THE INFLUENCE OF COMMERCE ON THE CHANGING

STRUCTURE OF SERBIA'S PEASANT ECONOMY

1860-1912

by

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SUMMARY

Rapid and continuous population growth, unaccompanied by urbanization was associated with a tendency for Serbia's farm economy to acquire increasingly intensive characteristics. Relatively intensive cultivation expanded more rapidly than the pastoral stockraising sector. But only through the development of a corresponding commercial structure, whose principal feature was a shift away from the export of pastoral produce towards that of crops and fruit, could this be achieved without a long-run deterioration in peasant welfare. The intensification of cereal agriculture itself was only beginning at the end of our period; till that time, commercial growth was achieved only through the expansion of sown area per capita and through the development of a huge trade in plum products. The traditional export to Austria-Hungary of lean hogs was destroyed through trade obstructions on the part of the importing country after 1878. Growth in the commercial production of food products provided a solid basis for the emergence of a mechanized industrial sector (mills, breweries, meat packing, sugar, jam making and prune drying). The intensification of farming could not extend to areas of inferior land in the south of the country. Only in the south east was this disadvantage effectively counteracted, in this instance, by the development of migrant building and similar skills.
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<td>Beogradskaja Trgovska Omladina (Belgrade junior chamber of commerce)</td>
</tr>
<tr>
<td>CBE</td>
<td>Belgian Consular reports. For their abbreviation system, see p.613</td>
</tr>
<tr>
<td>RCE</td>
<td>Recueil Consulaire</td>
</tr>
<tr>
<td>CBR</td>
<td>British Consular reports. See pp.614 - 9</td>
</tr>
<tr>
<td>(A.H.)</td>
<td>on Austria Hungary, See pp.617 - 8</td>
</tr>
<tr>
<td>(Bos)</td>
<td>on Bosnia, See pp.618 - 9</td>
</tr>
<tr>
<td>(Bul)</td>
<td>on Bulgaria, See p.619</td>
</tr>
<tr>
<td>(G)</td>
<td>on Germany, See p.619</td>
</tr>
<tr>
<td>(S)</td>
<td>on Serbia, See pp.614 - 7</td>
</tr>
<tr>
<td>ČS LIST</td>
<td>Čiča Srečkov List za Srbske Zemljevidelce</td>
</tr>
<tr>
<td>DAS</td>
<td>Državni Arhiv S. R. Srbije, Beograd, Karedžijeva Ul.</td>
</tr>
<tr>
<td>Min Fin</td>
<td>Ministarstvo Financija (Min. of Finances)</td>
</tr>
<tr>
<td>MNP</td>
<td>Ministarstvo Narodne Privrede (Min. of National Economy)</td>
</tr>
<tr>
<td>S</td>
<td>Statistika</td>
</tr>
<tr>
<td>T</td>
<td>Trgovinsko Odeljenje</td>
</tr>
</tbody>
</table>
Dražopis Dražavoris Srbije
Glasnik S. U. D. Glasnik Srpskog Učenog Društva
G. M. F. Glasnik Ministarstva Finansija


I. A. V. Istorijiski Arhiv Valjevo
I. Č. Istorijiski Časopis (Beograd)
I. K. S. Industrijska Komora Kr. Srbije (Chambers of industry of the Kingdom of Serbia)
J. C. E. A. Journal of Central European Affairs (Boulder)
J. E. Ec. H. Journal of European Economic History
J. Ec. H. Journal of Economic History
M. N. P. Ministarstvo Narodne Privrede (relates to a series of reports, see below, p. 622-3
M. S. B. Magyar Statisztikai Évkönyv
M. u. S. Muzej u Smederevu

- Sava Stanković papers

N. S. Z. Naselja Srpskih Zemalja
P. R. O. Public Record Office

Proizvodne Snage ..., see Ekonomski Institut N. R. Srbije, p. 648 below
P. S. D. S. Popis Stanovništva i Domaćeg Stoka
S. A. D. K. P. S. Srpsko Aksionarsko Društvo za Klanje i Preradu Stoka
M. M. Savić, N. I. Z. M. M. Savić, Naša Industrija i Zanati (I-III)
M. M. Savić, Z. I. I., see Ministarstvo Narodne Privrede, Zanati i Industrija ... (below, p. 624)
S. C. K. Srpski Centralni Komitet

SCPP Statistika Cena Poljoprivrednih Proizvoda u Kr. Srbiji, see p. 621
S.D.Ž.  Srpske Državne Železnice (annual statistics and tariffs, see p. 622)
S.G.  Statistički Godišnjak Kr. Srbije
S.N.  Srpske Novine (official gazette of the Serbian government)
Statistika  Statistika Kraljevine Srbije (see p. 621)
S.S.T.  Statistika Spolne Trgovine
T.G.  Trgovinski Glasnik
T.K.S.  Trgovačka Komora za Kr. Srbije (Chambers of commerce of the Kingdom of Serbia)
Town names. Except for obvious anglicisations (Belgrade, Vienna) towns are given the names they bore in the early twentieth century. Within the area of Serbia at that time, two towns have had their names changed since World War II. They are Jagodina (now Svetozarevo) and Užice, which has since felt the need to prefix itself to Titovo Užice. The only other such change was of Kraljevo (to Rankovićevo) but this proved less enduring.

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akov</td>
<td>see oka</td>
</tr>
<tr>
<td>Argastina, argatanje</td>
<td>agricultural wage labouring. The worker is argastin or argat</td>
</tr>
<tr>
<td>Čaršija</td>
<td>market; Ottoman trading town; business community</td>
</tr>
<tr>
<td>Cincar</td>
<td>a Balkan community or nation noted for its propensity for migration and trade</td>
</tr>
<tr>
<td>Crna Gora</td>
<td>otherwise Montenegro. The citizen is Crnogorac (Montenegrin). Also a gora (q.v.) of Serbia</td>
</tr>
<tr>
<td>Dragoman</td>
<td>labour recruiter; guide</td>
</tr>
<tr>
<td>Drustvo</td>
<td>company; society</td>
</tr>
<tr>
<td>Dundjer</td>
<td>migrant building or carpentry worker</td>
</tr>
<tr>
<td>Ėra</td>
<td>inhabitant of Užice ekruž, or Hercegovinan</td>
</tr>
<tr>
<td>Esnaft</td>
<td>guild</td>
</tr>
<tr>
<td>Gajtan</td>
<td>peasant braid or piping</td>
</tr>
<tr>
<td>Gazda</td>
<td>proprietor; boss; kulak</td>
</tr>
<tr>
<td>Groš</td>
<td>pre-1878 currency unit. 5 groš (each of 40 para were equated with the dinar (of 100 para of the dinar) which equalled one French franc at its gold parity.</td>
</tr>
<tr>
<td>Hercegovci</td>
<td>people of the Hercegovina</td>
</tr>
<tr>
<td>Kačkavalj</td>
<td>hard, durable sheep's cheese</td>
</tr>
<tr>
<td>Kafana</td>
<td>coffee house; restaurant; cafe</td>
</tr>
<tr>
<td>Kajmak</td>
<td>sour cream</td>
</tr>
<tr>
<td>Kiridžija</td>
<td>pack horse caravan worker</td>
</tr>
</tbody>
</table>
Fým

Klanica - abattoir. With a capital K is used in the text to refer to the Belgrade abattoir of the Srpsko Aksionarsko Pruštvo za Klanje i Proradu Stoka.

Krivivir - A breed of Serbian sheep, prized for its wool.

Majstor - master craftsman.

Motika - hoca; unit of land measure for vineyards (≈ 0.058 hectares).

Oka - (solida) 1.28 kg (liquida) 0.57 kg, or 1.28 kg. 100 oka = 1 tovar; 100 fluid oka = 1 akov.

Ogrug - administrative division corresponding to the French département.

Opština - administrative division corresponding to the French commune.

Pečalba - Long range migrant labouring. The worker is pečalbar or pečalovnik.

Pekmez - crude, unsugared plum jam or jelly.

Pivnica - tavern or wine cellar on the vineyard.

Piličar - petty chicken merchant.

Pomoravlje - valley of the Morava river.

Potčar - small scale peasant sluice mill.

Pušalica - smoke oven for plum drying.

Rabadžija - ox cart haulier.

Rakija - distilled alcoholic beverage from fruit. Rakija Komovica was made from grape husks, Rakija Sljivovica from plums.

Šajak - coarse broadcloth.

Salaš - farmstead on the high pastures used seasonally by upward transhumant stockraisers.

Srez - administrative division corresponding to the French arrondissement.
Šumadija  Geographical area corresponding to the traditional limits of the old Serbian oak forest. Bounded (approximately) by the rivers Kolubara, Sava, Danube, Great Morava and West Morava

Tajva  migrant labouring gang

Tafter  merchant account book. Credit given on goods simply by book entry is described as na tafter

Tovar  a load; horse-load, and see oka (q.v.)

Trošarina  consumption tax

Udruženje  see društvo

Ustavobranitelj  "constitutional defender", refers to the period of government from 1839 to 1858

Užar  handwork ropemaker

Zadruga  extended family; its farm, held undivided as a single unit of ownership
A Factor approach to the development of the Serbian economy.

This is a study of the economic development of a small European state which, during the century of its existence, neither urbanized nor industrialized substantially. Central to the study, therefore, and inevitably dominating it, are the economics of agricultural development. In a small-holder society where the economics of seigneurial agriculture played little or no part, the problem is one of analysing the development of mass freehold peasant agriculture. The application of factor endowment theory to an economy of relatively small capital inputs would suggest that the dominant relationship is that of relative land-labour abundance. Were this not found to have undergone any substantial shifts, then our principal concern, having analysed the structural outcome in terms of micro-economic statistics, would most likely be directed toward the evolution of factor mobilizing institutions and their impact on economic structure.

However, in the Serbian case this would be an unreal condition, for the repopulation and growth of population density on the land was going forward with great rapidity during most of the period. This suggests strongly that demographic growth may have been the lever, which through the fulcrum of land-labour relationships, was the prime determinant of the course of economic change.

Despite the evident necessity of proceeding at the very outset on these lines, the current economic historiography of pre-1914 Serbia
tends to reject this approach in favour of essentially institutional analysis. To Yugoslav historians, the problem is seen in the relatively simple terms of rising of capitalism and of capitalistic modernization and industrialization, with population change treated as an input affecting the emergence of capitalistic relations on the land and the formation of an industrial labour force, but even in these respects receiving remarkably scant attention. An essentially similar, though much more sophisticated approach is attempted in the one major Western contribution to Serbian economic history, the unpublished doctoral thesis of Dr. John E. Lampe, "Financial structure and the economic development of Serbia 1878-1912" (Univ. of Wisconsin, 1971).\(^1\) In this work, Dr. Lampe 'faults' the 'emphasis' of the 'modern spectrum of approaches' pivoted upon the dynamics of factor analysis, which, as he claims, treat institutional arrangements as only incidental, 'thereby ignoring the old fashioned but essential question of which institutions are best suited to an economy struggling to modernize.'\(^2\) All roads lead through capitalism — in the long run — to industrialization, and the historiography as it stands at present makes much of the emergence of modern industry in pre-1914 Serbia, and of the modernizing institutions which encouraged, promoted, financed and sustained it. To quote Dr. Lampe again, "Industrialisation, after all, lies at the heart of the most commonly accepted definition of economic development... The European historical record shows that some kind of mechanized manufacturing sector was invariably the leading link in sustained increases in income."\(^3\) In the long run perhaps, we may agree.

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\(^1\)Hereafter, Lampe, thesis. The content and conclusions of this work are more readily accessible in summarized form, as his contribution 'Serbia 1878-1912' in Rondo E. Cameron (ed.) Banking and Underdevelopment, (New York, 1972). I am grateful to Professor Lampe for having permitted me to read the manuscript of this contribution in advance of its publication.


\(^3\)Ibid, p 24.
But the borrowing of industrial technology and capital has generally enabled very backward countries to build up a small mechanized industrial sector a long while prior to the emergence of mutually sustaining linkages with the rest of the economy. This could well have been the case with pre-1914 Serbia, and it was probably this consideration which led Professor Lampe in his most recent article to revise the views expressed in his thesis on the implications of his carefully constructed tables of pre-1914 industrial output, and the impressive growth of which they seemed to speak.¹

"I have reversed my initial impression, moreover, that the respectable growth rates of the last pre-war decade... could have turned into sustained industrialization, had the First World War not intervened. I will argue that the long term prospects of those industrial stirrings were very limited."

This is what he proceeds to do, in an interesting analysis which is unfortunately marred by his assumption that on the demand side only the urban population really counts. "However much the Balkan peasantry had been drawn into selling in the money economy to pay for supplies and taxes, its surplus over subsistence would be more likely to be saved or spent on buying more land than on manufactures."²

Given that the urban sector was small, and growing only moderately, and that the urban industrial workforce was smaller still, the whole

¹ These tables appear on pp 22-3 of the Lampe thesis and are summarised as part of Table I. on page 9 of J.R. Lampe, "Varieties of Unsuccessful Industrialization: the Balkan States before 1914", J.Ec.H. XXXV (1957) I. from p 60 of which the above passage is quoted.

² J.R. Lampe, "Varieties of Unsuccessful Industrialization..." loc cit p 70. This comment is footnoted to two sources, one concerning Russia, which is of no proven relevance to Balkan conditions, and the second N. Avramović, Naka Soljaško Gradinatvo (Beograd 1923) which published the data reproduced as Table I.13 below, which will be used to demonstrate the reverse of this proposition.
argument really hinges precariously around this one assumption. Let us suppose that this assumption were unjustified, and that the development process which was taking place was such as continually to expand the demand of the peasantry for commercially purchased goods and services, so that it attained a scale comparable in size to the demand generated by the urban sector. Then the other barriers to industrialization—monetary policy, economic nationalism and shortage of skills—would have created only ephemeral bottlenecks in implementation of the strategy which had been adopted of import substituting industrialization.

The validity of Dr Lampe's assumption will be called into question in the course of our analysis, but, if we take it at face value for the moment, it leads us only to an analytical dead end. Having pursued through the institutional jungle a developmental model which leads but to economic growth and structural change through industrialization, and having belatedly discovered that the model led nowhere at all, we find ourselves faced with a stagnation in a structural limbo.

But for all the emphasis the study of relative factor dynamics has received in the 'modern spectrum of approaches' neither Dr Lampe nor anyone else has applied it to the Serbian economy. Such an approach would of course treat the institutional arrangements, not as incidentals, but as integral to the outcome and input of the process of structural change. But it carries within it no presumptions about the operation of the process, linking development to industrialization. If the outcome of a development model, reached through factor (and product) market analysis, was to imply a passage towards industrialization
at the apex of the development process, this would of itself be of interest, but it would become irrelevant as to whether this apex were yet in sight by 1914.

This is the approach which we have selected, so our first analytical task will be to test, reject or accept the hypothesis that a strong lever operated from demographic change via factor endowment shifts to economic change. As a first step towards this end, we survey the demographic experience of Serbia immediately before and during the period with which we are concerned.

b. An Empty Land Fills Up.

Between 1820 and 1912 the density of settlement may well have risen by up to five times. A powerful contributory cause was the initial emptiness of the country - a fertile virgin land awaiting settlement.

Caught up in the successive conflicts between Austria and the Turks in the late seventeenth and the eighteenth centuries, the Serbian people emigrated massively across the Danube, to settle in Syrmia (Srem) and the Vojvodina. The peak of this emigration was attained in 1690 when the patriarch Arsenije Čarnojević III led his people into Hungary at the invitation of the Habsburgs to take up free land and thereby to form part of a military frontier designed to insulate Austria from the incursions of the Ottomans. On conclusion of the peace of Belgrade (1739) the lands along the Turkish side of the

---

1 Thus was established the large Serbian community of the Vojvodina and Srem, the prečani - i.e. the people across the Sava and Danube.
Danube and Sava were left 'almost uninhabited with burned out or abandoned settlements', but by the mid 18th century, they began somewhat to revive in settlement and economic activity. This was stimulated by what were to become the dominant demographic inflows — the migration of Dinaric peoples down into the plain, and the return flow of Serbs from the Vojvodina.  

This revival was interrupted, and probably reversed sharply during the three decades following the renewal in 1798 of Austro-Turkish warfare. This was a period of turmoil, of regular and irregular warfare, famine and plague, which was only ended after the successful insurrection of 1815, by which de facto autonomy was achieved. Though the aftermath of instability and famine took a few years to clear, the effective detachment of Serbia from the Ottoman system of misgovernment, and the attraction of a fertile but empty land of which huge tracts were in res nullius was conducive to high natural increase and a growing volume of immigration. The population explosion had begun. The growth rate between 1820 and 1834 appears to have been about 2.2% per annum, and between 1834 and 1841 about 2.9% per annum. It then slowed down, reaching a minimum at mid-century, and subsequently revived.

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3 Proizvodna Snaga... p 66 col 1.
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Growth per annum (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1820</td>
<td>500,000 (est)</td>
<td>2.2</td>
</tr>
<tr>
<td>1834</td>
<td>678,000</td>
<td>2.9</td>
</tr>
<tr>
<td>1841</td>
<td>829,000</td>
<td>2.0</td>
</tr>
<tr>
<td>1846</td>
<td>913,000</td>
<td>1.1</td>
</tr>
<tr>
<td>1850</td>
<td>957,000</td>
<td>1.1</td>
</tr>
<tr>
<td>1854</td>
<td>999,000</td>
<td>1.5</td>
</tr>
<tr>
<td>1859</td>
<td>1,070,000</td>
<td>1.7</td>
</tr>
<tr>
<td>1866</td>
<td>1,216,000</td>
<td>1.3</td>
</tr>
<tr>
<td>1874</td>
<td>1,354,000</td>
<td></td>
</tr>
</tbody>
</table>


This revival attained its greatest strength in the 1880's, if the official statistics are to be trusted. But doubts have been expressed as to the reliability of the census material. On the basis of the official statistics, which we have used for intertemporal per-capita comparisons, population grew 61.2% between 1880 and 1910 but an adjusted Yugoslav calculation gives a lower rate of 52.6%. This implies a downward revision of annual growth rates from 1.6% to 1.4%. It should therefore be noted that all our per capita figures for this period are more likely to understate growth and overstate decline than the reverse. It should be noted, however, that even with this revision, Serbia's population growth outstrips that of any of the European countries quoted by Glass and Grebenik from the Sandberg figures.

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1 See Table I. 2.

2 For the basis of this discussion see Proizvodna snaga..., pp 67 col. 1-69 col. 1.

Yugoslav sources appear to treat natural increase as more or less constant up to 1876 at about 1.4% per annum, ascribing the high growth rate of the 1830's to a rate of immigration higher even than natural increase, with the consequence that the much slower growth of population in the 1840's and 50's is explained by a sharp falling away of immigration from about 11,600 a year to about 2,600. It is not claimed that such a treatment of the data should be accepted other than "with some reserve", but the approach is not unreasonable. A fall in the rate of population growth from 2.9% per annum to 1.6% per annum between 1834/41 and 1841/50 could not easily be explained without leaning very heavily on the immigration variable.¹

As we are concerned with population growth only as an input towards explaining the structure of economic development we are spared the necessity of detailed research as to the causes of fluctuations in the demographic growth rate. It is however, necessary to note that natural increase was probably not significantly restrained by mortality crises caused by resource deficiency, and may therefore be treated as a largely independent variable. The apparently high mortality of the period appears to have been caused by wave after wave of epidemic diseases such as that reported in 1842 to be "decimating the population each year". This period of heavy though fluctuating epidemic mortality lasted into the 1860's and 70's for during this period, Serbia suffered the effects of the last great European cholera epidemic, which is believed to have killed at least 300,000 people in neighbouring Hungary.²

¹ See Proizvodne Snaove... p 67 col 2 and V. Jovanović, "Statističan proglis našeg privrednog i društvenog stanja" Glasnik S.U.D. L (1891), p 186 for data and discussion.

Famine induced mortality crises though were scarcely known. This was not simply because the country was still underpopulated, though this obviously helped. But until the 1860's when Serbian grain began to appear regularly on the export market, the food supply, though usually ample, was also precarious. The response to a surplus in one year was to reduce sowings the next. In a highly fragmented economy, the threat of famine was always present. This was accentuated by the practice of maize monoculture which was general in most regions which did not raise grain regularly for the market.

Explaining the reason for a serious grain shortage in the Niš region in 1830, a British representative observed that part of the trouble arose from the peasants having no winter sown wheat crop to fall back on. Maize was a spring sown crop and thus more vulnerable to drought than a winter sowing. The prospective opening of rail communications should be anticipated to improve the security of grain supplies by encouraging the peasants to raise a winter sown crop for market purposes which could provide the means for self consumption if the higher yielding but more risky spring maize crop should fail. Three maize crop failures in a row—such as appear to have occurred in 1871, 2 and 3, could give rise to an "unpitiable flood of misery", which the authorities were incapable of alleviating.

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1 PRO FO 78 312 No. 14 cons. of 14.12.1837.
3 AAE. CCB. t 5 despatch of 25.5.1873, fo. 78.
Nevertheless maize does have the useful property of being easily stored on the cob. So to counteract the ever present threat of famine, a system was established during the first government of Miloš Obrenović (1813–38) requiring each opština to maintain a communal granary into which each householder would be obliged to make an annual deposit of 4-5 metzen (about two quintals) of grain which stood as a reserve in the event of individual or collective hardship. The system appears to have been borrowed from Hungarian practice, and was not operated elsewhere in European Turkey. It is not clear whether the system was maintained in full force during the subsequent Ustavobranitelj period, for it seems to have needed to be re-established after the Obrenović restoration. But it had not disappeared in the meantime.

At Valjevo town, the opština granaries were kept well stocked and served particularly well in 1857 and 1858 – a time of mass migration into free Serbia... the Valjevci endeavoured to receive, maintain and settle more than 200 families. On this occasion, the granaries were opened and the town was able to feed and maintain the refugee families. From the 1860's, the opština granary system became a permanent fixture, and provided, in the early 1880's, by one report, a national reserve of 60-70,000 tonnes. By this time it was beginning to be seen as a

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1. Serbia was administered centrally on a pattern similar to that of France, with okruzi, the equivalent of départements, each administered by a state appointed okrug nadželnik, orszöv (arrondissements), each administered by a greski nadželnik, and opštine (communes), each administered by a predsednik opštine.


4. La Serbie à l'Exposition Universelle de 1911 à Turin (Belgrade, 1911), p 62.

war reserve,\(^1\) and this function was formally attached to it in 1890,\(^2\) but in the okrug of Rib (where the system was only established after annexation) the granaries had to be opened for distribution as late as 1909 when they "saved many from dying of hunger."\(^3\) Contemporaries expressed an unanimous view as to the effectiveness of the institution.\(^4\) As there is no obvious reason why it should not have worked well, it seems likely that it prevented short term harvest crises from interrupting population growth.

This reinforces our belief that fluctuations in population growth up till the 1830s were probably caused mainly by fluctuating rates of immigration which, under conditions of moderate prosperity, were likely to react more sensitively to changes in economic (as opposed to sanitary) conditions than mortality rates.

The marked speed up of population growth after about 1880 was however more probably the result of improved mortality rates. Epidemics became less frequent and severe it appears, from the relative absence of comment on them, and the authorities, galvanized by the inadequacies exposed by the war of 1876-8,\(^5\) seem to have been better able to cope with them.\(^6\) A natality rate of 40-45 per mil between 1862

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1 Ibid.
2 La Serbie....à Turin, 1911, p 62.
3 M.W.P. 1908-09, p 1011
6 PRO FC 105 42 No. 1; comm. of 14.7.1883.
and 1850 suggests that there was little family limitation.  

This experience was however more or less general to central and eastern Europe, but what singled Serbia out from the rest was the balance of migration. In the 1820's and 30's immigrants had poured in as we have noted, and appear to have been easily settled. The state, at that time a big landowner, had an obvious interest in this, and immigration was encouraged. For example, Prince Milos appears to have initiated what subsequently became a standing arrangement with Montenegro for the re-settlement of Crnogorci (Montenegrins), particularly in the Kruševac region.

Incentive to settle immigrants was removed from the state by the 1838 constitutional reform, and the diminution of immigration in subsequent years probably reflects the disappearance of free land. An actively pro-immigration policy was revived with the enactment of the 1861 forestry law, which imposed upon the opština the obligation to distribute land from their resources to persons in need of it, poor immigrants being enumerated among those eligible.

Specific assistance for immigrants was then provided under the colonization law of 1865, in the form of land grants and assistance in settlement. Further inducements were offered to immigrants in 1873 in a law designed to attract settlement of the poor of Slavonia and the Banat. These laws appear to have operated successfully for 51,137

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1 Proizvodno Snaža... p 69 col 1.
2 Stojančević, op cit pp 193-5.
3 Sekulović et al., Kruševački Kraj Juče i Banac (Kruševac, 1961) p 48.
4 Vučo, Položaj Seljaštva i Eksploatacija od Zemlje u XIX Veku (Beograd, 1933) p 12.
5 PROC PC 78 1862 Report on the trade of Servia 1863-4 dated 4.5.1865.
6 AAE. CCH. t 5 despatch of 8.8.1873, fo. 93.
persons (net) immigrated between 1860 and 1875, this number probably exceeding that which would have been settled on the land under free market conditions. This is because, as the land market had tightened considerably, the paštine conceded land to new arrivals only with great reluctance, and the 1873 concessions were strongly resented by the settled population who looked upon immigrants as intruders.

But the policy was given a new lease of life after the annexation of the pašalik of Niš in 1878. Here, the Muslim population fled or were chased out in large numbers. A swarm of land grabbers from the adjacent provinces immediately descended on the territory to lay claim to the choicest bits of real estate, but attempts by the state to resettle peasants from other less well favoured parts of the country in the territory received a negative response. The government turned instead to organizing the settlement of the area with new immigrants, particularly in Toplica okrug, where the former Muslim population had been relatively most numerous, and where, in consequence, there was most vacated land.

According to the census of 1900,

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2 AAE.CCB. t 4 despatch of 13.6.1863, fo. 65.

3 AAE.CCB. t 5 despatch of 5.6.1873, fo. 93.

4 In a memorial of 1882 the Muslims of Serbia claimed that in the previous four years, 120,000 of them had been dispensed of their homes and goods and were "dying of hunger" PRO 70 10 37, memorial dated 24.4.1882.


7 Whereas the number of tax heads in Niš, Pirot and Vranje okruzi remained stationary between 1880 and 1883, the number in Toplica okrug leaped by 45%. M.Đ. Mitrović, Kraljevina Srbija Dž. Novi Kraljevi (Beograd, 1884) p xxi.
were 37,700 first generation immigrants in Serbia, or 3\% of the population. Among these, Dinaric peoples accounted for 48\%, Prekani Serbs and Croats, 31\%, Macedonians and Bulgarians, 9\%. The largest of these elements probably came in mainly in response to push conditions at home. Famine brought in 10,000 Crnogori and numerous Hercegovci (people of the Herzegovina) in 1890, while harvest failures impelled large arrivals from the Koszot. As late as 1905-6, 1,118 families, 65\% of them from Crna Gora and the Herzegovina were settled in Vranje and Toplica okruzi.

As elsewhere in east central Europe, the trend towards emigration was strengthening in the latter years of our period, but even during the last quinquennium for which figures are available the annual rate was only 4.3 per mil, and as we will see below (Chapter VIII) this probably reflected a rising tide of temporary emigration as well as an increasing flow of permanent emigrants. Even in this period, migration was on balance inward:

Table I. 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net outflow of citizens</th>
<th>Net inflow of aliens</th>
<th>Net immigration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1889-93</td>
<td>15,594</td>
<td>51,129</td>
<td>35,535</td>
</tr>
<tr>
<td>1894-98</td>
<td>20,439</td>
<td>53,257</td>
<td>32,818</td>
</tr>
<tr>
<td>1899-1903</td>
<td>31,432</td>
<td>57,171</td>
<td>25,669</td>
</tr>
<tr>
<td>1904-08</td>
<td>58,749</td>
<td>60,715</td>
<td>1,966</td>
</tr>
</tbody>
</table>

Source: W.F. Wilcox (ed) International Migrations I, p 880, tables II and III.

1 B.d. 1900, pp 45-6.
3 Proizvodne Srace... p 69 col 2.
c. Town and village population.

The growth of the population of Serbia, and its rural-urban distribution between 1854 and 1910 is set out as Table I. 2, below.

For the presentation and use of aggregative statistics in a convenient form, due allowance must be made for the frontier change of 1878 when the pašalik of Niš was annexed. A census the following year showed its population to be 303,697\(^1\) or about 21.2\(^\%\) of that of the former Serbian state. We have no previous census material with which to compare this figure, and for the sake of convenience, we have assumed its demographic trend to have been similar to that of Serbia up to this time. This should not generate serious errors in the global statistic, but as the evidence available suggests that the growth rate of population in the pašalik was somewhat lower, and that there may have been a sharp fall immediately on annexation, such a measure should not be employed for area itself.\(^2\)

\(^1\) Državopis XI, pp 54-5.

\(^2\) Some useful material on the cross flows of migration in this region before 1878 may be found in K. Spasie "podaci o agrarnim odnosima Hrvatskog u oslobodjenim krajevima, okrugu Topliškog i Vranjskog za vrijeme Turaka vladavine" Glasnik S.U.D. XIV, (Beograd, 1890) p 219-57 and in V. Nikolić "Arhivski prilazi..." loc cit.
<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>Old Frontier 1878</th>
<th>Representing compound annual increase(%)</th>
<th>Population of Towns</th>
<th>Number of Towns Included</th>
<th>Belgrade Population in Urban Population of Towns</th>
<th>Farm Families</th>
<th>Total Urban Real Rural Population</th>
<th>&quot;&quot;&quot;&quot; of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1854</td>
<td>993.9</td>
<td>1,307</td>
<td>1.5</td>
<td>78.8</td>
<td>36</td>
<td>33a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1859</td>
<td>1078.3</td>
<td>1,474</td>
<td>1.4</td>
<td>119.2</td>
<td>40</td>
<td>24.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1864</td>
<td>1353.9</td>
<td>1,640.5</td>
<td>1.4</td>
<td>139</td>
<td>48</td>
<td>27.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1878</td>
<td>1431.3</td>
<td>1,734.3</td>
<td>1.6</td>
<td>150.4</td>
<td>196.4</td>
<td>92.7a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>1,901.7</td>
<td>236</td>
<td>2.3</td>
<td></td>
<td></td>
<td>35.5</td>
<td>14.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>2,185.4</td>
<td>286</td>
<td>1.4</td>
<td></td>
<td></td>
<td>54.2</td>
<td>18.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td>2,341.7</td>
<td>319</td>
<td>1.6</td>
<td></td>
<td></td>
<td>59.1</td>
<td>18.5</td>
<td>21.8</td>
<td>249.4 89.3</td>
</tr>
<tr>
<td>1900</td>
<td>2,529.2</td>
<td>334.4</td>
<td>1.5</td>
<td></td>
<td></td>
<td>69.8</td>
<td>20.9</td>
<td>21.8</td>
<td>261.4 89.7</td>
</tr>
<tr>
<td>1905</td>
<td>2,724.9</td>
<td>408.3</td>
<td>1.4</td>
<td></td>
<td></td>
<td>80.7</td>
<td>19.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>2,922.1</td>
<td>483</td>
<td>1.4</td>
<td></td>
<td></td>
<td>89.9</td>
<td>18.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. with in old frontiers.
b. Based on census figure of 18,860. But note that a French consular despatch of 1861 reported Belgrade's population as 20,394, 'plus 4,500 Turks' AAE. CCB. t2, despatch of 23.7.1861, fo. 477
c. extrapolation of 1866-74 trend.
Sources and calculation; Total population, old frontiers 1854-74 and new frontiers, 1884-1910 from census statistics reproduced in N. Vučić, Prijrodu Istorijskih crteža, p 171. Population within the old frontiers in 1870 was estimated by extrapolation of the 1866-74 growth trend. Population in 1859 and 1866 of the subsequently annexed territories was estimated by assuming equal population growth rates on both sides of the frontier. (But see text, p 15.) Urban Population. 1854: AAE:CCD, t 2 despatch of 23.7.1861, fo 472; 1859: Državna IX, pp 92-3; 1866: Državna XIII, pp 324-5, 362-3; 1874: Državna IX pp 142-3. Urban population estimates for the 1840's in the subsequently annexed territories are given in Ami Boué, Recueil d’Itineraires dans la Turquie d’Europe, (Vienna, 1854), pp 6c, 60, 23, 30, 334, and on the assumption that these towns were stagnant in size, they were added to the 1859 census figure for Serbia to obtain an estimate of urban population within the post 1878 frontiers. Town population 1884, 1890, and 1910 from Lanko, thesis, p 15. For urban and urban farm population 1854, and 1866, sources as for urban population generally. For 1895 and 1900 see census for those years in Statistika XII-XIII and XXIII respectively. For 1905 census, see 2.dj, 1906, pp 25-9.

In nineteenth century economies, a normal concomitant to massive population growth was a profound change in economic structure, of which the most obvious manifestation was more or less rapid urbanization. An echo of this tendency - but no more - is evident in the experience of Serbia. For the period 1859-1910, town growth, at 2.7% p.a. was nearly double the village population growth of 1.4% p.a. But the population of the towns in 1859 was so small - 9.6% of the total, that even by 1910 it only comprised 16.5%. The growth rate of the towns as a figure meaningful in economic terms is rather difficult to ascertain, for several reasons, and both at the beginning of the period and at the end of it, the truly urban population was considerably smaller as a fraction of the total than those administrative
figures imply. Being a town was a matter of legal rather than economic status, though naturally, the two coincided to a considerable extent. While there were 31 communities with town status in the old territories in 1859, together with 4 in the annexed territories for which population estimates are available, a further 40 communities had acquired urban status by the turn of the century, without necessarily adding anything to their economic function but the presence of a few officials. If we excise from our town population all those who declared themselves to be farmers,—a large but decreasing proportion of urban population—our cadre of townsmen is reduced to 7.3% of total population in 1866, and 10.3% in 1900, by 1900, about 20% of urban population was concentrated in the capital (70,000 inhabitants), which was a veritable metropolis compared to the rest of the towns, which extended in size from Niš (24,600) down to such a tiny, (but genuinely urban) community as Draginac (Podrinje), pop. 89, including only 21 persons in farming families. Table 1.3 below shows how small and fragmented urban population was, and remained.

Table 1.3
Size Distribution of Towns, 1866 and 1900.

<table>
<thead>
<tr>
<th>Towns of</th>
<th>2,000</th>
<th>2-4,000</th>
<th>4-6,000</th>
<th>6-10,000</th>
<th>10-20,000</th>
<th>20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1866</td>
<td>n.a. (24)</td>
<td>11 (10)</td>
<td>3 (3)</td>
<td>3 (0)</td>
<td>1 (0)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>1900</td>
<td>55 (51)</td>
<td>11 (10)</td>
<td>8 (8)</td>
<td>5 (3)</td>
<td>3 (1)</td>
<td>1 (1)</td>
</tr>
</tbody>
</table>

a: Niš.

b: Belgrade.

Source: As for urban statistics in Table 1.2 above p. 17

1 But it has been noted that "compared with foreign bases for calculation our figures for town population underestimate." N.J. Komadinic, Problem Seljaških Dućova (Beograd 1934) p 10, col 2. No reason is stated.
During the period 1866-1900, the population of the capital rose by 183.4% or 3.1% per annum, from 24,300 to 68,900, not of farm families who, in any case, never composed a sizable element in its population. Taking only that area of Serbia which lay within the pre-1878 frontiers, urban, non-agricultural population appears to have grown by 117.6%. This is an overstatement, because of the inclusion since 1866 of 34 communities as towns which had hitherto had only village status, the sum of whose non-agricultural population in 1900 was 19,900. Some of this represents a net gain to the urban sector, because many such communities were in a real sense accumulating urban functions, this being one reason why they would be granted formal urban status, but it is obviously not a net gain in its entirety. But growth of non-farm population in those 34 communities which (excluding Belgrade) hold urban status in 1866 was only 89.6%, that is to say, not very much faster than the growth of the population as a whole - 70.6% for the same period. From our data it is thus possible to derive the following urban growth attributions:

Table I. 4.
The Causes of Urban Growth.
1866-1900
(pro 1878 frontiers, exclusive of farm families)

<table>
<thead>
<tr>
<th>Urban growth attributable to:</th>
<th>Absolute</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>General population growth</td>
<td>62,400</td>
<td>51.7</td>
</tr>
<tr>
<td>Relative growth of Belgrade</td>
<td>27,500</td>
<td>22.8</td>
</tr>
<tr>
<td>Chartering of former villages</td>
<td>19,900</td>
<td>16.5</td>
</tr>
<tr>
<td>Relative growth of pre-existing country towns</td>
<td>10,800</td>
<td>9.0</td>
</tr>
<tr>
<td>Total urban growth</td>
<td>120,600</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Calculated from Sources given for urban population in Table I. 2.
Thus as a component of the trend towards urbanization, the growth of the capital was about 2 1/2 times as significant as the growth of the rest of the pre-existing towns put together, and the inclusion of former villages as towns was nearly twice as significant. But the biggest growth element - slightly more than half - was merely a reflection of the overall growth of population.

As a basis for discussion of internal migrational trends, we have summarised the results of our basic calculations in Tables 5-7. Firstly it should be noted that the population of Belgrade was not self-regenerating, nor was that of the other towns, although the villages displayed a strong tendency to natural increase. Thus the whole of town expansion and more depended on immigration, either from the villages or from abroad. (Concealed here would also be a certain amount of migration from the small towns to Belgrade, the favourite route to success for the ambitious small town businessman). As the growth of Belgrade speeded up in the 1870's and even more in the 1880's, so it absorbed an increasing migrant inflow. In the early years not only was the annual inflow into Belgrade small, but it was predominantly that of foreigners rather than of Serbians. Till the late nineteenth century the Belgrade Serbija (business community) was regarded virtually as a foreign enclave in Serbian society, and till about 1830 Greek had been its language of commercial communication. The Serbians, by apprenticeship and other means eventually secured commercial dominance in their capital, but the inflow was gradual and the Serbian inflow into the country towns though larger in aggregate, was not great either.

Rapid growth of the capital seems to have begun in the mid-'80's - coinciding with the opening of the railway (which is not in itself proof of causality) but as foreign immigrants still accounted for a third of the inflow to Belgrade in the 1890's, it still only attracted the immigration of 0.6 Serbians per thousand each year. Although they grew less rapidly than the capital, the country towns evidently acted as a more powerful pull on village emigrants, as well, surprisingly, as attracting half the inflow of town-bound foreign immigrants. In the 1890's the country towns attracted three-quarters of all emigrants from the villages and Belgrade only one in four.¹

Yet in the 1890's migration of villagers to the towns absorbed only a sixth of natural increase. Immigrants still played an important part in populating the towns, and although urban growth depended strongly on rural inflow which was substantial when related to the towns' own size, most villagers stayed put; in 1900, again, 85% of the rural community had been born in the opština in which they were resident. Only one villager each year out of 400 would depart to make his future in a town, as a permanent urban resident. By and large, the rural economy absorbed by far the greater part of its natural increase, as well as a substantial immigrant inflow.²

¹ See Table I. 7.

² For the quantitative basis of the above discussion see Tables I.5-7 and Appendix I to this chapter, Pp. 62-5
### Tables I. 5-7.

**Growth and Structure of Rural-Urban Migration and Immigration 1862 – 1908.**

#### I. 5. Annual Migrant Inflow to Belgrade 1862-1908.

<table>
<thead>
<tr>
<th>Period</th>
<th>Persons per annum</th>
<th>Of which native born</th>
<th>Representing per mil of population of Serbia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862-1866</td>
<td>672</td>
<td>&lt; 300</td>
<td>&lt; 0.3a</td>
</tr>
<tr>
<td>1867-1874</td>
<td>605</td>
<td>&lt; 270</td>
<td>&lt; 0.2a</td>
</tr>
<tr>
<td>1875-1884</td>
<td>900</td>
<td>&lt; 402</td>
<td>&lt; 0.2</td>
</tr>
<tr>
<td>1885-1887</td>
<td>2,704</td>
<td>about 1,209</td>
<td>0.6</td>
</tr>
<tr>
<td>1892-1895</td>
<td>1,369</td>
<td>1,395</td>
<td>0.6</td>
</tr>
<tr>
<td>1896-1900</td>
<td>2,160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1901-1905</td>
<td>2,271</td>
<td>&gt; 1,497</td>
<td>&gt; 0.6</td>
</tr>
<tr>
<td>1906-1908</td>
<td>2,109</td>
<td>&gt; 1,390</td>
<td>&gt; 0.5</td>
</tr>
</tbody>
</table>

* a: within pre 1878 frontiers.


<table>
<thead>
<tr>
<th>Line</th>
<th>Migration of</th>
<th>Belgrade (i)</th>
<th>Country towns (ii)</th>
<th>All-areas (iii)</th>
<th>Rural areas (iv)</th>
<th>All Areas (v)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Natives</td>
<td>13,954</td>
<td>40,758</td>
<td>54,712</td>
<td>approx. approx.</td>
<td>approx. approx.</td>
</tr>
<tr>
<td>2.</td>
<td>Immigrants</td>
<td>7,235</td>
<td>7,636</td>
<td>14,871</td>
<td>15,000</td>
<td>30,000</td>
</tr>
<tr>
<td>3.</td>
<td>All migrants</td>
<td>21,189</td>
<td>48,394</td>
<td>69,583</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### I. 7. Rural and Urban Natural Increase 1891-1900

<table>
<thead>
<tr>
<th>Category</th>
<th>Increase</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Villages</td>
<td>+1.66% p.a.</td>
<td>335,000 persons</td>
</tr>
<tr>
<td>Country towns</td>
<td>-0.6% p.a.</td>
<td>15,500</td>
</tr>
<tr>
<td>Belgrade</td>
<td>-1.0% p.a.</td>
<td>5,700</td>
</tr>
</tbody>
</table>

Immigration of native Serbians to towns: 16.3% of natural increase

\[
\begin{align*}
\text{To Belgrade} & \quad \text{To country towns} \\
\frac{1}{4} & \quad \frac{3}{4}
\end{align*}
\]

For calculation and source materials see Appendix I to this Chapter, pp.62-5
The structure of the Serbian farm economy in the middle third of the 19th century.

Natural increase and the tide of immigration which carried the rural population of Serbia from 637,000 in 1834 to 1,011,000 in 1863 resulted in no profound structural changes, but to increasing tensions within a fundamentally unchanged structure. The land was in the ownership of peasant proprietors, few of whom entered the labour market either as hirers or workers, and they organized their farms on a tri-sectoral basis. Firstly there was the cultivated patch; in 1867, 38% of such cultivated land was under maize, 22% under wheat, 12½% under rye, oats and barley, 12½% was under fruit, mainly plums, 4.7% under vines and 2.8% under hemp. The remaining 7½% was under a variety of minor crops.¹ In 1862, grain exports amounted to 264,000 dinars, wine, fruit and fruit products to 419,000 dinars, and exports of tobacco to 135,000 dinars. These commodities in total amounted to less than 5% of the total exports from the agricultural economy, and although we can be far from certain as to what the total output of such commodities was, we can say with confidence that little cultivated produce passed into international trade. Internal exchanges also existed; there was a considerable inter-regional trade in wine,² but little grain appears to have changed hands. For the most part, the cultivated patch provided the peasant with self consumption goods and little more.

The homestead and the cultivated patch were set in a milieu of meadow, pasture, and woodland, and these provided sustenance for

¹ V. Jakšić, "Stanje zemljoradnje u Srbiji", Glasnik S.U.S. XLI (Beograd, 1875).
² See below, pp. 397-8
the animal population. As late as 1867, cultivation extended over only 400,000 hectares, out of a land area of 5 million. The greater part of the remaining land was of good quality, and although much less intensively exploited than the cultivated area, it is likely that the stockraising economy it supported was of greater aggregate value than the product of cultivation. The stockraising economy was the main source of cash income. In 1862, 37.2% of exports (in value terms) were of hogs, 19.0% were of sheep and goats, their wool, hides and tallow, 16.6% were of horned cattle and 5.6% of horses. It also provided an important element in the peasant's self consumption: only 54,000 sheep were exported, but the export market took 738,000 sheepskins and lambskins, apart from the number of those which must have been used for home consumption. The products and by-products of hog-raising, fats, coats, and skins, were also very important items within the peasants' own consumption. Only horned cattle went mainly to market, but even then only after they had served their time at the plough. 1 This stockraising economy was almost entirely extensive, or pastoral, in character, and made little demand on the product of cultivation.

A third sector of this economy, which (as Theodore Shanin reminds us) provided a far from negligible flow of produce to the peasant, was that of gathering. 2 Medicinal herbs, dye stuffs, firewood, game and fish all entered into the export statistics, and no doubt contributed directly as well to peasant welfare, while the great

1 See below p. 251

oak forests, besides providing prime grazing for the hogs, contributed the export of 517,000 dinars of gall nuts, more than double the grain export. They were bought for the central European tanning trade.

The more intensive forms of agricultural economy were practiced for the provision of subsistence; the more extensive forms were practiced both for subsistence and for trade. Between 1843 (when the first set of national export statistics were published) and 1863, the money value of exports from the agricultural economy rose by 95% per capita, but as this was also a highly inflationary period, it is less certain that they rose in real terms. Their composition had changed appreciably: hog exports rose 87% (in volume), exports of horned cattle and horses rose 24% and exports of sheep and goats fell 43%. But at both dates, the export total was dominated by pastoral produce, and intensive cultivated produce was yet to appear in substantial quantity.\footnote{See S. Dj. Milčić, \textit{Spolna Trgovina Srbije od 1843-1875 godine} (Beograd, 1902).} Despite the ongoing growth of population, the Serbian farm economy of 1863 was substantially similar to that of 1843, self sufficient in cultivated products, and selling off a portion of its pastoral output. More land was settled, more forests were cleared and more homesteads created, but they continued to farm and to trade as before.

Over what was probably the greater part of Serbia, there was still little pressure on the supply of arable even by the 1860's and...
a growing population could easily be provided with the tillage that it needed by encroaching on the pasture. As was observed by a traveller with an intimate knowledge of the country:

"...from the great abundance of excellent land, every man with ordinary industry can support his wife and family and have a large surplus... A very small proportion of the whole soil of Serbia is cultivated... if the present production of Serbia became insufficient for the subsistence of the population, they have only to take in waste lands; and improved processes of agriculture will remain unheaded until the population begins to press on the limits of subsistence; a consumption not likely to be brought about for many generations to come."

Excepting that the 'consumption' was rather closer than he thought, this was a fair summary of the situation. The low pressure on the supply of arable resulted in the adoption, as in other frontier type areas, of a cultivatory system which was relatively sparing of labour, relatively wasteful of other resources.

It was, for example, notorious that manure was commonly permitted to waste. A traveller, returned from central Europe in 1844 after a prolonged absence from Serbia, recounts the following dialogue between himself and an innkeeper in the region of Belgrade:

"Why do you burn the manure?"
"What else can I do with it?"
"Why is it not taken out into the fields and spread on them, so that they will be more fertile?"
"They are fertile without manuring."

---


This was probably quite true. The soil was rich and deep, and the return to seed seems to have been high. An official source, the data for which purport to relate to 1847 and 1867, quotes net and gross harvest figures which indicate a seed ratio of 7.3 for wheat and 39 for maize, and net yields per hectare of 9.43 quintals and 11.1 quintals respectively. (If these figures are to be believed, yields could not have risen subsequently and may even have declined in later years). But although the figures for crop area were based on a census, no indication was given as to how the yields were calculated; this was certainly not done on a census basis. But even allowing for a generous dose of optimism, the contrast with the 4.5 seed yield pertaining in Vörmarz Austria does suggest that the peasants had little real cause for concern over the fertility of their soil. Consequently, well intentioned efforts to persuade them to rationalize their farming methods — which, if unaccompanied by capital inputs, would probably have entailed the intensification of labour — failed to result even in a short term response. Milojević notes an attempt during the first government of Miloš Obrenović to encourage improved husbandry in the Kačva:

"...At that time [1837] the duty of the agronomos was to show the peasants a method of working such that 'the abundance of produce be multiplied and the working of the soil improved.' But the experiment was ended the same year. All attempts of the agronomos to get the field tasks attended to in good time remained in vain, because the agriculturalists more readily went off to chatter in the kačna and to their horses than to the fields."

1 Calculated from data in V. Jakšić 'Stanje zemljoradnje u Srbiji' loc cit pp 5, 9, 27.
Abundant land, and a moderate level of taxation (in the 1840's) were equated in the eyes of our traveller with a moderately high standard of crude comfort. The peasants asked him:

"How do people live where you have been?"  
"Eh! my brothers," I say, "These people live quite differently, still, if they were to have such a sufficiency of fertile land and forest, but so little tax to pay, nowhere would there be a happier people."

"Thank God! Surely it is they do not have enough good land and forest?"

"Indeed not, and what there is is so infertile," I reply, "that nothing can grow unless it is manured, and not a stick of wood is cut which does not go for sale..."

"Another asked me: "But surely they pay very high taxes?"

"I reply: "So high, and if that were not enough, nobody is allowed to mill their bread until they have paid tax on it."

"At that they all picked up their hats and said "O God, long live our prince, we thank you.""

In fact notwithstanding their still partly feudalistic institutions the same kind of rude prosperity extended fairly generally through the European lands of the Turkish empire. Demands for tax, tithe and rent did not place an unsupportable burden on the producer, and it was the arbitrariness and corruption of the ruling power - which made for uncertainty and insecurity - rather than the absolute scale of its demands which formed the principal substance of complaint.  

1 'Dr. M.I.S. 'Neko prisadbe,...' loc cit. pp 92-3.  
2 Probably Bohemia.  
3 The close similarity between the Bulgarian and Serbian lands in the first two thirds of the nineteenth century, notwithstanding their radically dissimilar institutions, is evident from S.G.B. St. Clair & C.A. Brophy, A residence in Bulgaria or notes on the resources and administration of Turkey, (London 1863), esp. pp 143-197 and David Urquhart, Turkey and its resources: its municipal organisation and free trade (London 1833).
So the level of per capita production, in the first half of the 19th century was fairly high by the standards of pre-modern economies, and because of the unusually equal distribution of wealth and the high opportunity cost of labour, this was translated to rude mass prosperity.

The test of the subsequent years of development was therefore not so much whether this level could be surpassed, but rather whether it could be maintained as factor supply conditions altered.

It may be questioned whether the total output of this extensive economy had been able before the 1860's or 70's to keep up with the growth of population. Not all areas were adequately endowed with expansible supplies of potential arable. Fertile soil was not in abundant supply in the east of the country;” by the 1880's, there was a sharp regional differentiation between this and the central regions. Since the wars of 1876-7, the Timočka Krajina had come to be regarded as a poverty stricken area whence the authorities were recommending emigration into the newly annexed territories,¹ and where the peasants were obliged to respond to their problems by more intensive agriculture. "The hard working Timočani have not lost unseen even these handfuls of fertile soil which are concealed at the bottom of clefts in the rock, high in the mountains”. Pumping and irrigation were widespread, "thus the fertility of the land is exceptionally increased.”²

¹ D.K. Jovanović "Iz Timočke Krajine..." loc cit pp 156-7.
² V. Karić, Srbija (Beograd, 1887) pp 680-1.
Even if we take the country as a whole, and future experience was to show the tremendous potential for expansion of the arable, the advance of the plough was still slow. According to the arable statistics for 1846/7 and 1866/7, the area of land under grain increased by only 10.4%, at a time when population appears to have expanded by 32.9%. So even if we allow for a very considerable overstatement in the official figures for population growth, it appears unlikely that the output of grain did more than keep pace. Moreover, the capacity of the meadows, wastes and forests to sustain the livestock inventory of an ever rising population was, in some, if not in all areas only too obviously finite. By organizing themselves to exploit the possibilities offered by upward transhumance, by the maintenance of animals on relatively remote high summer pastures, on which they would maintain temporary shelters, peasants could sometimes stretch the amount of pasture available to them, and did, for the remoter pastures were generally understocked. But they were and remained understocked because of serious barriers to their exploitation. Migrant stockraisers must also have faced increasing problems, as the need to safeguard what grazing they possessed caused peasants to defend their land rights with vigour. In 1863, the British consul made the following observation, though he was unable to see the reason for what he observed:

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1 See V. Jankić, "Stanje Zemljoradnje..." loc cit.

2 Accounts of the transhumant system are numerous. An overview may be obtained from Jovto Pečijer, "La Transhumance dans les Pays Dinariques" Annales de Géographie, XXV, (1916).

3 See pp. 255-6 in Chapter IV, below.

4 C. Br. (S) 1863 p 236.
"Though more than two thirds of Serbia are known to be uncultivated, there is not a road but in subject to ownership of some sort, and that is not more carefully enclosed and fenced off than the most productive fields of the richest country in Europe."

It is only too evident that increasing strains were appearing within the system, particularly manifesting themselves in the difficulty encountered in supporting a livestock population of a size sufficient to provide a traditionally based structure of cash income and self-consumption. The strain was most evident in areas where the quality of grazing land was so low as to render the supply of arable inelastic. In the arable short Timor region, it is not surprising to find that the peasants had difficulty finding enough grazing to support their animals. A drought in 1863 highlighted what was obviously a longer run problem. 1

"On the road along the Crni Timok river we see how a man was letting sheep onto the stubble to pasture them. "Why do you let the animals on there, brother", cried the prefect, "Do you know that that is only poison for sheep?".

"I know sir", replied the peasant, "But what can I do? There is no grass; the drought has burned everything up".

"And it is indeed thus. This valley has in fact sufficient moisture for grass to succeed in it, but again it cannot provide fodder for the number of animals which have been released onto it".

Even in the fertile Kačva, where there could be no question of the suitability of the soil for cultivation, the process of clearing Natural pasture after 1833 for ploughing enforced a reduction

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1 Put Licaških Pitanaca... po Srbiji Godina 1863, (Beograd, (1867), p 57.
by the peasants of their holdings of livestock, and a progressive shortage of forest grazing for the pigs resulted in inter-village strife as early as 1840. The open frontier was rapidly closing. Immigration was falling away, in response, to an extent which accounted for a very large part of the slowdown in population growth. Nevertheless, even the slower population growth rate of 1.3% p.a. (between 1843-63) meant that the economic equilibrium of the 1820's and 1830's was coming under increasing strain.

Observers were convinced that the country was becoming poorer. "I fully believe", wrote the British consul in 1863 "that the people of Servia were better off and more thriving in the early days of their independence than they have been subsequently". A pamphleteer of 1881, using (and misusing) data relating to the '60's and earlier, passionately argued the same case: he cited tax figures of 1846 and 1865 to sustain the claim that "our nation stands in a material aspect less well and does not thus live as our fathers lived", he thought the circulation of money had declined between 1846 and 1863, and pointed to a sixfold rise in the number of orphans between the same years as indication of diminution of life expectation. Between 1843 and 1863, he claimed that real income had diminished and that life was 'more miserable'. The case is probably unverifiable for we lack the kind of aggregative data necessary to test it, but it is interesting that such comments were being made. Even if we may doubt contemporary analysis of causation, it is evident that structural changes were going to be needed to accompany the further growth of population, and that these had not taken place by the early 1860's.

1 M.D. Milojević, op cit p 43.
2 C. Br. (S) 1863, p 44.
3 T. S [lojanović], Naš Ekonomska Položaj (Doegrad, 1881) esp. pp 20, 52-3, 59.
In the absence of any development of foreign trade in grain, or other cultivated produce, the kind of structural change which would have been forced upon the peasant economy by demographic growth was one which could only have represented a declining welfare condition. The peasants would have had to sacrifice an increasing percentage of their pastoral output to meet their external commitments, while making good their loss of consuming power from the output of this sector by an increased output per capita of grain. As we have seen, this does not seem to have happened between 1846/7 and 1866/7, but as population growth rates began to pick up in the 1860s, such a trend could not have been long deferred. On the other hand, the establishment of a regular and systematic commitment to supplying the market with an increasing flow of arable products would offer the possibility at least of diverting a part of the pastoral output which could otherwise have been sold on the market toward the augmentation of the supply available for self consumption.

An important assumption behind this statement is that a declining per capita consumption of pastoral produce substituted by a rising per capita consumption of arable products represents a declining welfare condition. Self-evident as this may be, it perhaps needs some justification by reference to observed consumer behaviour in the Sorbian village. It might, after all, have been possible to argue that because of the evident predominance of stockraising in the mid-nineteenth century Sorbian economy, meat consumption had been so high as to render the substitution of grain for meat an indication of an improving welfare condition rather than a deteriorating one.
But during this period, meat consumption was not particularly high; it was estimated that the adult Serbian peasant consumed only "about a pound of bacon" a week. ¹ (Bacon in this sense would refer to any type of dried or smoked hog flesh, and was probably the main meat source of the peasantry). And in the popular esteem, the consumption of meat was closely associated with prosperity. Describing the interior arrangements of the peasant houses in the okrug of Valjevo, N.Đj. Milićević noted that in the place of honour, behind the seat of the head of the household, "hang dried bacons, the finest jewels in the meat consuming peasant house."² Further to stress this point, he related the anecdote of the peasant who went to inspect the house into which his daughter was to be married. "The cottage is undeniably small", he noted "but it is meaty, provided with bacon". (Thus satisfied he gave his daughter in marriage, unaware that the meat had been borrowed from a neighbour in order to impress him).³

Transition towards cultivation for market purposes was the only means within the farm economy whereby the peasantry could maintain and increase their per capita cash incomes without cutting further into the self consumption of pastoral produce. This could not be achieved merely by producing more from the cultivating sector. The surplus also had to go to market. This transition represents the principal theme of the process of agricultural development in the late 19th and early 20th centuries. In time, we may anticipate that this process would

¹ C.Đr. (S) 1863, p 214.
³ Ibid, p 412.
become linked to a general tendency towards agricultural intensification.*

An approach can be made towards the quantitative assessment of the monetization of the farm economy firstly through examining the long run structural and quantitative changes which took place in the export of farm output.

Over the period 1862-1911, the total value of exports, as recorded by the customs houses, rose by 594%. Within this growth the structure of the export trade underwent a fundamental shift. In 1862, hogs, sheep, and goats, and their derivatives, horned cattle, and horses accounted for 79.3% of total exports; grain, flour, bran, plums, prunes, and plum jam (pok-ôz) to only 1.6%. By 1911, the division had altered to 24.6% and 50.4% and the true trend away from the export of pastoral products was stronger even than these figures suggest, because in 1911 (but not in 1862) the export of meats and fats concealed the indirect export of a significant quantity of arable produce (mainly maize).

We have already shown that this transition appears to have been retarded, and in Chapters III and VI, we will examine some of the reasons for this retardation. The question remains, however, as to whether the long run change in the volume and structure of the export trade was sufficient in magnitude to create a maintained or increased supply of cash income within the peasant sector, after taking account of taxation changes, at least to maintain the level

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*As a matter of observation, the tendency towards intensification only seems to become apparent after the turn of the 20th century (see pp. 217-9 below). But we cannot rule out the possibility that the intensification of animal husbandry significantly preceded that of cereal agriculture, despite the lack of positive evidence for this.
of peasant purchasing, if not to increase it. For the maintenance of free cash income was not in itself enough to maintain the peasant standard of living; increasingly goods hitherto obtainable for self consumption from the pastoral sector had to be purchased on the market as the balance of peasant economy swung towards tillage. N.D. Popović quotes the claim made by a peasant of Kragujevac region as early as 1838 that

"There are more than two thirds of the village people, who, because of the abandonment of stockraising and beekeeping, buy candles, both of tallow and wax, buy cloth for blankets and trousers, not because they do not know how to make those things but because they have nothing to make them from."

This type of pressure could only have increased in subsequent years.

The development of the export trade over the period under consideration gives us an important component of the change in peasant cash incomes during this period. This is set out in Table I. 8 below. In this table certain mineral products have been eliminated, in order for this table to represent something closely approximating the export trade generated by the farm economy. As the mining of copper on a large scale for export was just beginning to develop on a substantial scale at the end of the period, this necessarily reduces the growth trend. The key figures, so far as this analysis is concerned are those of per capita farm exports at constant (1906/11) price, converted to a five year moving average to eliminate the effect of year-to-year fluctuations. This curve has been plotted as Figure I. (1). Behind the impressive absolute trend the rise in the per capita volume index looks modest. For we must not only deflate off this a rise in population to 243% of 1862 (from growth and territorial change), but also of valuation prices of 91%. 2

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2 1862–1911
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<th>Constant</th>
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Notes to Table I. 8.

a. Less certain non-farm exports in some years. See Appendix II to this chapter.

b. Price level of 1906-11.

Sources and calculation: see Appendix II to this Chapter, pp. 66-70

Figure I. (i).

5 YEAR MOVING AVERAGE OF EXPORT VOLUME PER CAPITA.

In dinars at 1906/11 constant prices.

Source: Col. 5 of Table I. 8.
The annual growth rate of per capita farm exports at constant prices was 1.105% p.a. between 1862-66 and 1902-06, or 0.646% p.a. between 1862-66 and 1907-11. This, of course, arises because of the great unevenness with which this growth was distributed; it is almost entirely concentrated in the periods 1862-66 to 1868-72 and 1876-80 to 1890-94, while a marked downtrend evident after 1902-06. The latter can of course be regarded as a temporary phenomenon, the direct result of the commercial war with Austria-Hungary, as is clear from the sharp post-treaty recovery in 1911, though it is nevertheless apparent that the momentum of growth had slowed down sharply in the mid '90's. (Again, as will be seen in chapter II, Austrian interference with the livestock trade may have had a part to play in that). But the sharpest boom — that of the late 1860's — was primarily a boom in the export of stock-raising produce, for although agricultural exports were beginning to appear in much larger quantities than hitherto, their volume, compared to livestock products was still slight. It is only during the second gradual though persistent up-cycle of export quantities in the 1880's and early 1890's that we observe rapid progress in the intensification and monetization of the agricultural economy in per capita terms (a fact the more remarkable as rural population was also growing at its greatest rate during this period). Nevertheless, we can say that, until the commercial war, the necessary transformation towards monetization and intensification was proceeding, but only at about 1½% per annum.

1 disregarding 1912, when the outbreak of war in October resulted in the mobilization of the railways and the consequent suspension of export operations.
This trend tends to understate to some extent the growth of farmers' per capita earnings from foreign trade. In the first place, it does not include the probable contraband export of rakija aijivovica which did not exist at the beginning of the period, and may have been worth up to 2 million dinars per annum at the end of it. Secondly, it takes no account of invisibles. In 1863, the British consul estimated that about 1.25 million dinars were taken out of the country by migrant workers from the Turkish provinces, but by the end of the period the balance on this account, though indeterminate, was certainly positive and substantial. Moreover, it is not possible because of the frontier change of 1878 to compare like with like: per capita earnings from the export trade in the annexed territories were almost certainly lower than those in the rest of the country, so the effect of their inclusion was somewhat to dilute per capita export earnings. Finally, the growth of population may be overstated.

Nevertheless, it would be absurd to speak of a commercial revolution during the years under survey. We can only say that the demographic explosion was met by a movement towards the intensification of the farm economy sufficient to maintain per capita export earnings and to permit them also to advance.

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1 See below pp. 393–4, 426–8
2 C. Fr. (S) 1863 p 245.
3 See below Ch. VIII, pp. 544–69
4 See above p. 7
But as the next stage, we must take into account the effect on peasant income of sales into a growing urban economy. This is rendered possible, thanks to a survey of the earnings and expenditures of 835 peasant households in 324 villages which was conducted in about 1911 by Mihailo Avramović on behalf of the Union of Serbian Agricultural Co-operatives (Савез Српских Земљорадница Задруж).\(^1\)

This survey, which was the only one of its kind for pre-1914 Serbia, is of immense analytical value, though it is not without certain defects, for the households and villages surveyed were not a representative cross section. Only 12 okrux (out of 17) were included, and the southern part of the country was probably not represented at all among them, for it was stated that industrial crops were not grown in the provinces included.\(^2\) The primary focus appears to be on regions and on properties which were substantially dependent on the sale of grain and livestock for their cash incomes. However, as it is intended to use the survey as an indication of total income and purchasing power, it should serve reasonably well, for the lower incomes derived from farm products in southern Serbia were probably compensated more or less by higher earnings by the peasants from outside the farm economy.\(^3\)

The survey revealed the following gross and net income of the sample properties as in Table I. 9.

---

1 M. Avramović, Κακα Σεληνιακα Χαρδιατρος, p 17. This dating of the survey is offered by the authors of Προινονον Σημανη, p 120.

2 M. Avramović, op cit p 35. The principal industrial crops were hemp and tobacco both of which were grown in the Southern okrux.

3 See below Ch. VIII.
Table I. 9.

Gross and Net Farm Income in 1911.

<table>
<thead>
<tr>
<th>Of farms of</th>
<th>Crona</th>
<th>From Wages</th>
<th>Purchase of cattle</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ha.</td>
<td>72</td>
<td>37</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>150</td>
<td>56</td>
<td>-</td>
<td>102</td>
</tr>
<tr>
<td>5</td>
<td>290</td>
<td>-</td>
<td>-</td>
<td>290</td>
</tr>
<tr>
<td>10</td>
<td>490</td>
<td>-</td>
<td>-</td>
<td>480</td>
</tr>
<tr>
<td>15</td>
<td>1000</td>
<td>-</td>
<td>126</td>
<td>874</td>
</tr>
<tr>
<td>20</td>
<td>2010</td>
<td>-</td>
<td>280</td>
<td>1730</td>
</tr>
</tbody>
</table>

a. As we are interested in net farm income from agriculture we exclude purchases of livestock on the grounds that these constitute an intra-sectoral exchange, as also do wages from labouring. Part of these wages may have been drawn from work in foreign countries and work in the towns or elsewhere outside the farm economy, but it is probable that the greater part were earned from appratiina for larger farmers. The error involved in eliminating them completely will be small because in aggregate they amounted to only 5% of farmers' income. (Avramović, op cit p 17).


To estimate the total cash income of agriculture, this data must be related to the structure of landowning, and the nearest available figure to 1911 is a table for 1905 passed privately from the statistical office to the Industrial Chamber of Commerce, which published it in the form presented below:

Table I. 10.

Landholding Structure of Serbia in 1905.

<table>
<thead>
<tr>
<th>Size of Property</th>
<th>No. of Proprietors</th>
<th>Total in Hectares (000)</th>
<th>Hectares per Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 2 ha.</td>
<td>99,175</td>
<td>104.2</td>
<td>1.05</td>
</tr>
<tr>
<td>2 - 5</td>
<td>140,795</td>
<td>471.9</td>
<td>3.35</td>
</tr>
<tr>
<td>5 - 10</td>
<td>87,663</td>
<td>61.0</td>
<td>6.97</td>
</tr>
<tr>
<td>10 - 20</td>
<td>32,901a</td>
<td>440.8</td>
<td>13.40</td>
</tr>
<tr>
<td>20 - 50</td>
<td>7,750</td>
<td>221.8</td>
<td>23.62</td>
</tr>
<tr>
<td>50 - 100</td>
<td>751</td>
<td>49.8</td>
<td>66.27</td>
</tr>
<tr>
<td>100 +</td>
<td>361</td>
<td>74.6</td>
<td>206.51</td>
</tr>
</tbody>
</table>
a. The original gives 62,901, which is not reconcilable with an area of 440,810 ha, as it gives a mean of 5.32 ha. Given the shape of the curve at this point the mean size of properties should be near the geometric mean of the limits (in this case 14.2 ha.) as is also the case for the 5-10 and 20-50 ha. means on either side. Given also that the total number of properties shown in this table is much higher than that shown for the census of that year (see N. Vučo, Privredna istorija..., p 180) whereas the total area figures show a curve close to the Gaussian distribution, it is almost certainly the number of properties that is in error. The explanation that the '3' was misread or misprinted as '8' is highly likely; this mistake occurs frequently in Serbian statistical publications.

b. This calculation was not in the text.

Source: Industrijska Komora Kr. Srbije Izveštaj o radu i stanju industrije u 1912 i 1913 godini (Beograd, 1914), p 90.

The data in this and the Avramović table had to be matched up to calculate total farm income. By interpolating, earnings of 1.05 ha properties are 35 din., of 3.35 ha properties 200 din., of 6.97 ha properties 347 din., and of 13.4 ha properties, 703 din. Extrapolation of trend to estimate the income of properties of over 20 ha (for which Avramović supplied no data) is less satisfactory, because the trend observable in the 10-20 hectare range, whereby cash earnings nearly doubled for each 5 hectare increment, could not long have been extended. So it seems safer to assume that the product of the 16th hectare and upwards was fully monetized. This product apparently yielded in money terms 

\[
\frac{1730-874}{5} = 171.2 \text{ dinars per hectare}. 
\]

According to Austrian consular statistics, wheat in 1911 yielded 10.78 quintals per hectare,\(^1\) while the price of wheat at export valuation being 17.34 din/quintal, the maximum possible return per hectare on wheat would be 186.94 dinaras, which takes no account of the probable difference between export and farm gate prices. On the basis that 171.2 dinaras per hectare represents a full monetization of the crop, incomes of larger farms were extrapolated on this marginal return for the 21 st hectare and upward. Thus, total (not) income of Serbian farms in 1911 is derived as follows:

\[\text{1} \text{Randouwog, 1912, p 12.}\]
Further correction is needed for the expansion of rural population between 1905 and 1911. This increased by 6.99%; an appropriate upward adjustment would, for want of more detailed information, give a figure of 130,600,000 dinars. Now in that year, the value of agricultural exports was 107.3 million dinars, which suggests that sales into the internal market amounted to about 31.3 million dinars. Taking the 1910 figure for urban population of 483,000, this is equal to 64.80 dinars per capita of urban population.

This may now be used to provide some rough intertemporal comparisons, on the assumption that as a maximum the urban population did not purchase a higher volume per capita of farm goods in former years than it did in 1911. (It is more likely that it consumed a good deal less). Deflating per capita sales by farms to the urban population to current money terms of previous periods (on the basis of current and constant price export values in Table 1.8) maximum urban consumption is calculated as below:

---

1 Because of the diminution of urban self-sufficiency in the provision of food, which seems still to have been high as late as the 1870's, see below, pp. 192-3
### Table I. 11.

Cash Incomes of the Farm Population from Exports and Sales to the Towns 1862/4 - 1911.

<table>
<thead>
<tr>
<th>Period</th>
<th>Per capita consumption of farm products, current dinars.</th>
<th>Urban population (1859/66 mean)</th>
<th>Urban purchases (100 din)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862/4</td>
<td>36.62</td>
<td>103,000</td>
<td>3,772</td>
</tr>
<tr>
<td>1898/1900</td>
<td>44.44</td>
<td>334,000</td>
<td>14,062</td>
</tr>
<tr>
<td>1905/1907</td>
<td>49.14</td>
<td>408,300</td>
<td>20,063</td>
</tr>
<tr>
<td>1911</td>
<td>64.80</td>
<td>483,000</td>
<td>31,300</td>
</tr>
</tbody>
</table>

whence,

<table>
<thead>
<tr>
<th>Period</th>
<th>Urban purchases (100 din)</th>
<th>Exports (100 din)</th>
<th>Total sales (100 din)</th>
<th>Total sales per capita of farm population.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862/4</td>
<td>3,772</td>
<td>17,246</td>
<td>21,018</td>
<td>19.56</td>
</tr>
<tr>
<td>1898/1900</td>
<td>14,862</td>
<td>63,086</td>
<td>77,948</td>
<td>34.92</td>
</tr>
<tr>
<td>1905/1907</td>
<td>20,063</td>
<td>74,165</td>
<td>94,228</td>
<td>38.72</td>
</tr>
<tr>
<td>1911</td>
<td>31,300</td>
<td>107,332</td>
<td>138,632</td>
<td>53.84</td>
</tr>
</tbody>
</table>

The above being expressed in current money.

Therefore we can say that even if per capita purchases of the towns from the rural economy failed to rise over the period under consideration, the demand of the urban economy for rural produce was rising slightly faster (7.3 times) than that of the export market (5.3 times) resulting in a growth rate of cash incomes from the farm economy which was somewhat faster than the growth of per capita farm exports.

However, during the period 1863-1911, there was an enormous rise, of 9.2 times, in the ordinary receipts of the state from internal sources, to meet the soaring costs particularly of defence and of national external debt servicing.\(^1\)

\(^1\) Between 1863 and 1911, the cost of the military establishment rose from 4.2 million to 27.9 million dinars; (having peaked in 1909 at 59.7 million) and that of debt servicing rose from 0.28 million to 32.4 million dinars. (In 1911, total expenses including those of the public sector were 125 million dinars). C. Br. (S) 1863, p 221; Lampo, thesis, Table IV 2a, p 184.
had been laid upon the backs of the peasantry, the consequent massive increase in their taxation burden would have eaten away all or more of their slowly rising cash incomes. There would have been little doubt that the monetization of peasant production had proceeded at too slow a rate to maintain the peasant standard of living.

The structure of state receipts in 1863, 1899, 1906 and 1911 is set out in Table 1.12. Firstly it is necessary to separate from the receipts of the state the receipts of the public sector, to strike a true revenue figure. The public sector is treated as including the gross receipts of the railways, state mines and domains, the post office, government press and oprava fondava (mortgage bank). The state monopolies were run as revenue raising rather than service providing enterprises, so the "profits" of these monopolies have been treated as if they constituted excises, and were included as indirect taxes, while the expenses of the monopolies are included with public sector receipts. The turnover of the public sector (thus defined) rose 108 times between 1863 and 1911, comprising 23.8% of the receipts of the state in the latter year, so that true revenue receipts rose only 6.9 times. Immediately apparent is the tendency for an increasing proportion of revenue to be levied by indirect taxation, rising from 11.9% in 1863 to 57.1% in 1899 and to 58.9% in 1906, before falling slightly to 56.8% in 1911. This arose from the establishment of state monopolies and excises, and the increases in tariff protection from 1892. All such indirect taxes could stand as security for bondholders in a way in which direct taxes could not, and this was certainly an important reason for the preference of the government for them. We note that within the relatively slow growing direct tax sector, the
### Table I. 12.

Revenue and the Public Sector.

<table>
<thead>
<tr>
<th></th>
<th>1863</th>
<th>1899</th>
<th>1906</th>
<th>1911</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(000 dinars)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receipts of the state</td>
<td>12,430</td>
<td>68,825</td>
<td>93,716</td>
<td>126,361</td>
</tr>
<tr>
<td>Loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domains</td>
<td>107</td>
<td>160</td>
<td>355</td>
<td>497</td>
</tr>
<tr>
<td>F.P.T.</td>
<td>105</td>
<td>1,400</td>
<td>2,257</td>
<td>3,285</td>
</tr>
<tr>
<td>Press</td>
<td>63</td>
<td>791</td>
<td>500</td>
<td>732</td>
</tr>
<tr>
<td>Railways</td>
<td>6,200</td>
<td>8,700</td>
<td>14,000</td>
<td></td>
</tr>
<tr>
<td>Mines and mining royalties</td>
<td>54</td>
<td>865</td>
<td>1,540</td>
<td></td>
</tr>
<tr>
<td>Banking</td>
<td>50</td>
<td>820</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>Expenses of monopolies</td>
<td>-</td>
<td>5,942</td>
<td>6,847</td>
<td>9,117</td>
</tr>
<tr>
<td>Total public sector receipts</td>
<td>275</td>
<td>8,655</td>
<td>13,497</td>
<td>20,954</td>
</tr>
<tr>
<td>REVENUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct taxation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9,830</td>
<td>19,035</td>
<td>25,262</td>
<td>32,671</td>
</tr>
<tr>
<td>Back taxes</td>
<td>875(?)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4,250</td>
<td>4,926</td>
<td>8,961</td>
</tr>
<tr>
<td>Total direct revenue</td>
<td>10,713</td>
<td>23,285</td>
<td>30,188</td>
<td>41,632</td>
</tr>
<tr>
<td>of which, on farm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>population</td>
<td>9,776</td>
<td>18,027</td>
<td>21,650</td>
<td>28,764</td>
</tr>
<tr>
<td>and on non-farm pop.</td>
<td>937</td>
<td>5,258</td>
<td>8,498</td>
<td>12,868</td>
</tr>
<tr>
<td>Indirect taxation:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excises</td>
<td>-</td>
<td>4,070</td>
<td>5,717</td>
<td>8,165</td>
</tr>
<tr>
<td>Monopoly &quot;profits&quot;</td>
<td>-</td>
<td>13,519</td>
<td>17,989</td>
<td>21,312</td>
</tr>
<tr>
<td>Customs duty</td>
<td>1,000</td>
<td>8,750</td>
<td>10,410</td>
<td>12,930</td>
</tr>
<tr>
<td>Other revenues</td>
<td>442</td>
<td>4,604</td>
<td>9,068</td>
<td>12,251</td>
</tr>
<tr>
<td>Total indirect revenue</td>
<td>1,442</td>
<td>30,943</td>
<td>43,184</td>
<td>54,658</td>
</tr>
<tr>
<td>Per capita direct tax on farm income</td>
<td>9.10</td>
<td>8.03</td>
<td>8.91</td>
<td>11.17</td>
</tr>
</tbody>
</table>

### Notes

- a. described as 'unforeseen contingencies' on revenue a/c.
- b. Excludes obrt (turnover tax on business) which is better treated as an indirect from the point of view of incidence.

### Sources

- G. Br. (S) 1863, p 221; A. A. N. W. 22 Serbia Finance 1 1897-9, fo. 109; G. Br. (S) 1908 (Finance) pp 5-11; G. Br. (S) 1912, (Finance) pp 5-9; Laspe, thesis, p 128.

The farm population are assumed to have paid all the land tax and the poll tax in proportion to their numbers, but no other direct tax. Back taxes are assumed to have been paid in proportion to direct tax liability. "Other revenues" are principally composed of judicial and other fees (in 1911, 47%), interest received (25%) and 'sundry receipts' (17%). Also see text.
proportion paid by the peasantry diminished sharply from 91.2% in 1863 to 71.0% in 1906 and to 69.1% in 1911. This was not only a consequence of increasing urbanization, but also of the establishment of (and growth of revenue from) direct taxes on unearned income, business profits and on salaries.

The outcome of this was that direct taxation of the peasantry remained remarkably stable in per-capita terms — and if we take into account the diminishing value of money, its real burden was falling. Thus disposable incomes of the farm community after direct taxation rose very rapidly in money terms, and even in terms of the volume of sales they represent after direct taxation, they rose quite sharply, though at a diminishing rate:*

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Sales per cap. of farm population</th>
<th>Total direct tax per cap. of same</th>
<th>Net income after tax</th>
<th>In 1906/11 export prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1863</td>
<td>19.56</td>
<td>9.10</td>
<td>10.46</td>
<td>16.21</td>
</tr>
<tr>
<td>1899</td>
<td>34.92</td>
<td>8.08</td>
<td>26.84</td>
<td>34.28</td>
</tr>
<tr>
<td>1906</td>
<td>38.72</td>
<td>8.91</td>
<td>29.81</td>
<td>34.46</td>
</tr>
<tr>
<td>1911</td>
<td>53.34</td>
<td>11.17</td>
<td>42.67</td>
<td>37.37</td>
</tr>
</tbody>
</table>

Per capita direct taxation on the non-farm community rose by comparison quite sharply, from 9.10 dinars in 1863, to 15.72 dinars in 1899, 20.81 dinars in 1906, and 26.64 dinars in 1911; that is at a rate persistently higher than the rate at which direct taxes on the peasantry increased.

The Avramović survey provides a useful comparison with these direct tax figures, because it breaks down farm expenditures into various categories including "tax and other". These are set down below, together with expenditure totals:

*While tax figures relate to single years 1863, 1899 etc., sales (Table I.11, p.49) refer to periods 1862/3, 1898/9, 1900, 1905/6, 1911. Adjustment to constant 1906/11 prices was carried out on the basis of weighted annual average prices for these periods weighted by annual export volume, not for the single years 1863, 1899 etc.
<table>
<thead>
<tr>
<th>No. of farms</th>
<th>Size (hectares)</th>
<th>Each paying (dinars)</th>
<th>Total 'tax and other' (COO dinars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>99,175</td>
<td>1.05</td>
<td>16</td>
<td>1,587</td>
</tr>
<tr>
<td>140,795</td>
<td>3.35</td>
<td>46</td>
<td>6,477</td>
</tr>
<tr>
<td>87,663</td>
<td>6.97</td>
<td>86</td>
<td>7,539</td>
</tr>
<tr>
<td>32,901</td>
<td>13.40</td>
<td>206</td>
<td>6,778</td>
</tr>
<tr>
<td>7,750</td>
<td>28.62</td>
<td>555</td>
<td>4,301</td>
</tr>
<tr>
<td>751</td>
<td>66.27</td>
<td>1,402</td>
<td>1,053</td>
</tr>
<tr>
<td>361</td>
<td>206.51</td>
<td>4,557</td>
<td>1,645</td>
</tr>
</tbody>
</table>

Between 10 and 20 hectares there is an approximate linearity of 'tax and other' payable per hectare at 22.50 din. Interpolating for smaller holdings and extrapolating on a linear basis for larger holdings, we can calculate total payment of 'tax and other' by a similar procedure to that used for the calculation of total farm income. Thus:

and adding in 6.98% adjustment for population growth 31,430,000 din.

This figure of 31.4 million dinars of 'tax and other' may be compared with the calculated direct tax on the farm sector of 28.8 million. It suggests that 'other', under which heading seems to be included interest burdens and various fees, was not a significant item.
of farm expenditure.\footnote{This does not preclude the peasants from having to have borne heavy interest burdens, because one important way in which rural usury operated was through the sale of the crop while still 'green' to the merchants, (соленаство). This would not show up as a money payment under 'tax and other' but in the form of a lower money income than might otherwise have been obtained. On usury, see M. Radonavić, "Zolenaštvo i Maće Solo" in N. Stejadinović, (ed) Maće Solo (Beograd, 1929). Nevertheless, this evidence does appear to support the view that Yugoslav writers may have been prone to exaggerate the importance of usury. See Lampo, thesis, pp 94.-6.}

However, the burden of direct taxation on the peasantry was only part of the burden of taxation which they had to bear. As indirect taxation rose 37 fold over the period 1863-1911, this may have served as a more effective means of squeezing the peasantry. After all, it is through forcing up indirect taxation (particularly through the establishment of the alcohol monopoly) that the Tsarist government is supposed to have laid the burdens of its industrialization programme on the backs of the Russian peasantry.

It appears to be possible, \`\` from the Avramović data, in conjunction with the revenue figures compiled in Table 1.12, to estimate, if not the actual indirect taxation paid by the peasants in 1911, then the upper limit to the amount they could have paid. Farmers' expenditures on various categories of goods, and total expenditures, (deducting purchases of livestock and of payment of 'tax and other') based on the Avramović survey, are laid out below:
Table I. 13.
The Structure of Peasant Consumption
in 1911.

<table>
<thead>
<tr>
<th>Size of Property</th>
<th>Clothing and Footwear</th>
<th>Salt, petroleum rice, sugar and other</th>
<th>Tools, Books, Sickness, etc.</th>
<th>Total (in dinars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ha)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>63</td>
<td>8</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>92</td>
<td>13</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>163</td>
<td>23</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>201</td>
<td>31</td>
<td>34</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>237</td>
<td>53</td>
<td>88</td>
<td>14</td>
</tr>
<tr>
<td>20</td>
<td>362</td>
<td>62</td>
<td>99</td>
<td>18</td>
</tr>
</tbody>
</table>

\(^a\) 12 dinars in the original, but total figure is 10 dinars higher than the sum of components, while trend of spending on this item would be obviously inconsistent at 12 dinars.

Source: M. Avramović, op cit p 39.

All the main excised or monopolised commodities including salt, sugar, petroleum — and presumably tobacco — would have to be accommodated within the third column of this table. 53.92\% of indirect revenues were levied from purchases of these items in 1911. Yet they constituted rather a small item of peasant spending. To estimate what was the maximum component of such expenditures which would have been swallowed by indirect taxation we will set this as equal to the 'profit' percentage of the monopolies — 70.0\%. A modest element of customs duty would have been incorporated into expenditures on clothing and footwear, tools, books, etc., and sickness. We can only make the roughest of guesses as to how much but we will assume that the peasant paid the same proportion of his cash income in customs duties as the urban population. Using the figures provided by the Geneva committee,
non agricultural incomes - from craft and factory industry, trade
building and services totalled 287 million dinars.\(^1\) Agricultural
cash incomes amounted to 138.6 million dinars, or 32.6\% of the total
cash income. 32.6\% of 12,930,000 customs duty is 4,215,000 dinars.
'Other revenue' being composed to the extent of 69\% in judicial fees and
interest payments we will assume were met by the peasant under the
rubric of 'Tax and other' to the extent of the balance left after tax,
or 2,666,000 dinars. We will calculate peasant expenditures on heavily
taxed goods on the basis used for calculating total income and total
tax liability, extrapolating above 20 hectares on the marginal rate
of expenditure between 15 and 20 hectares. (This will probably
overstate total expenditure on these items as the marginal rate appears
to have been falling.)

<table>
<thead>
<tr>
<th>Farm size ha</th>
<th>Expenditure per farm on heavily taxed items</th>
<th>Expenditure Aggregated (000 din)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.05</td>
<td>8</td>
<td>793</td>
</tr>
<tr>
<td>3.35</td>
<td>13</td>
<td>2,534</td>
</tr>
<tr>
<td>6.97</td>
<td>26</td>
<td>2,279</td>
</tr>
<tr>
<td>13.40</td>
<td>48</td>
<td>1,579</td>
</tr>
<tr>
<td>23.62</td>
<td>78</td>
<td>605</td>
</tr>
<tr>
<td>66.27</td>
<td>145</td>
<td>168</td>
</tr>
<tr>
<td>206.51</td>
<td>393</td>
<td>144</td>
</tr>
</tbody>
</table>

\[8,643 + 698 = 8,649,000 \text{ din.}\]

The tax component of this would be 70\%, or 6,023,000 dinars.
This means that the ceiling level of peasant indirect tax liability
was 4,215,000 plus 6,023,000 = 10,238,000 dinars or 3.98 dinars per
capita plus 2,666,000 dinars in 'other' = 12,904,000 dinars. Thus

\(^1\) Srpski Centralni Komitat, (hereafter, S.C.K.) Srbijska u Inovnom
Foraliu pro, za Vreme, i Poslo Svetskoj Rata 1914-1918 (Zenov, 1916),
p 65.
the urban indirect tax burden (allowing 2,666,000 dinars for the peasant share of judicial fees etc.) would be at least 41,754,000 dinars or 86.45 dinars per capita. Thus in all, the peasants paid (direct and indirect) 41,668,000 dinars of tax - 16.19 dinars per capita, at most, or 30.06% of their cash income. Urban dwellers paid the rest, 54,622,000 millions, or 113.09 dinars per capita - at least.

Of course, this is partly the result of urban per capita cash incomes being so much larger than those of the peasantry; on the basis of the Genova committee's figures, they come to 494 dinars per capita (compared with 53.84 din. for the peasants). Tax per capita thus works out at 19.04% (at least) compared with 30.06% (at most) for the peasants. But, against this, a large part of peasant income - certainly more than half - was taken in kind, which suggests a remarkable neutrality in tax incidence, despite the apparently regressive makeup of its structure.

To make a crude comparison with 1863, we will assume that in that year the ratio of peasant per capita cash income to urban per capita cash income was unchanged. This would imply a peasant share of 43.6% of customs duty payments and fees etc. or 701,000 dinars, which is 0.65 din. per capita.

Thus comparing 1863 with 1911:

<table>
<thead>
<tr>
<th>Year</th>
<th>Pro tax income</th>
<th>Tax Pro tax income</th>
<th>Indirect Tax</th>
<th>Disposable Income</th>
<th>In 1911 prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1863</td>
<td>19.56</td>
<td>9.10</td>
<td>0.65</td>
<td>9.81</td>
<td>17.36</td>
</tr>
<tr>
<td>1911</td>
<td>53.84</td>
<td>11.17</td>
<td>5.01</td>
<td>37.66</td>
<td>37.66</td>
</tr>
</tbody>
</table>

* For 1863, basis is 1862/4 prices (weighted annual average)
Therefore, unless the terms of trade (after allowing for taxes on consumption) turned against the peasantry, its free purchasing power rose by 28.4% over this period in money terms or by 116.9% in real terms, or at 1.6% per annum cumulative. During the same period, the growth of the volume of supplies delivered to the export market was at about 0.65% per annum, and to all markets at 59.4% or 0.9% per annum.

It is evident from this that the peasant was to a great extent able to avoid (or evade) the burdens of indirect taxation whereas there was little opportunity of so avoiding payment of direct taxes. Whereas in 1911 the peasantry paid 69.1% of the direct taxes, they paid but 23.6% of the indirect taxes at most. Back in the 1860's when most of the revenue had been raised through the poll tax, more than half of the peasant's income in cash had gone to the government; in 1911 when 57% of the revenue was collected indirectly a maximum 30.05% of his cash income went in taxes. The main items contributing to the revenue by monopolization or excise were: tobacco, salt, petroleum (for lighting), cigarette paper, matches, cooking oil, rice, sugar, coffee, beer, cement, conserves, chocolate, fine wines and electric lighting. Of these items, cooking oil was essentially an urban product as the peasant used lard, beer was little seen in the villages, which did not have electric lighting, while some of the other items were primarily urban consumption goods as well. The biggest revenue raiser of them all was tobacco, the gross turnover of the tobacco monopoly amounting to 5.9 dinars per head of the population. Yet nowhere is expenditure on tobacco mentioned in the Avramović survey; at best it must be included in 'salt, petroleum, rice, sugar and other'. It could be that the peasants simply did not smoke, but that is doubtful.
In 1867, 1,419 hectares of tobacco were grown, in every okrug of the country, the greater part probably for self consumption, and even after establishment of the tobacco monopoly (1885) Mallat noted that "Everybody, man, woman and the peasants themselves smoke cigarettes." After its establishment, producers were compelled to produce only for sale to the state tobacco monopoly which only licenced production in certain parts of the country, to facilitate administration. One means by which tobacco could be obtained was by smuggling. A large smuggling trade appeared as soon as the monopoly was set up, and in 1889 it was reported that it "does not cease to grow." In the frontier areas, tobacco could readily be obtained by smuggling, as the authorities complained:

"It is done without any obstruction on the side of the present guards... the customs officials in Užice crux are rebuked by the State monopoly administration for not showing the least will or energy, although they are sufficient in number to check the smuggling..."

By 1893, smuggling "has grown so strongly that the sale of monopolized articles has fallen heavily". Smuggling extended not only to tobacco, but coffee, sugar, cigarette paper and petrol. But again, insofar as the peasantry continued to smoke, it was probably of the illegally grown produce of their own fields. The one item which

1 V. Jakšić, "Stanje zonaljoradnje u Srbiji" loc cit p 92.
2 J. Mallat, op cit II, p 162.
5 Ibid.
the peasantry would have found it difficult to avoid purchasing salt, and this was very heavily taxed by the state monopoly to the extent that 79% of the turnover was 'profit' margin. Even so, supposing that the peasantry had bought the same amount of salt per capita as the townspeople, their salt bill would have amounted to only 1.02 dinars per head, out of 3.12 dinars for 'salt, petroleum, rice sugar and other'. Nor should it be assumed that the imposition of the state salt monopoly necessarily forced the price of this commodity up against the peasantry, for the salt import had hitherto been in the hands of private monopolists.\(^1\) And it is, to say the least, curious that while in 1863, 245,500 tonnes of salt were consumed,\(^2\) the corresponding figure for 1904 was only 22,900.\(^3\) Again we may suspect the existence of an active smuggling trade.

In summary, therefore, it is evident that the growth of peasant income after taxation was very much greater than its growth before deduction of tax. This was because the incidence of direct taxes on the peasants was gradually reduced over time, in the process of moving from a poll to a land basis, and because of the extraordinary ability of the peasantry to avoid the purchase of these highly taxed goods which were contributing so much to the growth of the revenue, either by abstention or evasion. The image of the Serbian peasantry groaning under the weight of an evermore crushing tax burden to pay for the state's diplomatic and military entanglements\(^4\) is at

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1 See below p. 447

2 Net import

3 Stat. 1904, p 786.

variance with the facts. Whether or not the rise in the discretionary per capita income of the peasants was sufficient to compensate for the diminution of their incomes from self consumption it is impossible to say, but it seems quite likely: between 1863 and 1911 per capita discretionary income (in terms of 1911 prices) rose by 20 dinars, or about 120 dinars a family, no insignificant sum when compared with a total of 80-595 dinars over the range of holdings from one to 20 hectares. Though the prosperity of the Serbian farm economy was unevenly spread by the 20th century, the imagery conjured up by the anecdote of Rebecca West of the peasant of Sabac who told his king that "he did very well, thanks to the trade in pigs and smuggling" may not have been too far removed from reality.¹

The lightening (relatively) of the tax burden on the peasantry was no accident, rather a reflection of political realities. To borrow a bon mot from Tomasevič on the government of pre-1914 Serbia, "It is possible to rule against, but not without the peasants."²

State finances were therefore frequently impossibly stretched, and in 1895 the state was technically bankrupt, which led to foreign

¹ Rebecca West, Black Lamb and Grey Falcon, I, (London, 1942) p 462.

budgetary supervision. Even then it had to resort to hand to mouth expedients and was frequently unable to pay its officials promptly.

For example, in February 1898, heavy military spending

"forced the government into arrears with the salaries due to its military and civil services - the rank and file of the army have received no pay for several months and although the troops stationed at Belgrade have been paid, officers in the interior have only just had their salaries for last October."

Pledged revenues had to be re-borrowed to meet short term needs, and led to strong diplomatic protests. Recourse was had to more foreign borrowing, for in 1902 it was reported that

"Fresh taxation is almost impossible - all possible taxes have been introduced and all articles capable of taxation are taxed already. It is almost equally impossible to rely on an increase of existing taxes. That would only increase the injustice of the present system which is already sufficiently oppressive in the case of certain classes of the population."

Rather more to the point, "It is moreover doubtful if any such measures might not render the collection of taxes more difficult." This was indeed the case. In 1904, a year of poor harvests, it was reported "there is no doubt that this year the peasants will absolutely refuse to pay the additional taxation which has already raised such discontent."

1 Lampo, thesis, pp 149-50, 156.
2 A. Milne Beaman, Twenty Years in the Near East, (London, 1898) p 137.
3 PRO FO 105 124 No. 3 comm. of 15.2.1898
4 Ibid.
5 PRO FO 105 146 Unnumbered despatch 'summary of a speech made by the Servian finance minister in introducing the estimates for 1902'.
6 PRO FO 105 154 No. 3a comm. of 11.8.1904.
There was nothing absolute about taxable capacity, however. The limit was one of political expediency, and that limit was low.

In 1891,¹

"Despite the exceptionally abundant harvest the taxes are not paid owing to the unwillingness of the authorities to apply pressure calculated to injure the party to which they all belong..."

Only two years previously peasant pressure had been successful in forcing a reduction in the rate of land tax,² and the real strength of the peasant lobby became apparent early in the twentieth century when the government sought to obtain indirect taxes on the production of alcohol. This was one item which could really have prized a heavy yield of indirect revenue from the peasantry, and the issue was therefore explosive. Even the collection and publication of statistics on alcohol production, which was rightly suspected as being preparatory to taxing it, raised a political furore: the government was obliged to retreat. A tax on school text books was found to be much more readily acceptable.³

It therefore appears that the peasantry were to a significant extent successful in warding off tax changes which would damage their own interests, a considerable feat, at a time when the aggregate burden of taxation was rising sharply. The shift of tax incidence away from the rural sector, and onto the urban population, whose extent we have attempted to measure, was not merely the chance outcome of the swing in

¹ PRO PO 105 93 No. 74, comm. of 8.10.1891.
² Lampo, thesis, p 146.
fiscal policy towards indirect taxation, a phenomenon which was common to most of central and eastern Europe at this time.

We would not go so far as to claim that the diminishing incidence of taxation on the peasants substantially discouraged them from expanding their market output, for the biggest gains that they achieved in terms of shifting the incidence of taxation towards the towns seem to have been achieved before 1859, when in any case, the volume of peasant per capita output was growing more rapidly than in subsequent years. But the suggestion that growing fiscal demands contributed towards the monetization of farm production by forcing an increasing supply of peasant produce onto the market should be firmly rejected. On the contrary, the relatively sluggish growth of the tax burden on the peasants meant that their purchasing power expanded more rapidly than their gross incomes, and did little or nothing to accelerate the pace of structural change whose principal driving force was the inexorable growth of rural population. As we have noted, population pressures on the economic structure which emerged in the half-century following the establishment of self government were being felt with increasing severity at the beginning of the period under survey, with the result that peasant welfare was probably declining at this time, as the necessary structural response had not yet begun to take place.

However, positive responses to the problem were eventually to become apparent, and probably halted the hitherto declining trend in welfare, and maybe reversed it. In chapters III, IV, VI and VII, we shall analyse the means by which structural changes were achieved within the Serbian farm economy between the 1860's and the Balkan Wars.
In Chapters V and VII (especially) the impact of these structural changes will be assessed from the aspect of their generating supplies of raw materials to provide a basis for industrialization. In Chapter VIII, consideration will be given to the means employed to obtain cash incomes by peasants who found it impossible or impracticable to expand and monetize cultivational agriculture, especially in the less fertile regions. Finally in Chapter IX our conclusions will be summarized and extended to a brief survey of the way in which the development of the rural economy was likely to have affected the demand side of the industrialization process.

In Chapter II, however, we will look at the limitations imposed on Serbia's trade expansion by her external commercial relations, especially with Austria-Hungary, which created exogenous parameters within which the development process was constrained.
APPENDIX I. 1.

Tables I. 5-7

Sources and Method of Calculation.

1. Annual migrant inflow to Belgrade 1862-1908, all migrants.

Sources: for annual births and deaths in Belgrade:

- M.G. 1893 pp 68-74, Raznim (section on movement of population).
- Census of population 1866, 1874, 1884, 1890, 1895, 1900, 1905, 1910.

Within each period, inward migration is taken as growth of Belgrade population (derived from comparison of censuses) plus the excess of deaths over births during that period.


Sources: breakdown of population 31.12.1960 by national origin and in case of native born population as to whether born in place of residence or otherwise. Separate statistics were shown for rural and urban residents, M.G. 1900, pp 45-6 (set out below as appendix table I. (1), lines 3 and 4). Breakdown of population of Belgrade in 1890 and 1900 by origin - foreign, Belgrade born, born elsewhere in Serbia, (from census statistics): Vladišlav Milenković, Ekonomska Jstorija Beograda, (Beograd, 1932) p 72 (set out below, Appendix Table I. (1) lines 1 and 2). Mortality rates for Belgrade derived from sources as for (1) above.
Appendix Table I (1)

<table>
<thead>
<tr>
<th>Lines</th>
<th>Belgrade residents</th>
<th>Foreign born</th>
<th>Born elsewhere in Serbia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1890</td>
<td>19,854</td>
<td>15,955 (44.7%)</td>
<td>35,809</td>
</tr>
<tr>
<td>2.</td>
<td>1900</td>
<td>21,105</td>
<td>24,225</td>
<td>45,330</td>
</tr>
<tr>
<td>3.</td>
<td>Of all town residents in 1900:</td>
<td>43,381</td>
<td>105,479</td>
<td>148,860</td>
</tr>
<tr>
<td>4.</td>
<td>Of village residents</td>
<td>44,275</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the basis of annual mortality rates for Belgrade of the 35,809 non-Belgrade born residents in 1890, 26,420 would still have been alive in 1900. In 1900, there were 45,330 non-Belgrade born residents, so 18,910 of these must be the surviving remainder of those who migrated to the city in the decade 1891-1900. Assuming a constant annual immigration flow, and the same mortality rates as the population of the city as a whole, 21,189 must have immigrated in this decade. (This squares reasonably well with the estimated inflow for the comparable period in the first table, derived from a different basis). This is entered as Table I. 6 (1/3).

In 1900, of 148,860 immigrants to towns, 45,330 lived in Belgrade so 103,530 lived in the country towns. Assuming constant migration trends as between Belgrade and the country towns, then immigration into country towns in 1891-1900 was 21,189 x 103,530/45,330 = 48,394.[Table I. 6 (i1/3)]. Thus immigration into all towns was 69,583.[Table I.6 iii/3].

Serbian and foreign born migrants. Of those migrants into Belgrade who came in before 1891, 55.4% were foreign, 44.6% Serbian born.
As 26,420 were alive in 1900 they would split 14,643 and 11,772, foreign and Serbian born. So to make up the numbers as they were in 1900, these must have been joined by 6,457 foreign and 12,453 Serbian born survivors of immigrants into Belgrade within the previous decade, i.e. immigrants into Belgrade 1891-1900 split 34.15% foreign and 65.85% Serbian born. Therefore of the 21,189 who migrated to Belgrade in 1891-1900, 7,235 (34.15%) were foreign born and 13,954 were Serbian born. [Table 1.6 (i/2) and (i/1)]

Now in 1900, if foreign born immigrants in all towns were 43,381 and foreign born immigrants in Belgrade were 21,105, there were 22,276 in the country towns i.e. foreign migrants went to Belgrade and the country towns in the proportion 1:1.0555. So if in the '90's, 7,235 settled in Belgrade, 7,636 would have settled in the country towns. [Table 1.6 (ii/2)]. Serbian natives migrated to country towns [Table 1.6 (ii/1)] therefore = (ii/3) - (ii/2) = 49,758.

In 1900, foreign born rural population was 44,275, foreign born town residents 43,381. Thus it seems that foreigners immigrated about half and half to town and village. So immigration of foreigners into the villages would have been about the same as that of foreigners into the towns, i.e. about 15,000 (iv/2) and total foreign immigration about 30,000 (v/2).

From this we can estimate the native born element of migrants into Belgrade over time. In the 1890's 13,954 natives migrated to Belgrade = 1,395 per annum. Immigrants to Belgrade pre-1890 were 44.7% Serbian. Immigrants in the 1890's were 65.85% Serbian born.
The trend is very clearly away from the dominance of the foreign born
immigrant stream towards the Serbian born immigrant stream. Thus it
is likely that at least 65.0% of post-1900 immigrants into Belgrade
were Serbian born and that to 1884, less than 44.7% of immigrants were
Serbian born. In the period 1885-1892, to compensate, slightly more
than 44.7% of immigrants would have been Serbian born, thus we may
assume that in the earlier part of this period, 1835-1887, the ratio
of 44.7% is about right. The second column of the first table is
derived from the first column by applying this principle. Derivation
of the third column is self-explanatory.

3. Rural and Urban natural increase.

Between 1890 and 1900 the censuses indicate that Belgrade
increased by 15,500, all towns by 49,400, thus population of country
towns increased by 32,900. (Or by slightly less if we allow for the
chartering of new towns during this decade). To achieve this growth,
Belgrade absorbed 21,189 immigrants, the country towns 48,394. Thus
Belgrade failed to regenerate itself to the extent of 5,700 and the
country towns to the extent of 15,500, - or, 570 p.a. and 1,550 p.a.
respectively. On the basis of 1895 census population these work out
at decreases of 1.0% and 0.6%.

Between 1890 and 1900 censuses, national population rose by
343,800. Subtracting foreign immigration of 30,000 and urban natural
increase of -21,200, natural increase of the villages would be 335,200.
Rural population in 1895 (census) was 2,023,000, so an annual increase
of 33,520 gives a natural increase for the villages of 1.66% p.a.
Of these 33,520 p.a., 5,471 p.a. went to the towns, or 16.3%. Of these
about 1/4 went to Belgrade and 3/4 to the country towns.
APPENDIX I. 11.

Sources and Calculation of Table I. 8.

Col. (1) Farm Population. Defined as earlier (see Table I.2) as village population plus farm families in towns. Census of 1866 indicated 25.16% farm families in the town population of pre-1873 Serbia. Censuses of 1895 and 1900 indicated a figure of 21.8% for post-1873 Serbia. To obtain a consistent approximation over time, 75% of town population was deducted from each pre-1873 census total, and 70% of town population in subsequent censuses. Comparison of censuses indicates a growth of farm population as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1859</td>
<td>1,008.7</td>
<td>1.6</td>
<td>1884</td>
<td>1,717.7</td>
<td>2.25</td>
</tr>
<tr>
<td>1866</td>
<td>1,126.9</td>
<td>1.3</td>
<td>1890</td>
<td>1,962.3</td>
<td>1.3</td>
</tr>
<tr>
<td>1874</td>
<td>1,249.7</td>
<td>1.62</td>
<td>1895</td>
<td>2,092.9</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1900</td>
<td>2,268.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1905</td>
<td>2,466.4</td>
<td>1.13</td>
</tr>
<tr>
<td>1910</td>
<td>2,545.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Farm population for inter-census years was estimated by applying these growth rates to the census figures. The resulting table of farm population is set out as Col. 1.

Col. (2) Source for exports: Standard sources for Serbian foreign trade statistics. As Serbia's export trade consisted almost entirely of farm and forestry commodities and semi-manufactures derived therefrom, we have used the unadjusted export totals as representing exports from the farm economy. However, there may be a slight underestimation implicit in the data for 1879 onward because of the existence of a substantial
smuggling trade in rakija (see Table VII. 6 and notes). Secondly, up to 1875 there was a significant salt re-export which more properly should be regarded as a transit item, and from 1907 onwards the export figures are swollen by the appearance of substantial copper exports from the Bor mine. Therefore salt exports 1862-1875 have been eliminated from the totals presented in Col. 2 as well as copper exports from 1907.

Thus to convert Col. 2 back to the official totals of exports the following sums should be added (in 000 dinars):

<table>
<thead>
<tr>
<th>Year</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862</td>
<td>312</td>
</tr>
<tr>
<td>1863</td>
<td>194</td>
</tr>
<tr>
<td>1864</td>
<td>259</td>
</tr>
<tr>
<td>1865</td>
<td>710</td>
</tr>
<tr>
<td>1866</td>
<td>818</td>
</tr>
<tr>
<td>1867</td>
<td>830</td>
</tr>
<tr>
<td>1868</td>
<td>410</td>
</tr>
<tr>
<td>1869</td>
<td>400</td>
</tr>
<tr>
<td>1870</td>
<td>322</td>
</tr>
<tr>
<td>1871</td>
<td>204</td>
</tr>
<tr>
<td>1872</td>
<td>140</td>
</tr>
<tr>
<td>1873</td>
<td>140</td>
</tr>
<tr>
<td>1874</td>
<td>192</td>
</tr>
<tr>
<td>1875</td>
<td>171</td>
</tr>
<tr>
<td>1907</td>
<td>2,605</td>
</tr>
<tr>
<td>1908</td>
<td>3,284</td>
</tr>
<tr>
<td>1909</td>
<td>6,070</td>
</tr>
<tr>
<td>1910</td>
<td>8,000</td>
</tr>
<tr>
<td>1911</td>
<td>9,584</td>
</tr>
<tr>
<td>1912</td>
<td>9,402</td>
</tr>
</tbody>
</table>

Also note that before 1879, prices and values were expressed in groš and para. (40 para = 1 groš). A new decimalised dinar/para currency was introduced in 1879, with the dinar at a gold parity with the French franc (or 25 dinars = £1 3s.6d.) Groš were converted to dinars at 5.1 (100 para dinarško = 1 dinar). Weights had been expressed in oka where 1 oka = 1.28kg.

For comparability all pre-1879 weights and prices have been converted in Table I. 8, and throughout the thesis, to metric equivalents and dinars, even for periods when the dinar did not exist. Most post-1876 Serbian work follows the same convention.
It should be noted that where the dinar has to be converted in terms of other currencies, its gold parity cannot always be used, because as a silver-backed paper currency it is often traded at a discount (or agio) on gold. Tables of agio at different dates are set out in Lampe, thesis, pp 157, 187.

Col. (3) Exports 1862-1912 expressed in constant 1906-11 prices. This is a chain index of quantities constructed in the following manner. For each of eight sub-periods, a sample was composed of major export products, selected so as to achieve for that period as large as possible a percentage of total trade consistent with an approximately proportionate division between animal and crop products. The selected products for each sub-period are listed below, together with, in brackets, the proportion of the total export trade that the sample represents.

1862-1866. Fat hogs, lean hogs, oxen, wool, lambkins, horses, sheepskins, tallow, light rakija, wheat (75.5%).

1866-1871. Fat hogs, lean hogs, wheat, oxen, lambkins, horses, wool, sheepskins, light rakija, prunes (79.2%).

1871-1875. The same (80.0%).

1879-1884. Hogs, prunes, wheat, hides, cordage (70.4%).

1884-1888. Prunes, wheat, maize, hides, hogs (66.1%).

1888-1897. Fat hogs, lean hogs, wheat, maize, oats, prunes, raknez (60.0%).

1897-1906. Fat hogs, wheat, maize, barley, prunes, raknez, hides (61.4%).

1906-1912. Wheat, maize, barley, prunes, raknez, hides, neat, eggs, lard (68.2%).

For each sub-period and commodity in the sample, a mean (constant) price was calculated, except for 1906-1912, where the constant price was of 1906-11, as it was felt that in 1912 war conditions unduly influenced the price of commodities.
Each year's export volume at constant price within the sub-period was calculated by valuing the sample commodities at that constant price, totalling, and then crossing up in the proportion that that year's total value exceeded the total of current price sample values.

The next problem was to link the quantity indices for each sub-period. For this reason the last year of each sub-period was included as the first year of the next. In this respect, the break in the statistical series during the war years 1876-78 caused some difficulty, particularly as the export statistics of the subsequent period 1879-1887 were of very poor quality. Accordingly it was decided to link 1875 with 1888, the first year of improved statistics, so that the inherent inaccuracy of the intervening figures should not distort the relationship of the preceding and succeeding periods.

Therefore a new sample of prunes, wheat, oats, bulks and oxen, horses, lean hogs, fat hogs and wool was used for both years, and in each case the sample products were valued at 1875 and 1888 prices. It was discovered that taking 1875 prices as 100, 1888 prices at base year weighting were 70.4109 and at end year weighting were 70.5981.

The geometric mean of these figures, 70.5045 was used as the price link between these years.

Incorporating this relationship, the constant price quantity series for the sub-periods were weighted in terms of 1906-11 prices as follows, the weightings pre-1878 being divided by 5 to take account of adjustment from PROA to dinar prices:
1907-12  100.00%
1898-1906  127.95%
1889-1897  147.56%
1885-1888  149.52%
1879-1884  130.69%
1872-1875  22.11%
1867-1871  24.92%
1862-1866  30.20%

The results are tabulated as Col (3) of the table.

Col. (4) Constant price exports of farm population per capita is derived by division of Col (3) by Col (1).

Col. (5) is a five year moving average of Col (4).

Col. (6) the price level of export commodities at customs valuation is obtained by division of col (2) by Col (3). It should be noted that the validity of Column 6 as a price deflator is limited to customs valuation prices. In the earlier years these appear to diverge markedly from market prices in the same year, but remain inaccurate in this respect throughout the period. For a discussion on the source of these difficulties, see Jelenko Petrović, Reforma Trgovinske Statistike. ( Negotrad, 1909) esp. pp. 16-29. Petrović regards the quantities as recorded accurately (though comparison with rail freights statistics for the same year and commodity might bring this conclusion into question); but in addition to the usual negligence in recording values when a specific tariff was levied, and under-recording them when the tariff was ad valorem (both types of tariff being applied to exports as well as imports, though only for small sums), he criticises the inadequate liaison between the customs administration and the statistical division of the finance ministry which processed them.
a. The significance of Serbian commercial relations with Austria-Hungary.

Because Serbia was a landlocked country, the conditions under which she traded into the international market were affected to an unusual extent by her politico-economic relations with her immediate neighbours, particularly with Austria-Hungary. The dominant role of Austria-Hungary arose for several reasons. It aspired to hegemony over what it regarded as its sphere of interest, particularly after the war of 1866 had channelled its expansionist ambitions in a south-easterly direction. Across its railways and through its entrepôts lay Serbia's main markets, both within and outside the empire. Serbia's other neighbours were too backward to offer substantial markets for her exported raw materials, and too much like Serbia in productive structure to develop strong complementarities. At best they could provide alternative means of transit to the Austro-Hungarian railways into world markets, but in times of normal trade relations, the access which they offered to these markets was less advantageous to Serbian exporters than the Austro-Hungarian connection, with the consequence that they were relatively little utilized.

Though technically landlocked, Serbia enjoyed fairly good waterway connection: via the Danube and Black Sea into the Mediterranean, with the consequence that a substantial Serbian export trade passed through the Romanian entrepôts of Braila and Galaţi, despite the obstruction posed by the Iron Gates of the Danube which lay downstream.
of the major Serbian river ports.

However, the traditional staples of the Serbian export trade were hogs and cattle, driven on the hoof. The structural changes which were taking place in the Serbian economy meant that these trades were not in the sector which was to provide the main impulse to export growth, but as their decline was for a long while relative, and not absolute, the prosperity of the Serbian economy was dangerously dependent on their having free access to their traditional markets, in Hungary, Austria and Germany. It was difficult (and until the development of a domestic meat packing industry and of the refrigerated railcar almost impossible) to divert these exports to other markets. Sea freighting of live animals, particularly of hogs in fattened condition was experimented with on several occasions. It was found to be just viable for lean oxen, though even then only as a poor second best to land access, but similar attempts with fattened hogs were utter failures, for the animals were unable to stand protracted journeys in the holds of vessels in the torrid heat of the Mediterranean summer. ¹

The Serbian experience was not unique in this respect. Live animals had generally to be transported (on the hoof or on the rail) by land routes to their markets. Even a country like Denmark with unquestionably good maritime connections was dependent on the German market for disposal of her hog exports until, stimulated by necessity, the Danes established their own meat packing industry, which enabled them to penetrate the U.K. market.² Thus the dependence of the Serbian


livestock trades on access to the central European market conferred upon Austria-Hungary the immense political power to close the frontier to them and thereby create economic chaos in Serbia. This power was exercised from time to time.

The knowledge that Austria-Hungary had it in its power to wreck Serbia's commerce, and was not loath to use that power, determined the direction of Serbia's commercial policy. There were two alternatives. The obvious policy was to recognize the existence of a great power-satellite relationship, and to conduct the affairs of the country in such a way as to give no offence to Austria-Hungary; to permit Vienna to dictate the structure of Austro-Serbian commercial relations, and to concede any point which would imperil Serbian access to the Imperial market.

There was one great difficulty however. Such a policy had to begin from the assumption that Vienna's interest in the Serbian economy was founded upon the desirability of a close economic connection between the two states. The desirability of this connection in Austrian eyes would depend on the belief that the Serbian economy was complementary to rather than competitive with that of Austria-Hungary. There was some justification for this view. As an unindustrialized territory, Serbia, by reason of its proximity to the Empire, and its isolation from other industrial powers, provided a sheltered market for Austrian manufactures, and a politically secure haven for Austrian capital exports. Small though the Serbian market was, it was one of the very few external markets where Austrian industrial exports stood in a strong position against competition from the products of more
highly industrialized states. As a supplier of imported foodstuffs and raw materials, however, Serbia was of rather less importance to a state which was itself amply endowed with most competing products. Nevertheless, the re-export of part of the produce received from Serbia provided a profitable source of entrepôt business and, in any case, if Serbia was to pay for the exports she took from Austria, and service the foreign debts owed to her, she had to be able to sell her output.

But after the Ausgleich of 1867, Vienna could no longer conduct its commercial policy towards Serbia without taking Hungarian interests into account. At this time, Hungary had no powerful industrial lobby, no capital tied up in Serbia, and an over-riding agrarian interest which was concerned to ensure that Serbian competition did not affect the selling price obtained for its own produce. So a Hungarian voice in Vienna's commercial policy meant that the Empire could no longer be relied on to favour a close economic connection between itself and Serbia. It meant that if pressure was brought to bear on Serbia's livestock interest, it was not simply to encourage compliance with Austria's demands, say, on access for manufactures, but because the Hungarians wanted to keep Serbian meat out of the Imperial market.

Thus in Belgrade a policy of acquiescence was not necessarily seen to pay. Serbian manufacturing interests - the archaic but politically vocal craft guilds - had to be sacrificed to the interests of Austrian manufacturers, and were understandably opposed to this policy, while the producer and the exporter of livestock derived no security from the commercial arrangements with the Dual Monarchy.
Though Austrophobia was a widely held sentiment in Serbia (the other side of the coin was Russophilie), 'emancipation' of Serbia's trade was for a long time more desirable than practicable. For Serbia to be able to stand a commercial confrontation with Austria, and to survive the closing of the Austrian market, she had to be able to slaughter and pack her own meat, find markets on which it would be acceptable, and dispose the necessary transport means to get it to market. Once these conditions had been achieved, she could survive a commercial confrontation, though not without cost. This confrontation occurred in 1906-10, but although Serbia was by this time technically ready to survive it, and was prepared to react to Austrian pressures with emancipationist policies, these were more in the nature of a political demonstration than a long term economic plan. The best business arrangement was still a close commercial relationship with Austria-Hungary, but in order to exact terms from Austria which would make the relationship fruitful for Serbia, the latter had to demonstrate her capacity to survive the difficulties created by Austrian ill-will.

Coming almost at the end of the period, it is difficult to view the commercial changes of the Tariff War for the transient phenomena that they were, or might have been, but for the impending political upheaval which was to redraw the map of eastern Europe. For reasons which we will shortly examine in detail, the changes imposed by the modifications of Serbo-Austrian commercial relationships from the Ausgleich up to the commercial war were of a cumulative and long-term nature, and unlikely to be reversed. In an analysis of long-run change in the commercial structure of the Serbian economy, these earlier changes had a much greater structural significance. We will therefore place
our emphasis on the earlier period, and conclude the chapter with a brief review of the commercial war period, with primary regard for such long run changes as it engendered.

b. Austria, Serbia and the commercial treaty of 1831.

The circumstances of the period up to the Russo-Turkish war (1876-8) may be dealt with briefly, because from the Serbian point of view, trade relations with Austria-Hungary were unrestricted and the tariffs in both directions were low. Vienna treated Serbia as a market for manufactures, and as a supplier of pastoral produce which could be re-exported, and therefore provided useful entrepôt business. Though Serbia was still technically part of the Ottoman Empire, her commercial relations were governed openly in the Austrian interest. In 1862, Vienna was obliged to assent to an increase in the Ottoman tariff from the 3½ rate which had pertained since the peace of Pojarevac (Passarowitz) in 1718 to 6½. But Serbia was expressly excluded from this measure so that Austrian goods continued to pay only 3½ on the Serbian frontier. Austrian satisfaction with this arrangement was again reflected in Article 37 of the Berlin agreement of 1878: "Till the conclusion of new treaties nothing can be altered in the existing commercial relations of the principality toward foreign countries." European free trade conditions meant that there was no reason for obstructing Serbian exports. This remained the case throughout the period, as the German tariff only went up in 1879. This does not exclude a growing nervousness during the '70's that changes were imminent.

1 K. Vujic, 'Hajnovi obrt u trogovinskoj politici' Glas Srpske Kraljavnke Akademije, 2-1 razred, LXIII (Beograd, 1903) pp 175-6.
2 Ibid, p 177.
Vienna's desire to enforce on Serbia a status quo in commercial arrangements in 1878 reflected her concern to keep the Serbian market open for Austrian manufactures, while at the same time not wishing to make any long term commitment to Serbia on the terms under which the latter could export to her, because she wanted first to ascertain the conditions under which she could expect to export to Germany. This was of much greater interest (so far as the prospective Serbian treaty was concerned) to Budapest than to Vienna for, if Austro-Hungarian produce were to be shut out of the German market, it was the Hungarian producers who were going to suffer from Serbian competition in the Austro-Hungarian domestic market. In particular the pressure might fall on the Hungarian hog trade, and therefore, the Hungarians wanted to ensure that they were left with a free hand to discriminate against Serbian imports at any time their own hog export might be threatened. The Austrians at this time were contemplating absorbing Serbia as they had just swallowed Bosnia-Hercegovina, this time through the medium of a customs union. The Hungarian agrarian interests vetoed this proposal. It was also opposed in Hungary on the curious grounds that Serbia, with low taxation and cheap labour, would become a relatively attractive location for industrial capital seeking to manufacture within the common tariff area. 1

The prospect of a customs union being ruled out, Vienna was in no hurry to sign a commercial treaty with Serbia. The Serbians, on the other hand were desperate for one. They knew that they had no hope of being allowed to protect their manufactures (though there was some wishful thinking on this point) but they were very much concerned

1 PRO FO 105 10 No.23 com. of 4.4.1879.
to end the uncertainty that the treatiless condition inflicted on their exports. The issue was confused by another question: at Berlin, the Austrians had committed Serbia to build the section across her territory of the projected Budapest-Belgrade-Constantinople railway, and the branch from this at Niš (now in Serbian hands) to Salonika. These two lines were to be the physical expression of the Drang nach Sudoesten. The Serbians had little desire to see this connection built (see p. 136, below) and a strong disinclination to mortgage the State treasury to the hilt in order to finance it. Moreover, they were not at all sure that Austria wanted to complete the railway at all. Negotiations with Turkey over building a junction between this line and her own railways were allowed to drag out, and this raised the suspicion that what Austria-Hungary really wanted was a spur which would lead into the heart of Serbia and then stop, which would be built and maintained at Serbia's expense, and which, while linking Serbia tightly with the Empire, would forestall the possibility of effective competition for Austria by giving Serbia a maritime link.¹ In order to coerce Serbia into signing the railway contracts, the Austrians let it be understood that they would not extend a commercial treaty to Serbia until the railway contracts had gone through.² To underline the extent to which Serbia needed the commercial agreement, the Hungarians were given free rein to interfere with Serbia's export trade. The pressure had the desired effect.

Serbia entered into her ill-fated railway contract with the French Union Générale, (which went bankrupt in the middle of the work), owing Serbia huge sums for unexecuted work paid for in advance with government bearer

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² PRO FO 105 10 No 42. comm. of 26.6.1879.
bonds)\(^1\) and Austria accorded the Serbians a ten year commercial treaty in 1881. Serbia had to give Austria terms for her exports so designed that these paid only half the duty which would be borne by imports from any other country with which Serbia signed any subsequent most favoured nation treaty. Good terms were accorded for Serbian dry goods, and a formal veterinary convention regulated the import of Serbian cattle. The convention did not however extend to hogs which left to the Hungarians to import or refuse Serbian hogs at their own discretion.\(^2\)

To understand why the Hungarians held out for this provision, it is necessary to review developments in the international hog trade.

\(^1\) The full story of this affair is told in J. Fouvier, \textit{Le Krach de l'Union Générale}, (Paris, 1960).

\(^2\) W.S. Vucinich, \textit{op cit p 171}.

\(^3\) See Table II, 2, below.
outbreaks of foot and mouth disease, the hog population of the more advanced European countries rose very strongly during the period under discussion, as may be seen in Table II. 1., and production probably expanded more than proportionately to numbers, as breeding and feeding improvements accelerated the maturation process and increased fecundity.

Serbia, Hungary and Congress Poland were the big traditional suppliers onto the European market, but Poland and Serbia seem to have been unable to absorb the new agricultural technologies which would have enabled their own hog production to keep pace; on the contrary, production was suffering from the increasing pressure on the natural economy. Hungary was in an intermediate position. Their livestock statistics are less reliable than those for Germany and Austria, and downward pressures were reinforced by outlet difficulties; nevertheless the divergence of trends is striking.
Table II. 1.

Hog Population of Various European Countries.

1859 - 1910 (in millions).

<table>
<thead>
<tr>
<th>Year</th>
<th>Denmark</th>
<th>Germany</th>
<th>Austria</th>
<th>Hungary</th>
<th>Serbia</th>
<th>Poland</th>
</tr>
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<tr>
<td>1859</td>
<td>1.83a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1866</td>
<td>1.35a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1867</td>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1869</td>
<td>2.55</td>
<td></td>
<td></td>
<td>3.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1870</td>
<td>0.44</td>
<td></td>
<td>7.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1873</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1876</td>
<td>0.53</td>
<td></td>
<td>2.72</td>
<td></td>
<td>3.41</td>
<td></td>
</tr>
<tr>
<td>1878</td>
<td>9.21</td>
<td></td>
<td>4.80</td>
<td>1.07b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>0.77</td>
<td></td>
<td>3.55</td>
<td>0.91</td>
<td></td>
<td>1.50</td>
</tr>
<tr>
<td>1881</td>
<td>12.17</td>
<td></td>
<td></td>
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<td>1883</td>
<td>0.83</td>
<td></td>
<td>6.45</td>
<td>0.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>14.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1888</td>
<td>1.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>16.81</td>
<td></td>
<td>4.68</td>
<td>0.96</td>
<td>1.26</td>
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</tr>
<tr>
<td>1892</td>
<td>1.46</td>
<td></td>
<td>4.37</td>
<td></td>
<td></td>
<td>1.31</td>
</tr>
<tr>
<td>1893</td>
<td>18.92</td>
<td></td>
<td></td>
<td></td>
<td>0.91</td>
<td>1.16</td>
</tr>
<tr>
<td>1895</td>
<td>5.07</td>
<td></td>
<td></td>
<td></td>
<td>0.85</td>
<td>0.80</td>
</tr>
<tr>
<td>1896</td>
<td>22.15</td>
<td></td>
<td>5.53</td>
<td></td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>1897</td>
<td>6.06</td>
<td></td>
<td>5.49</td>
<td>0.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>1.47</td>
<td></td>
<td>6.43</td>
<td>0.86</td>
<td>0.58</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

a. Those figures are adjusted to include the probable hog population of the annexed territories, to make them broadly comparable with post-1878 statistics. Thus to the Serbian census statistics for 1859 and 1866 have been added 62,000 head, the hog population of the annexed territories in 1883, for which see N.Dj. Milidović, Kraljevina Srbija, (Beograd, 1884) p. xxxv.


Sources: Serbia - Državna, IV, p. 349; Statistical Yearbook, 1914, p. 1285. Hungary (exclusive of Croatia-Slavonia) 1876-84 for Kingdom Hungary with deduction of 750,000 head (1878 census figure for Croatia-Slavonia) M.S.E. 1893, p 104; M.S.E. 1900, p 100. All other statistics from Statistical Abstract (Foreign Countries) 1861-1875/6, Parl. Papers, 1877, LXXXV, passim.
Thus despite stagnation in the herds of the traditional exporters, overall output was growing fast, so that between 1867-71 and 1877-81, the market was to undergo an abrupt transformation. In the period 1867-71 Serbia was exporting 342,000 hogs per annum\(^1\) and Austria-Hungary imported 569,000, most of the balance coming from Romania.\(^2\) Hungarian surpluses were insufficient to make Austria-Hungary a net exporter, but she nevertheless passed on some 253,000 hogs per annum, nearly all to Germany.\(^3\) Denmark, a minor supplier, was sending Germany in live and slaughtered condition, much of her annual export of 91,000\(^4\). The U.S.A., a large supplier into Europe was temporarily sending out exported hog produce in smaller quantity than hitherto; \(2/3\) of the 57,300 long tons went to Britain, leaving the equivalent of about 200,000 live hogs for other markets.\(^5\) Penetration in Germany was still weak. Serbia was thus still the dominant supplier into central and western Europe. Ten years later in 1877-81, ravaged by war, and on a long-term decline as well, Serbia's hog export had fallen to 243,000.\(^6\) Though supplies from Romania also declined, Austro-Hungarian supplies to Germany slightly increased to 250,000 as an expansion in internal

\(^1\) Standard sources for Sorbian foreign trade statistics.

\(^2\) Auswörter über den Auswärtigen Handel Österreichs 1867, passim.

\(^3\) Ibid

\(^4\) Statistical Abstract (Foreign Countries) 1860-1875/6 pp 46-7, Parl. Papers 1877 LXXXV

\(^5\) Ibid pp 82-3; Quinquennial Trade Abstracts, p 209, Parl. Papers 1872, LVI

\(^6\) Period 1879-81. No statistics were kept for 1876-8.
production, particularly in Austria, offset the fall in imports. But Danish exports rose threefold to 290,000, and U.S. exports underwent a more than eightfold increase, with some 10% or the equivalent of half a million live hogs entering the German market alone.

The response to the parallel influx of cereals from the U.S.A. onto the German market is well known. In 1879, agrarian agitation won its first protective tariff. Yet there was nothing for the hog raiser. Import duties on hogs were raised from 2.00 to 2.50 marks per head, but a duty of 0.50 marks per quintal was placed on barley, the main feedstock. As it took between 3.3 and 6.4 units of cereal to put one unit of live weight on a hog, this ratio rising with the weight of the animal, only the raisers of young hogs of up to about 50 kg live weight were as well off or better off than they had been before vis-à-vis importers enjoying free market access to barley, while producers of the big lard hogs of 130 kg and upwards were actually worse off vis-à-vis importers than if there had been no tariffs at all.  

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1 Ausweise über den Auswartigen Handel Oesterreichs 1877, passim.
3 See below p. 86.
5 H.N.P. 1906.2, p 305 (See Appendix to this Chapter).
6 Attention has been drawn to this tariff anomaly in connection with the Caprivi treaties by Alexander Gerschenkron, Bread and Democracy in Germany (New York, 1966), p 73, but it was in fact operative from 1879 onward.
Not surprisingly, the new arrangements invited an intensification of import competition.

Unlike cereal producers, hog producers did not constitute a strong political lobby, as they were predominantly small farmers. At a rather later date it was noted that "the density of the pig population on the smallest holdings of less than half a hectare is almost ten times as great as the average for all farms" in Germany.¹ Moreover, meat prices were politically more sensitive than the price of grain. When the duties on cereals were raised, only the bourgeois liberal interest had lobbied wholeheartedly in favour of free trade, and scorn of the support of the manufacturing interest on this issue, it carried little weight in the legislature. Social-Democrat attitudes were ambiguous; they "disapproved of proposals which tended to raise the price of food" but some of them adopted the familiar line of argument "that a protective tariff might increase the demand for labour in the home market, and consequently bring some benefit to the workmen."²

But effective protection of the hog producer, which took into account the burden imposed by protection on his food inputs, would force a very substantial price increase on a commodity whose price had

¹ R.J. McFall, *The World's Meat* (New York, 1927) p 268. But policy all along tended to favour the breeder over the fattener. There could have been an explanation for this similar to that which appears to have accounted for similar policies in Austria-Hungary, See pp. 95-6 Belov

not, in any case, fallen to the 'abnormally' low level ruling in the grain market. And as meat consumption appears to have been elastic to price changes, the resultant change in the supply-demand equilibrium would not necessarily benefit the producer.\(^1\) Moreover, the effects of protection on the price of meat were rather more obvious to the consumer than those on grain, for unlike cereal, meat was essentially a differentiated product. Canned and cured U.S. hog products sold across the shop counter at a large discount on the domestically produced item; protection would cause this discount commodity to disappear from the shops, and put consumption of the commodity in any form outside the reach of the consumer.\(^2\)

However, if protection for the hog raiser could not be brought in through the front door, partial protection could be obtained by engineering a public health scare, based on the alleged injuriousness of imported meat. The government could then step in and prohibit the import of supplies from allegedly contaminated sources. "A government

\(^1\) This problem appears to have affected the decisions behind the 1906 tariff, for although the general tendency was to shield producers behind substantially higher walls than had operated under the Caprivi system, by lowering the duty on feed barley from 2 to 1.30 marks in the Russo-German treaty, while raising the duty on hogs from 5 marks to 9 marks, (which was prohibitive) the tariff makers indicated their awareness of the difficulties which would result from placing the whole of the incidence of meat protection on the consumer. A. Gerschenkron, op cit p 73.

\(^2\) "Lard became an important and extensively used article of food only through its import from America; German lard on the other hand because of its high price remained a luxury. In 1881 and the first half of 1882 Westphalian and Oldenburg hams cost 1.05 to 1.10 marks a pound, and American hams from 60 to 64 pfennigs." L.I. Snyder, "The American-German Pork Dispute, 1879-1891" Journal of Modern History, XVII.1. March 1945, p 18.
keeping out cheap food would be resented by the poor. A government posing as the protector of its peoples' health could not be blamed.1 Fears that American pork was responsible for sporadic outbreaks of trichinosis were raised by a dubious scientific publication emanating from Vienna in 1878 and were assiduously fed by press publicity, which created a minor panic among European consumers. This provided a splendid propaganda tool for protectionist interests. The disquiet was not alleviated by bland American denials, or by the disinclination of U.S. hog packers to submit their produce to microscopic inspection. Boycotts of U.S. pork were quickly transmitted from southern Europe to Germany, and led in June of 1880 to a prohibition on U.S. chopped pork and sausages. With the exception of the U.K., most European powers followed suit. U.S. threats of retaliation merely provoked resentment. But U.S. hams and bacon entered in increasing quantities, touching 585,000 long tons (equal to about 600,000 live hogs) in 1881;2 after prolonged and acrimonious debate a total sanitary embargo was imposed on U.S. hog products in March, 1883.3

Rather shortsightedly Hungarian hog exporters welcomed these measures, in the naive belief that it opened them a privileged market.4 But the potential universality of the sanitary weapon had already been

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2 Ibid pp 8-9.
3 L. Enyder, "American-German Pork Dispute..." loc cit p 22.
4 "Svinjarcku Trgovina u Prešolj Godini" Vido (Zagreb) IV, 1883, 19, p 4.
demonstrated in 1879, by a series of closures of the German frontier against Austro-Hungarian produce because of cattle plague in Bohemia and Silesia; Germany was then regarded as an undependable market outlet, though it was difficult to bypass it.\footnote{Economist (London) 21.6.1879 p 710; 28.6.1879 p 738.} The Imperial government, which was well aware of the threat that the sanitary weapon posed to its own commerce, responded by setting up its own system of sanitary control on exports, and sought to maintain equilibrium on its own markets in the face of German frontier closures by establishing and manipulating veterinary control arrangements on the Serbian and Romanian frontiers. When the German frontier was open to Austria, Serbian hogs entered Hungary under a moderate tariff and when the German frontier was closed to Austria, Hungary promptly closed her frontier on Serbia.

This was taking place during the period of commercial treaty negotiations with Serbia. No reason had to be given by the Hungarians for closing the frontier, as Austro-Serbian trade was still unregulated by treaty. Infection was alleged as the reason for repeated closures in 1880, "though it has since turned out that Serbia was perfectly free from all infectious cattle diseases".\footnote{C. Fr. (S) 1880, p 852.} The Hungaro-German hog problem thus harmonized in its policy implications for Serbian trade with Austrian desires to demonstrate to Serbia the need to sign a railway contract. But as we have already noted, signature of the railway contract still did not give Serbia the secure arrangements for the hog export that she had reason to expect as quid pro quo, for as the Hungarian-German hog problem was still unresolved, the Hungarians
insisted on retaining the ability to transmit the incidence of German action against them backwards onto Serbia.

But even though the German market might be closed from time to time, Austria-Hungary still needed Serbian hogs for she exported fewer than she imported. The Austrians, while permitting the Hungarians a free hand with Serbian hog imports when the market was obviously glutted because of their own export difficulties, were less enthusiastic about Hungarian desires to drive up the price of hogs on an artificially created shortage, and anyway, conflict of this kind damaged the Austrian export trade. But the rapid expansion of Hungarian (and Austrian) agricultural production during the great depression period was rapidly making the common tariff area self-sufficient in pork:

Table II. 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Import (Export) of Hogs into Austria-Hungary</th>
</tr>
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<td>1872-76</td>
<td>468</td>
</tr>
<tr>
<td>1875-79</td>
<td>120</td>
</tr>
<tr>
<td>1877-81</td>
<td>78</td>
</tr>
<tr>
<td>1880-84</td>
<td>47</td>
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<tr>
<td>1882-86</td>
<td>53</td>
</tr>
<tr>
<td>1885-89</td>
<td>20</td>
</tr>
<tr>
<td>1887-91</td>
<td>29</td>
</tr>
<tr>
<td>1890-94</td>
<td>-112 (not export)</td>
</tr>
</tbody>
</table>

Sources: Ausweise über den auswartigen Handel Österreichs 1872, passim; Österreichische Statistik, Bd. 4, 7, 10, 14, 17, 20, 23, 26, 29; Statistik des auswartigen Handels des Österreichische-Ungarische Zollgebiete 1891, 1, passim.

As Serbia had the capacity to export about 300,000 hogs a year, Hungary's ability to re-export the excess supply on the market was

1 PRO PO 105 66 No. 93 comm. of 14.9.1890.
was becoming more critical for Serbia than ever. Frontier closures affected the export trade in 1884, coincidentally with a glut on the international market, though there was no further trouble till 1890.¹

Serbia's trade position would probably have been all the more serious if a commercial war had not broken out between Austria-Hungary and Romania, which eventually resulted in the virtual prohibition of hog imports to the Empire from the latter country. Like that of Serbia, the smaller Romanian hog export trade had been subject to repeated interference by the Hungarians in the early 1880's. The excuse for this again had been the inadequacy of sanitary control in the supplying country. But whereas Serbia could be dealt with as an Imperial satellite, the Romanians were prickly about their sovereignty, and, being aware that the whole sanitary farce was a manoeuvre to protect the interests of the big Hungarian hog breeders, insisted on a mutually acceptable veterinary convention. The Hungarians refused to let this be conceded, so the two countries failed to renew their commercial treaty in 1886. Austria-Hungary used the occasion to pressure Romania (unsuccessfully) by raising her non-treaty tariff on hogs from three to 12 forints. This was prohibitive in its effect.² It at least took some of the pressure off Serbia. It did not however resolve the problem, for the difficulties of the German hog industry continued to intensify. Tariff changes only tended to compound them. Under the 1885 tariff the German hog duty was raised to six marks, offset by a

¹ K. Stojanović, Ekonomski Stanje Srbije... 1878-1903 (Beograd, 1909) p. 41; PRO FO 105 53 No. 4 comm. of 30.7.1905.

rise in the duty on barley to 1.50 marks.\(^1\) The effect of this was to strengthen the protection accorded to raisers of young animals, which were increasingly being reared on skimmed milk\(^2\) but to weaken the protection extended to the fattening trade.

A subsequent boost in the tariff on barley in 1887 to 2.25 marks per quintal, unaccompanied by any compensatory adjustment in the livestock tariff\(^3\) helped neither, but especially disadvantaged the latter. In the Appendix table to this chapter is set out how each combination of feedgrain and livestock tariffs between 1879 and 1891 affected the position of the German hog breeder relative to free market competition. Each tariff change between 1879 and 1887 widened the discrimination between breeders and fatteners to the disadvantage of the latter, and accorded negative protection, or an import subsidy to the importer of fattened animals. Thus although the obvious remedy of a rationalization of tariff levels was not contemplated, backdoor methods had to be continued to render market conditions tolerable for German home producers. Despite Congressional moves in 1886 to establish microscopic inspection in the U.S.A., it was made clear that Germany was still not interested in reopening her market to American produce,\(^4\) and the profitable and rising Danish import at the fattened end

\(^1\) German Tariff, 22.5.1885, pp 5-12 Parl. Papers. 1884-5 LXXI.


\(^3\) C. Dr. (G) 1888, p 5.

\(^4\) L. Snyder, "American-German Pork Dispute..." loc cit p. 27.
of the trade was hit by a closure of the market in 1887.¹

The problems of the German hog raisers were compounded in the late 1880's by the outbreak of an Europe-wide wave of foot and mouth disease, which made its appearance in Germany in 1886 and spread to 23,200 farms by 1889. (It was only to reach its peak in 1892).² Hungarian hog farms were also affected,³ and the disease broke out in Serbia in October 1890, probably by transmission from Hungary.⁴

The widespread prevalence of foot and mouth disease - even though Germany was as badly affected as anywhere else - provided a justification for further interference with imports to assist the home producer. More prohibitions were directed against Danish, Austrian and Russian imports in 1889,⁵ and in 1890 the Germans again closed their frontier against hogs from Austria-Hungary.⁶ Hungary transmitted the shock in similar fashion to Serbia. This time it was alleged that Romanian hogs had been entering Hungary as Serbian.⁷ These measures resulted for Serbia in the most serious and protracted crisis to date.

¹ M.N.P. 1906, 2, p 312.
² S.R. Tirrell, German Agrarian Politics after Bismarck's Fall, (New York, 1951), pp 77-8.
⁴ C.Br. (G) 1889-90, p 16.
⁵ S. Tirrell, op cit p 77.
⁶ PRO FO 105 86 No. 100 comm. of 29.9.1890.
⁷ PRO FO 105 86 No. 61 comm of 19.6.1890; No. 80 comm. of 28.7.1890; K. Stojanović, op cit p 41.
and might well have resulted in a definitive redrawing of the conditions for export, if abrupt changes in world market conditions had not supervened which, for a time, created a sellers' market.

Soaring primary product prices in 1890-91 coincided with shifts in Germany's internal and external political alignments to bring about a temporary retreat under Caprivi from Bismarck's policy of agrarian protection. Alleviations were granted to Austrian and Scandinavian hog importers in 1890.\footnote{S. Tirrell, op cit p 103; C. Br. (A.H.) 1890, p 8.} Imports from the U.S.A. were recommenced in November 1891,\footnote{J.L. Cignilliet "Figs, Politics and Protection..." loc cit p 11.} and the Treaty of Commerce signed with Austria-Hungary in December of that year lowered the duty on hogs to 5 marks (i.e. by 17\%) and that on barley to 2 marks (i.e. by only 11\%),\footnote{A. Gorescheniron, op cit p 73.} which barely altered the relationship between home and imported produce.\footnote{To the slight advantage of the fattener and the slight disadvantage of the raiser of young animals, see Appendix table, p. 127.} The German market was once more open to the hog importer, and on advantageous terms; the (sanitary) floodgate was temporarily down, and U.S., Danish and Austro-Hungarian imports began to pour in, in unprecedented quantity.

Austria-Hungary had been waiting on the cut-turn of her commercial negotiations with Germany, before committing herself to a
now ten year treaty with Serbia. As the German treaty terms gave Hungarian hogs favourable access to the German market, the cause of Hungarian objections to Serbisan imports was largely removed (because they could now be re-exported) and Serbia was therefore permitted favourable terms of access in a new treaty of 1892, including a new sanitary convention, which now included hogs. This made it more difficult for the Hungarians to interfere arbitrarily with their import.¹ The Caprivi policy thus led to a hog export boon for both Germany’s suppliers, and her supplier’s supplier, but this lasted only till 1895.

Shorn of any real protection from import competition, the German smallholder-stockraisers moved into open alliance with the agrarians to intensify agitation against the Caprivi treaty tariff system.² This new alliance the Bund der Landwirte, and its allies, brought the Caprivi government down in October 1894, and although its successor refused to discontinue the commercial treaties in the letter, a fresh round of prohibitions was applied at the end of 1895 to shut Danish and Austro-Hungarian hog imports from the German market.³ This time the

1 W. S. Vucinich, op cit p 175.
2 Gerschenkron treats the vociferous Bund der Landwirte as a tool by which the agrarians manipulated the conflicting interest of the small farmers to their own advantage. See A. Gerschenkron, op cit p 58.
3 C. Br. (1.) 1896 (V) p 8; C. Br. (g) 1895, p 14; C. Br. (g) 1896, p 40. These reports do not indicate that this prohibition became permanent, but this is evident from the cessation of imports thereafter.
prohibition was definitive — it marked the end of the live hog export to Germany from either of these countries, though a substantial lard import from the U.S.A. continued to enter over the tariff.

Just as Germany had been discriminating against the import of smaller animals — weaners and lean animals for fattening — while according substantial subsidies to importers of fattened animals, whose import was kept under restraint by the arbitrary use of the veterinary control weapon, so similarly did Austria-Hungary act towards Serbia.

As in Germany, this form of discrimination was brought about by levying duty through a flat rate capitation tariff, which would constitute a smaller relative burden on the exporter of the more expensive fattened animal than on the low priced lean one. The raising of the Austro-Hungarian capitation tariff to sharpen the differential protection against lean hogs had been expected in Serbia long before the Hungaro-German hog issue had appeared to exacerbate tensions. In 1868, the Hungarian hog tariff had been set at a modest one forint a head. But four years later the rumour circulated in Serbia that Austria-Hungary was about to start applying a really heavy duty of 5 forint per hog against imports, a level which would probably have prohibited the import of lean animals. In the event no such tariff was applied, but in 1879, pressure was brought to bear on Serbian

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1 After this only a controlled import of 100,000 hogs per annum entered the Reich, almost exclusively from Russia. For 1903-06 hog imports see Statistisches Jahrbuch für das Deutsche Reich, 1907, p 128.

2 Ibid, p 124.

3 C.Br. (A.K.) 1877 (A), p 56.

commerce by the doubling of the former import tariff to two forint (gold) per hog, which was thought sufficiently high to prohibit the entry of unfattened hogs. Although the Serbian customs compounded the difficulties of the exporters by levying an exit duty of 1.20 dinars per hog throughout the period, suggesting that the Serbian government did not consider the level of duty as harmful, other observers clearly differed.

What is undeniable is that the Serbian hog trade had shrunk considerably since the 1876-8 wars, and that the marked diminution of the lean hog trade was not offset by the expansion of the trade in fattened hogs. In 1871-75, the annual mean export of hogs was 353,200; by 1880-83 it had diminished by 27.6%. During the same period the lean hog trade diminished 40.2%, while the smaller trade in fattened hogs rose only 19.2%. The reasons why the Hungarians brought this discriminatory policy to bear against lean hog imports must surely have been related to Germany's differential treatment of lean and fat hog imports from Hungary. But there were also very powerful domestic Hungarian reasons for the application of the same policy.

In Hungary, as in Germany, the keeping of hogs was predominantly a smallholder activity. But the agrarians were also interested, and vociferously so. The 99.0% of all landowners who held 100 hold (43 hectares) or less—broadly speaking, the small farmers—kept 75.1%.

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1 *Economist*, 24.5.1879, p 595.
2 See table II. 4, below, p. 105
of all the hogs. Between them they held 52.3% of all land, which included 64.4% of the arable, 68.8% of the hayfields, but only 23.8% of the grazing and 11.5% of the forest.¹ Though they held 76.2% of the domestic livestock in general, they, unlike the German or Danish peasants, could not operate an integrated system of animal husbandry depending on rearing hogs on milk-waste products, as cattle raising was orientated (like that of Serbia) to production of draft animals and meat, and dairying was weakly developed.² Like the hogs of Serbia, most of those of Hungary probably had to be pasture reared, and it is apparent from the above statistics that this extensive form of stockraising was not easily integrable into the peasant economy.

On the other hand, the 3,768 holders of great estates (over 1,000 hold) held 17.8% of the hogs (87,000 hogs, or 233 each) and 13.9% of domestic livestock in general but held 49.5% of the available pasture on which to support them.³ The smallholder's staple crop was maize, on which his family was nourished and his livestock fattened. The estate, on the other hand, predominantly cultivated its arable for the market production of the broadgrains. So the tendency which this indicates is for the estate owner to raise store animals by extensive husbandry, and to dispose of them directly to the market, or to the peasant whose capacity to fatten them was greater than his capacity to rear them. Thus the estate owner — the "agrarian interest"—wanted the price of feeders to be maintained as high as possible, but had little direct interest in the maintenance of the price of fattened animals.

¹ All the above data is for Hungary, excluding Croatia-Slavonia on the basis of the agricultural census of 1895. M.N.E. VIII, 1900, pp 68-9, 100.

² H.J. McFall, op cit p 280.

³ M.N.E. loc cit.
Hungarian government policy on the Serbian hog import question favoured not only the powerful breeders of small animals. It also favoured the Budapest market, for it was onto this that all the railways from the Serbian frontier led. This was of course intentional for although the ultimate consuming markets for Serbian hogs lay mainly in or through the Austrian lands, there was not a single direct rail link between Serbia and Vienna. Thus Serbian hogs which were intended for direct sale in Austria would have to go to such markets as Sopron, Wiener Neustadt and Marburg (Maribor) on the hoof. The rail tariff system was designed to discourage the use of Budapest as a mere transit point.

But despite the inconvenience of using markets other than the main hog market of Budapest, in the suburb of Steinbruck (Kőbanya), it is clear that the alternative of the droving trails was preferred by a large proportion of the Serbian hog export. As is shown in Table II, 3, this market took 61.0% of the Serbian hog export in 1870, but even after the building of the Budapest–Belgrade direct rail link, only 35.5% of the annual export of 223,900 hogs were moved by rail to Budapest.

This was understandable, for the organization of the Steinbruck market was the object of much criticism. It may indeed have been controlled by a price fixing ring. But it also appears to have been a less satisfactory market for lean hogs than for fat ones. This was probably because for the purposes of this market, the lean animal

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1 The Steinbruck market was originally set up by Serbian and Hungarian-Serb capital with the express object of servicing the Serbian hog export. See Chapter III, pp.169–70 below.

2 C.D. 1901, R.C. CXIV, p 396.
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<th>Romania</th>
<th>Serbia</th>
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<th>Vienna</th>
<th>Austria</th>
<th>&amp; Czechia</th>
<th>Export</th>
<th>All Outlets</th>
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<td>from</td>
<td>to</td>
<td>both</td>
<td>to both</td>
<td>from</td>
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<td>-</td>
<td>151.9</td>
<td>284.4</td>
<td>242.7</td>
<td>23.3</td>
<td>11.7</td>
<td>-</td>
<td>277.7</td>
<td></td>
</tr>
<tr>
<td>1905</td>
<td>30.7</td>
<td>193.8</td>
<td>64.1</td>
<td>-</td>
<td>112.0</td>
<td>376.9</td>
<td>330.0</td>
<td>31.9</td>
<td>11.6</td>
<td>-</td>
<td>373.5</td>
<td></td>
</tr>
<tr>
<td>1906</td>
<td>34.2</td>
<td>227.3</td>
<td>81.0</td>
<td>-</td>
<td>62.2</td>
<td>370.5</td>
<td>347.0</td>
<td>23.6</td>
<td>10.0</td>
<td>-</td>
<td>355.7</td>
<td></td>
</tr>
</tbody>
</table>
Notes.

a. Figures for Ferencvaros market only begin to appear in 1899, though it is evident from inspection that a substantial part of the locally produced hog supplies had been diverted to it several years previously. Ferencvaros served only local demand and was not available as a market for importers. Therefore total market throughputs for 1895-8 have been bracketed as it seems likely that Ferencvaros throughput would have materially affected the relevant totals in these years.

b. Mainly for the city's own consumption, but includes supplies for Hungary generally, as well as a small amount for the Budapest soap trade, for which separate figures are maintained from 1892.

c. Listed 1885-92 as for Wiener Neustadt and Bohemia, thereafter as for "Austrian provinces"; for 1892, the totals are identical for each rubric.

d. Listed 1885-92 by port of exit, thereafter by importing state. Almost all went to Germany.

e. Summation of separate entries for "Hungary" and "Transylvania". As Romania was a heavy exporter at this time and certainly exported to Steinbruck in later years, it seems likely that part of the import credited to "Transylvania" includes Romania.

f. Includes export of 25,120 to Prague, and 18,910 "in transitu". As exports outside the empire are listed separately, it seems probable that the transit item refers to stock destined for Wiener Neustadt, and has been treated as such.

g. Approximations. 65% of transactions were in Hungarian, 35% in Romanian and Sorbian hogos.

1885-1892: X.M.B. I, 1893, Table 26, p 104.
1892-1898: XI, 1898, Table 140, p 82.;
1899 : " VII. 1899, Tables 55-6, p 108.
1901 : " IX. 1901, Tables 43-4, p 103.
1902 : " X. 1902, Tables 41-2, p 124.
1903 : " XI. 1903, Tables 41-2, p 122.
1904 : " XII. 1904, Tables 41-2, p 124.
1905 : " XIII. 1905, Tables 43-4, p 115.
1906 : " XIV. 1906, Tables 46-7, p 130.
needed to undergo fattening, before it had attained that balance of lard and meat which would be wanted by the butchery and wholesale trade. So not only did lean hogs trade on this market at a discount kilo for kilo in terms of computed slaughter weight, but the formula for converting live to slaughter weight for pricing purposes—subtraction of 22.5 kg plus 4.5% of net weight—tended further to widen the real differential against the lighter lean animal very considerably.¹ Fattening required outlays both for maintenance time and fodder, and the charges made for both these items were regarded as very high.² On the one hand, city wages had to be paid, on the other, Hungary was a maize importer, and levied duty on it, making fodder prices relatively high compared with Serbia.

There were clearly therefore good reasons for exporters of lean hogs to do their business elsewhere, despite the obvious advantages of using rail transport. During the years 1888–1890, 324,000 Serbian hogs arrived at Steinbruck.³ 216,900 of these had been consigned by rail from or through Belgrade.⁴ During the year for which this information is available, 1890, 93.7% of all hogs exported by rail through Belgrade were fat.⁵ Assuming that this percentage was applicable over the longer period, the railway carried

¹ This discount was consistent as may be seen by consulting the tables of Steinbruck (Kőbanya) hog turnover and price each year in E.Š., in which the conversion formula is also given (for page references see sources for Table II.3).
² 'Podišino Klánica' Odlaz 11, 14 of 3.11.1884, p 2, Col. 1-2.
³ See Table II. 3.
⁴ E.N. LXII (1895) 233, p 1183, table XXIX.
⁵ E.N. LVIII (1891), 178, p 952, table XX.
14,500 lean hogs, and 202,400 fattened. Total fattened hog exports amounted to 299,500, total lean hog exports 253,500. So 97,100 fattened hogs, and 239,000 lean hogs must have travelled other than on the direct rail route Belgrade to Steinbruck. Of these, some 108,000 hogs must have travelled by other routes to Steinbruck.

Other rail routes were available; the smaller Serbian ports tended to ship the animals to the railhead at Daciaś forfreighting to Budapest, and concentrated on the export of fattened animals. On the unlikely assumption that the 108,000 hogs travelling by other rail routes to Steinbruck were composed 28.9% fat and 71.1% lean (i.e. in the same proportion as the total of those which did not travel directly Belgrade-Steinbruck), that is to say 31,200 fat and 76,800 lean, a maximum of 91,300 lean hogs went to Steinbruck, indicating that a minimum of 162,200 travelled to other markets, presumably overland. Conversely, a minimum of 233,600 fattened hogs went to Steinbruck, a maximum of 65,900 going elsewhere. Thus while fattened hogs went at least 3.5:1 by rail to Steinbruck, lean hogs went at least 1.8:1 overland to other markets, the difference in fact being probably much greater. Most fattened Serbian hogs went to Steinbruck. Most lean Serbian hogs avoided it. Perhaps the fattened ones would also have done so had there been alternative rail access, but of course, the droving of fattened animals would have been much more costly than the droving of lean ones. ²

²Also see p. 165 below. It is worth noting that in 1870 when Steinbruck took the high 61% of the Serbian hog market, an exceptional 56% of the hog export was fattened.
The incentive for exporters of lean animals to avoid using the rail route to Steinbruck must have been very powerful, for indirect pressure was applied to force them into using the market, but evidently with no more than partial success. In 1879 a curious regulation had been introduced by the Hungarians to the effect that "Servian and Romanian hogs should not be fed in transit through Hungarian territory" and this appears still to have been in force, and to have "somewhat affected the trade" in 1883. Given the great distances the hogs would have had to travel, exporters could only have complied with the regulation by freighting them by rail, which, in practice meant selling them at Budapest. As a result of this regulation, it was reported "that a large percentage of the swine die in transit and all of them lose condition". Even this, by implication, was better than sale at Steinbruck. The overland export of Serbian lean hogs to markets other than Steinbruck went on till 1891, when an incident arose which led to the specific ruling that all Serbian hogs must enter the Steinbruck quarantine stables. A herd of hogs from Kragujevac (central Serbia), which were probably in lean condition, successfully passed through the Hungarian exit quarantine at Sopron en route for the market at Wiener Neustadt, even though the veterinary authorities at Sopron found evidence of trichinae in the animals. When they had reached their destination the Austrian authorities sent them back to Serbia. This precipitated the closure of the Wiener Neustadt market to Serbian hogs together with the introduction of the above mentioned regulation.

1 C.Br. (S) 1879, p 904.
2 FRO PO 105 42 No. 8 comm. of 27.4.1883.
3 C.Br. (S) 1879, p 904.
The rule was seen by the British consul as having been devised "for the commercial advantage of Budapest".\(^1\) It was also stipulated that the Serbian seller of hogs - now captive to Steinbruck market - might only sell his hogs on the once weekly market day,\(^2\) which, given the high cost of maintaining his stock there, can only have been contrived to panic the seller into a quick sale. The British consul's remark seems to have been justified.

From this time onward, the entire Serbian hog export did in fact pass through Steinbruck.\(^3\) As this was the only regulation introduced at this time which could have had any effect on the lean hog import, it very nearly killed it outright. Though in the few years following this regulation, the Serbian fattened hog export was buoyant, lean hog exports abruptly contracted to half or less than half of a former level which had already been eroded by tariff and other forms of discrimination.\(^4\) The policy of forcing hogs into Steinbruck did as much to destroy the lean hog export as the subsequent definitive prohibition in 1896 (See below, p109).

This final prohibition was no more than the last logical stop in a cumulative process begun in 1879 designed to force lean Serbian hogs off the export market, as shown in Table II. 4, below. Analysis of demand restraints is not enough in itself to point out why, for example, the Serbian hog raising trade was unable to respond

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\(^1\) PRO FO 105 110 No 5 comm. of 29.8.1895.
\(^3\) Compare Steinbruck entries from Serbia (table II.3) with the total Serbian hog export (table II.4).
\(^4\) See table II. 4, over
to this situation by expanding the fattened hog trade to the extent that the lean hog export declined; supply side problems will be dealt with in the context of the intensification and commercialization of the agricultural economy in Chapter III, below. But if the experience of that other branch of the pastoral export economy, cattle raising, is any guide, there is no reason to anticipate from the change of supply conditions in the hog raising trade that the total number of hogs delivered to the export market would have fallen greatly except because of restraints on the demand side.

Table II - 4.
Export of Hogs in Lean and Fattened Condition
1871/5 - 1897.

<table>
<thead>
<tr>
<th></th>
<th>Lean</th>
<th>Fat</th>
<th>Total</th>
<th>% Fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1871-75</td>
<td>278.3</td>
<td>74.9</td>
<td>353.2</td>
<td>21.2</td>
</tr>
<tr>
<td>1880-83a</td>
<td>166.3</td>
<td>89.3</td>
<td>255.6</td>
<td>34.9</td>
</tr>
<tr>
<td>1884-87a</td>
<td>n.a.</td>
<td>n.a.</td>
<td>227.9</td>
<td>-</td>
</tr>
<tr>
<td>1888-89</td>
<td>103.3</td>
<td>95.4</td>
<td>198.7</td>
<td>48.0</td>
</tr>
<tr>
<td>1890-94</td>
<td>38.3</td>
<td>140.2</td>
<td>179.0</td>
<td>78.3</td>
</tr>
<tr>
<td>1895-97</td>
<td>2.2</td>
<td>86.4</td>
<td>88.6</td>
<td>97.5</td>
</tr>
</tbody>
</table>

a. The standard statistical sources do not differentiate between fattened and lean animals over the period 1879-87.

Standard sources for foreign trade statistics. 1880-83 estimate of fattened hog exports is in V. Karić, Srbija..., p 640.

It is reasonable to presume for the same reasons that Hungarian hogs passed through Steinbruck or avoided it according to whether they were fattened or lean. For reasons shown above, it appears likely that hogs from the great Hungarian estates were sold in lean condition while those held by smallholders were fattened. Thus the produce of the Hungarian great estates would be competing with the lean hog export of Serbia which did not pass through Steinbruck.
So while the Budapest market interest would want to divert Serbian supplies away from other markets onto Budapest, the agrarians would also want lean hog exports from Serbia diverted off markets where they competed with their own supplies and onto Steinbruck where they did not, and whence they would emerge in fattened condition. This collusion of interests must surely have accounted in some degree for the political influence of the Steinbruck merchants.

Part of this competition would have been for the German market; it was only partly supplied from Steinbruck, but as German discrimination was aimed mainly against light hogs, and encouraged the import of hogs in fattened condition, an increasing percentage of exports of hogs to Germany came through Steinbruck, while the export of hogs to Germany by other routes was progressively squeezed.

Table II. 5.

Export of Hogs from Austria-Hungary from Steinbruck and from other Markets.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Export (ooo head)</th>
<th>Export from Steinbruck</th>
<th>Export from other Markets</th>
<th>(as % of total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870</td>
<td>291.5</td>
<td>88.3</td>
<td>203.2</td>
<td>69.7</td>
</tr>
<tr>
<td>1880</td>
<td>242.4</td>
<td>112.3</td>
<td>130.1</td>
<td>56.0</td>
</tr>
<tr>
<td>1885</td>
<td>197.2</td>
<td>111.6</td>
<td>85.6</td>
<td>43.4</td>
</tr>
<tr>
<td>1886</td>
<td>430.3</td>
<td>157.7</td>
<td>272.6</td>
<td>64.2</td>
</tr>
<tr>
<td>1887</td>
<td>218.7</td>
<td>86.5</td>
<td>132.2</td>
<td>60.5</td>
</tr>
<tr>
<td>1888</td>
<td>170.9</td>
<td>72.2</td>
<td>98.7</td>
<td>57.7</td>
</tr>
<tr>
<td>1889</td>
<td>136.4</td>
<td>102.4</td>
<td>34.0</td>
<td>24.9</td>
</tr>
<tr>
<td>1890</td>
<td>166.0</td>
<td>115.3</td>
<td>50.7</td>
<td>30.5</td>
</tr>
<tr>
<td>1891</td>
<td>143.8</td>
<td>114.8</td>
<td>29.0</td>
<td>20.2</td>
</tr>
<tr>
<td>1892</td>
<td>342.2</td>
<td>275.3</td>
<td>73.9</td>
<td>21.2</td>
</tr>
<tr>
<td>1893</td>
<td>430.6</td>
<td>235.9</td>
<td>194.7</td>
<td>45.2</td>
</tr>
<tr>
<td>1894</td>
<td>485.1</td>
<td>350.7</td>
<td>134.4</td>
<td>27.7</td>
</tr>
<tr>
<td>1895</td>
<td>113.7</td>
<td>72.6</td>
<td>41.1</td>
<td>36.2</td>
</tr>
</tbody>
</table>

Sources: Total export: Total export as for table II.2. Export from Steinbruck from Col. II of table II.3.
The rules, pressures, and manipulated market forces which had been applied to force an increasing proportion of the central European hog trade through Steinbruck tended to make the market increasingly unable to cope with the throughput it received, magnified the effect of any disequilibria which emerged, and heightened the sensitivity with which difficulties in the German import trade were transmitted back to Serbia.

In 1877, Steinbruck had a throughput of about 11,500 a week, maintained a stock averaging some 54,600 hogs and therefore passed each hog through the market in less than 5 weeks on average.\(^1\) In 1880, throughput was about 8,000 a week, and year end stock was 60,500 making throughput time about 7½ weeks.\(^2\) But in 1888 throughput time had risen to between 9 and 15 weeks, and in 1890, between 10 and 18 weeks, although turnover had not increased since 1877.\(^3\) Congestion on Steinbruck had been the immediate cause of the series of partial and total prohibitions against the entry of Serbian hogs into Hungary, which began on the 29th May 1890 and were finally withdrawn on 29th October.\(^4\) Thus diversion of the whole Serbian hog export through

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\(^3\) Annual turnover figures are shown in Table II.3. Weekly reports on Steinbruck market by the Serbian Consulate-General at Budapest appeared in the official gazette (\textit{Izvetska Novina}) giving beginning and end position stock figures, entries and their origin and exits according to destination, as well as other information. From these it is fairly simple to calculate turnover time and its fluctuations.

\(^4\) Old calendar. K. Stojanović, op cit., p 41. Arrivals from Serbia promptly fell to zero and were then only permitted to trickle in at a rate which would not worsen existing congestion. PO PO 105 86 No. 77 commercial of 26.7.1890; No. 80 commercial of 23.7.1890; No. 101 commercial of 12.10.1890. British consular information that 400,000 animals had accumulated at Steinbruck was exaggerated – the peak figure was 170,000 but this was clearly an unmanageable figure.
Steinbruck was bound to intensify the problem of congestion; partly because of the now increased throughput of Serbian hogs on this market, turnover rose strongly between 1890 and 1894, and congestion with it. In 1893, it was reported that because of the crowded state of the stockyards, the hogs were deteriorating rapidly, having to lie in the open, exposed to the weather. Consequently, in response to Hungarian pressure the Serbian government had to impose a self-embargo on exports to relieve the glut.\(^1\) Such conditions only promoted the spread of infectious diseases, for the control of which the regulations were ostensibly drawn up; by 1893, Hungary was in the grip of hog pneumonitis and this gave the Germans a perfectly good reason to follow their inclination to close the frontier. The disease struck at the stock of hogs lying at Steinbruck,\(^2\) and forced a short closing of the frontier. The Serbian government, which now had the protection arising from its treaty rights then got the frontier reopened by consenting to a restriction of exports to the market.\(^3\) This, however, did not satisfy the Hungarians - least of all "the minister of commerce at Budapest [who] was himself a big breeder". In order to create cause for the use of the veterinary sanction, the Hungarians had to discover proof of infection among the Serbian hogs arriving at Steinbruck.

According to the British consul, "it was reported with some likelihood of truth" that infected Hungarian hogs were planted among a herd which had originated from the Serbian port of Gradistoe "in consideration of a very large bribe" to the breeder. These were duly examined at Steinbruck, though under decidedly irregular circumstances and

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\(^1\) G. Br. (3) 1893, p 29.

\(^2\) K. Stojanovid, op cit p 41.

\(^3\) FO 105 110 No. 5 comm. of 29.8.1895.
pronounced to be infected. The frontier was promptly closed again, and remained closed, although a Serbian commission, despatched to the Gradište district to examine all the hogs there, failed to find a single case of the disease among them.\(^1\) This took place at the height of the export season, and caused chaos with "multitudes" of hogs accumulated at the export points, amongst which cases of the disease now started to appear.\(^2\) The protection accorded by the 1892 veterinary agreement had demonstrably been rendered ineffective.

The German frontier remained firmly closed, while indecision on the Hungarian side led to a subsequent state of openings and closings, and changes of regulations, until eventually normal trading conditions were restored in September 1896, the Serbian government having conceded new regulations that hogs must weigh at least 120kg. on export, and that not more than 7,000 Serbian hogs be held at Steinbruck at any one time. The former regulation meant the definitive ending of the lean hog export, but this represented no great loss, considering the diminution which had already been inflicted upon it, while the latter does not appear to have had any practical effect.\(^3\) Considering that there had been no reversal of the German import ban, and no likelihood of any such reversal in the future, these terms were surprisingly moderate, the more so as they were adhered to for the next ten years. The reason for this was that supply conditions on the Austro-Hungarian market tightened considerably even though just

\(^1\) Ibid.

\(^2\) PRO FO 105 110 No. 7 comm. of 20.9.1895.

\(^3\) PRO FO 105 114 No. 9 comm. of 10.9.1896; L-A Janitch, La Serbie au Point de Vue Économique (Paris, 1910), p 32; K. Stojanović, op cit p 41.
previously to the German frontier closure the Empire had become a net exporter. The mortality of Hungarian hogs in consequence of the epidemic was so severe as to cause estimated losses of 'at least' 25-30 million forints, the equivalent of over a million hogs. Hog prices on Steinbruck naturally soared, and during the period in which the market was open during the later months of 1893, Serbian exporters obtained such good terms that "this rise in value was almost large enough to indemnify [them] for the expense they had undergone in consequence of their having been obliged to supply keep for the pigs during the time of the embargo". Whether or not in consequence of this epidemic, supply conditions in the Empire probably remained tight, for the Hungarian hog population seems to have reached a peak at about this time, and then to have turned down. Although the Austrian hog population appears to have risen, it probably did no more than offset the fall in Hungary, while the continuing expansion of the Austro-Hungarian economy must have created demands for a fast rising output. It appears also that the Austrians were unwilling to tolerate the consequent rise in the price of pork that harsh terms for the Serbian trade would have engendered; Austrian sympathies were reported in 1895 to be with Serbia in this dispute, and a memorial was reportedly addressed by the Chambers of Commerce of Lower Austria to the Austrian government urging that on renewal of the Ausgleich in 1897, import control of cattle and hogs should be taken from the sole control of the Hungarians. But the situation was, for the time being, stabilized.

1 C.Br. (A.H.) 1897, p 17.
2 PRO FO 105 110 No. 3 comm. of 31.10.1893.
3 See Table II, 1. above p. 81.
4 PRO FO 105 110 No. 7 comm. of 20.9.1895; No. 8 comm of 31.10.1895.
The big Hungarian breeders had won a victory of sorts, which at least preserved for them a monopoly in the sale of young hogs for fattening, prices remained buoyant, and Serbian hog exports could begin from 1900 to show a marked recovery, without fear of serious political pressure. At almost any time after 1896 the veterinary sanction could have been used quite legitimately against imported Serbian hogs among which infection of one sort or another was endemic. But there were no more closures, and when in 1901, it was discovered that several hogs from Serbia had died of pneumonia in transit to Steinbruck, the Hungarians merely protested. As late as 1903, Hungarian official opinion seems to have inclined to a considerable satisfaction with the commercial arrangements with Serbia as they then stood. A Hungarian commercial representative in Serbia observed that as adequate means already existed for ensuring that Serbian exports would not damage Hungarian markets, any major extension of barriers between the two countries would be counterproductive. This seems to be a fair comment as far as the hog issue was concerned, though as will be shown below, it was less true of the cattle trade. But as Serbia and Austria-Hungary were shortly to enter into a prolonged and bitter sanctions war, in which settlement of the livestock issue appeared to be the most

1 The Serbian hog population was reported repeatedly to be infected with Pneumonia. C. Br. (s) 1897–98, p 18; C. Br. (s) 1898–99, p 17; C. Br. (s) 1899–1900, p 19. A serious outbreak of erysipelas was also reported in 1901. C. Po. 1901 R.C. CXIV p 356.

2 PRO PO 105 140 No. 3 comm. of 25.2.1901.

intractable of problems, it is important to bear in mind that the real issue between Serbia and Hungary on the hog problem had already been resolved to Hungarian satisfaction. Subsequent Hungarian manoeuvring on the issue was largely opportunistic, and was probably aimed more to hurt Vienna than Belgrade.

d. Export Problems of the Cattle Trade

Like the hog trade, the export of live cattle had, by 1878, become wholly dependent on the Austro-Hungarian market. There was thus always the potential for similar pressures to be brought to bear on it. In one way it was even more vulnerable, because although the Hungarians exerted relatively mild pressures at the fattened end of the hog trade, for reasons which we have already examined, the Serbian ox export was almost entirely of store animals, and could not be adapted in a comparable manner. Notwithstanding this, the cattle export was politically less sensitive, probably because the growth of American and Argentine beef exports was of a later date; and the market less prone to oversupply. Austria-Hungary was willing to attach a veterinary convention to the 1831 trade treaty, which covered cattle, though not hogs, and the trade was not subject to the same degree of political interference. The right of closure was used sparingly and probably on legitimate grounds. To some extent Hungarian complaisance

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1 S. D. Milošević, Spoljna Trgovina Srbije... p 14.
3 The Hungarian frontier was closed only once, briefly, in December 1882 against Serbian cattle, until 1897, while it was closed against Serbian hogs on numerous occasions. K. Stojanović, op cit p 40; M. N. Victorovitch, Le Mouvement Economique en Serbie...1878-1923, (Poitiers, 1924), pp 39-40.
at what was a buoyant and steadily rising increase in Serbia's cattle export may also have been the result of her success in excluding the cattle export from Romania from the Hungarian market. Romanian trade policy had balked at agreeing to the same terms of abject compliance with Hungarian demands as the Serbs. The potential for conflict remained, and was immediately heightened by the abandonment of the Caprivi system. After the closure of the German market in 1895, the Hungarians, (no doubt stimulated by their success in achieving their ends on the hog export issue) started to become increasingly obstructive. This was first demonstrated by a short embargo on the import of Serbian cattle in 1897, on allegation of foot and mouth infection. A more serious blow was struck in July 1901, when a single ox from Serbia was discovered at Budapest to be suffering from pleuro-pneumonia. In sharp contrast to the then current Hungarian policy towards Serbian hog imports, the reaction was harsh in extreme. The entire stock of Serbian oxen on Budapest market at the time - some 2,000 head - were destroyed by order of the authorities, and the frontier was closed against further Serbian ox imports for most of the rest of the exporting season. Even after this, a licensing system was imposed on Serbian ox imports, which was not withdrawn till June 1902. The German dog was beginning to make the Austro-Hungarian tail was vigorously. Serbia's minister of commerce was reported as telling the Serbian senate:

1 C.Hr. (i.H.) 1886, p 10; P.G. Kidelberg, The Great Rumanian Peasant Revolt of 1907, (Leiden 1974), PP 42,43.
2 K. Stojanovic, op cit p 42.
3 Ibid; PRO FO 105 140 No. 32 comm. of 12.9.1901.
4 PRO FO 105 146, No. 4 comm. of 12.2.1902.
"If, for instance, Austria-Hungary were compelled to place obstacles to the export of Serbian cattle notwithstanding existing veterinary conventions, this action would be principally on account of Germany having in a similar manner hindered the export of cattle from Austria-Hungary."

This remained the situation on the eve of the commercial war of Austria-Hungary and Serbia, and there was no likelihood whatever of German trade policy being reversed on this point. So, whereas, from the Hungarian point of view, the hog export problem had already been brought to a fairly satisfactory conclusion, the issue of cattle exports remained to be resolved. This difference was eventually reflected in the final settlement, which turned out much more favourably for Serbia in respect of the hog trade than it did for the trade in cattle.

e. The Trade in Cultivated Produce.

The era of the great depression is rather better known for the crisis in the cereal trade. As increasingly prohibitive tariffs were set up against Hungarian cereals on their German export markets, it was not to be expected that Serbian cereal exporters could count on easy access to Austro-Hungarian markets. However, although it was useful for the Serbians to be able to export across the border to the Hungarian mills, it was not essential, as there were alternative outlets. Grain could be sent down the Danube, and much of it was, for retrading at Braila whence it would re-emerge as a small part of the Black Sea grain trade. And as this trade did not affect their own interests, the Hungarians had no reason to try to obstruct it. As far as maize, the problem was even less than for the bread grains. Though the Hungarian peasantry raised a great deal of maize, most of it was for self consumption and livestock fodder, and little of it found
its way onto the market. The techniques of large scale farming meant that for the magnates, wheat was a much more profitable market crop, so they had little interest in the maize market. Moreover the built in tendency of the German economy towards a fodder and fats deficiency meant in practice that maize was always accorded better tariff treatment than the breadgrains. So Serbian maize never encountered serious outlet problems. Serbian plums were in competition with Bosnian supplies, though not to a great extent with Hungarian production. Had the Bosnian plum growing interest any considerable lobbying power in Austria-Hungary, pressures might have been brought to bear on Serbia, but this was not the case.

f. The impact of Austro-Hungarian Commercial Policy on Serbia's trade to 1906.

The principal impact was felt on the livestock trade, as Austro-Hungarian commercial policy had little negative effect on the trades in cultivated produce. The hog trade was subjected to repeated interference from 1879 to 1906, with the general effect of discouraging hog raising, and with the more specific effect of destroying the trade in lean hogs in the interest of the Hungarian stockbreeders. For those producers to whom the opportunity was open, incentive was thereby given to fatten their hogs with maize, though this incentive was weakened by the insecurity attaching to the trade. The lack of alternative outlets (and, as we shall discuss below in Chapter V, the difficulties in the path of creating such alternatives) meant that the continued dependence of the hog trade on the Austro-Hungarian market doomed it to a phase of protracted decline. It is true that, in income terms, this decline was masked by the tendency of unit value to rise as the proportion of fattened hogs rose, as the proportion of
lean hogs declined. However, the income decline from hog raising in itself was real enough, as a large part of the value difference between lean and fattened hogs arose from the input of feedstuffs (maize, mainly) taken from the cultivating economy. As the cattle trade was not subjected to comparable vexations till the beginning of the twentieth century, the export of cattle was able to rise steadily, while the export of hogs fell. Even so, the political risk attached to it was always present, and eventually became a reality.

Directly, by encouraging hog producers to grow or procure maize for fattening, and indirectly by acting to discourage livestock exports in general, Austro-Hungarian commercial policy forced the pace of change in the productive structure of Serbian agriculture away from commercial dependence on the produce of the pastoral sector, and towards the expansion of commerce in the produce of cultivation. Thus, although it tended to diminish the current stream of earnings of Serbian agriculture, it did not retard the pace of those changes on the supply side which were necessitated by the pressure of population growth.

6. The political economy of Serbia's export trade during and after the Commercial War with Austria-Hungary.

The difficulties of the Serbian livestock export should not obscure the fact that Austro-Hungarian commercial policy was to bind Serbia to the Imperial economy and policy, and that the sanction of isolation was therefore only used to achieve the reverse of this. So long as Serbia was politically too weak (and disinclined) to want to sever her links, her trade with Austria-Hungary was safe enough, except at those two points where it came directly into conflict with
powerful Hungarian vested interests. With the commercial war, Austro-
Serbian economic relations enter an entirely new phase: the struggle
was pursued primarily through the commercial aspect, but it was not
about a conflict of commercial interests. It did not therefore imply
for the long term a substantial weakening of the commercial links
between the two countries.

This phase of Austro-Serbian commercial relations was affected -
adversely - by Germany's return to the politics of protection after
the fall of the Caprivi government and by a new factor, which came to
dominate the issue, an abrupt change - for the worse - in Austro-Serbian
political relations. The officers' putsch and assassination of King
Alexander Obrenović on the 29th May 1903 did away not only with the
Obrenović dynasty, but also with the traditional if wavering Austrophilism
with which Obrenović supporters were associated, and it paved the way
to the reassertion of the nationalistic and Russophil political ground-
swell which the former régime had none too effectively stoppered up.
Although incoming Radical governments had no wish to pick a quarrel
with Vienna if they could avoid it, the mutual incompatibility of
Serbian political aspirations with Austrian interests meant that a
confrontation would not be long postponed. However, the aftermath
of the putsch predisposed Belgrade to caution. State finances were
extremely rickety and Belgrade was highly conscious of its political
isolation, and the subsequent involvement of the Russian 'protector',
firstly in the far east war, and subsequently in domestic difficulties.

Under the terms of the Austro-Serbian commercial treaty of
1892, either party was free to give a year's notice of termination
from the beginning of 1903 onward, which meant that treaty relations
were only guaranteed up to the end of that year. However Austria-Hungary was reluctant to renegotiate a new long term treaty until her future treaty relations with Germany had been settled; as always, Austro-Serbian relations had to hang on the out-turn of Austro-German settlements. The Caprivi treaty was due to expire in 1906, and the outlook for Austria was unprospering. Böhm's tariff act of December 1902 marked the definitive return to Bismarckian commercial policy, and was deliberately designed to tie the hands of the negotiators of subsequent treaties by the introduction of a scale of minimum duties on certain agricultural commodities, below which they were not empowered to grant concessions to foreign powers. Thus for the time being, Austria's foreign minister Goluchowski was content to wait on events in respect of the Serbian treaty, and as the Serbians knew that they were unlikely to extract terms from Austria-Hungary which were as favourable to their exports as those of the 1892 treaty, both parties passed up the opportunity to serve notice of termination, either at the end of 1902 or at the end of 1903.

However, even the terms of the existing treaty by no means satisfied the Serbian Radicals who had protested of the 1881 and 1892 treaties that they had sacrificed the artisan industries, and now the calls for protection fell on more receptive ears. The cry for economic

1 D. Djordjević, op cit p 131. The following coverage of the Commercial politics of the era 1903-11 is necessary as a background to the problems of the meat industry during this period but does not purport to do more than summarise the salient issues mainly from the above indispensable work and from W.S. Racich, op cit. The interpretation offered, however, is not that of these authors.

2 A. Gerschenkron, op cit p 62.
"emancipation" had powerful emotive overtones, but although "emancipation" of the export trades might be justified as a political necessity, should the Hungarian market be closed, as a form of nationalistic self-indulgence it was more attractive in theory than in practice. Yet the threat that the combined activities of the agrarians in Germany and in Hungary would lead to a further squeeze on Serbia's export trade justifiably encouraged the Serbian government to enter commercial relationships with other foreign powers and to try and mend its fences with Bulgaria, whose railways, in the event of Austro-Serbian commercial conflict, and the deterioration of Serbia's far from cordial relations with Constantinople, would provide a vital if costly outlet for Serbia to the sea.

Added to all this, there arose a dispute over Serbia's military re-equipment plans. New artillery was to be ordered. Serbia ignored Austrian overtures and entered into discussions for the purchase of French ordnance from Schneider. Arguments business lay at the very heart of the Austrian industrial interest, and Skoda, whose shareholders included the highest in the land, desperately needed the orders. Commercial warfare with Serbia might appear unattractive to Austrian industry and commerce if it were presented as a sacrifice of good business at the behest of the Hungarian magnates, who wanted to force raw material costs up against them, but with Serbia busily arranging for the realignment of her commerce, threatening industrial protection and proposing to buy French ordnance, it could be justified as a means of exerting pressure for the recovery of a market which might otherwise be lost. Thus once the Austro-German treaty negotiations had been concluded — and they gave few grounds for
satisfaction in Austria-Hungary - Goluchowski chose to serve notice on Serbia of termination of the 1892 treaty, which would therefore expire a year later, on the 15th February, 1906. After this date Serbia would have to sell her exports in Austria-Hungary over the high Austrian autonomous tariff, unless a fresh agreement was reached. This was not a particularly hostile move on Goluchowski's part, nor was it intended to be. But Goluchowski insisted on linking the prospective commercial settlement to the ordnance question, and while the Serbians were prepared to compromise on less sensitive issues they remained adamant in their refusal to purchase Škoda artillery.

No progress was made. Then in December of 1905, the Bulgarians suddenly revealed that they had signed a secret commercial treaty with Serbia, with the provision for eventual customs union between the two states. This had profound political implications for Austria, and on impeccable legalistic grounds she refused to recognize it and required Serbia's renunciation of the treaty before commercial negotiations for the Austro-Serbian treaty could be resumed. Jumping the gun on the imminent expiry of the 1892 treaty the Hungarians were allowed to ring down the frontier on Serbian livestock and meat products, on 22nd January, 1906. For a time it seemed possible that this action might be followed by a punitive expedition, and Serbia backed down, and effectively abandoned the Bulgarian customs union project. Negotiations with Austria were resumed, with commerce being restored under the terms of a 4-month provisorium from 9.1.1906, pressure on Serbia being maintained by Austria's application of her autonomous tariff while Serbia was obliged to import from Austria according to the status quo ante. But both sides refused to yield on the ordnance contract issue which had led to the original impasse, the provisorium
ran out, and the embargo on Serbian livestock and meat was resumed on 25.6.1906. Goluchowski's policy had failed; an operative condition of commercial war had not been sought, as commercial pressure had been specifically applied to resolve both the ordnance and commercial treaty questions in Austria's favour, and the only party it satisfied was the Hungarian magnates. Even in Hungary it was viewed with misgivings by the nascent Hungarian industrial interest which, with the assistance of subsidies and a rigged structure of rail tariffs, wanted a piece of the Serbian action,¹ and the Steinbruck interest which wanted Serbian hogs to slaughter. At first sight, Goluchowski's replacement by Hirschthal precised a still tougher line, but in fact Hirschthal realized the gun contract was a dead duck, and was prepared to be flexible.

Both sides needed to negotiate — Serbia was feeling the pinch of the commercial war, but the pressure against her was not of sufficient strength to force a capitulation, and its perpetuation would not achieve Austria's objectives. Negotiations were reopened for a further provisorium which included protection for Serbia's manufactures, the definitive discontinuation of the livestock trade, and a quota arrangement on Serbian meat, on the basis of which agreement was reached in March, 1903. The frontier was accordingly reopened on the 19th August, 1903, but in respect of meat imports, it only extended to the output of the Belgrade slaughterhouse (Klanica). Though it was ratified by the Skupština, it failed to get by the Reichsrat and the Hungarian Sátor. Then the storm broke over the Bosnian annexation (5th October 1908), which profoundly deepened Austro-Serbian hostility, in consequence of which the provisorium was permitted to expire at the behest of the Hungarians some seven months after its establishment. Yet the annexation

¹ "Industrija i Tehnika" T.O. XVI (1906), 92, p 3.
crisis only deferred the renewal of negotiations; at no time throughout this lengthy dispute could the rupture of trade relations be treated as definitive, for there were always pressures on both Austria-Hungary and Serbia to reach a settlement. It was galling for Austrian commerce to see the Serbian market pass into German hands, without being able to do anything to counter this, and a Turkish boycott of Austrian goods as a reprisal for the Bosnian annexation served to underline the vulnerability of Austria's trade in the near east. And Serbian rage at the annexation might be correctly read as impotent fury at not being able to do anything about a move which shattered her aspirations in this territory. Serbian policy also had to take account of the possibility of being isolated by an accord between Austria and Bulgaria, which was reverting to her traditional policy of hostility to Serbia.

But it still was not easy to reach an agreement, for Austria and Hungary could not agree between themselves on the terms to offer, and the Serbian cabinet was split on them as well; it was however united in rejecting a further provisorium, and insisted on a definitive agreement. After tortuous negotiations in Vienna, foreign minister Milovanović brought home an agreement in July 1910 which effectively re-established on a long term basis the terms of the provisorium of 1906, with minor changes. Delays in ratification prevented the treaty from coming into effect till January, 1911. For Serbia, the new treaty was a modest diplomatic victory. The Austro-Hungarian sanctions had had an irritant effect on her trade development and had been expensive to counter. They marked the end of the livestock trades replacing them with small meat quotas, but this was not so serious as it might have been in earlier years. The process of structural change in Serbian agriculture had been carried so far by 1906 that dependence on the prosperity of these trades had
greatly diminished. Even the loss of the hog export was smaller than appeared because it was to some extent replaced by the export of the maize which would otherwise have served as an input to the hog trade. The trades in cereals and plums were only marginally affected by rerouting, and these had become by now the real staples of the export economy. In a subsequent chapter (Ch. 7), we will look in detail at the role of the meat packing trade which had been built up in the years prior to the tariff war in creating alternative outlets for Serbian pork, but we may note at the outset that these alternatives proved to be much less attractive than an open Austro-Hungarian market - an expedient which would contribute to Serbia's political strength to stand up to Austro-Hungarian pressure, but not a competitive alternative.

This being recognized, the principal bargain centred around the extent to which Serbian meat would be permitted access to Austria-Hungary. It took the form of a quota arrangement, which, given the high protection of the Austro-Hungarian market against imports from elsewhere, was a highly profitable arrangement for exporters with a share of the quota. This quota was eventually fixed at 50,000 hog carcasses, rather a low figure considering that in the years immediately prior to the tariff war, Serbia's live and slaughtered hog export amounted to upwards of 130,000 hogs a year. Yet, as it transpired, Austria-Hungary was no less in need of pork than hitherto, because of the inadequacy of home production, and the rising price of meat during the tariff war gave added pressure for a settlement. Again, a familiar pattern asserted itself. Austria would let the Hungarians defend themselves against slump conditions at Serbia's expense, (as, effectively in 1906 when despite disruption of supplies from Serbia, the
Steinbruck price for the year was 6.6% down on the previous year\(^1\), but
resisted their attempts to force and exploit artificially created
shortages. Thus, in practice what the 50,000 quota meant was that
this was the minimum market guaranteed for Serbia, and that if market
conditions were active, it could be exceeded. In 1911, the price of
fattened hogs on Steinbruck was 1.91.5 filler per kg\(^*\), compared with
a mean of 1.14.56 filler in 1901-05\(^2\), and Serbia was permitted not
merely to exceed but possibly even to triple her quota.\(^3\)

The Hungarians of course resisted this move, or at least
demanded 'compensation'. But 'the Austrian government did not
consent that compensation which the Hungarian government demanded under
pressure from its agrarians should be offered to Hungary'.\(^4\) Nor do
they seem to have changed their mind subsequently for the 1912 and 1913
hog import quotas were widely exceeded.\(^5\)

We noted earlier that cattle exports from Serbia, not having
been subjected to interference before 1897 had risen strongly while
hog exports had declined, with the consequence that these had become,
on the eve of the commercial war, the target of Hungarian pressure.

\(^1\) M.S.E. 1905, p 113; 1906, p 130. Faced by a delegation of
Vienna butchers, who were asking for ways to be found to increase the
livestock import, the Austrian economics minister refused to act.
But in the opinion of Politika, consumer pressures would sooner or
later have to be taken into consideration. "Ekonomija i Trgovina,

\(^2\) M.S.E. 1901, p 103; 1902, p 124; 1903, p 122; 1904 p 124;
1905, p 113; 1911, p 126.

\(^3\) T.K.S. Izveštaj...za...1911..., pp 11-12.

\(^4\) I.K.S. Izveštaj...u 1911..., p 25.

\(^5\) I.K.S. Izveštaj...u 1912 i 1913..., p 73.
The eventual quota for these at only 15,000 head (slaughtered) was regarded as much less generous than the quota for hogs, but this was only to be expected. The cattle trade had not succeeded to the same extent as the hog trade in overcoming the Austro-Hungarian sanctions, and Austria-Hungary, which was engaged in negotiating a new treaty with Romania, wanted to be able to offer the Romanians the greater part of her cattle quota. Even so, the cattle quota was somewhat exceeded in 1911, probably because of the failure of the Romanians to fill theirs.¹

The loss of Austro-Hungarian markets for cultivated products was of no great consequence; grain could be diverted via the Danube and the Balkan railways to the seaports, while Germany, which gave the Dual Monarchy much less support than had been hoped for, willingly took up the better part of Serbia's plum export. The Germans were, at this time, more interested in using the breach with Austria to further their own programme of commercial penetration than in underwriting Austria-Hungary's political objectives.² For Serbia, the greatest problem for these trades was the acute shortage of railway wagons that the commercial war created. The Serbian railways had customarily leaned heavily on the loan of Austro-Hungarian rolling stock, a position which the latter exploited by depriving the Serbian railways of their use.³ But, on the whole, the Serbian producer of

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¹ T.K.S. Izvěštaji...za...1911, p 12; I.K.S. Izvěštaji...u 1911... p 25.
³ PRO FO 368 47, No. 32 comm. of 3.10.1906. This policy produced its own irony. When in 1907 the Serbian government invited tenders for the supply of rolling stock, the British bidder was undercut by an offer from Hungary, PRO FO 368 126 No. 27 comm. of 27.3.1907.
cultivated products was little affected by the commercial war, and any losses sustained by switching markets were obscured by government transport subsidies and the general buoyancy of world price levels.

Although it was an event of enormous political significance, as it ended any possibility for Austria-Hungary to reduce Serbia again to satellite status other than by resort to arms, the Commercial War had remarkably little long term effect on Serbian commerce. This is all the more noteworthy, because Serbia's 'victory' turned on her capacity to continue to trade in the teeth of Austro-Hungarian sanctions. Though of recognizably little more than irritant value in connection with the dry goods export, these sanctions were intended to cause such irreparable losses to the two key livestock trades that the Serbian government would find itself forced to accept Austro-Hungarian terms. The pressure exerted caused serious losses to Serbia in this sector, but fell far short of resulting in its collapse. The one thing that emerged from this conflict was that the trade in Serbian meat gave rise to such clear commercial advantages to both sides in the dispute (if not to the Hungarian stockbreeders) that, whatever the nominal terms of the new agreement, the essentials of the status quo ante would restore themselves.
Effect of Tariff Changes on the Level of Protection received by German Hog Producers, 1879 - 1895.

<table>
<thead>
<tr>
<th>Weight of Hog (kg)</th>
<th>Barley input per additional kg.</th>
<th>Weight of Hog (kg)</th>
<th>Barley input kg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>nil</td>
<td>30</td>
<td>53</td>
</tr>
<tr>
<td>16-34</td>
<td>3.3</td>
<td>50</td>
<td>139</td>
</tr>
<tr>
<td>34-52</td>
<td>4.4</td>
<td>100</td>
<td>388</td>
</tr>
<tr>
<td>52-70</td>
<td>4.7</td>
<td>150</td>
<td>696</td>
</tr>
<tr>
<td>70-89</td>
<td>5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89-107</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107-125</td>
<td>6.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>125-143</td>
<td>6.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Observations by Copenhagen Agricultural High School quoted in H.P. 1906. 2. p 305.

Import duty on hogs and Barley (marks)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hogs (Head)</th>
<th>Barley (Quintal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1879</td>
<td>2</td>
<td>nil</td>
</tr>
<tr>
<td>1879-85</td>
<td>2.5</td>
<td>0.5</td>
</tr>
<tr>
<td>1885-87</td>
<td>6.0</td>
<td>1.5</td>
</tr>
<tr>
<td>1887-91</td>
<td>6.0</td>
<td>2.25</td>
</tr>
<tr>
<td>1891-95</td>
<td>5.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Source: See foot of page.

Thence, the net protection of the hog raiser of

<table>
<thead>
<tr>
<th>Hogs, weight (kg)</th>
<th>30kg.</th>
<th>50kg.</th>
<th>100kg.</th>
<th>150kg.</th>
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<tbody>
<tr>
<td>1879</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>1879-85</td>
<td>2.2</td>
<td>1.8</td>
<td>0.6</td>
<td>-1.0</td>
</tr>
<tr>
<td>1885-87</td>
<td>5.2</td>
<td>3.9</td>
<td>0.2</td>
<td>-4.4</td>
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<tr>
<td>1887-91</td>
<td>4.8</td>
<td>2.9</td>
<td>-2.7</td>
<td>-9.7</td>
</tr>
<tr>
<td>1891-95</td>
<td>4.0</td>
<td>2.2</td>
<td>-2.0</td>
<td>-8.9</td>
</tr>
</tbody>
</table>

Source: For tariffs, G.B.(Q) 1879; German Tariff, 22.5.1885, Parl. Papers, 1884-5, LXXI; C.B.(Q) 1888; A. Cohenkonron, Bread and Democracy in Germany, (New York, 1966) p 73.
CHAPTER III.

SOME RETARDIVE INFLUENCES ON THE DEVELOPMENT OF

COMMERCIAL GRAIN RAISING AND HOG FATTENING.

Though other important crops entered into the commercialization of the intensive sector in the Balkan agricultural economy, the commercial cultivation of the more fertile areas of the peninsula was dominated by the grain crops, particularly wheat. The importance to the Serbian economy of a rapid transition to commercial cultivation was demonstrated in the first chapter. The cereal export economy only began to develop in the 1860's, but on a very modest scale. As late as 1873 a poor harvest could lead to the reappearance of net grain imports. The grain export trade between 1862 and 1912 is tabulated in Table III. 1. The course of its development is given an upward bias from 1906 to 1910 because the difficulties of the trade in fattened hogs led producers to sell their maize surpluses directly into the export trade. The contraction of the fattening trade during this period probably released about 34,000 tonnes of maize per annum. But by comparison with the other south east European states, Serbia's performance in this sector appears to have been both retarded and slight: (table III.2)

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1. See below, p. 319
Table III. 1.

In 000 Tonnes, 000,000 dinars.

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat &amp; Flour by Weight</th>
<th>Maize</th>
<th>Barley</th>
<th>Oats</th>
<th>Rye</th>
<th>Total by Weight</th>
</tr>
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<tbody>
<tr>
<td>1862</td>
<td>- 2.1</td>
<td>- 1.5</td>
<td>- .3</td>
<td>0</td>
<td>0</td>
<td>- 3.9</td>
</tr>
<tr>
<td>1863</td>
<td>+ 3.6</td>
<td>+ 2.2</td>
<td>+ .9</td>
<td>+ .3</td>
<td>0</td>
<td>+ 7.1</td>
</tr>
<tr>
<td>1864</td>
<td>+ 1.5</td>
<td>+ .4</td>
<td>+ .1</td>
<td>1.1</td>
<td>0</td>
<td>+ 3.1</td>
</tr>
<tr>
<td>1865</td>
<td>- 2.6</td>
<td>- 1.0</td>
<td>- .1</td>
<td>+ .1</td>
<td>0</td>
<td>- 3.5</td>
</tr>
<tr>
<td>1866</td>
<td>+ 6.3</td>
<td>+ .9</td>
<td>1.7</td>
<td>+ .3</td>
<td>0</td>
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</tr>
<tr>
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<td>+22.3</td>
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<td>.2</td>
<td>+ 26.9</td>
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<tr>
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<td>+57.8</td>
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<td>+ 3.4</td>
<td>+ .9</td>
<td>1.3</td>
<td>+ 63.9</td>
</tr>
<tr>
<td>1869</td>
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<td>+ 3.6</td>
<td>+ 5.1</td>
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<td>.9</td>
<td>+ 18.7</td>
</tr>
<tr>
<td>1870</td>
<td>+13.0</td>
<td>+ 2.1</td>
<td>+ .2</td>
<td>+ .8</td>
<td>.4</td>
<td>+ 16.5</td>
</tr>
<tr>
<td>1871</td>
<td>+13.5</td>
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<td>- .4</td>
<td>+ .1</td>
<td>.8</td>
<td>+ 12.5</td>
</tr>
<tr>
<td>1872</td>
<td>- 7.0</td>
<td>- 4.8</td>
<td>- 1.4</td>
<td>+ .1</td>
<td>.2</td>
<td>- 13.2</td>
</tr>
<tr>
<td>1873</td>
<td>+ 1.4</td>
<td>- 7.1</td>
<td>+ .7</td>
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<tr>
<td>1874</td>
<td>+14.2</td>
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<td>.7</td>
<td>+ 31.9</td>
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<tr>
<td>1875</td>
<td>+13.8</td>
<td>+ .7</td>
<td>1.6</td>
<td>6.2</td>
<td>.6</td>
<td>+ 22.9</td>
</tr>
<tr>
<td>1876 - 1878 = War Period. No data.</td>
<td></td>
<td></td>
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<tr>
<td>1879</td>
<td>+ 9.3</td>
<td>+ .5</td>
<td>- .6</td>
<td>1.7</td>
<td>1.3</td>
<td>+ 12.1</td>
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<tr>
<td>1880</td>
<td>+28.3</td>
<td>6.0</td>
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<td>3.1</td>
<td>+ 27.9</td>
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<td>+27.0</td>
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<td>1.2</td>
<td>2.2</td>
<td>+ 32.7</td>
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<tr>
<td>1882</td>
<td>+34.0</td>
<td>+ 1.0</td>
<td>+ 3.7</td>
<td>1.6</td>
<td>3.8</td>
<td>+ 44.1</td>
</tr>
<tr>
<td>1883</td>
<td>+ 38.0</td>
<td>+ 5.1</td>
<td>+ .5</td>
<td>+ .2</td>
<td>3.8</td>
<td>+ 47.4</td>
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<td>+38.8</td>
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<td>+ 2.3</td>
<td>1.8</td>
<td>4.0</td>
<td>+ 54.6</td>
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<td>1885</td>
<td>+20.1</td>
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<td>+ 1.4</td>
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<tr>
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<td>+ 2.7</td>
<td>+ .1</td>
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129.
<table>
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<tr>
<th>Year</th>
<th>Wheat &amp; Flour</th>
<th>Maize</th>
<th>Barley</th>
<th>Oats</th>
<th>Rye</th>
<th>Total</th>
<th>Gross Value</th>
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<td>+ 4.4</td>
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<td>- 8</td>
<td>+ 3.5</td>
<td>+169.9</td>
<td>29.8</td>
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Source: See Standard sources for Serbian foreign trade statistics. Flour export weights have been adjusted upwards to compensate for a 20% milling loss. See R. Millet, La Serbie Economique et Commerciale (Paris, 1889) pp. 54-5.
Table III. 2.

Export per capita of wheat, barley, maize & rye.

1887/90 - 1906/10.

(kg)

<table>
<thead>
<tr>
<th></th>
<th>Romania</th>
<th>Bulgaria</th>
<th>Serbia</th>
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<tbody>
<tr>
<td>1887/90</td>
<td>318</td>
<td>127</td>
<td>29</td>
</tr>
<tr>
<td>1906/10</td>
<td>370</td>
<td>109</td>
<td>80.5</td>
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Calculations are based on midpoint population for each period, interpolated geometrically between consis. Flour and oats are excluded for want of comparative data. The omission is insignificant.

a. Retardation in railway development.

Although grain could be exported at any time from the valleys of the great navigable rivers, the Sava and Danube, whose commercial development would be little affected by the presence or absence of rail transport, there were regions of substantial grain exporting potential in Serbia along their unnavigable north-south tributaries, in particular the Drina, Kolubara, Korava, Mlava, Pek and Timok, and tributaries of these rivers such as the Rosava, Jasenica, Lepenica, Toplica and Nišava. It is doubtful whether their full potential as grain exporting regions could be tapped other than by the development of modern inland communications.

Generally speaking the peasants of the southern parts of the country did not try to raise grain surpluses till very late,
because of the impossibility of disposing of them; an extreme example was the remote Nišava–Južna Morava region where it was reported in the 1850’s that in years of abundance the crops were burned off in the fields for want of market access.¹ As late as 1882, it was observed that "despite the corn carrying capacity of the [South] Morava and Nišava valleys, only sufficient corn is grown for home consumption, the cost of transport to the coast being such as to preclude an export corn trade."²

The building of the internal railways (which traversed these regions) was clearly an important means by which the expansion of commercial cultivation could be achieved, yet the first section of railway track in Serbia was not opened for public carrying till 1884. Even by comparison with the other Balkan states, the development of rail communications in Serbia was seriously retarded.

Table III. 3.


<table>
<thead>
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<th></th>
<th>1870</th>
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<th>1910</th>
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<tbody>
<tr>
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<td>19.0</td>
<td>29.2</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2.3</td>
<td>8.3</td>
<td>20.0</td>
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<tr>
<td>Serbia</td>
<td>nil</td>
<td>11.2</td>
<td>19.2</td>
</tr>
</tbody>
</table>


² PRO FO 105 36 Baker’s commercial report for the year ended 29.9.1882 (unprinted section).
Even Romania was probably undersupplied with railways in 1910: the corresponding figure for Kingdom Hungary which had built up a railway net approaching Western European density was 63.5 metres per square km.  

The construction of rail communications in an underdeveloped territory has necessarily in nearly all cases required the participation of the state, either as capital source or, more usually, as guarantor of the capital imported to undertake the task. Serbia, with only an embryonic capital market, was no exception, and the retardation of railway building in Serbia was in considerable measure a reflection of the attitude of the Serbian government to this task. But the failure of government in this vital respect arose only partly through omission; on the whole, till about 1900, it pursued policies which were hostile or antipathetic towards the development of a railway network.

Even for the state, the building of railways, whether through internal financing or foreign borrowing, would inevitably place a heavy charge on its budgetary resources, but capital shortage was by no means the most serious retarding influence. For trunk lines, if not for the extension network, the interest of foreign capital was likely to be assured, for the simple reason that as a landlocked country which sat astride international communications routes, foreign powers had a direct interest in getting transit routes constructed through its territory; and it was at the behest of just such a foreign power (Austria-Hungary) that Serbia was forced to build her railway network, and indirectly,

1. See *M S E* 1911, p 226 for track length
that the necessary capital sums were made available to undertake the work.

The possibility that such work could be financed by domestic private capital can be ruled out, for not only were the sums involved out of proportion to its resources, but the risks involved in building and operating a line, much of whose traffic would only be created by the railway itself, were discouraging, and the expectations of private profit modest. Thus the onus fell without question on the government. However, until it was pressurised by Austria into building the line in 1831, it was shy for several reasons of assuming this commitment, and numerous schemes put forward from 1851 onwards by foreign interests failed to receive its assent.

At no time would the internal resources of the government have been sufficient to finance the construction of a major railway project, though these, had they been so applied were sufficiently large at one time greatly to mitigate the foreign exchange cost. For the Serbian state, particularly under the rule of Miloš (1815-38), accumulated very large sums in bullion in the treasury, which passed as a nest-egg to his successors. Much of this money was squandered between 1848 and 1858 in opening up a copper and iron mine at Majdanpek (in north-east Serbia) on the basis of which they hoped to establish a self sufficient armament industry.

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1 PRO FO 105. 4. No. 3 comm. of 5.9.1876.

2 For the principal secondary source on which see D. Arnaoutovitch, Histoire des Chosins de For Yugooslaves 1825-1937 (Paris, 1937), pp. 35-54.

3 See M.D. Popović, Pragujeće i njegovo pravredno područje, pp. 337-33.
venture, which proved utterly sterile, swallowed up 1,577,766 silver forints,\(^1\) (about £160,000 sterling, or 4,000,000 dinars), the equivalent of two full years tax revenue,\(^2\) corvée labour valued at £80,000 sterling,\(^3\) (the value of more than 2,000,000 man-days at the then current market price), and huge quantities of timber from the rich Majdanpek forest. Works were abandoned in 1858 with little or nothing to show for the effort. But this was by no means the limit to the state’s disposable resources. Accumulated government funds of up to 250,000 dinars equivalent were cut on loan in the 1860’s,\(^4\) and an annual expenditure of similar magnitude was being used in the early 1860’s to finance the Kragujevac state arms works.\(^5\)

The Majdanpek investment alone would have sufficed to build 50–110 km of railway.\(^6\)

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\(^1\) M. Dj. Milicević, Kneževina Srbiya, p 948.

\(^2\) The poll tax of 1858 produced 11,360,000 forint (2,270,000 dinars) for the revenue report on the principality of Servia, dated May 1859.

\(^3\) C. Br. (s) 1895 (Minist) p 15. The report values corvée labour at half the amount expended in cash. The figures quoted are £240,000 and £120,000 respectively, but it seems likely that these figures result from incorrect calculation of forint – sterling exchanges in the relevant period.


\(^5\) M. D. Popović, op cit p 342.

\(^6\) The kilometric costs of the earlier Bosnian railways suggest that the Majdanpek funds would have built 50–100 km. See P. P. Sugar, Industrialization of Bosnia – Herzegovina 1878 – 1918, (Seattle, 1963) Appendix VII, p 233. But the Serbian contracting firm of Frusnjecka Kompanija received payment for building the Lapovo–Kragujevac branch line of only 54,000 dinars per kilometre. "I najposle dokazačo" Vidoje, (Belgrade) VI, 101, of 21.5.1885, p.1. This was an easy line, but so also would have been a railway built from Scdovro to Aleksinac, and on this basis the Majdanpek funds could have built 110 km. The Bosnian lines passed over more difficult terrain.
The military, however, were unenthusiastic. They had their own priorities for investment, which they feared that railway building would prejudice, and in any case feared that a railway to the Turkish frontier might be a strategic liability in the event of war. They had yet to understand the strategic value of railways, and we can fairly regard this miscalculation as a retardive influence, for had they wanted the railway they would probably have got it, for no interest group had easier access to the state's resources. As a foreign staff officer reported before the 1876 débacle, and with obvious approval,

"In default of luxury industry, the Serbias has made a war industry. There are no silk factories, only those for military blankets, no jewellery nor marquetry nor goldsmiths work, but powder mills, cartridge works, cannon foundries and arms factories. No manufacture of novelties or of fashion goods, but of military equipment and clothing and baggage supplies. No operas but military schools; no palace, but good barracks, hospitals and regimental schools."

Nor did enthusiasm for railway building extend to its most apparent potential beneficiaries, the merchant class:

"The trading community, petty capitalists and shopkeepers, having the import trade in their hands have begun to tremble for their monopoly - a spurious system involving exorbitant profits, long credits and slow returns - to all of which railways would probably put an end... many of this class connected by family ties with members of the administration, are by this means thought to influence decisions. But the majority in the council are men of sounder and more liberal views... yet even these cannot divest themselves of the want of enterprise and the fear of committing themselves to future risks and contingencies."

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1 D. Armcutovich, op cit p 52.
2 La Serbio et la Bulgarie en 1876, explorées par un officier d'État Major attaché d'Ambassade (Paris 1876) p 21.
3 PRO FO 78 2237 No. 4 comm. of 16.5.1868.
Failure to build a railway before 1878 constituted an opportunity missed. Locally accumulated funds could have met part of the cost and their availability would greatly have improved Serbia's credit standing in negotiating a railway loan. But these funds were wasted and when Serbia emerged from the burden of fighting a successful but expensive and humiliating war, her credit standing had dropped precipitously. With the commercial treaty question tied to speedy negotiation of railway contracts, which then entered the cockpit of international diplomacy, the outcome was an ill-considered contract which involved the expenditure of at least 12,000,000 dinars more than necessary. The trunk lines were opened by sections between 1884 and 1888. Once this work was complete, the sums needed to build a network of feeder lines were of more manageable size, but government long term debt had shot up between 1881 and 1885 by 265 million dinars (the equivalent of seven years' export trade) with heavy unfunded commitments still outstanding, and the European money market was tightening against Serbian stock. Thus although funds were found subsequently to finance a wave of politically motivated investment in nationalization (of the railway operating company, and the recently leased salt monopoly), the only railways

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1 The original contract was awarded to Union Générale which commenced the works and then went bankrupt. The work was then taken over by Comptoir d'Encaissement, on the same terms as hitherto except that the Comptoir agreed to take over 12,000,000 francs of the debt that was owed to the Serbian Government by the bankrupt Union Générale, which was some indication of the extent to which Serbia overpaid on the original contract. Their generosity was not misplaced, for whereas the original contract fixed the construction cost at 198,000 francs per km, "impartial contemporary estimates put costs, including reasonable profits at 150,000 francs per km". Even this seems excessive. D. Arnaoutovitch, op cit. pp 77-9, 101-2.


opened voluntarily (that is to say, independently of treaty obligations) were for the strategic purpose of linking the Kragujevac arsenal and its fuel supply at Senj-coal mine with the trunk system, and a branch line to Smederevo which had already been laid down to facilitate the main line building work. And as state finances continued to deteriorate through to the twentieth century, serious consideration of the branch line programme, for which the need was admitted, continued to be deferred.

The influence of the state of branch line construction till the 20th Century seems to have been wholly obstructive. De Dudzeele noted three local railway projects which he considered well worth backing. In the first case, a light railway had been built from Požarevac to its Danube port of Dubravica in order to facilitate the transport of materials for the construction of a public building; local interests then wanted to operate this track for the carriage of passengers, and to extend the line to link it with the trunk system at Cipaonica.¹

The town of Valjevo also was anxious to get a light rail link built to the Sava at Obrenovac, and at least since 1881, a group headed by Dilić of Valjevo had been seeking a concession. The existing traffic (mainly in plums) was already heavy and cost an estimated 600,000 francs p.a. in freights, the terrain was easy, and the developmental potential excellent. De Dudzeele even claimed that the merchants of the town had been willing to guarantee 6% interest on the line.²

¹ C.De. de Dudzeele, "Compte rendu..." R.C. LXXV, pp 37-8.
In the late 1880's the Belgian owned Vrška Čuka mining enterprise near Zaječar built a light railway linking its mine with a briquetting mill at Radujevac on the Danube. It also wanted to utilize its investment for carrying general freights.¹

In the first and third instances government permission for the commercial exploitation of these lines was refused, and in the second, it withheld permission to build. It feared that these ventures would not co-ordinate with its own plans for constructing a secondary railway system, which it intended to build on standard gauge. It also feared that private competition might divert freights from its trunk railways. Both objections were ridiculous because the government was in no position to carry out its own plans, and because when it eventually did so, it built the secondary system on narrow gauge anyway.

The need for such extension lines was not in doubt. A firm to whom the government concessioned the rights to build a network of light railways in 1900 felt able to claim in their prospectus "So greatly are railway facilities desired that certain towns and districts are proposing to offer... material assistance... in order that they may obtain priority..."²

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¹ C.Ér.(S) 1895 ( Mines ) p. 3; C.Éo. de Dudzele "Compte rendu..." pp. 50-3.
² Prospectus of Royal Servian Railways and Exploration Company Ltd., enclosure with PRO FO 105, 136.
The trouble was that the state still tended to see the problem of railway building in strategic and political terms, which eclipsed economic considerations. Just as those considerations had prevented the building of the trunk line before 1876, and had forced its building in 1882, so the principal preoccupation of "railway politics" had shifted after the short disastrous Serbo-Bulgarian war of 1885 to the project of building a strategic railway from Radinjevac, along the Bulgarian frontier, to Niš, which would in turn be built out to the Adriatic and in the north be linked via Romania to the Russian railway system. The Danube-Adriatic railway was not built, though the Skupština voted 100,000 dinars for a survey, and negotiations with all the parties involved dragged on until the Balkan wars. Not only would this line have been economically useless, for the regions it was designed to traverse had little developmental potential and the existing traffic was almost nil, but because it was to be built on standard gauge, the existing mine railway was to be obliterated by the project.¹

Thus, apart from a few factory sidings in Belgrade, not a mile of track was added to the state railway system between 1889 and 1904. Having failed to find concessionaires who were willing to build without interest guarantees from the state, the state belatedly borrowed sufficient money to build the urgently needed extension railways in the Šumadija and Eastern Serbia on its own account, though at a very leisurely pace. Little track was opened

¹ C. Bo. de Dudzoole, "Compte Rendu..." R.C. LXXV, pp 50-3.
before 1908 and the important Most Morava line to Užice was only completed in June 1912.\(^1\) Even then, two of the most valuable lines were built on the initiative not of the state, but of local authorities.\(^2\)

Failure to open these railways earlier had left large tracts of fertile territory in an underdeveloped state. This may be judged from the impact these lines appear to have had on their economic life. A writer in 1925 spoke of what had hitherto been "pure stockraising regions"—meaning regions where the livestock trades had been the sole branch of agriculture to give rise to substantial money incomes—multiplying in settlement. Active line of rail towns which had hitherto been villages, or less, sprung up, with brisk trades in cultivated produce.\(^3\) The linking of the Užice region with Belgrade led to the multiplication of shops in the capital trading in Užice produce—such as smoked meats, gin, and resin.\(^4\)

b. The regional geography of grain production.

Not all areas of Serbia, however, good their communications, were capable of raising grain surpluses for export, and the upland

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\(^1\) D. Arnautovitch, op cit pp 172-5.

\(^2\) The Požarevac railway network and the Šabac-Loznica line. Ibid., pp 175-6.

\(^3\) D. Jovanović, "U carstvu kljiva i rakiho" Priradni Preslad III, (1925) 46, p. 3.

areas of the South-West with their almost Alpine character, and the dry rocky expanses of much of the East and South East were barely capable, even in good years, of supplying from their relatively infertile fields sufficient grain for the needs of the local population. In consequence, these were regions of grain deficit, whence peasant carts, loaded with such produce as the local forests pastures and quarries could yield, set off for the lowlands to obtain the grain that was wanted by means of barter.\(^1\) Thus development through expansion of the grain raising economy was confined to what in the main were the valleys of the larger rivers. Fig. III (1), is a map of the commercial grain raising economy at about the turn of the 20th century, showing by means of black dots areas of grain surplus and by means of red dots areas of grain deficit. (It should be noted that the presence of a few black dots in a given area does not necessarily mean that grain flowed out of it; all it indicates is that the farm population raised rather more grain than was needed to feed itself, and had some over, which could be applied either to stock fattening or to supplying the local markets). The means of calculation for the construction of this figure are the subject of the appendix at the end of this chapter.

Among the grain crops the cultivation of maize and wheat predominated with 58\% and 24\% of total grain production.\(^2\) Maize was still the basis of the peasant diet, though it was very gradually being displaced by the breadgrains. From the point of view of providing a subsistence, the cultivation of maize had much to be said

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\(^1\) See below pp. 525, 538-9

\(^2\) See Appendix, p. 231
Fig. III (i)

Serbia End 19th Century Regional Grain Surpluses and Deficits

Each black dot represents 20 kg. per capita of surplus.

Each red dot represents 20 kg. per capita of deficit.

Sources and calculation: see pp. 145-7, 221-7.
SERBIA-ADMINISTRATIVE BOUNDARIES (1895)
## Areas of Grain Surplus and Deficit

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<th>Sro</th>
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<td>Crop per Cap. quintals</td>
<td>Surplus per Capita crop = 2.00q</td>
</tr>
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<td>------------------------</td>
<td>-------------------------------</td>
</tr>
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<td>181.5</td>
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Areas of Grain Surplus and Deficit (continued)

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<th>Srez</th>
<th>Farm Pop. 000's</th>
<th>Total Crop 000 q</th>
<th>Crop per Cap. quintals</th>
<th>Surplus per capita Crop - 2.90q</th>
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<td>- 0.50</td>
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<tr>
<td>80</td>
<td>0.72</td>
<td>2.3</td>
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</tr>
</tbody>
</table>

Notes: for identification of Srez, see map on p. 144
for it. On good, well irrigated soil, it was higher yielding than any of the other grains, in respect of weight of production per hectare, the seed ratio was extremely high, and as a spring sown crop, the period between sowing and harvesting was short. It could also be sown as a hoe crop and could thus be raised without need for draft stock and ploughing equipment.\(^1\) It could be hulled by hand, and did not need to be milled for consumption. It also served, on the cob, as an excellent fodder crop, which could if desired, be sown for this purpose while still green. Under suitable conditions it could be raised as a monoculture. It could also be stored for long periods.

Wheat, on the other hand, presented more difficulties. The seed ratio was relatively low, it was best sown as a winter crop (spring wheat yields were relatively poor)\(^2\) and therefore effectively tied up more capital, it had to be ploughed, and animal power also had to be used for threshing it. It needed to be taken to the mill. It could not be used for fodder, because of its characteristic of forming dough. It would rapidly exhaust the soil if grown in monoculture, (and was therefore normally alternated with maize).

It was difficult to store. It was in consequence only used sparingly in the peasant diet, as a luxury\(^3\) for example in the passion cake (\vjesnica).

\(^1\) As in Kragujevac okrug, H.M.P. 1908-09. 6. p 950.

\(^2\) In 1907 the return per hectare to winter wheat was 1.3 times that to spring wheat and in 1908, 2.0 times. 3.0. 1907-08, p 249.

\(^3\) La Serbie... à Turin, 1911, p 72.
For commercial purposes however the choice of grains was more complicated. To the farmer who was in a position to choose between maize and wheat, without being constrained to raising a surplus of one or the other either because of soil conditions or because of a local impossibility of disposing of a wheat surplus, wheat was generally the preferred market crop. This was because it gave a higher cash yield per hectare than maize (the price difference more thanoffsetting a lower physical yield). Secondly, starting from a maize based economy, the introduction of another crop in alternation with maize afforded some relief to the soil. Thirdly, as wheat was generally used as a winter sowing, and maize was spring sown, the planting of both crops spread the risk of harvest failure, and diminished it absolutely because of the relative reliability of winter sowings. Fourthly, placing some of the land under a winter crop ready for harvesting in June-July tended to smooth out fluctuations in the agricultural labour cycle.

For all these reasons, the commercialization of cereal growing was accompanied by a strong rise in wheat cultivation relative to that of maize up to 1900, after which proportions stabilized.

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat (1000 hectares)</th>
<th>Maize (1000 hectares)</th>
<th>Both (1000 hectares)</th>
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<tbody>
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<td>1847</td>
<td>67</td>
<td>154</td>
<td>221</td>
</tr>
<tr>
<td>1867</td>
<td>91</td>
<td>163</td>
<td>254</td>
</tr>
<tr>
<td>1889</td>
<td>187</td>
<td>289</td>
<td>476</td>
</tr>
<tr>
<td>1893</td>
<td>317</td>
<td>532</td>
<td>849</td>
</tr>
<tr>
<td>1897</td>
<td>280</td>
<td>448</td>
<td>728</td>
</tr>
<tr>
<td>1900</td>
<td>310</td>
<td>463</td>
<td>773</td>
</tr>
<tr>
<td>1905</td>
<td>372</td>
<td>552</td>
<td>924</td>
</tr>
<tr>
<td>1910</td>
<td>386</td>
<td>585</td>
<td>971</td>
</tr>
</tbody>
</table>

Sources: As for Table III, 14, below.
Wheat came to be exported earlier and in far larger quantity than maize and also much more consistently,\textsuperscript{1} which makes it appear that while wheat was being adopted mainly as a market crop, the foreign trade in maize was based on fluctuating (positive or negative) residuals.

This however assumes that most farmers were able to choose freely between maize and wheat as cash crops, and this was certainly not universally the case. In the first place natural conditions were not well suited to wheat culture in all the major grain basins, and in the second, maize could be monetized through export hog fattening in inland regions from which wheat could not be easily exported. In effect, the rise of the hog fattening trade is in disguised form the rise of commerce in maize. This means that although maize was being raised in systematic surplus these surpluses do not appear as exports of raw material.

Study of the 1897 census of cultivation shows very pronounced regional differentiation between maize and wheat production. Since wheat was raised primarily as a surplus crop, it is not surprising to find that the main deficit areas, except for the south-east, tended to grow little wheat. Within the surplus areas, the main crop surplus in the Sava valley region and its hinterland was wheat, and the area of wheat surplus extended along the Danube plain. But the densest area of cereal cultivation, the lower Morava valley, up to its confluence with the Danube raised surpluses of both crops,

\textsuperscript{1}During the period prior to the opening of the railway, for which we have data — i.e. 1862-75 and 1879-84, average wheat export was 16,800 tonnes p.a., average maize export 840 tonnes. Wheat was exported in 17, maize in only 13 of these 20 years.
with a tendency for areas further up the Great Morava which were still heavily in surplus to concentrate on maize. In the southern grain surplus areas of the Toplica and Nišava valleys the surpluses were of wheat rather than of maize. With this exception, wheat was the surplus crop of the west and north, maize of the east and centre.

Moving west to east (by srez) along the regions bordering the Sava and Danube, most of which were heavily in surplus, the west-east distribution of maize (irrespective of equally good transport conditions) is clear:

Table III. 5.

<table>
<thead>
<tr>
<th>Srez (from West to East)</th>
<th>Okrug</th>
<th>Wheat cultivation as a % of Maize cultivation.</th>
</tr>
</thead>
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<tr>
<td>Pocerina</td>
<td>Podrinje</td>
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<tr>
<td>Mašva</td>
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<td>160</td>
</tr>
<tr>
<td>Posava-Tarnava</td>
<td></td>
<td>165</td>
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<tr>
<td>Posava</td>
<td>Valjevo</td>
<td>135</td>
</tr>
<tr>
<td>Posava</td>
<td>Podunavlje</td>
<td>114</td>
</tr>
<tr>
<td>Vračar</td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Grocka</td>
<td></td>
<td>109</td>
</tr>
<tr>
<td>Smolerevo</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Požarovač</td>
<td>Požarovač</td>
<td>47</td>
</tr>
<tr>
<td>Ban</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>Golubac</td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Poreč</td>
<td>Krajina</td>
<td>31</td>
</tr>
</tbody>
</table>

(SERBIA 63)

Source: Calculated from cultivation census of 1897, Statistika XVI, pp 350, 356.
Wheat was the dominant crop along the Sava valley, and so heavy was its cultivation, as compared with that of maize that it is doubtful whether this region produced a sizeable maize surplus at all. Example is instanced of a zadruža in the Mačva, at Štitare, where the land was grazed for 3-4 years, put under maize for one year, then under wheat for 3-4 years. Though the Danube valley was more orientated to maize culture, the areas of heaviest maize surplus were by no means located within easy reach of the navigable rivers.

While the regions of the Upper Danube particularly around the mouths of the rivers Morava, Mlava and Pek probably produced the large maize surpluses, as might have been predicted from their good communications position, the substantial maize surplus region extended far down the valleys of these three Danube tributaries, and into the valley of the Resava. Although some maize surpluses were also generated along the Drina and Kolubara, they do not appear to have been as large as those of the central rivers nor to have extended so far inland.

Though farms higher up the Morava, Mlava and Pek rivers tended to produce rather smaller maize surpluses than those lower

1 H. Vivian, Servia the Poor Man's Paradise, (London 1897) p 162.
down, it was the case that the higher up these rivers, the more
maize dominated was their grain production, as is clearly demon-
strated in Table III.6, below.

Table III.6.

Cultivation of wheat and maize in srezovi on the
Korava, West Korava, Resava, Klava and Pek valleys.
(1897).

Srezovi are listed in order of distance along these
tributaries to the confluence of Korava, Klava and
Pek with the Danube.

<table>
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<tr>
<th>Srez</th>
<th>Wheat cultivation as % of maize cultivation along</th>
</tr>
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<tr>
<td></td>
<td>RESAVA</td>
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<td>Smederevo, Požarevac, Ram.</td>
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</tr>
<tr>
<td>Građe, Golubac</td>
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<tr>
<td>Korava (Pož.) Zvižd</td>
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<tr>
<td>Jasenica (Podun.) Klava</td>
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</tr>
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<td>Svilajnac</td>
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<tr>
<td>Lepenica, Homolje</td>
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<tr>
<td>Despotovac</td>
<td>30</td>
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<td>Dolica</td>
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<td>Paraćin</td>
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</tr>
<tr>
<td>Rasina</td>
<td>25</td>
</tr>
<tr>
<td>Tretenik</td>
<td>17</td>
</tr>
<tr>
<td>Žita</td>
<td>20</td>
</tr>
<tr>
<td>Trnava</td>
<td>23</td>
</tr>
<tr>
<td>Požega</td>
<td>35</td>
</tr>
<tr>
<td>Koravica</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: On the Korava, as high as Temnić, substantial maize surpluses appear to have been generated in all areas. Above Temnić, and on the West Korava, most areas were probably in chronic maize deficit (and thus produced wheat only in very small quantity indeed).

Source: As for Table III. 5.

<table>
<thead>
<tr>
<th>Srez</th>
<th>Wheat cultivation as % of maize cultivation along</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RESAVA</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Obviously none of these administrative areas coincide exactly with the economy of any one stretch of a single river. It may be noted that Jasenica (Podunavlje) and Lepenica srezovi where wheat cultivation was of relatively great importance were located primarily on tributaries bearing the same names; it is therefore probable that within these srezovi maize production tended to predominate along the Korava, wheat production along the tributary.
Market considerations also resulted in a diminishing orientation towards wheat cultivation on stretches of the other rivers that were distant from the Danube and Sava. But the pattern for the Tinok is broadly similar to that on the central rivers. But as Table III.7 shows, the Drina and Kolubara valleys (areas of substantial surplus grain production) cultivated wheat proportionately on a much greater scale than the upper reaches of the central rivers.

Table III. 7.

Cultivation of wheat and maize in glogovi on the Drina, Kolubara and Tinok valleys.

<table>
<thead>
<tr>
<th>Glogo</th>
<th>Drina</th>
<th>Kolubara</th>
<th>Tinok</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pecarina. Pecava (Valj). Krajina</td>
<td>212</td>
<td>165</td>
<td>106</td>
</tr>
<tr>
<td>Jadar. Kolubara (Podun). Zaječar</td>
<td>43</td>
<td>72</td>
<td>44</td>
</tr>
<tr>
<td>Radojvina. Valjevo. Tinok</td>
<td>61</td>
<td>101</td>
<td>47</td>
</tr>
<tr>
<td>Asbukovac. Kolubara (Valj). Zaglavak</td>
<td>62</td>
<td>78</td>
<td>52</td>
</tr>
<tr>
<td>B. Bašta. Svrljig</td>
<td>62</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

Source: As for Table III. 5.

The reason for these divergences was basically geographic. The Pek, Mlava and Korava (particularly its right bank and westward flowing tributaries) were subject to regular and extensive spring flooding. There was therefore a high risk of losing winter sowings. Among the spring crops, maize was much the highest yielder and was therefore the best crop for the floodlands.\(^1\) Spring barley was also sown in this area in preference to winter barley, while the reverse was the case in the rest of Serbia. Regular flooding however reduced the need for crop alternations, and maize monoculture

\(^{1}\)La Serbio... à Turin 1911, p 72; N.M. Savić, N.I.Z. I, p 280; M.N.P. 1906-9, 6. p. 984.
was the result. Further east maize culture was even more dominant, for it was not only the staple of the alluvial K glava, but hill maize was the only successful crop on the high plains to the east of it.\(^1\)

\(c\). The trunk railway and the grain economy.

The tendency for wheat to be grown in the Danube-Sava plain and for the main surplus areas of the interior to concentrate on maize leads us to suspect that the impact of the railway on the development of the wheat export may not have been very great despite the apparent correlation of the most rapid expansion of the wheat trade with the opening of the railway.\(^2\)

Table III.8. below breaks down wheat exports by port of exit 1831-1899:

\(^1\) Ant. Lazić: "Ekonomski Centri Bosolja i Zvižda" Glasnik Geografskog Društva XIV (Beograd, 1923) p. 123.

\(^2\) I unfortunately observed the correlation between wheat exports and the opening of the railway before I had conducted the present piece of analysis, and pointed it out to Dr. John Lampe, who asked if he might quote me on this point. The means by which he did this amounted to an exact and fair statement of the point, but unfortunately, the interpretative implication of the statement is much more questionable than I then supposed. See Lampe, thesis, p 33.
Table III. 8.

Wheat export 1881-1899 by port of exit.
(000 tonnes).

<table>
<thead>
<tr>
<th>Port of Exit</th>
<th>1880</th>
<th>1881</th>
<th>1883</th>
<th>1890</th>
<th>1891</th>
<th>1896</th>
<th>1897</th>
<th>1898</th>
<th>1899</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitrovica</td>
<td>-</td>
<td>-</td>
<td>n.a.</td>
<td>n.a.</td>
<td>-</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Šabac</td>
<td>1.9</td>
<td>1.2</td>
<td>3.6</td>
<td>7.7</td>
<td>13.9</td>
<td>15.2</td>
<td>7.0</td>
<td>9.5</td>
<td>10.2</td>
</tr>
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<td>n.a.</td>
<td>n.a.</td>
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<td>2.5</td>
<td>6.0</td>
<td>7.0</td>
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</tr>
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<td>1.6</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>3.2</td>
<td>7.4</td>
<td>10.8</td>
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<td>-1</td>
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<td>n.a.</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
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<td>15.5</td>
<td>21.0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>41.6</td>
<td>12.9</td>
<td>28.8</td>
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<td>Dubravica</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>3.8</td>
<td>6.6</td>
<td>2.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Gradinašte</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>5.0</td>
<td>7.7</td>
<td>2.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Kladovo</td>
<td>0.7</td>
<td>0.4</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>5.5</td>
<td>1.6</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>Radujevac</td>
<td>3.8</td>
<td>4.0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>3.7</td>
<td>6.4</td>
<td>2.9</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Otherd</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.6</td>
<td>0.9</td>
<td>1.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>31.6</td>
<td>26.7</td>
<td>40.0</td>
<td>63.5</td>
<td>86.2</td>
<td>103.0</td>
<td>30.9</td>
<td>61.7</td>
<td>77.5</td>
</tr>
</tbody>
</table>

a. 1884.
b. Grain in general, mainly wheat
c. "Garden and agricultural produce".
d. Includes rail freights of wheat across the southern frontiers.


Between 1880-81 and 1896-99 the increase in exports through Belgrade, Gročka, and Smederevo accounts for 21,400 tonnes out of a total increase of 39,150 tonnes, or 55% of the general rise in the wheat export. But the share of those ports in the total export of wheat fell from 64% to 59%. Wheat exports from the ports east of Smederevo were stagnant and small, but it was the ports of western Serbia which showed the strongest export expansion during this period.
The share of Sabac rose from 8.4% in 1880-83 (excluding 1882) to 17.0% in 1890-91 and to 19.4% in 1896-99. Between 1890-1 and 1896-99 the wheat export of Sabac accounts for 23% of the general rise, and Sabac and Obrenovac-Zabrežje account for 36% of it between then, that is to say an increase of 14,125 tonnes per annum.

There was no internal rail link to contribute to the expansion of cereal exports from either of these west Serbian ports, (indeed, if anything, the main line railway would have drawn away grain which might otherwise have been exported through Obrenovac). In the absence of the internal railway, Belgrade, Grocka and Šeđorovo serviced the grain export of an area very similar in magnitude to that served by Obrenovac and Sabac, yet their wheat export expanded to the extent of only 7,000 tonnes more than the latter two ports, which suggests that the impact of the railway in expanding the volume of wheat exports might well not have exceeded this modest figure, and so have contributed only about 18% of the observed rise.¹

Analysis of rail freightings of wheat into internal traffic which were broken down for the first time in 1908 by station of loading tends to confirm the relatively minor role of the railway in expanding the wheat export. In that year, 26,460 tonnes of wheat were freighted in internal rail traffic. Nearly all of this was probably consigned to Belgrade and Šeđorovo, for subsequent export by water. 15,000 tonnes of the above total was loaded at

¹ There were no substantial rail freighted wheat exports across the southern frontiers till 1905.
stations between Kladonovac and Markovac, that is to say, from
districts of 46 km and less from the Danube at Smederevo. Though
areas closer than this to the Danube at Smederevo and Belgrade were
also very substantial producers of wheat surplus,\(^1\) relatively
little wheat — only 4,229 tonnes — were loaded in internal freight by
rail from there, implying that their surplus travelled principally
by road to the ports. Finally, only 6,400 tonnes of wheat were
loaded south of Markovac for internal freight. However, an
additional 10,300 tonnes of wheat were consigned by rail for direct
export, all of which left the country through its southern frontiers
(93\% towards Salonika and the rest towards Varna). Even if we
assume that the whole of this export originated south of Markovac
(for the most part from the Korava-Mikava region) we have a total of
only 16,700 tonnes of wheat taken up by rail from the deep interior,
or 18\% of the total export of 90,325 tonnes.\(^2\)

Now it may reasonably be objected that the expansion of
wheat production for export in the region from Markovac northwards
may have been materially assisted by the railway, in spite of the
fact that this region lies within a fairly short cart haul of the
rivers, no further than some of the large surplus areas of western
Serbia. But the cost saving on rail freighting was probably very
slight. Very little grain went directly to Budapest over the
rails through Belgrade even before the tariff war because it was
cheaper to offload it at Smederevo or Belgrade into barges —

\(^1\) See Table III.7.
\(^2\) Source for 1903 rail freight statistics used above is SDZ,
1903 tables 31, 34, 35.
rail wheat exports Belgrade–Zemun rarely exceeded a few hundred tonnes in a year, and even those probably only went when river navigation was closed. Thus for short hauls by rail relatively heavy handling and trans-shipment charges had to be added onto the small basic freight tariff. Secondly, in trying to encourage the use of the Velika Plana–Belgrade link in preference to the much shorter branch line from Velika Plana to Smederevo, the latter route was made artificially costly:  

"The grain trade has for a very long time past been based on Smederevo. It is accustomed to it, and much stronger measures would have to be applied than the equalization of the freight tariff on the Smederevo line with that on the Beograd line, so as to direct the grain to Beograd. The Velika Plana–Smederevo track is fifty kilometres shorter than that between Velika-Plana and Beograd. The grain tariff on both tracks is equal and is calculated by the kilometre. In its time, the railway raised the freight tariff against Smederevo and equalized the freight charge on this route with the freight charge to Beograd. One of the reasons for this increase was that the railway was losing 50 km of freighting when the grain went to Smederevo – as if the railway had been built with the object of increasing the geographical distance between places rather than to diminish it as much as possible. Unfortunately this tariff policy was shown to be much in error, for the grain continued to take the road to Smederevo, only now by rabadžija cart instead of by railway as it has done hitherto."

By my own calculation from the published 1885 and 1891 tariffs it is that the freight charge in (silver) dinara including manipulation, loading, unloading, insurance and adio (the tariff of 1891 contained a concealed increase by expressing freight charges in gold) for a ten-tonne truckload of grain consigned from Velika Plana worked out as follows:  

2 For 1885 and 1891 rail tariffs see Đ. Đ., Tarifa 1885, No. 1 special tariff for grain, mill products and dried fruit, and S.D.Z., Tarifa 1891, odredbe za Smederevsku liniju.
To Smederovo in 1885: 45.25 din. 1891: 54.13 din.
To Belgrade in 1885: 77.75 din. 1891: 56.21 din.

This provides strong supporting evidence for Kostić's claim.

Now Markovac, at 11 kilometres south of Velika Plana junction was only slightly further from Smederovo than Vlaško Polje was from Belgrade (56 km to 52 km), yet bulk commodities from Vlaško Polje, on the Belgrade line were not moved by rail, so it is likely that rail freighting offered no advantage at this point. As Markovac was the southernmost point at which substantial consignments were loaded for internal freight, (except for those already designated as originating in the deep interior and therefore highly rail dependent,) it seems reasonable to conclude that only the latter exports were substantially affected by the opening of the railway, and that the rest would have been exported anyway. This is fully in line with the previous conclusion based on the distribution of exports by port of exit. Thus in summary we may conclude that the opening of the railway only affected the expert trade from the relatively minor Morava-Nišava region, and possibly Kragujevac. The reasons for this limited impact were

1. most of the substantial wheat raising areas were in any case near enough to waterway access to expand their export production more or less in accordance with supply conditions,

2. the rail tariff was kept too high to have a powerful developmental effect.
d. The limited development of hog fattening - outlets.

The fattening of hogs - mainly for the export market - was essentially a branch of the grain trade. Lean hogs were fed on maize instead of being exported as they were. The trade in fattened hogs was developed well before the opening of the Serbian railways, and well before Austro-Hungarian policy began to be directed towards reducing and eventually eliminating the trade in lean hogs. Table III.9. sets out the annual export of hogs in lean and fattened condition up to the outbreak of the commercial war.

It may be seen from this that while this policy was effective in squeezing the lean hog export, the supply of fattened hogs was not increased correspondingly. The trade in hog fattening, though apparently ideally suited as a means of intensifying the agricultural economy and its export trade, failed to serve this purpose. The reasons for this are important in understanding the path of Serbia's commercial development.

In the first half of the nineteenth century, the export trade in hogs to the Habsburg lands was of critical importance to the peasant sector of the Serbian economy. The hogs which were exported were nearly all native animals usually in lean condition, (Falocije), that had been raised on pasture and the rich grazing of the great oak forests. In the autumn, they were herded from the interior to the banks of the Sava and the Danube to be exported to the further side, where they would set out on the long drawn roads which led to the consuming centres of the Habsburg Monarchy, particularly Budapest and Vienna. A substantial number would travel further into the German states, and even to France, though the high French tariff restrained this trade to very small proportions.  

1 Ami Doux: La Turquie d'Europe, III, p 142.
<table>
<thead>
<tr>
<th>Year</th>
<th>Lean &amp; Fat</th>
<th>Lean</th>
<th>Fat</th>
<th>Fat (%)</th>
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<tbody>
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<td>69.0</td>
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<td>32.7</td>
<td>10.9</td>
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<table>
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<tr>
<th>Year</th>
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<th>Lean</th>
<th>Fat</th>
<th>Fat (%)</th>
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<td>-</td>
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<tr>
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<td>Lean &amp; Fat</td>
<td>Lean</td>
<td>Fat</td>
<td>Fat (%)</td>
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<td>1.3</td>
<td>46.7</td>
<td>97.4</td>
</tr>
<tr>
<td>1897</td>
<td>118.4</td>
<td>.4</td>
<td>118.0</td>
<td>99.6</td>
</tr>
<tr>
<td>1898</td>
<td>88.4</td>
<td>-</td>
<td>88.4</td>
<td>100.0</td>
</tr>
<tr>
<td>1899</td>
<td>87.5</td>
<td>.2</td>
<td>87.3</td>
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</tr>
<tr>
<td>1900</td>
<td>78.7</td>
<td>-</td>
<td>78.7</td>
<td>100.0</td>
</tr>
<tr>
<td>1901</td>
<td>105.1</td>
<td>.6</td>
<td>104.5</td>
<td>99.5</td>
</tr>
<tr>
<td>1902</td>
<td>143.5</td>
<td>.9</td>
<td>142.6</td>
<td>99.4</td>
</tr>
<tr>
<td>1903</td>
<td>136.4</td>
<td>-</td>
<td>136.4</td>
<td>100.0</td>
</tr>
<tr>
<td>1904</td>
<td>147.3</td>
<td>.1</td>
<td>147.2</td>
<td>99.9</td>
</tr>
<tr>
<td>1905</td>
<td>122.2</td>
<td>.3</td>
<td>121.9</td>
<td>99.8</td>
</tr>
<tr>
<td>1906</td>
<td>67.4</td>
<td>1.4</td>
<td>66.0</td>
<td>97.9</td>
</tr>
</tbody>
</table>

a. estimated. See table II.4 above, p. 105

Sources: V. Karić, Srbija..., p 840 and Standard sources for foreign trade statistics.
The volume of hog exports probably reflected supply conditions, rather than central European demand although foreign interests were very active in the trade. They were certainly dependent on whether there had been a fertile acorn crop, for this would affect not only the grazing capacity of the natural economy, but would also determine how much valencia the peasant could garner for winter fodder and how much stock could be kept for breeding.
Thus in every aspect - even that of the provision of material for winter fodder, the raising and commerce in hogs was organized within the framework of extensive economy.

The acorns and gall-nuts were also used as fattening fodder and continued for this purpose to be highly esteemed. Hogs fattened on it commanded a premium over those fattened on cereal food, because of the distinctiveness of the flavour which this fodder imparted to the lard.¹ However, although by the 1860’s the pressures felt on the general pasture resources of the country were still weak, the oak forests were being fast eroded, and in any case the gall nuts they produced also commanded good prices for export to the Austrian tanneries.² Hogs could be raised on open pasture, but could not be fattened on it, so as the resources of the forests failed, they either had to be sent out in lean condition or else be fattened on maize. Thus the ratio of fattened to lean hogs very much depended on the abundance of the maize crop.³ Very often the lean Serbian

³ C. Er. (S) 1872 pp 345-6.
hogs were sent to Hungary, and only fattened once they had reached the Hungarian side of the river. Sometimes the maize for fattening was procured on the Serbian bank.  

It is remarkable that a trade in fattened hogs should have existed at all, at a time when the animal had to be driven on the hoof from its village in Serbia, to cross the Sava at Zemun and continue all the way to market in Vienna. The hogs had to be fed, and maintained in condition while on the hoof; it was an expensive and laborious process. Eight drivers were needed per hundred head, and in order to keep the animals in condition, they were driven only at night, so as to avoid the heat of the day, and at a very leisurely pace. The journey from Zemun to Vienna took 6-8 weeks. Heavy bills had to be incurred for the purchase of fodder. Lean animals could be driven very much more cheaply, as they could travel much faster and scavenged their own food by the wayside. According to the available data it must have cost (in the 1830's) 3.47 francs to drive a lean hog from Zemun to Vienna, and 10.24 francs to drive a hog in fattened condition. The amount of fodder that this allowed for would probably not have sufficed for the animal to put on weight, and this figure takes account only of wage, fodder and interest costs, but not of duties, ostrein and stabling in transit.  


2 For transit details see Ami Bouč, op cit III, pp 141-2. Interest rate (20%) ibid, p 124. Maize price (10 para per oka) from D. Hilić, Trovina Srbije 1815-19 (Beograd, 1959) p 327. The rate at which the animals were fed was only a quarter of that used for stable fattening, for which see C. Dr. (S) (A. H.) 1877 (II) p 71.
Only one alternative form of transportation existed at mid century and this was provided by the fleet of the monopolistic Austrian Danube Company (Fehrt 1-u-k Privilegierte Donau Dampfschiffahrtsgesellschaft) which began to carry Serbian hogs in 1844. But the company's steamers only acquired a modest portion of the trade in Serbian hogs, for their services were inconvenient for dispatchers from Serbian ports, as the goods usually had to be ferried across the Danube to an Austrian port first, and its tariffs, which reflected its monopoly of carrying, were reputed to be excessive. It carried only 57,000 hogs a year from below Budapest in the period 1833-55, when the total Serbian hog export averaged 362,376 head a year, and the carrying figure probably includes hogs other than of Serbian origin.

The first radical change in transport conditions took place in 1856, when the Crédit Mobilier's Staatsbahn railway from Budapest reached its railhead on the Danube at Baziaš, thirty kilometres below Požarevac. From then on, there was no need to drive fattened animals on the hoof much beyond the Serbian frontier. From this date, the export of fattened animals did begin to expand quite quickly, so it is likely that the opening of the Baziaš terminal was the key event which permitted for the first time the serious development of

1. A.A. Paton, Servia - or a Residence in Belgrade, (London 1845) p 323.
2. E. De Borclave, La S tine Administrative, Economique et Commerciale, (Bruxelles, 1853) ppp 62-3.
3. C. Er. (5) 1871 (2) p 554.
the hog fattening trade in Serbia. It certainly evoked a strong response from the merchants of the important Serbian hog trading port of Smederevo, and especially in the heat of summer, when herds drove from their traditional routes, transported across the Danube, and driven along its northern bank to the Baziaš railhead. The traffic also attracted steamer connections between the Serbian hog ports and the railhead, and in the 1860’s Smederevo port was noted to be filled with 1

"many trellised-in hog transport ships belonging to various small steamship companies which have been formed in recent years alongside the formerly sole great Austrian Danube Steamship Company, although they can only rival such overwhelming resources with difficulty"...

Our knowledge of the hog trade in this era, between the opening of the Baziaš terminal and the building of the Serbian railway, is in no small measure owed to the preservation in the Smederevo museum, through the efforts of its director Dr. Leontije Pavlić, of the papers of the firm of Aron Despinić of Kovin (on the Danube opposite Smederevo), in particular, correspondence of the firm with Despinić’s grandson and employee Sava Stanković. 2

Through these papers it is evident that the development of the trade through Baziaš put the Serbian hog merchants in direct contact with

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1 F. Kanitz, Serbien... (Leipzig, 1868), p 11.

2 The papers of this firm for the preceding period have been edited by Dr. Pavlić as Arhiva Arona Despinića o Trgovini Srbije i Austro-ungarsko od 1808-1859, (Smederevo 1963). The subsequent papers have not been published, but are maintained in excellent order, and are referred to below under the abbreviation M.u.S., SS (Muzoj u Smederevo, Sava Stanković). The relationship is noted in Arhiva Arona Despinića..., p 11.
Budapest. Formerly the Despinić firm had operated directly from Ković whence it kept in touch with the merchants of the Serbian interior, and where it maintained its own establishment which probably included fattening stables,¹ and from which it sent its drovers out over the trails to Hungary. But with the opening of steamer connections between Baziaš and Smедерово, the Ković establishment was made redundant for this purpose, and the firm established a permanent agent in Smедерово, Sava Stanković, who now took over the business with the interior. By combining the functions of steamboat agent for the Staatsbahn railway with his employment by the Despinić firm², he placed his employers in a strong position to compete for the often inadequate supply of shipping between Smедерово and Baziaš.³ Besides a base in Smедерово, the firm also needed permanent representation in Budapest, as the rail system of consignment dispensed with the need for traders to accompany the animals in passage.⁴ Failing this, an exporter would have to be dependent on the Budapest commission houses, whose reputed business methods were not such as to inspire confidence in their clients.⁵

¹ This is indicated by several letters, including one from R. Krtić of Smедерово who offers Despinić in Ković "good, well fed hogs" for sale and enquires whether he needs hog fodder. Nauj. S. 53 311/66 of 25.2.1860.

² L. Pavlović, Smедерово и XIX век (Smедерово, 1969), p 53. Stanković's predecessor at the steamboat agency, Torpek also seems to have been placed there by the Despinić firm. Idem, Arhiva Aron Despinića..., p 27; Nauj. S. 55 450/66, Jovanović-Martinović, 7.2.1861.


⁵ A.G.D., Krtić "Autobiografija" (n/a) fo.fo. 19-20. (Folio numbering refers to a stenographic copy in my possession); PRO 70 105.79, despatch of 25.1.1839.
Thus, after Aron Despinić's death, the sons established branch offices at Budapest and Vienna. In 1863 Stanković was corresponding with "Despinić Bros., Steinbruck", and in 1876 received a letter from Josip Despinić on the headed paper of "Despinić & Markovits, Pest".

This was no more than the beginning of a process which was to have profound and adverse effects on the development of the Serbian hog trade. In the earlier part of the nineteenth century the Budapest hog market and stables had been located near the centre of the town, but the Despinić and a consortium of their associates established a joint stock company to set up row stockyards at the suburb of Steinbruck (Kőbánya). One of the Despinić was "president-manager" (Načelnik-Predsednik), his No. 2 man (Podnačelnik-Podpredsednik) Taodorović, was a fellow Kovin hog merchant, and also on the board of management was one Rašić. Rašić was a member of the wealthiest of the Smederevo firms, Braća Rašić, subsequently Spasić i Rašić, principals in the foundation of Smederevska Freditna Panka and

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1 For Vienna still absorbed a considerable part of their trade, L. Pavlović, Arhiva Arona Despinića..., p 5.
2 M. u S. SS. 315/66 Stanković, Smederevo-Braći Despinić, Steinbruck.
3 M. u S. SS 1250/70 dated 25.2.1876.
5 A.G.R. M.M. Kostić, "Autobiografija" fo. 17. This as almost certainly the same enterprise as the "Društvo za bavanje svinja i društvo za davanje prethodnog zajma" which sent periodic reports to the Serbian press ("Svinjarska Trgovina u Prošloj Godini" Vidalo IV, 1883, 19, p 3 col 4) and the "Pig Fattening Establishment Company" referred to in G.BE. (A.M.) 1880, p 1307.
7 A.G.R. M.M. Kostić, "Podaci" fo. (Spasić i Rašić).
substantial merchants in the hog fattening and exporting business as well as in the import and wholesaling of "manufactures".¹ The enterprise was probably established in the early 1860's, to operate stockyards and maintain the hogs which were driven in, till they had been sold.² But the most substantial part of the company's business was in fattening hogs, though they might be already in partly fattened condition.³ In 1876, an average of 54,600 hogs would be fed at the fattening establishment at 3kg of cereal a day requiring an annual 60,000 tons.⁴ In a short time, Steinbruck market had, for the hog trade, become synonymous with Budapest, and the "Fattening establishment company" in 1880, was listed among the largest quoted on the Budapest bourse, its 2,500 shares being quoted at around 200 florins in 1880, representing a capitalisation of the equity at about £50,000.⁵ Though in the 1890's ownership passed from the Serbian group to the "Fest Commercial Bank",⁶ Steinbruck market was to remain the dominant influence on the Serbian hog market till the commercial war of 1906-10, though it was complained by 1905 that its facilities had become obsolete.⁷

¹Ibid; L. Pavlović, Srederevo u XIX Veku, p 53.
²A.G.B. M.M. Kostić, "Autobiografija" fo. 17.
³Hogs which had already undergone three or four months fattening in Serbia would receive "definitive" fattening for a further one or two months at the "Steinbruck General Warehouses" R. Milllet, La Serbie Economique et Commerciale, p 83.
⁴C. Br. (A.H.) 1877 (II) p 71.
⁵C. Br. (A.H.) 1880, p 1307.
⁶A.G.B. M.M. Kostić "Autobiografija" fo. fo 17-18. L. Pavlović notes that the sons of Aron Dospinid lacked their father's business acumen, and that with their associates, the Parkovidi, they were subsequently ruined. L. Pavlović, Arhiva Arona Dospinida..., p 5.
⁷M.M. Kostić, Srpska Izvorna Tržovna od 1893-1903 Godine (Beograd, 1905) p 72.
We have already shown the adverse influence that this Steinbruck system had on the development of Serbia's hog export; it is ironic that it had been created by Serbian enterprise to facilitate its export problems.

c. Regional specialization into trades in fattened and lean hogs.

Although the whole of the Serbian river frontier was brought in touch with the railroad at Bania, and with subsequently established railway terminals, the emergence of a trade in fattened hogs was confined to certain regions, while others continued to export the hogs in lean condition. This information may be deduced from customs figures for hog exports in lean and fat condition by port of exit, and while it is obviously difficult to make precise statements about the extent of the hinterland of each port, the general picture seems quite clear.

The information we have on port of exit is derived from certain data relating to the early 1880's (before establishment of the railway down the Morava valley). It is presented as Table III:10. Although by reason of the fragmentary and incomplete nature of our data we are limited to making qualified rather than definitive statements, we can be fairly certain that the export of fattened hogs was confined to central and eastern Serbia, and left the important lean hog exporting areas of western Serbia unaffected. The export of fattened hogs was particularly concentrated in the region from Belgrade to Crnište. The export of lean hogs was less concentrated, for although the western ports predominate, it is likely that the ports which specialized on the fattened hog export...
### Table III. 10.

**Fat & Lenn Hogs – Exports by port of Exit, early 1880’s.**

<table>
<thead>
<tr>
<th>Port</th>
<th>Col. 1.</th>
<th>Col. 2.</th>
<th>Col. 3.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Export of all hogs in 1881</td>
<td>Mean export of hogs 1880-83</td>
<td>Mean export of hogs 1880-84</td>
</tr>
<tr>
<td>Drina crossings</td>
<td>0.8</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Rača</td>
<td>35.2</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Mitrovica</td>
<td>132.8</td>
<td>v. small</td>
<td>75.2</td>
</tr>
<tr>
<td>Šabac</td>
<td>13.5</td>
<td>n.a.</td>
<td>13.0</td>
</tr>
<tr>
<td>Crnouvac</td>
<td>8.1</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Beograd</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Višnjica</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grocka</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smederevo</td>
<td>11.6</td>
<td>27.8</td>
<td>n.a.</td>
</tr>
<tr>
<td>Požarevac</td>
<td>35.0</td>
<td>30.3</td>
<td>n.a.</td>
</tr>
<tr>
<td>Ram</td>
<td>44.6</td>
<td>over 7</td>
<td>n.a.</td>
</tr>
<tr>
<td>V. Gradište</td>
<td>11.7</td>
<td>7.0</td>
<td>4.1 b</td>
</tr>
<tr>
<td>D. Milanovac</td>
<td>6.7</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Tekija</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kladovo</td>
<td>1.3</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>B. Palanka</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry crossings</td>
<td>3.6</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Residual</td>
<td>-</td>
<td>17.2</td>
<td>74.0</td>
</tr>
<tr>
<td>Total</td>
<td>305.6</td>
<td>89.3</td>
<td>166.3 b</td>
</tr>
</tbody>
</table>

a. "by the export of fattened hogs, the town [Gradište] comes immediately behind Ram ferry.,” Karić, p 868.

b. mean of 1880-83.

c. includes 2,600 sucking pigs, "more than on any other ferry.,” Karić, p 869.

**Sources:**

"Exports of livestock and hogs by customs houses in 1881 accounting year across Drina, Sava, and Danube customs houses." O.H.F. I, 17, 16.10.1882, p 262

V. Karić, Srbija..., p 637, 640, 798, 822, 740, 868-9.

Standard sources of foreign trade statistics.
Notes: The concentration of fattened hog exports through Smederevo, Požaravac, Ram and Gradište is clearly apparent. A maximum of 19 1/4% of the trade could have passed through other ports.

Most of the balance must have passed through ports in the centre of the country. According to 1897 figures Drina and land frontier customs posts passed only lean hogs and sucking pigs. This was merely peasant frontier traffic. It is very unlikely that any of this traffic had been in fattened condition at any time.

Nor is it likely that any considerable flow of fattened hogs crossed the frontier at Sabac or its outlets of Rača and Nitrovica. In 1890, only 651 fattened hogs passed through Sabac, and in 1891 only 997.3

Only a negligible flow of hogs of any type passed through the lower Danube ports. Hogs were indeed fattened in the Timok valley, but merged into the Morava valley hog trade, or else were probably exported through Donji Milanovac.5

In 1887 - a year of low hog exports in aggregate - Donji Milanovac exported 3,500 in fattened condition.6 It seems fair to assume that at least this number (4% of total fattened export) passed through it in 1880-83.

Thus the bulk of the remaining 13,700 fattened hogs unaccounted for must have passed through Ram (in addition to the minimum quoted) and the ports between Obrenovac and Gročka, of which the most significant was probably the capital. Thus most or all their hog exports must have been fattened.

Trade in lean hogs was less concentrated. We have to account for 74,000 a year in addition to those already located. The trade of Rača would have been similar to that of Sabac and Nitrovica, at say 30,000 lean hogs at least. Similarly we can allow about 40,000 for Drina frontiers and land crossings. That leaves about 40,000 unaccounted for. This indicates that ports which handled fattened hogs also handled lean ones in the ratio of about 4:9 lean to fattened.

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1. S.S.T. 1897, p 205 ('ostale carinica' lines 57-59)
3. S.M. LIX. 62. of 18.3.1892, p 300.
4. M.K. Kostić, Pisma s Put... p 92.
6. R. Millot, La Serbie Economique... p 263.
also continued to handle perhaps 4 lean hogs for every 9 fattened.¹

So two separate branches of the Serbian hog export can be distinguished, one predominantly of fattened hogs from the Morava valley region and another of unfattened animals from the west of Serbia.

The Morava valley had long been an attractive area for stockraising. The annual flood provided it with rich water meadows. Even as late as 1896 a traveller (who knew the country well) could write of the Morava north of Jagodina that, as much land was unploughed because of the flooding, water meadows stretched over enormous extents.² Population pressure probably forced the margin of cultivation up to the banks of the Morava, and south of Jagodina the monoculture of maize predominated.³ Winter crops were ruled out by the flooding, but the same floods which inhibited the spread of wheat annually restored the fertility of the soil for the maize crop.

Lacking rail communications, the difficulty of growing a cash crop of wheat was unimportant, as much of this area lay far from the Danube, but the maize surplus could readily be monetized as hog fodder. Transit of fattened hogs was slow, but perfectly practicable.

¹ See note to Table III. 10.
² H. Kostić, Pisma o Puta Beograd-Paraćin-Zaječar (Beograd, 1892), p 30.
³ Ibid.
The Morava valley hog trade, with its principal outlets at Smederevo (for the left bank) and Požaravac-Dubravica (for the right bank) drew to itself hogs raised not only in the basin of the river and its tributaries, but also most of that of the east of Serbia. Hogs raised — and "well fed" — in the eastern region of Zaječar were sent across the hills to join the flow at Paradin¹, while up to 30,000 a year were brought up from the West Morava and its tributaries.² The Smederevo villages themselves were an important supply source,³ but an estimate of 1879 indicated that between 30,000 and 50,000 hogs a year (depending on conditions) were driven up the Morava valley from the maize-rich region between Paradin and the confluence of the West and South Morava rivers.⁴

Many of these hogs were in fattened or partially fattened condition when they started on their journeys, fed on the maize surpluses of the regions of their origin. So their speed of travel was slow. A herd from Paradin would take 20 to 25 days to reach the Danube⁵ (i.e. about 4½-5½ km per day) but the trade had provided itself with an efficient commercial infrastructure which mitigated the difficulties of transportation. Along the drove roads on either side of the Morava, the trade was serviced by overnight stables and inns, where maize could be purchased for feed, as the drovers slowly made their way from one to another. It did not necessarily follow

¹ Ibid, p 92.
³ N.U.S. 33 424/66 Stanković - Despinić, 14.2.1876.
⁴ A. Aleksić, "Morava..." loc cit.
⁵ Ibid, p 80.
that the herds would remain on the same bank as they had started 
out on, for although all the bridges and ferries exacted toll, they 
might cross the river according to whether the price of maize was 
higher on the one bank or the other, or to take advantage of better 
watering conditions from the streams which intersected the roads, 
particularly as water was often short on the right bank of the Korava 
between Svilajnac and Fožarevac.¹

**Dominating the trade were the big firms of the river ports** 
like that of Despinić, most of whose purchases during the period 
1863–77 appear to have been made by Stanković, their Smođerevo agent. 
Some of the small town merchants of the interior with whom they dealt 
were little more than purchasing agents for the Despinić firm, 
travelling the hog raising regions and purchasing with Despinić money, 
such as Puncić Rašić, merchant of Junkovac village, who bought hogs 
for the firm at Kusadak, then travelled in the region of Kragujevac 
to buy more, and wrote back asking for money to continue purchasing.² 
Even their correspondent at Jagodina, Todor Arandjelović, one of the 
foremost hog merchants of that town,³ himself purchased hogs on 
account of the Despinić firm.⁴ The correspondence of the Despinić 
firm indicates their dependence on close, often contractual, relations 
with the merchants of the interior.⁵ Nevertheless, the Smođerevo

¹ Ibid., p 90.
² **K.u.u.S.** SS 400/66 Rašić-Despinić, 20.5.1861.
⁴ **K.u.u.S.** SS 301/66 Arandjelović-Despinić, 9.11.1876.
⁵ For example, see **K.u.u.S.** SS 513/66, Prokić-Despinić, 23.11.1860; 
SS 344/66 Simić-Despinić 17.11.1860.
merchants had no monopoly of the business for country merchants from
Svilajnac, Terasin and Palanka were also noted as leading hogs of
their own onto the transports at the port,\(^1\) while Budapest merchants
competed for supplies not only in Smederevo itself, but also secured
the Smederevo villages.\(^2\)

Once in the hands of the merchants at Smederevo, the herds
from the interior would have to be stabled. Several of the larger
Smederevo merchants held stables on the Danube bank and rented them
cut on a regular commercial basis. Stabling was needed not only
for transit, but also for the purpose of holding the hogs for
fattening.\(^3\) This appears to have been carried out particularly in
the winter months, though unfavourable circumstances would cause
merchants to cut short the fattening and export immediately.\(^4\)

\(^1\) N.u.s. SS 566/66 Stanko\'vi\'\'c-Despin\'i\'\'c 26.12.1876; SS 364/66
Stanko\'vi\'\'c-Despin\'i\'\'c, 27.5.1875; SS 361/66 Stanko\'vi\'\'c-Despin\'i\'\'c, 22.5.1875.

\(^2\) N.u.s. SS 484/66 Stanko\'vi\'\'c-Despin\'i\'\'c, 14.2.1876.

\(^3\) See, for example, N.u.s. SS 367/66/1, Stanko\'vi\'\'c-Despin\'i\'\'c, 5.11.1876; SS 465/66 Stanko\'vi\'\'c-Despin\'i\'\'c, 21.2.1876. On 6.2.1875,
Stanko\'vi\'\'c bought 165 hogs, probably a consignment from Zimko\'vi\'\'c of
Palanka which then weighed about 300 funta a pair. By Tuesday,
11.2.1875 they had been put on feed, from a supply of grain which
Stanko\'vi\'\'c had held in store for the purpose and for which he was
accounting to his employers. N.u.s. SS 398/66/2 of 3.2.1875; 398/66/3 of 4.2.1875; 398/66/5 of 6.2.1875; 398/66/7 of 12.2.1875;
all Stanko\'vi\'\'c-Despin\'i\'\'c.

\(^4\) N.u.s. SS 569/66 Stanko\'vi\'\'c-Despin\'i\'\'c 3.2.1877. In this case
because of exceptionally bad weather. SS 373/66 Stanko\'vi\'\'c-Despin\'i\'\'c
9.11.1876. In this case because of a shortage of fodder. SS 362/66
Stanko\'vi\'\'c-Despin\'i\'\'c 23.5.1875; SS 363/66 J. Despin\'i\'\'c-V. Despin\'i\'\'c,
24.5.1875. Very discreetly in this case as the hogs were sickening
of an epidemic.
Smaderevo was by no means the only centre where fattening became a highly organized business; Pećaraveac also became identified as a hog fattening centre, with great fattening stables in the town,\(^1\) likewise Gradište,\(^2\) and towns in the interior, particularly Svilajnac.\(^3\)

Over time, the business appears to have grown more concentrated, as Millet wrote of merchants building up huge herds of five and six thousand head of lean animals, which they would then maize-fatten for three or four months in the fattening stables,\(^4\) before exporting. Though Smaderevo is specifically mentioned as one of the leading centres in this respect,\(^5\) this is an altogether different order of magnitude to the operations of the Despinići, who dealt and fattened in terms of hundreds.

Smaderevo was probably not ideally located for fodder supplies, for as has been shown above, much of its immediate hinterland specialized in raising the more remunerative surplus\(^5\) of wheat, for export, while transport obstacles and the natural tendency of areas further up the Morava valley to generate maize surplus\(^5\) created a price gradient which favoured fattening in the interior.

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1 V. Karić, Srbija pp 622-3; C. Dr. (S) 1886 (Railways) p 1.
2 V. Karić, op cit p 666.
3 "In all the towns in the immediate vicinity of the Great Morava there are centres for the export of fattened hogs which are reared in their extensive stables". Ibid, p 798. "Trade is engaged at Svilajnac... in the export of fattened hogs which are fattened in very large number in the obori (stables) there." Ibid, p 818.
4 R. Millet, op cit p 82. However, Millet was prone to exaggeration.
5 R. Millet, op cit p 82; E. Lazard & J. Hugue, La Srbie d'Aujourd'hui, II (Genbleux, 1900) p 38.
Table III. II.

Price gradient on maize along the Morava valley

<table>
<thead>
<tr>
<th>Town</th>
<th>1865-9</th>
<th>1870-4</th>
<th>1875-9</th>
<th>1880-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smederevo</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Svilajašac</td>
<td>91</td>
<td>89</td>
<td>90</td>
<td>93</td>
</tr>
<tr>
<td>Jagodina</td>
<td>79</td>
<td>77</td>
<td>n.a.</td>
<td>93</td>
</tr>
<tr>
<td>Paračin</td>
<td>n.a.</td>
<td>n.a.</td>
<td>92</td>
<td>93</td>
</tr>
</tbody>
</table>

Towns are listed in order of distance from the Danube. Prices of maize are expressed as percentages of the price ruling in Smederevo (October prices).

Source: "Genovnik zonaljski proizvoda i zasluga u Srbiji za Oktobar..." in Državna din IV, p. XXXVIII; V, pp. XXXVIII, 1 and 2; VI, VII and VIII, each pp. XXXVIII; IX, pp. XXXVIII, 1 and 2 and LXXVIII; XI, pp. XXXVIII, 1-4; XII and XIV each pp. XXXVIII and LXXIV; XV, pp. LXXIV and CLXXIV.

The main source of maize supply at Smederevo seems to have been the local market, though as this kind of transaction was unlikely to generate correspondence, it is difficult to be sure of this. It was clear, however, that the failure of the local peasantry to bring maize into the town, as happened in 1876, after the outbreak of war, could throw the hog trade into a crisis.

There is no specific evidence that maize was not brought up from the Morava valley to augment this supply, yet there are several references to negotiations and dealings with the merchants of the central Serbian towns for consignments of the minor hard grains.

1 We do note that Stanković purchased 60,000 eka of maize (77 tonnes) from a Smederevo man in 1863, Mau S. SS 315/66 Stanković-Despinić, 18.7.1863.

2 Mau S. SS 373/66 Stanković-Despinić, 9.11.1876; SS 402/66 Stanković-Despinić, 23.11.1876; SS 390/66 Stanković-Despinić 27.11.1876; SS 489/66 Stanković-Despinić 16.11.1876.
(barley, oats and rye), while in order to get wheat for their export trade the firm went to the extreme length of organizing an experimental attempt at navigating the Morava with steam shipping. This apparent absence of maize consignments from the Morava valley does suggest that the hogs were fattened as much as local surplus permitted in the interior and that in consequence, demand for maize for local fattening sustained a price level which made it unattractive for the merchants of Smederevo to cart it to the Danube. For there can be little question as to the inadequacy of locally procurable supplies; in 1877, a Greek brought a consignment of maize up the Danube to Smederevo which was eagerly snapped up by two Smedorevo merchants for feeding hogs, while the Despinid of Kovin made repeated consignments of maize across the Danube to Smederevo, usually to their own agent who in turn supplied other merchants.

Circumstances in the west of Serbia and its hinterland in the Šumadija were rather different. This was hilly country, fertile but less well suited to cereal cultivation, and lacking long wide alluvial valleys like that of the Great Morava and its tributaries.

1Particularly with Todor Arandjelović of Jagodina, N.s. S. 336/66, Brće Arandjelović-Stanković 21.10.1873; Ss. 461/66, Stanković-Despinid 4.2.1873; also note purchase of oats at Jagodina, Ss. 904/67. Stanković-Despinid, 25.10.1873, and dealings in oats and barley with Tucaković of Kragujevac in 1873 and 1875, Ss. 905/67, Stanković-Despinid 24.10.1873; Ss. 348/66 Stanković-Despinid 12.1.1875.

2Without success. The Morava was hopelessly obstructed. There is no mention of maize in the cargoes. A. Aleksić, "Morava..." loc cit. Prilog III, p 106.

3N.s. S. 369/66 Stanković-Despinid, 4.4.1877.

4N.s. S. 570/66 Despinid, Kovin-Stanković, telegram 4.2.1876; Ss 466/66 Stanković-Despinid, 21.5.1875; 361/66 Stanković-Despinid, 22.5.1876; 364/66 Stanković-Despinid, 27.5.1875; Ss. 355/66 Stanković-Despinid 11.5.1875; Ss. 470/66 Stanković-Despinid 11.3.1875.
The animals in this region were raised on the farms in great numbers for there was ample pasture to support them, even after the erosion of the great Šumadija oak forest, but were sold off in lean condition. The export trade in these animals focussed on the port of Šabac, which was claimed to have been "the permanent market for more than half of Serbia in lean hogs", whence they were exported over Šabac ferry itself and the ferries of Rača and Kitrovica, which were mere exit points for Šabac, with little or no commercial function.¹

At one time, the Mačva, for which Šabac was the regional centre, had been one of the greatest hog raising areas of the country,² but this occupation was in decline because the exceptional richness of its soil attracted a disproportionate density of settlement, and the clearance and ploughing up of its former hog pastures.³ Thus the trade of the port increasingly came to depend on the activities of the small town merchants of the interior, in areas such as Rudnik, who claimed that they only dealt in lean hogs and traded them through Šabac, and the "peasant merchants" of Valjevo okrug, who were "hog merchants only in name" and acted as agents for "the larger Šabac capitalists"⁴.

²See 1866 livestock census in Državna, IV, p.119
This trade endowed the town of Šabac with enormous wealth and importance by Serbian standards. At times "up to 40,000 lean hogs would be gathered on the Šabac fields, with hundreds of buyers, sellers and their herds...

"... the ferry registers of Klenak, Nitrovia and Raša certified that nearly a million [sic] lean hogs a year were sold at Šabac and transported to the above mentioned ferries... and enriched the Šabac merchants."¹

Thence they would continue to be driven overland in the direction of Austria, usually for sale at Győr.²

So when Austria-Hungary started to discriminate against the import of unflattened animals, the Morava valley trades, which had already developed the fattening of hogs, were in a far better position to adapt themselves to changing conditions, than those of the west of Serbia. Moreover, while the Šmederevo and Požarevac merchants loaded their hogs onto the Bačka railroad for Steinbruck, the west of Serbia, consigning by the overland route, was especially severely hit by the regulations which had been designed to force their exports onto that market. The prolonged embargo of 1884 hit the Serbian hog trade at all points. Losses were reported by merchants waiting at Belgrade with their herds for the embargo to be lifted.³

¹Određeni Cdbor..., op cit. pp 9-10.
³"Podižimo Klanice" Odjek (Beograd) I.14, 3.11.1884, p.2, Col. 3.
The fattened hog export of Smederevo was down some 40% on the average for 1880-83.¹ But the lean hog trade of Sabao was singled out for special mention as having sustained a loss of seven million francs²—the value of about 200,000 hogs.

Thus if the hog trade of western Serbia were to survive, it would also have to develop a fattening function. But this was far from easy. Although the Našva was becoming one of the country's principal grain basins, it was not based on the alluvial monoculture of the Korava valley, and as in any case wheat was the most profitable cash crop, so the usual cropping system was a wheat-maize alternation. Thus as maize was the basis of subsistence, there was little to spare, and the massive wheat export of the area was paralleled by a notable absence of maize surpluses.

The system was not entirely inflexible, and eventually a hog fattening system did begin to appear in the west of Serbia, but not before the trade was irreparably weakened, and even then only on a very modest scale. By 1885, the merchants of Sabao were claiming that the hog trade of their town had shrunk to a quarter of its former level.³ By 1896, when the lean hog trade had been ended definitively, Sabao and Nitrovica managed between them to export only 1,204 hogs in

¹V. Karić, Srbija..., p 840.
²AAE. CCB. t.6, despatch of 8.4.1885, fo. 426.
³Credjenci Odbor..., op cit p 11.
fattened condition. Subsequently force of circumstances brought about a modest fattening trade and the corresponding figures attained 20,388 by 1904. But hog raisers, faced with the high cost of fattening their stock, or a very low price for the unfattened article seem to have found the trade, as a whole, unremunerative, and to have left it. Some probably reacted by ploughing up their hog pasture, and exporting wheat instead; while the total Serbian export of wheat rose by 139% between 1880/81 and 1898/99, that of the western ports of Šabac and Obrenovac (Zabrežje) rose 52%. Others no doubt put their pasture over to oxen, the trade in which was growing during this period, especially in the west of the country, and others again took more care to dry and export their surplus plums instead of using them as a source of hog grazing.

f. Impact of the railway on the hog trade.

The opening of the Serbian railway in 1884 does not appear to have had any very strong effect on supply conditions although it contributed to an upheaval in the organization of the market.

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1 See export data broken down by port of exit in S.S.T. 1896, pp 186-7.
3 See export data broken down by port of exit in S.S.T. 1904, pp 218-9.
4 See Table III.8.
5 See Ch. IV.5, pp 254-5
Running as it did through the Korava valley it had most influence on the export of fattened hogs. The line appears to have been opened for livestock in 1886, and in the following four years an average of 69,000 hogs were loaded onto it for export. Because of our lack of statistics for fattened hog exports between 1876 and 1887, it is difficult to be conclusive about its impact but inspection of Table III.9, does not suggest that any great and immediate impulse was given to fattening. There is certainly no reason to suppose that it had any impact at all on the total number of hogs exported. Nor did it have much negative impact on hog fattening by diverting maize from fattening to direct export. For although there certainly was an upsurge in the export of wheat in the late 1880's for which the railway was partly responsible, maize exports continued to flow in very modest dimensions.

Yet by offering a direct link between the hog supply areas of the Korava valley at any of a large number of small stations and Steinbruck market, free of the costs of driving overland, shipment and trans-shipment, it swiftly obliterated the established fattening

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1 Sm. 29.11.1890.

2 In 1890, export hog freights, all of which were consigned through Zemun (and none through Smederevo) were picked up from Belgrade, Mladenovac, Palanka, Velika Plana, Lapovo, Bagrdan, Jagodina, Čuprija, Turačin, Stalač, Aleksinac, Miš, Leskovac, and Vranje on the main line and from Kragujevac on the branch line. In 1888, 7,247 hogs had been conveyed over this branch line. Hogs were also carried on the Smederevo – Velika Plana branch line from Kraj jevo and Ipava, and even Smederevo itself, thus reversing the former direction of this traffic. Unfortunately no statistical information was supplied to evaluate the relative importance of these stations. Sm. LVIII. 1891. 175. p 952, table XX and notes Sm. 13.6.1889. (Statistički pregled železnica.)
and export centres of Smederevo and Požarevac. Smederevo was most immediately hit. Having barely survived the protracted crisis of 1873-5 which had all but wiped out the Austro-Hungarian banking system on which the small Serbian banks were heavily dependent, Smederevská Kreditná Banka faced a new crisis when, in 1883 the opening of the railway combined with a particularly acute cyclical depression to bring the local population close to begging. It had been expected that Smederevo would lose the business which had formerly come up the Morava valley, as well as most of its import trade into the interior, yet the loss of 80% of the export trade of Smederevo ferry was hard to bear. For even the merchants of the small towns and villages of the Smederevská Pomoravlje were consigning their export produce by the railway. The port which had once been so active, with boats "full of food from the Pomoravlje, great herds of hogs from the Sumadija and fine Serbian oxen" now stood idle. In 1886, the export of fattened hogs was down to 6,434 (or 23% of the average for 1880-83). The effects of the railway were a little slower to be felt by Požarevac, where 12,000 fattened hogs were still exported in 1887, and where the hog fattening trade still appears to have been flourishing in the early 1890's. But insofar as the trade survived at either town, the produce must then have been driven or shipped to

1 Though the bank in its report to shareholders appeared to be unable to distinguish between the effects of the general depression and that of their specific local problems. Protokol of shareholders meeting of Smederevská Kreditná Banka, 23.3.1886, Srpenska Podonesto- godišnica Rada Smederevská Kreditná Banka, p 116.

2 Ibid., pp 116-7.

3 V. Karić, op cit p 840. Karić writes of 1886 being a weak export year in general - and in money terms, so it was, but for the hog trade as a whole it was, by the number of head exported, a better than average year.

4 R. Millet, op cit. p 264.

the railway, for by 1896, not a single hog was exported through either port, nor would be ever again. The fattening trade now shifted - as was logical - to the line of rail, and as the railway ran for a long distance through the richest Morava grain surplus areas, it was natural that it should become more dispersed than a trade whose location depended on drawing supplies from a large area into a terminal, such as did that of Smederevo and Požaravac:

"Thus this branch of agricultural industry which used to be so profitable, into which the rich maize producing areas in the Morava valley had launched themselves, was entirely ruined, and all the places of production - the salnaži - where it was operated on an industrial scale, were abandoned, and the hogs were fattened in smaller stables of ten to twenty head in place of the former 500 to 2,000 head, so that it now lost its industrial character."

This diminution of scale is perhaps exaggerated in the above quoted passage, for now and growing livestock trading centres sprang up at hitherto insignificant places which happened to find themselves on the line of rail. Mladenovac developed a livestock market, and to Palanka, where big stables appeared, was drawn the former trade of Arandjelovac; while "establishments for the breeding and feeding" of hogs were set up along the railway to benefit from the abundance of cheap maize.

From the point of view of the Serbian business community, this change was disadvantageous, for it made the intermediary position

1 See standard sources for foreign trade statistics.
3 K.M. Kostić, Finančna Ruta... pp 7-12.
4 C.E. (s) 1887-8, p 23.
of the Serbian hog merchant between the producer and the Budapest purchaser redundant. The Budapest houses could easily buy directly from the producer, using the services of a kalauza — i.e. a purchasing agent, who could make advances (forêun) to producers and work exclusively on the account of his effective employer. So, despite the traditional strength of the Serbian merchant class in the hog trade, Kostić noted that "even" this "in recent times" had to the extent of 50% become a trade like that in cattle where

"the cattle exporter is becoming a simple drover of cattle which are bought with the komisijonar's money and which are exported under the komisijonar's name."

This tendency only reflects the dominant role of Budapest market which was, since 1891, the sole outlet for Serbian hogs.

g. Total hog supply inelasticity.

Although it was at least in part the availability of cheap maize in the Morava valley which encouraged and sustained its hog export, and a relative shortage of maize in the west of Serbia which inhibited the fattening trade in this area, the supply of maize was not the restraining factor on the development of the fattening trade of the Morava valley; on the contrary, by the beginning of the 20th century, surpluses of maize for export appeared every year. The limiting factor, which prevented the hog trade of the Morava from growing substantially, even to the extent of compensating for the decline of the trade in western Serbia was still the resource base

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1 M.N. Kostić, Srpska Izvorna Trgovina... pp 52-3. In 1895 the British consul estimated that "between 60 and 70 per cent of Serbian exporters collect their swine by aid of money advances from Budapest" PRO FO 105/111. No. 20 comm. of 27.12.1895.
of the extensive economy. For a heavy, lardy animal, maize was unquestionably an excellent fattening material, but the animals which were fattened had still to be raised to maturity for two years on open pasture,¹ and in the Korava valley region this was by no means in ample supply. Modern, intensive stall feeding, such as was developed in northern Europe as an expanding and profitable smallholder occupation made little headway in Serbia, despite the fact that this was the only way of breaking clear of the ever narrowing limitations of the pastoral economy. On the supply side, it required the use of barley rather than maize for feeding, and ideally, large quantities of buttermilk, the by-product of what was in Serbia a virtually non-existent dairying trade, and a relatively capital intensive restructuring of the productive system. On the demand side, the barriers were equally formidable. Hungary wanted heavy, lardy hogs, and the type of bacon animal which the more intensive raising system would have provided was of lighter weight, precisely the type which central European markets were bent on excluding. So it would have had to have been exported by circuitous routes, to western Europe, a costly venture, particularly when the Hungarian market was open and offered a fairly profitable outlet for the traditional fattened product. Only during the tariff war, when the fattened product was excluded from the Hungarian market, and the exporters of slaughtered meat had to endeavour to meet the demands of western markets did the question of intensification come to the fore. Even then, with market

conditions suddenly altering to favour the export of bacon animals, the supply response was very weak. Considering that even in the much more advanced agricultural economy of Hungary, the proportion of hogs raised for meat (as opposed to fat) had advanced between 1884 and 1911 from 11% to only 20%, it is not surprising that Serbia made little progress in this direction. We shall be examining the implications of this problem in more detail in connection with the development of the slaughtering industry, during the Commercial War with Austria-Hungary.

h. The myth and the reality of peasant conservatism.

Given the existence of very substantial areas of prime arable land, or potential arable, which enjoyed easy access to the great waterways, there were other influences which must have tended to inhibit and defer the development of an active market in grain besides the tardiness of the state in building an internal railway network, and the problems of the hog fattening trade. It was frequently averred by contemporaries that the main retarding influence which tended to perpetuate 'primitive' agricultural conditions stemmed from the unresponsiveness, ignorance, conservatism, laziness (or what you will) of the peasantry.

Such judgements tend to stem from incomprehension, and it is indeed surprising to find that even recent writers seem to have swallowed something of the myth. In that otherwise excellent edition, D. Warriner's *Contrasts in Emerging Societies*, (London, 1955) Miss Auty...

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2 See Chap. V, PP. 315-6, 324-6
chose to utilize a piece on Serbia which was captioned "Conservative peasants" which she used to draw the not very helpful conclusion that "the arteries hardened, perhaps because the peasants wore in their own eyes affluent enough", which the editor picked up and appeared to endorse.\(^1\) For society, where as Miss Auty agrees, "the growth of population required the development of a more intensive agriculture", and where, by inference, the maintenance of unchanged ways of economic life must have led to declining welfare, a feeling of "affluent enough" is a little odd.

Yet there is a good bit to explain, and it is scarcely enough to avoid explanation by having recourse to arguments emphasizing 'non-economic' considerations about the behaviour of peasant societies.\(^2\) In the first instance, so far from there having been a want of outlets and opportunities for peasants to intensify their agriculture (for commercial purposes), such internal markets as existed were not reliably supplied with peasant produce. The towns of the Danube and Sava were insulated from this problem because they could and did draw heavily on the Hungarian territories across the rivers for their supplies of grain and flour, but this was not altogether satisfactory. When the further bank of the Danube was cut off from Belgrade by ice in the winter, the town suffered seriously from shortages; 'even the bread' of Belgrade had to be imported.\(^3\) In November, 1859, the French

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1. See, in the above work, extract on pp 307-13 from M. Jovanovid, Die Sorbische Landwirtschaft, and comments on pp 288 and 15.


consul reported on the dearness of bread in Belgrade, owing to "mediocre" 
harvests. Yet, to his annoyance, "there were, a fortnight ago still 
fields of corn a few kilometres from Belgrade which had not been 
harvested and whose harvest is entirely lost."¹ As late as the 
1880's, Belgrade continued to be heavily dependent on provisions from 
Zemun, despite tariff discrimination against them,² and even by 
the turn of the 20th century, Serbian traders and their food products 
were still in competition with better quality produce from across 
the river.³ In the interior towns, no such import trade was possible 
and the townspeople seem largely to have provisioned themselves from 
their own fields. The 1863 census showed clearly that ownership by 
townspeople of land on the town fields was very much the norm. A 
regulation of the town of Kragujevac shows just how important the 
consōta considered it that the town fields should be utilized to secure 
a bread supply for the inhabitants. It was stipulated that grain 
raised on the town fields might not pass into commerce, and grain was 
most frequently sown "by those who had settled in the town from the 
surrounding villages, and purchased a plot of land there."⁴ Evidently 
the immigrant to the town still expected to have to procure his own 
food. In consequence the town was only differentiated from the 
village by the way its inhabitants obtained their cash income; for 

¹AAR.CCB.t2, despatch of 7.11.1859, fo. 402. 
²Z. de Borghgrave, La Serbie Administrative, Economique et 
Commerciale p 99. 
³H.B. Curtis, The Turk and his Lost Provinces, (Chicago, 1903) 
p 261. 
⁴H.D. Popović, Kragujevac..., p 218.
both obtained their subsistence by peasant farming. A complaint of
1874 illustrates this situation well: ¹

"... places in Serbia such as are Zaječar, Banja, Knjaževac,
Aleksinac, Paradin, and Jagodina have each about 20 shop-
keepers who are considered real merchants and fall into
the better class, and besides them there are 15-18 who have
their tillage orchard and vineyard, and although these
figure as merchants, and although they are known to the
townpeople as merchants, they and their families nevertheless
engage regularly in agriculture. And what can they be?
Each of them can say that his shop is only a sideline
occupation to him".

Even in Negotin and Smederevo,

"... it is known that there is a merchant class, but this
class draws good sums from the vineyards and engages
mainly in this occupation, indeed it can be said that this
business gives it its means of support".

At least in the interior towns, such a practice was probably
less a matter of choice than of necessity.

Clearly it was not simply for want of markets that the
peasantry were reluctant to sell grain. With a given technology and
a given price level, they sold only the produce of the extensive economy,
because although they had to be self sufficient in grain, the sale of
it would yield a lower return to labour than would the sale of a
quantity, equal in money value, of livestock. Although the land was
now sufficiently densely populated for this condition no longer to hold
true for the marginal sale; response to this change of circumstances
was deferred. In the eyes of those looking at the peasant economy

¹ K.V. "Iz istorije trgovine: zemljoradnici i trgovci" Nova
Trgovina, (April, 1952), p 307 and very much more in the same vein.
from outside, this made the cultivator "lazy" and "conservative" and his cultivation system "irrational". According to one, "the occupation of driving swine into the forest and from the forest to the Danube [i.e. for export] is suited to the lazy habits of the pure Serbian population". But, of course, it had to be admitted that, on average, if not at the margin, this represented a more efficient disposition of resources. In noting the lack of success of government attempts to stimulate cultivation it was observed that the peasants "find it less troublesome and cheaper to rear pigs for the Hungarian markets than to cultivate their lands." The need for adaptation was adequately analysed by at least one contemporary economist, but the failure to respond was not. "So long as the population was small, land abundant, and capital scarce, extensive farming was suited to the needs of the farmer and of the state, but now that these conditions are changing, a transition to a more intensive type of farming is desirable and necessary. Yet the transition is slow, simply because the peasants are ignorant of its advantages and adhere to what they know..." Having discussed the "primitive methods of cultivation", and having qualified his statement by the admission that capital was indeed in short supply, and having admitted that the grazing system "though unsystematic...is highly profitable", 

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2 PRO FO 76/1882, No. 18. cons. of 4-5-1863.
4 Ibid.
he asserted that the root cause of this backwardness was "the well known peasant conservatism, which holds fast to tradition and mistrusts every innovation as contrary to the nature of things. It is strange that the Serbian peasant, so liberal in other ways, should be much a stubborn conservative in this respect..."¹

However, "conservatism" can be construed as a response to an economic problem within a framework of economic rationality. The voice of the peasant is not easily heard in this respect, but every now and again some commentator would lift the veil.

For, soon from the inside, the matter was rationalized somewhat differently. During the era of Turkish rule, Serbia did indeed export grain, but only because the landowners, whose interest was more or less confined to the produce of the arable, needed money, and therefore obliged their tenants, as part of their rent in labour, to haul the produce of the fields to the market.² Once the Turks had gone, the grain trade vanished. It seems likely that in the minds of the people, the production and cartage of grain for the market was stigmatized by its former association with servitude. But there was much more to the problem than that. A šabac newspaper editor writing in 1906 of conditions in his village (Badovinci) "30 or 40 years ago" tells a story about how one of his forebears needed "a few ducats" and obtained them by selling grain. The Baba ³ was furious. "You are worse than a gipsy - you take food to šabac and

¹Ibid, p 310.
²M.D. Popović, op cit p 282.
³Grandmother; matriarch.
sell it!" All the old folk at Badovinci, he relates "know how in most of the villages of the drug it was a great disgrace – to produce and to have more food (Maize, wheat) than was consumed in the house, and to sell this surplus on the market at Sabac." (The italics are in the original). As he went on to point out, the disgrace which arose from raising grain for sale resulted from the sufficiency of livestock (particularly lean hogs) in the area, which were the mainstay of the local cash economy. 1 The fattening of hogs was cut for the same reason; "since food was only sown for what was needed in the house, nobody thought of rearing fat hogs for the house and for sale because the meat would be excessive in fat." 2 (This also suggests a difficulty on the part of the producer in comprehending the market possibilities of a product which he himself would not seek, a point to which we shall return in discussing the development of an export orientated trade in prunes).

Such attitudes give us something more solid than "conservatism" to interpret. The first people to feel the pinch from the want of pastoral resources sufficient to support the traditional style of economic life would have been those whose holdings or land rights were smaller than average in relation to the size of their households, the rural poor, or if you like the gipsies, the rural poorest who, bereft of landed resources would have to depend on sharecropping or wage labouring to earn the food – and cash – they needed. Prosperity, respectability and large pastoral holdings went together: larger farmers had less need to sell grain, thus grain sales were an overt

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symptom of poverty, and thereby of a lack of self respect. An early reference to grain sales in Belgrade implied a distress motive: "Grains have undergone during the month a considerable depreciation attributed to the excessive scarcity of firewood, of which the rigour of the cold has sharply suspended arrivals by water. The peasants have sought to sell their grains so as to procure the fuel of which they make an enormous consumption..." The causal connection could all too easily be reversed, so that in the public mind, "speculation" in grain became the cause of poverty, rather than its consequence.

A writer of 1872 deplored the incipient impoverishment of so many zadruga, which he ascribed to "the consequence of clumsy trading, to which our agricultural nation has given itself in recent years, although there is insufficient preparation and enterprise for this..." Such trading, he thought, led only to gain which was "rather desultory and insecure." Better to be like "the solitary man at Tarnava who lives solely from property, and as a peasant stands among the first by wealth in the whole of Valjevo okrug. There, trading is hardly necessary." Precisely how the small peasant with his "desultory and insecure returns" from trade was to better himself without putting grain on the market was not explained. Perhaps, as in the view of the moralist, he should accept the downward pressures on living standards imposed by a refusal or inability to intensify commercial production, and emulate the people of the impoverished Crna Roka okrug (as described by Milićević) where "one does not hear many complaints

1AAE.CCB. 11, despatch of 7.3.1842, fo.221.

A similar viewpoint was expressed by another writer on the zadruga, D. Novakovitch, La Zadrouga... (Paris, 1905) p 183.
about over indebtedness, as in certain parts of the Kukadija, the
people live more humbly but more securely."  

Influenced by the retention of social value judgements whose
validity was limited to conditions pertaining in an age which was
on the point of passing, it is not to be wondered at if the day when
land was to be ploughed up to raise grain for the market were to be
regarded as an evil day, rarely to be anticipated, more likely to be
defferred. The old pastoral values took a long time in dying. A
traveller (of 1903) who "found fault with one wealthy householder"
for the dirty establishment he maintained, received the retort "We,
respeching, enjoy such mud..." As he explained, "to the householder who
has much livestock it is not in the least shameful to lead a guest
through thick mud trodden by numerous beasts... they judge from the
mud outside as to whether the house is wealthy for it has a loöt of
animals."  

Only when it could be seen that prosperity could be obtained
other than through restriction of market relations to the sale of
lean animals, would the old sanctions be laid to rest. "Today"
写了our Sabac editor, in 1906, "almost every morsel of land is
ploughed - our okruž is the most advanced in Serbia in farming...
Anybody who does not adapt himself to new ways will surely fail.
By Vulovići for example, had they remained in the old ways, had they
not begun to raise much more crops, and to take food to sell in Sabac

1 M. Dj. Milčević, Kneževina Srbija (Beograd, 1876) p 921.
2 S. Pašić, Kroz Rudniški Okruž, (Sremski Karlovci, 1903) pp 120-1.
and feed up fat hogs... would have collapsed long ago. And so with all our peasants.”¹

Adaptation to a changing environment meant in this case more work to maintain an unchanged income, and a certain loss of face in the adaptation. Perhaps the supposed “conservatism” of the peasantry can best be compared by the modern analogy with the “conservative” response of the redundant bank manager, who might unquestionably be better off with a job as a milkman, than with no job at all, but puts off the evil day when he finally takes out the milk float, till he finds himself with no other option.

The most favourable time to make such a transition would be on a boom in the price of grain relative to that of pastoral produce, so it is not surprising that the first substantial outflow of grain (and fattened hogs) came on the cereal price boom of the late 1860’s, but in the longer run, the substitution and the consequent expansion of Serbian grain exports had to take place during the much less favourable conditions of the Great Depression era. The effects of this were mitigated for the Serbian farmer as Serbian grain prices were much more buoyant than those of the world economy (taking British prices as a proxy for the latter):

<table>
<thead>
<tr>
<th>Time</th>
<th>Serbia</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862/65</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1871/75</td>
<td>154.3</td>
<td>121.6</td>
</tr>
<tr>
<td>1896/1900</td>
<td>121.6</td>
<td>62.8</td>
</tr>
</tbody>
</table>


But as between relative prices of grain and livestock products, which are the key to the substitution, the position was much less favourable. A kilo of pork in Belgrade rose 79% in price between 1862/3 and 1896/1900 compared with the 22% rise in the export valuation of wheat. Other things being equal, the transition from extensive to intensive husbandry could not in itself maintain the former standard of welfare. However much access to the market was improved it was still the exchange of the milk float for the manager's desk, and so the retardation factor would persist. A positive incentive to bring grain onto the market (rather than a defensive reaction) could only be generated by change in one of the ceteris paribus conditions, the most obvious of which is capital supply.

1. Capital Supply conditions in agriculture.

Implicit to the model of rising labour input to achieve a constant level of output per capita is the assumption of unchanged capital stock of agriculture per worker. If, on the other hand, there were reason for supposing that the capital stock of agriculture were deepening, then we could no longer be certain that the productivity of labour in tillage would necessarily remain below that achieved in the extensive sector; in this situation the forces tending to make the cultivator "conservative" would rapidly be eroded, and the incentive to expand the commercial cultivation of the grain crops would be strengthened.

There would seem to be two routes through which a process of capital deepening could have been achieved within the rural sector. The first could come about via the formation of a capitalistic great estate agriculture, the second through the harnessing of peasant
savings into the deepening of capital within the smallholder sector.

It was once thought that so far from deepening the capital stock of agriculture, the existence of the great estate was more likely to result only in extensification and the perpetuation of agricultural backwardness, but the Eastern European estate has in some measure worked its way back to historiographical redemption. The moribund image of the great estate owes much to the baleful experience of the interwar years, when under circumstances of unparalleled economic adversity, the marginal efficiency of capital in east central European agriculture appears to have fallen to zero or below, and estate farms became consumers rather than accumulators of capital. However, the pre-World War I experience was radically different.

Notwithstanding the adverse price movements of the Great Depression, the six decades after 1850 were, on the whole, years when the great estates transformed themselves from moribundity into fairly dynamic, capital deepening, productivity raising institutions, able to harness effectively the increasingly abundant capital supplies to which they had access. So impressive was this transformation, that English farmers went to visit Hungary to see if there was anything they could learn there about the management of farming.

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2 J. M. Eddie, "Agricultural production and output per worker in Hungary 1870-1913" *J. Econ.*, 1968.

Romania, which was undoubtedly more backward in this respect, it has been questioned as to whether repugnance for the social institutions of the agrarian sector has not obscured its achievement in terms of the capital deepening of agriculture.¹

The formation of an analogous capitalistic farming, with access to external capital supplies and incentive to use them, could potentially have facilitated the development of capital using farming in Serbia. The process of ever widening social stratification in Serbian rural society is the common doctrine of Yugoslav historians, and there is some evidence to substantiate their view. In 1889, the land census recorded only 148 farms of over 50 hectares, but in 1897 there were 825 and in 1905, 1,112. Between 1897 and 1905, the number of those of over 100 hectares rose from 83 to 361, their average size increasing from 146 to 207 hectares. But not too much should be made of this, for even in 1905 farms of 50 hectares and upwards only amounted to 6.3% of the area of all farm properties.² The conditions for capitalistic land investment were evidently unfavourable, though land market conditions changed radically over the course of the century.

In the early years of the nineteenth century with an open frontier situation, and a thinly spread population, agricultural


²Vučo, Privredna istorija..., p 177; I.K.S., Inventar...u 1912 i 1913 godini, p 90.
capitalism would probably have had to be reinforced by the coercion of labour to make it profitable.

During the periods after both the first (1804) and second (1815) uprisings, labour coercion for field work was extensively practiced, and as late as 1827 an observer could report:\footnote{Dj. Magarašević, "Putovanje po Srbiji u 1827 god." in P.Ž. Petrović (ed) Duvanjan... p 41.}

"As dusk in beginning to fall, I see about fifty men, some on foot, others riding, with scythes and pitchforks on their shoulders. I ask what this signifies and I am told that all of these people have worked for Prince Danilović, it having been ordered that a few days must be worked each year for the chief prince."

According to Vlajinac, the principal authority on labour coercion, this partly arose because until 1811 no alternative provision was made for remunerating the Narodne Starošine from tax revenues after the first uprising, despite the very real military leadership function that it was necessary for them to perform. In 1819, after the second uprising, when the practice had reassumed the character of a major grievance, it was formally condemned and prohibited by Miloš Obrenović, but he himself grabbed extensive estates which he exploited with forced labour, as he regarded the laws of the land as inapplicable to his person. And as he permitted at least a small elite to emulate him, the signs were multiplying in the twenties and early '30's of progressive re-conservatism. But as labour coercion was effectively forbidden, his opponents, the abolition of forced labour could be used as a rallying cry against his régime, and was effectively ceased.
in respect of agricultural labour on his downfall (1838).

As a result of the legal separation of land from labour, it was open to those with the money to invest in land in Serbia, but only on capitalistic terms. But Serbia happened to be surrounded by territories in which the association of land with tied labour would result in its offering a more consistent positive return to capital invested in its purchase than land purchased under conditions of labour shortage and low labour productivity, in a free market.

There appear to have been no institutional barriers to the movement of capital in response to these forces, thus notwithstanding the relative shortage of capital in Serbia, profit maximising investors would export capital for the purchase of land with labour tied to it.

Such a capital flow out of the country certainly existed, and the following reasons given by contemporary observers for its existence appear to be strongly compatible with the above hypothesis:

"Property is so parcelled out as to render the purchase of a large estate difficult and moreover from political reasons the few Serbians who possess large fortunes have invested their accumulations in estates in Wallachia or in foreign funds..." 2

"...if a considerable capital is formed in Serbia it is obliged to leave for want of work. So it is in Wallachia and Hungary that it is almost always placed. It is there that the rich families of Belgrade (a very small number) have all their properties apart from the house that they own in Belgrade itself." 3

3 AAE.CCB. t3. despatch of 8.7.1863, fo. 70.
The same forces within Serbia would promote the putting out of money in usury: "The higher classes thus tend to become more and more the creditors of the lower... This is easy to understand in a country... where the land is without value to the town inhabitant who can neither work it nor can get it worked on his account."¹ Miloš Obrenović himself did not suffer an impoverished exile, for he had taken good care to build up extensive landed estate in Wallachia,² while Nisa Anastasijević, in his day the richest Serbian of them all, having made his fortune out of monopolizing the salt import into Serbia, invested it to become a great boyar, with 930,000 Austrian ducats sunk in the purchase and improvements of Wallachian real estate, before withdrawing altogether from Serbia to the lush delights of Bucharest.³ One of his investments, an estate at Kležani cost him 200,000 ducats, and after he had invested a further 120,000 ducats in improvements, it returned him 25–30,000 ducats per annum — about 3½% on the investment.⁴ With such rates pertaining on landed estate it is not surprising that Serbian capital was flowing to Wallachia. Apart from the conventional forms of estate, salt leases (in Wallachia) were also...

¹ AAE.COB. t.3. despatch of 13.7.1863, fo. 76.
² V. Stojanšević, Miloš Obrenović i Nisovo doba, p 447.
⁴ Ibid, p 290.
sought after, because of the monopolistic conditions of supply into Serbia, and constituted the object of investment competition between Anastasijević and the wealthy Bosnian emigré Rista Paranoš. This type of investment continued to attract Serbian capital as long as such opportunities continued to exist. Bulgaria remained under feudal rule till 1878, and both the Serbian Kragujevačka Kompanija and the firm of Kramanovíc speculated heavily in the farming of Bulgarian tithes. 

Even the subsequent opening of rail communications did not herald the emergence of a landowner economy, despite the continued and accelerated growth of population which should have tended to ease the labour market. But it is generally recognized that a land-hungry peasantry will tend to outbid the potential capitalist landlord (if given the chance).

The familiar argument on this is that the peasant, deriving income both from his capital and labour, will invest in land at a price which would give a sub-market return to a capitalistic investor. In theory, were he to farm his incremental land acquisition faced with the same factor market conditions as the capitalist, he would be better advised to deposit his money in a reliable bank. But of course, he will not farm the incremental land capitalistically, because at least

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1. See below, p. 447
2. A.G.B. K.N. Kostić, "Podaci" fo. 255/2 (Kragujevačka Kompanija); Dž. R. Vasičić, "Radi Obaveštanja" Vele Novina VIII (1895) 345, prilog.
part of the additional labour required to farm it will be drawn from the internal resources of his family, whose opportunity cost lies below the going market rate for agricultural labour. One does not have to look very far for Serbian evidence that in the opinion of prospective capitalists, land did not offer attractive investment prospects. For example we note that

"The richest house at Veliki Jovanovac has 35 hectares of the best land and a water mill. In all they have a labour force of five... but so much do they have to pay to the day labourers that it is already obvious that it is not worth their buying more land."

The capitalistic route to agricultural intensification could thus be ruled out: in the words of a French consul, "Another difficulty: the lack of a superior class and the excessive equality. Who will give impulsion to agricultural progress? Who will risk his capital in new enterprises while there are few large fortunes and not a single large property?"

Thus with the potential large investor excluded from the land market, it is necessary to inquire as to whether the system of

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2 J. Petrović, Pečalbari..., (Beograd, 1920), p 41n. Similarly argued calculations were put forward advising investors not to put money into vineyards. See below p. 471.

peasant farming precluded the process of capital deepening which was so necessary if the productivity of labour in tillage were to be pushed up to its productivity in extensive stockraising. There can be little question but that the peasant could form capital. According to Harriner, "peasants in all regions where a money economy is established tend to save a very high proportion of their incomes, even when that income is much smaller than that of a wage earner."¹ We have data which tend to confirm the truth of this generalization for the Serbian case.

For this we turn again to the Avramovic income and expenditure survey of 1911, to calculate total peasant expenditure, and to subtract this from total income.

Calculating total purchases of the farm community by the procedure used in Chapter I for total incomes etc.² and assuming linearity of trend above the 15th hectare, —

<table>
<thead>
<tr>
<th>At (ha)</th>
<th>each</th>
<th>on (no. of holdings)</th>
<th>total (100 din.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.05</td>
<td>80</td>
<td>99,175</td>
<td>7,934</td>
</tr>
<tr>
<td>3.35</td>
<td>180</td>
<td>140,795</td>
<td>25,343</td>
</tr>
<tr>
<td>6.97</td>
<td>256</td>
<td>87,663</td>
<td>22,442</td>
</tr>
<tr>
<td>13.40</td>
<td>350</td>
<td>32,901</td>
<td>12,831</td>
</tr>
<tr>
<td>28.62</td>
<td>873</td>
<td>7,750</td>
<td>6,766</td>
</tr>
<tr>
<td>66.27</td>
<td>2,085</td>
<td>751</td>
<td>1,566</td>
</tr>
<tr>
<td>206.51</td>
<td>6,601</td>
<td>361</td>
<td>2,383</td>
</tr>
</tbody>
</table>

+ 6.98% adjustment = 84,797

¹Economics of peasant farming, p 163.
²See above pp. 42-4.
From this should be deducted indirect taxes on expenditure of 10,238,000 dinars, leaving net expenditures of 74,559,000. Comparing this with net income after all taxes of 96,930,000, savings account for 22,371,000 or 23.08% of net income.

It is however, much less clear as to whether these savings or any part of them were devoted to increasing the productivity of agricultural land and labour. But to what end were these savings accumulated? The evidence suggests that they were accumulated for the achievement of economic security in an environment where there were two obvious foreseeable needs for them. These were the expectation of recurrent random shocks - harvest failure, warfare, disablement and so on. The simplest way of providing for these was through hoarding. Many observers believed that the peasants were inveterate hoarders, and given the obvious good reasons for hoarding, or of arranging one's affairs so as to be sure of an ample supply of cash in hand, there is little reason to doubt the truth of these observations. According to one observer, the head of household tried normally to keep a cash reserve of 2-300 dinars. The conversion of cash into real estate for this purpose would not have been wise, for under conditions of transient economic strain, forced sales of land could bring about heavy falls in land values. For example, in the village of Veliki Jovanovac the price of land in 1830-95

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1See above p. 52
2See above p. 44 (gross income) and 53 (total tax burden)
3For example, see C. Br. (S) 1880, p 854; AAE.CCB.t2, despatch of 9.3.1850, fo. 107.
4H. Vivian, Servia, the Poor Man's Paradise, pp 165-6.
The price of land ranged between 250 and 300 dinars a ralo but during the distress years of 1897-98, the price slumped to 180-200. The second expectation was of an increase in family size, and the necessity for the peasant therefore to try to make provision for adequate sized holdings for his multiple heirs. This was probably the most powerful savings motive of all, and readily comprehensible in a society where the density of population on the land was rapidly increasing. According to Warriner again, peasant savings were invested in land purchases, pushing the price of land higher and higher. Petrović's table of land prices in Veliki Jovanovac shows that despite the short run crisis of 1897-8, this process was indeed taking place.

Table III. 13.

Price of Good Land in Village of V. Jovanovac.
(per ralo of 0.25-0.30 ha.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1820</td>
<td>about 10 dinars</td>
</tr>
<tr>
<td>1860-65</td>
<td>120-200</td>
</tr>
<tr>
<td>1880-85</td>
<td>200-240</td>
</tr>
<tr>
<td>1890-95</td>
<td>250-300</td>
</tr>
<tr>
<td>1910-12</td>
<td>800-1,200</td>
</tr>
</tbody>
</table>

Sources: J. Petrović, Pešalbari..., p 33.

Between 1860-65 and 1890-95 there does not appear to have been any change in yields per hectare. But at export valuation, the price of farm output moved in the following way:

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862-65</td>
<td>67.2</td>
</tr>
<tr>
<td>1880-85</td>
<td>73.6</td>
</tr>
<tr>
<td>1890-95</td>
<td>66.7</td>
</tr>
</tbody>
</table>

1 J. Petrović, Pešalbari... (Beograd, 1920) p 33.
2 D. Novakovitch, La Zadrouza... (Paris, 1905) p 62; J. Petrović, op. cit p 27.
3 D. Warriner, Economics of Peasant Farming, p 163.
Thus the ratio of price to gross yield was widening. And even between 1890/95 and 1910/12, when both crop yields and prices appear to have risen, the latter by as much as 73%, the rise of 263% in land value must easily have gone on outpacing the money yield. Population pressure was still chasing the price of land up ahead of its productivity.

Such values, however, were probably being created on a rather narrow land market with a small turnover. The parcels that came on the market tended to be small and usually of inferior quality. "Offers are few and the demand for land is very large: in one village there would only be a few sales in a year." And in any case, the net savings of the rural sector could not simply be 'sunk' in land purchases; for every buyer, there has to be a seller, and the proceeds of all these sales could not have been dissipated in consumption for the savings of the rural sector could not longer have been not - as in fact they were. And why should we assume that all peasants, in their eagerness to acquire land, should be willing to invest on a basis of ever declining annual yields to capital? From the point of view of providing economic security for old age or for succeeding generations, why buy land when that money had a very real opportunity cost? There was a highly developed and secure local banking system which would offer a safe 5-6% for a start, and even if this yield were insufficient to compensate for the loss of a return to labour that the purchase of land would carry with it, there was the alternative

1 J. Petrović, op cit p 34.
of applying capital to the existing landholding, and thereby creating increased employment and output, and hence economic security from the farming of an unchanged area. In Warriner's judgement, however, "the efficiency of capital in other investments on the farm is very low and consequently all peasants who can save, hoard, to buy more land."¹ This may well have been the case during the inter-war years, but it was not self-evident for the period under consideration. In the opinion of Avranović, while underemployment was one of the most serious problems of peasant society, he regarded as at least as great a problem the "great shortage of agricultural equipment"². Even where a family had land to spare which it could not work itself, it would find difficulty in deriving a worthwhile return by putting it out on a sharecropping lease, unless it could also provide draft animals and the most necessary implements.³ In general, he observed, proportion better supplied with implements made more use of their labour force, permitting a greater number of workdays per man, larger output, and a larger surplus over consumption.⁴ Now after the end of the Great Depression, prices of agricultural exports turned up sharply; in the decade before the Balkan wars they were still rising, and at levels as high or higher than those attained during the Gründerzeit, apart from the difficulties caused by the Commercial War with Austria-Hungary, which affected the grain market very little, the prospects for cereal agriculture must have looked to the Serbian peasant as good as they

¹D. Warriner, op cit p 164.
²M. Avranović, Нaке Селjačко Годиште, p 16.
³Ibid, p 15.
had ever been; and with land prices also at record heights in relation to their yields, investment in farm buildings, irrigation, drainage, implements, draft and breeding stock and all the rest must have begun to have looked highly attractive, all the more so as only part of the cost needed have been met by the disbursement of money savings.

It is therefore significant to note that, at last, during this period of the second grunderzeit, crop yields seem, after decades of stagnation, to have been developing an upward trend. In Table III.14. we set out all the known official data on crop yields and crop areas for principal crops, and estimates which were made for 1912. Comparison of all the figures back to 1867 would not at first sight suggest any consistent trend. There are however good grounds for attaching very much less significance to the pre-1901 statistics than to those issued subsequently. A line has been drawn across each table at this point, to indicate that earlier data should be discounted. This is because of the highly erratic trends of cultivation per rural inhabitant above the line and the relatively small and gradual fluctuations below it. The yield data of the earlier years is even less to be trusted. For example 1897 and 1898 were known to be bad years; exports of cereal were abnormally low and there was even a net import of maize. Yet if we are to believe the figures in the table, 1897-8 saw the highest maize yield for any pair of years recorded, and similarly for the other crops. Conversely 1893 set a cereal export record which was not to be exceeded till 1900; yet this was achieved despite lower than average yields. It is therefore essential, in analysing yield changes over time to disregard these earlier figures.\(^1\)

\(^1\) Support for this evaluation may be found in T. G. Ilid, Iz Privrednog života Srbije I. Statističke Deležke (Beograd, 1910) pp 6-3.
Table III. 14.
Grain Cultivation and Crop Yields: 1867 - 1912.

(1) Yield in Quintals per Hectare.

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat</th>
<th>Maize</th>
<th>Barley</th>
</tr>
</thead>
<tbody>
<tr>
<td>1867</td>
<td>9.46</td>
<td>11.08</td>
<td>5.79</td>
</tr>
<tr>
<td>1893</td>
<td>8.66</td>
<td>7.49</td>
<td>5.95</td>
</tr>
<tr>
<td>1897</td>
<td>13.03</td>
<td>19.30</td>
<td>12.32</td>
</tr>
<tr>
<td>1898</td>
<td>9.39</td>
<td>14.33</td>
<td>9.68</td>
</tr>
<tr>
<td>1899</td>
<td>7.89</td>
<td>12.07</td>
<td>7.44</td>
</tr>
<tr>
<td>1900</td>
<td>7.14</td>
<td>10.13</td>
<td>6.58</td>
</tr>
<tr>
<td>1901</td>
<td>7.23</td>
<td>9.45</td>
<td>6.53</td>
</tr>
<tr>
<td>1902</td>
<td>9.54</td>
<td>8.91</td>
<td>8.63</td>
</tr>
<tr>
<td>1903</td>
<td>8.51</td>
<td>9.27</td>
<td>7.84</td>
</tr>
<tr>
<td>1904</td>
<td>8.67</td>
<td>4.46</td>
<td>6.96</td>
</tr>
<tr>
<td>1905</td>
<td>8.24</td>
<td>9.85</td>
<td>7.41</td>
</tr>
<tr>
<td>1906</td>
<td>9.64</td>
<td>12.88</td>
<td>9.65</td>
</tr>
<tr>
<td>1907</td>
<td>6.20</td>
<td>8.17</td>
<td>6.74</td>
</tr>
<tr>
<td>1908</td>
<td>8.24</td>
<td>9.42</td>
<td>7.05</td>
</tr>
<tr>
<td>1910</td>
<td>10.98</td>
<td>14.41</td>
<td>13.76</td>
</tr>
<tr>
<td>1911</td>
<td>10.78</td>
<td>11.54</td>
<td>9.73</td>
</tr>
<tr>
<td>1912</td>
<td>11.50</td>
<td>9.92</td>
<td>10.00</td>
</tr>
</tbody>
</table>
Table III.14 (Continued).

(ii) Area of cultivation, absolute and per head of rural population.

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat Total (000 ha)</th>
<th>Wheat Per Cap. (area)</th>
<th>Maize Total (000 ha)</th>
<th>Maize Per Cap. (area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1867</td>
<td>7.9</td>
<td>13.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td>317.1</td>
<td>15.5</td>
<td>531.8</td>
<td>26.1</td>
</tr>
<tr>
<td>1897</td>
<td>279.7</td>
<td>12.9</td>
<td>448.3</td>
<td>20.7</td>
</tr>
<tr>
<td>1898</td>
<td>281.6</td>
<td>12.8</td>
<td>510.0</td>
<td>22.8</td>
</tr>
<tr>
<td>1899</td>
<td>403.8</td>
<td>18.1</td>
<td>545.7</td>
<td>24.4</td>
</tr>
<tr>
<td>1900</td>
<td>310.0</td>
<td>13.7</td>
<td>463.3</td>
<td>20.4</td>
</tr>
<tr>
<td>1901</td>
<td>304.8</td>
<td>13.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1902</td>
<td>325.6</td>
<td>14.0</td>
<td>524.7</td>
<td>22.6</td>
</tr>
<tr>
<td>1903</td>
<td>348.1</td>
<td>14.8</td>
<td>533.8</td>
<td>22.7</td>
</tr>
<tr>
<td>1904</td>
<td>366.4</td>
<td>15.4</td>
<td>540.9</td>
<td>22.7</td>
</tr>
<tr>
<td>1905</td>
<td>372.1</td>
<td>15.5</td>
<td>552.5</td>
<td>23.0</td>
</tr>
<tr>
<td>1906</td>
<td>372.9</td>
<td>15.3</td>
<td>548.1</td>
<td>22.5</td>
</tr>
<tr>
<td>1907</td>
<td>367.6</td>
<td>14.9</td>
<td>549.7</td>
<td>22.3</td>
</tr>
<tr>
<td>1908</td>
<td>379.7</td>
<td>15.3</td>
<td>566.4</td>
<td>22.8</td>
</tr>
<tr>
<td>1909</td>
<td>376.6</td>
<td>15.0</td>
<td>584.4</td>
<td>23.2</td>
</tr>
<tr>
<td>1910</td>
<td>385.6</td>
<td>15.1</td>
<td>585.2</td>
<td>23.0</td>
</tr>
<tr>
<td>1911</td>
<td>386.5</td>
<td>15.0</td>
<td>584.1</td>
<td>22.7</td>
</tr>
<tr>
<td>1912</td>
<td>387.0</td>
<td>14.9</td>
<td>585.0</td>
<td>22.5</td>
</tr>
</tbody>
</table>

But thereafter, yields showed very sharp improvements. Between 1901/3 and 1910/12 wheat yields rose 31.57%, maize yields 29.82% and barley yields by 45.61%. These improvements represent annual growth rates of 3.1%, 2.9% and 4.3% respectively. Moreover, though this is more speculative, the take off in yields per hectare seems to have taken place simultaneously with an abrupt halt to the earlier tendency for the per capita cultivation of these crops to have risen. This rise seems to have taken place ever since 1867 (or before). (Though of course we cannot place too much reliance on the 1867 area of cultivation figures, it may be doubted whether these were so inaccurate as entirely to invalidate the supposition that crop areas per capita were rising markedly in subsequent years.)

It may still very well be the case that this intensification was achieved without any increase in capital per worker, but at the same time there was rather a sharp swing back towards grain as the leading commercial crop. Table III.15 shows two indices, the first of the export of grain per capita of farm population, the second of the total volume of farm exports per capita of farm population. The former index has been adjusted downwards during the years 1906-10 to take account of 34,000 tonnes per annum of exported maize which would in former years have been devoted to export hog fattening. Both indexes are of five year moving averages.
Table III. 15.

Index of Grain Export (adjusted) and Total Farm Products Export 1879/1883 to 1908/12, expressed in constant price and per capita of farm population.

\[(1890/91 = 100)\]

<table>
<thead>
<tr>
<th>Year</th>
<th>Grain</th>
<th>All farm products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1879/83</td>
<td>31.3</td>
<td>87.6</td>
</tr>
<tr>
<td>1884/88</td>
<td>41.3</td>
<td>90.1</td>
</tr>
<tr>
<td>1889/93</td>
<td>95.3</td>
<td>98.2</td>
</tr>
<tr>
<td>1890/94</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1894/98</td>
<td>63.2</td>
<td>94.0</td>
</tr>
<tr>
<td>1896/99</td>
<td>77.7</td>
<td>94.6</td>
</tr>
<tr>
<td>1898/99</td>
<td>79.4</td>
<td>102.7</td>
</tr>
<tr>
<td>1900/01</td>
<td>72.1</td>
<td>103.9</td>
</tr>
<tr>
<td>1902/03</td>
<td>63.3</td>
<td>105.1</td>
</tr>
<tr>
<td>1904/05</td>
<td>80.1</td>
<td>99.3</td>
</tr>
<tr>
<td>1906/07</td>
<td>123.6</td>
<td>93.9</td>
</tr>
<tr>
<td>1908/09</td>
<td>130.6</td>
<td>90.5</td>
</tr>
</tbody>
</table>

Sources: Table III.1 Col.6, with 34,000 tonnes per annum deduction between 1906-10 with population and total volume data from Table

From this it appears that after the initial expansion of grain exporting in the 1880's and the early 1890's, the tendency for peasants to continue expanding cultivation per head for the purpose of exporting abruptly ceased, and other products increasingly accounted for the expansion of exports. At the end of the period it is obvious that the expansion of the grain export is strongly associated with the rising yields achieved. Suddenly, grain exporting has become attractive enough to justify the intensification (rather than the extension) of its production, while formerly the process of intensification by putting former pasture under tillage had been retarded by
the decline in labour productivity per unit of work with which it
had been associated. A probable interpretation of this movement
would be that given the favourable grain market conditions which
pertained at the time, and the falling returns which could be obtained
through the purchase of new land, an inflow of investment was induced,
to deepen the capital stock of cereal agriculture, thereby raising the
productivity of labour engaged in this to a level relatively high
compared with alternative activities, and in consequence, encouraging
farmers to transfer their attention towards monetizing their production
through the grain market. The testing of this interpretation must
necessarily await new research, but the raising of grain yields seems
to have been real enough.

I have chosen to put forward no qualitative evidence for
a capital improving "agricultural revolution" in Serbia during the
"Second Gründerzeit", but not on account of any dearth of such evidence.
On the contrary, selective use could be made of the qualitative evidence
on the subject to create an 'agricultural revolution' in Serbia at almost
any sub-period within the period as a whole which one would care to
instance. As Morineau, dealing with eighteenth century France has
put it "The agricultural revolution was thus above all a literary
phenomenon." Yet one comment made by an observer in 1912
encapsulated the trend for which I have argued:

1. R. Morineau, "Was there an agricultural revolution in 18th
Century France?" in R. Cameron (ed) Essays in French Economic

"In the course of recent years, however, solicited in all parts by the foreign purchaser... the peasants are accustomed to these at first unhoped for receipts; they pay attention more readily to the information of the state which teaches them how better to cultivate the soil, to fertilize it, and unceasingly to increase the cultivated surface and to acquire improved agricultural implements."

But to quantify the hypothesis may, I fear, remain impossible. The kind of data, assembled by Dubić in 1933, and Petričović in 1940, for Croatia, on peasant farm capital is, for all its deficiencies the kind of raw material we need.¹ For pre-1914 Serbia, we have some capital stock figures (of a crude sort) in the Avramović survey, but nothing with which to compare them, for an earlier date.

J. Conclusions.

Having demonstrated the urgent need from the 1850's onward for an intensification of husbandry through a switch of resources away from the pastoral sector and into crop cultivation for the market, we observed that, while this process was undoubtedly in train from the 1860's it appears, in respect of the key arable sector, to have been retarded, at least by comparison with the other Balkan states.

Tardiness in building up a railway net suggested itself as an obvious potential restraining factor, and it indeed appears that government policy acted, mainly because of diplomatic and strategic considerations, to have delayed, diverted and restricted the development of this network. However, other factors, not subject to the influence of the state, also appear to have contributed to the retardation process,

¹As discussed by J. Temanovich, in Peasants Politics and Economic Change in Yugoslavia, pp 434-7.
and these, combined with an ill-considered rail tariff structure, probably led to the underutilization even of that network which was built. These factors, which arose from the tendency of intensification of farming at the stage of switching from pastoralism to tillage for the market to be associated with declining producer welfare, would only be nullified by technical change towards a more capital-intensive agriculture. Market conditions during the Great Depression era were unfavourable towards any such tendency, even though the rural economy appears to have been able to generate the requisite supply of capital. This capital supply could be created independently of any significant trend towards capitalistic ownership relations in the land, and when favourable conditions for such investment returned, during the era of the second Grundrente, there was a rapid improvement of yields, associated with a renewal of attention to the arable sector as a source of cash income, with a strong inference that this intensification was also associated with a deepening of the capital intensity of arable agriculture.
APPENDIX

Regional crop surpluses and deficits, schedule on pp.
Calculations and sources.

Definition. A region (krež) is defined as being in surplus or in deficit to the extent that local production of the five principal grain crops (maize, wheat, barley, oats and rye) per head of the farm population exceeds or falls short of the per capita consumption (other than for export fattening and for brewing) of those grains, or of their equivalent in bread, flour etc. derived from them, of the population as a whole. Serbia was — or by the end of the nineteenth century had become — a nation with a very high per capita bread consumption — according to the calculation below, mean per capita grain consumption was 290 kg per annum (and this is a conservative estimate as farmers were of the habit of underestimating their crops).

By way of comparison, Britain in the 1760's consumed 1.5 lbs per capita per day — or 248 kg p.a. — of wheat, and never reattained this figure.

So with a mean figure as high as 290 kg, it is reasonable to assume a fairly modest measure of fluctuation between consuming areas about this mean, for the additional consumption of relatively affluent households would be small, or even negative, given the probably low or negative income elasticity of demand for cereals above this level of consumption.

It is therefore assumed that the bread consumption of townspeople, notwithstanding their reputedly higher living standards would equal

1It may be of interest to note by way of comparison that in Romania, consumption of maize, the staple food of the peasantry, fell from 230 kg. p.a. in 1890 to 146 kg. in 1903. D. Kistany, Farm against the Peasant. A. Study in Social Domination, {London, 1951} p 73. The British figure is taken from B.R. Mitchell & P. Deane, Abstract of British Historical Statistics, {Cambridge, 1962} p 350, from the Salaman series.
the mean grain consumption of the country as a whole — i.e. that each head of the urban non-farm population gave rise to a trade of 2.20 kg of grain.

The "farm population" is defined as the entire population of the villages plus that part of the population of the towns registered in the census of 1895 as farmers. This is because many inhabitants, particularly of the smaller so-called towns, were in fact farm families — i.e. — in Lapevo, nominally a town of 5,436 inhabitants, 4,889 were described as farmers or their dependents. By treating all village inhabitants as farmers, we are expressing a near-truth as 96.7% did in fact so declare themselves (1900 census), but as it is also likely that nearly all the rest were more or less engaged in agriculture, at least to the extent of growing their own basic foods, intra-village purchases of breadgrains and maize may be treated as negligible, and purchases of these foods from outside the village by this element of the village community (except where it was the common practice of the villagers as a whole) would be even smaller.

Source of population statistics: aggregate population of each srez on 31.12.1895 from Popis stanovništva i domaća stoke 1895 (Roll of inhabitants and domestic livestock 1895), Beograd 1897, from which is subtracted the non-agricultural population of all towns within the srez administration (communities italicised in the above source) and to which is added the agricultural population of okrug towns falling within the geographical area of that srez while lying outside its jurisdiction, and the agricultural population of the city of Belgrade urban population in 1895 being broken down between
agricultural and non-agricultural families in census statistics reproduced in Statistika XII. These adjusted farm population statistics appear as column 2 of the schedule for figure III. (1).

The total grain crop, by ares

This is the aggregate of the sown area under wheat, maize, barley, oats and rye ("the 5 crops") in each ares multiplied by the local per-hectare yield. The basic data used relate to the farming census of 1897, but we encounter certain difficulties in using it. While the statistics of sown area appear to be fairly accurate and consistent with the trend of annual figures published for 1900 and after (unlike the 1889 census which grotesquely understates and the 1893 census which, in attempting to compensate for obvious prior understatement, no less grotesquely overstates), the techniques used for yield estimation were clearly inadequate. (Yield estimates were given on an okrug by okrug basis in the volume containing the census statistics, Statistika Kr. Srbije, XVI, pp 362-373). According to this work, output figures were as follows:

<table>
<thead>
<tr>
<th>Crop</th>
<th>Sown Area (ares)</th>
<th>Yield %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>8,654,000</td>
<td>57.3%</td>
</tr>
<tr>
<td>Wheat</td>
<td>3,644,000</td>
<td>24.1%</td>
</tr>
<tr>
<td>Rye</td>
<td>484,000</td>
<td>3.2%</td>
</tr>
<tr>
<td>Barley</td>
<td>923,000</td>
<td>6.1%</td>
</tr>
<tr>
<td>Oats</td>
<td>1,422,000</td>
<td>9.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,127,000</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

However, for objections to using these yield statistics, the reader is referred to discussion in the main body of the text, pp. 213-6. It is obviously safer, therefore to disregard them; instead the yields per hectare, by okrug, were calculated for the average of the
data for 1906, 1907 and 1908, by which time the figures are reasonably reliable, and these yields per hectare were applied to the cultivated areas of 1897. The so yields work out as follows:

<table>
<thead>
<tr>
<th>Mean yield per hectare of the 5 grain crops 1906 - 1908</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beograd</td>
</tr>
<tr>
<td>Valjevo</td>
</tr>
<tr>
<td>Vranje</td>
</tr>
<tr>
<td>Krugujevac</td>
</tr>
<tr>
<td>Krajina</td>
</tr>
<tr>
<td>Kruševac</td>
</tr>
<tr>
<td>Korava</td>
</tr>
<tr>
<td>Niš</td>
</tr>
<tr>
<td>Pirot</td>
</tr>
</tbody>
</table>

The okrug mean was then applied to each area within that okrug, as it was in 1897, with the following exceptions deriving from boundary changes since that time:

- Srezovi Grocka, Kolubara (Podunavlje), Kosmaj, Posavina (Podunavlje) and Vračar relate to the new Beograd okrug, and Smederevo, Jasačka (Podunavlje), Crajevo, to the new Smederevo okrug.
- Dragačević, Studenica, Trnava, and Žiča relate to the new Čačak okrug, as also does Koravica (transferred from Užice okrug), while Vlasotinac grez was transferred to Vranje okrug.

Col. 3 of the schedule is obtained from the multiplication of the above yields by the aggregate of areas under the five crops, by grez, as they appear in Statistika XVI, pp 350-51, 356-57.

Col. 4 is simply derived by dividing column 3 by column 2.

1 See standard sources for crop statistics.
Per capita grain consumption.

This figure is obtained by calculating the estimated total production (the summation of Col. 3) = $8,474,000$ quintals, and deducting from this an allowance for exports of grain, inputs of grain into export hog fattening, and inputs to the brewing industry.

Our figure is assumed to be that of the net crop – i.e. no allowance has been made for retentions of part of the yield for seed. All accounts which I have consulted appear to accept this assumption as implicit, though nowhere is it made explicit. The only source reference which gives any guide to seed ratios is that of Jakšić, in Glasnik S.U.B. XLI, Beograd 1875, pp. 9-27, in which he appends global gross and net: yields for grains and potatoes to the 1847 and 1867 areal cultivation statistics (the same yield ratios being applied to both sets of figures). Although Jakšić was onetime director of the state statistical office, no indication was given as to the basis of his yield estimates, which were certainly not attached to the original publication of the 1867 statistics in Državne zbornike VI. (Beograd, 1870). It must therefore be assumed that he wanted to obtain global crop estimates on the basis of the areal census and contemporary yield estimates; VI. Jovanović (also of that department) subsequently repeated use of these figures in order to demonstrate – in conjunction with population census – a diminution (between 1847 and 1867) in per capita cereal consumption,¹ a questionable act of faith in the accuracy of the figures with which he was working, and on the assumption that crop yields had remained about the same since the 1840’s, which may have been true, but does not appear to be open to

¹VI. Jovanović: "Statističan pregled našeg privrednog i društvenog stanja" Glasnik S.U.B. L. p 387.
proof. The Jakšić-Jovanović figures give a wheat yield of 9.46 q/ha net; 10.97 gross. Wheat yields 1900-03 moved as follows: 7.14; 7.23; 9.54; 6.51; 8.67; 8.24; 9.64; 6.20; 0.24, so unless yields per hectare had been on a long run falling trend since the '70's the 1900-03 yields are not. This of course is possible, though unlikely particularly as the 1900-03 figures appear to be on the beginning of a rising trend (See text, Pp213-6). (The difference between gross and net: maize yields was too small to have any practical comparative significance). The balance of evidence, though not wholly satisfactory, leads us to treat the yields as net.

(Creating them as gross would reduce grain availability for consumption by 29 kg per capita all round, to 2.61, a figure still high enough for our assumptions about distribution to hold good).

Although our areal statistics apply only to a single year (1897) these only changed slowly from year to year - much less than yields - and, as we are interested in conditions general to more than a single year's experience we have applied the mean grain export (net) for 1896-1898, of 924,000 quintals (see Table III.1). We have also allowed 20,000 quintals of barley for brewing inputs on the basis of data quoted on p. 369 below. Input into hog fattening for export is calculated as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fattened hogs</th>
<th>Hogs and meat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1896</td>
<td>46,700</td>
<td>60,000</td>
</tr>
<tr>
<td>1897</td>
<td>116,000</td>
<td>29,900</td>
</tr>
<tr>
<td>1898</td>
<td>83,400</td>
<td>18,500</td>
</tr>
<tr>
<td>mean of 1896-98</td>
<td>127,200</td>
<td></td>
</tr>
</tbody>
</table>

Source: Tables III.9 and V.1.
Estimating an input of 320 kg of maize per hog (for basis see p 319), the hog industry would have absorbed 407,000 q of maize.

Thus

<table>
<thead>
<tr>
<th>Direct export absorbed</th>
<th>924,000 q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brewing inputs</td>
<td>20,000 q</td>
</tr>
<tr>
<td>Export hog fattening</td>
<td>407,000 q</td>
</tr>
<tr>
<td></td>
<td>1,351,000 q</td>
</tr>
</tbody>
</table>

which deducted from total production of 8,047,000 quintals leaves 6,696,000 quintals for the consumption of a population of 2,315,000 (1895) or 2.90 q per capita.

This per capita consumption figure is deducted from each column 4 figure in the schedule, to ascertain the surplus or deficit production of each area in turn. (Col. 5). These surpluses and deficits were then represented diagrammatically on figure III. (1).

Aggregate Grain Trade.

From 1898 onward, annual statistics were published in Statistički Godišnjak of the trade in the main agricultural commodities passing over the opština scales. Because of the numerous ways in which produce could potentially avoid passing through licenced markets (and avoid payment of obč or turnover tax), it is unclear as to whether these statistics provide a meaningful measure of the volume of commodity trade, and our analysis of grain surpluses and deficits provides a useful cross check on the veracity of the municipal scales statistics.

At 2.90 quintals per head, the urban, non-farm population of 249,400 would provide a market for 723,000 quintals of grain. Rural deficit producers provided another internal market. Aggregation of rural deficits can be calculated as follows:
This figure constitutes an upper limit on inter-regional grain trade.

For a lower limit, it would seem reasonable to take a 50% satisfaction of inter-regional deficits, or 205,000 q. Another potential internal trade item is in grain for the fattening of hogs, as this was not only undertaken by the farmers themselves but also by commercial hog fattening enterprises. As we have estimated that this activity absorbed 407,000 q of maize, and as much of the basic fattening process seems to have been carried out by the farmers and only the finishing in commercial establishments, it is reasonable to estimate the potential trade in this commodity as between 0 and 200,000 q.

Therefore we can estimate internal trade as follows:

<table>
<thead>
<tr>
<th>Deficit</th>
<th>Deficit Deficit Total</th>
<th>Deficit Deficit Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crew</td>
<td>Per Cap. q.</td>
<td>600 q</td>
</tr>
<tr>
<td>2</td>
<td>1.56</td>
<td>20.01</td>
</tr>
<tr>
<td>3</td>
<td>0.47</td>
<td>9.99</td>
</tr>
<tr>
<td>9</td>
<td>1.23</td>
<td>18.62</td>
</tr>
<tr>
<td>12</td>
<td>1.33</td>
<td>33.25</td>
</tr>
<tr>
<td>17</td>
<td>0.99</td>
<td>23.90</td>
</tr>
<tr>
<td>18</td>
<td>0.07</td>
<td>2.20</td>
</tr>
<tr>
<td>21</td>
<td>0.45</td>
<td>7.19</td>
</tr>
<tr>
<td>30</td>
<td>0.27</td>
<td>11.12</td>
</tr>
<tr>
<td>33</td>
<td>0.39</td>
<td>7.29</td>
</tr>
<tr>
<td>35</td>
<td>0.79</td>
<td>11.97</td>
</tr>
<tr>
<td>39</td>
<td>0.91</td>
<td>16.82</td>
</tr>
<tr>
<td>41</td>
<td>0.04</td>
<td>1.80</td>
</tr>
<tr>
<td>47</td>
<td>0.10</td>
<td>2.37</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To towns 723,000 quintals.
To rural consumers 205 - 410,000
To breweries 20,000
To fattening trade 0 - 200,000

\[ 943 - 1,353,000 \text{ q} \]

external trade \[ 924,000 \text{ q} \]

\[ 1,372 - 2,272,000 \text{ quintals.} \]

If, for comparison we take the mean constant scales figures for the first 3 years in which they were published, 1896 - 1900, we should deduct exports for those years from them to make a comparison of internal trade with 1896-8.

<table>
<thead>
<tr>
<th>Sales of Grain across municipal scales 1898 - 1900 (000 quintals)</th>
<th>Less mean export (Cross)</th>
<th>Available for domestic use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize and maize flour</td>
<td>924.4</td>
<td>301.0</td>
</tr>
<tr>
<td>Wheat and wheat flour</td>
<td>1416.0</td>
<td>794.9</td>
</tr>
<tr>
<td>Barley, oats and rye</td>
<td>558.0</td>
<td>520.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,283.4</strong></td>
<td></td>
</tr>
</tbody>
</table>

Deduct from this the import of 76,000 q maize, and 9,000 q of wheat and wheaten flour 85.4

Supplies to the domestic market from home producers 1,199.0

This compares with our range above of 943 - 1,353,000 q which indicates that the two statistics are mutually supporting, and that the market scales figures probably are a true reflection of the volume of trade in grains. We can thus integrate these two sets of statistics to show a breakdown of the disposal of the crop in 1896-8 as follows:

1 S.O. 1898-9, pp 422-3, 426-7; S.O. 1900, pp 370-1.
Sales to urban consumers, Wheat flour: 52,700 q from domestic mills, 58,000 q's brought to market from the country and 5,000 imported, total 590,000 q. So urban demand for maize will be 723,000 - 590,000 = 133,000 q., assuming that wheat will only be bought in towns by the power mills.

The breweries will absorb 20,000 q of barley, leaving 19,000 for rural consumers, and our other residuals in the market will be 27,000 q of wheat for the rural market, and 490,000 q of maize for the fattening trade and the rural market, in addition to the gross export of all these crops. For the sake of convenience if we assume that all maize imports supply the urban consumer, then the urban maize market for the farmer amounted to 57,000 q. If we take our maximum figure of 200,000 q for the fattening trade then we have available 290,000 quintals of maize for the rural consumer, plus 46,000 of other grains or 336,000 q in all, an estimate well within our previously suggested range of 205-410,000 q.

Thence the breakdown of disposal of domestic production:

<table>
<thead>
<tr>
<th>Gross exports</th>
<th>Wheat</th>
<th>Maize</th>
<th>Barley, Oats and Rye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales to town consumers</td>
<td>585</td>
<td>57</td>
<td>-</td>
<td>642</td>
</tr>
<tr>
<td>Sales to rural consumers</td>
<td>27</td>
<td>290</td>
<td>19</td>
<td>336</td>
</tr>
<tr>
<td>To Breweries</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>To fattening trade</td>
<td>-</td>
<td>200</td>
<td>-</td>
<td>200</td>
</tr>
<tr>
<td>c/f</td>
<td>1,250</td>
<td>624</td>
<td>333</td>
<td>2,207</td>
</tr>
<tr>
<td></td>
<td>Wheat</td>
<td>Maize</td>
<td>Others</td>
<td>Total</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Fattening own stock</td>
<td>1,250</td>
<td>624</td>
<td>333</td>
<td>2,207</td>
</tr>
<tr>
<td>Self consumption</td>
<td>689</td>
<td>3,772</td>
<td>1,172</td>
<td>5,633</td>
</tr>
<tr>
<td>Total crop</td>
<td>1,939</td>
<td>4,603</td>
<td>1,505</td>
<td>8,047</td>
</tr>
<tr>
<td>(divided in same proportions as 1897 census estimate)</td>
<td>24.1%</td>
<td>57.3%</td>
<td>18.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Peasant grain purchases</td>
<td>27</td>
<td>290</td>
<td>19</td>
<td>336</td>
</tr>
<tr>
<td>Self consumption</td>
<td>689</td>
<td>3,772</td>
<td>1,172</td>
<td>5,633</td>
</tr>
<tr>
<td>Peasant grain consumption</td>
<td>716</td>
<td>4,062</td>
<td>1,191</td>
<td>5,969</td>
</tr>
<tr>
<td>= %</td>
<td>12.0</td>
<td>68.1</td>
<td>19.9</td>
<td>100</td>
</tr>
</tbody>
</table>
CHAPTER IV.

ORGANIZATIONAL CHANGE IN THE PASTORAL ECONOMY.

The central theme of our study has been the intensification and commercialization of the farm economy of Serbia, and the extensive pastoral sector has been treated as something of a diminishing and inflexible residual. As we are unable to show that the pastoral sector could and did integrate very far into the process of intensification, at the stage of agricultural development attained by 1912, the study of this sector would appear to offer a sterile excursion into the economics of sectoral stagnation, were it not that as late as 1905, it still gave rise to what was obviously a very sizeable component of total peasant income, cattle exports alone accounting for 10.50 million dinars or 14.6% of all farm exports.

But there is rather better reason than this. It can be shown that, although not readily subject to the techniques of intensification, the pastoral economy was susceptible to a high degree of organizational rationalization within a little changed production function. This meant that far from declining absolutely in face of the advancing frontier of cultivation, pastoral output probably rose substantially during the period under survey.

As with the economy of cultivation, the pastoral sector yielded produce both for self consumption and for sale, with this difference, that each branch - cattle, sheep and goats - produced a multiplicity of products, some of which tended to be produced for
sale, others for self consumption. Each branch yielded its products in variable proportions, of which again varying proportions would be sent to market.

The output of the cattle raising economy may be broken down as follows. Firstly it generated draft-power, and although this could give rise to exchanges between farmers, it may be treated for the peasantry collectively as a product wholly for self consumption. It also produced meat from the slaughter of calves, cows and oxen, which again was almost entirely a subsistence product, but was interchangeable with the sale on markets external to the farm economy of live animals delivered on the hoof. The Sorbian breeds were not held to any considerable extent for milking, and the dairying industry never got beyond the experimental stage.

On balance, the sheep economy was orientated more to subsistence, for whereas the mature ox was more usually sold on the hoof than self consumed, the mature sheep or fat lamb was normally slaughtered for domestic consumption, only its woolfell and perhaps some tallow being sent to market. Sheep's milk and manure were almost entirely subsistence products, but wool was sheared both for self consumption and sale. The goat was used in an analogous manner, save that its market aspect was less significant than that of the sheep.
a. The cattle stock and its maintenance.

The census figures indicate the following changes in the cattle stock:

<table>
<thead>
<tr>
<th>Year</th>
<th>Old frontiers</th>
<th>Annexed territories</th>
<th>New frontiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1846</td>
<td>672,700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1859</td>
<td>801,300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1866</td>
<td>741,400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1879 (est.)</td>
<td></td>
<td></td>
<td>964,000</td>
</tr>
<tr>
<td>1883</td>
<td></td>
<td>112,109</td>
<td></td>
</tr>
<tr>
<td>1880-86 (est.)</td>
<td>715,000</td>
<td></td>
<td>827,000</td>
</tr>
<tr>
<td>1886 (est.)</td>
<td></td>
<td></td>
<td>1,100,000</td>
</tr>
<tr>
<td>1890</td>
<td></td>
<td></td>
<td>819,200</td>
</tr>
<tr>
<td>1895</td>
<td></td>
<td></td>
<td>915,400</td>
</tr>
<tr>
<td>1900</td>
<td></td>
<td></td>
<td>956,700</td>
</tr>
<tr>
<td>1905</td>
<td>757,100</td>
<td>205,400</td>
<td>962,500</td>
</tr>
<tr>
<td>1910</td>
<td></td>
<td></td>
<td>957,900</td>
</tr>
</tbody>
</table>

Sources: 1846-66: Državopis IV p 114; "The horses, cattle... of Servia may at the present time be estimated at the following numbers." CIT (5) 1879, p 264; 1883 census of livestock in the new territories, in M.Dj. Kilićević: Kraljevina Srbija, p xxxv. 1880-86. According to Millot, an animal census was attempted in 1883 but interrupted by the outbreak of the Timok uprising; but the Ministry of Agriculture estimated the above quoted figure for the stock of horned cattle in 1880-1886. (R. Millot, La Serbie économique et commerciale, pp 74-75.) 1890: Karić gives "approximate" figures at the time of writing. (V. Karić, Srbija... p 366.) 1890-1905: (Corg.) summarised in N.G. 1907-1908 p 347. 1910: P.S.B.S., 1910.
Cattle census statistics were not wholly reliable. They tended, as did other aggregative statistics published by official organs, to understate, relative to unofficial trade estimates. This suggests that there may have been habitual concealment from census takers. Indeed the compilers of the exile national income statistic, who used the 1905 livestock census, noted that "according to the statistics, there were 962,600 head, but as is known, on the occasion of the census, the real state of affairs was concealed..." Appropriately they revised the census figure upwards by 30%.1 We may mistrust their inclination to revise upward by so large a percentage because their estimate was intended to serve as a basis for Serbia's postwar reparations claim, and inflated figures were used for other items in their accounts.2 However, we may concede that they were aware that there was some under-recording. On the other hand, this may have been slight in the case of the cattle census, for at no time during our period were livestock the object of direct taxation, and for this reason Jakšić, an official of the state statistical office considered the early livestock figures to underestimate less than the population figures, alongside which they were collected. (The latter were tax-related). Moreover the censuses of 1890 and after, though carried out in the same fashion have been regarded as good approximations, and a reasonable basis for comparison with the earlier figures.4 We will accept this position.

1. S.O.K. Srbija u inovnom Posledu..., p 45.
3. Proizvodne Snage..., p 191. But as the poll tax was levied on the oština rather than on the individual, and then redivided among its taxables, the peasant would still have a motive for concealing his wealth. See N. Vuko, Položaj Seljaštva I, (Beograd, 1955) pp 3-4.
But there is a further difficulty. All the censi from 1890 were carried out on the 31st December, (old calendar) but the time of the year at which the 1859 and 1866 censuses were taken was not made clear. It is likely that they were not both taken during the same season. While the ratios of cows in milk, cows out of milk and calves are about the same for 1859 as for 1900 and 1905, the proportion of cows out of milk in 1866 was exceptionally low and the cow:calf ratio exceptionally high. In the 1900 and 1905 censuses rather more than a third of all cows that were out of milk were being held for purposes other than draft, suggesting that they had not yet dropped their calves. The relatively low proportion of cows out of milk in 1866, together with the high ratio of calves to cows, suggests that this census may well have been conducted during spring, and if we assume the cow stock to be the least susceptible to seasonal variations, then the fall in the cow stock between 1859 and 1866, to the extent of 37,500 on 255,800 or 14.7% would be a fair reflection on the real diminution of the cattle stock between these two dates, giving a cattle stock of 684,000 at the end of 1865. While this movement is contrary to the observed long-term trend, the extreme raggedness of the export statistics over this period between the long and fairly smooth upswings of 1848-55 and 1867-75 tend to suggest that herd size and structure during this period were particularly seriously affected by disease epidemics.

1. Proizvodna Snam..., p 207.
2. The period 1858-65 appears to have been one of recurring bovine epidemics. S.Dž. Milošević, Spolja Trgovina Srbije..., p 14. For this reason, the mean of the 1859 and 1866 census figures has been taken as the basis for estimating the cattle stock in the early 1860's.
In the period after the annexation of the Pašalik of His, it is also evident that there was little or no increase in the cattle stock within the old frontiers, and that such growth as there was resulted from the apparent doubling of the stock in the annexed territory since the census of 1833. But in the long term this was not of great significance, for we may assume that in 1833 this stock was still suffering from diminution resulting from the campaigns of 1876-8, and from the shifts of population during and after this war. Cattle were a highly mobile asset and it is likely that a large part of the former stock of the area was driven across the Turkish frontier.  

Certainly the 1883 stock looks surprisingly low in relation to the area and population of the region.

Barring short run fluctuations, the cattle stock seems to have been fairly stable over the period in question at about 800,000 - 1,000,000 head.

Determinants of the size of the cattle stock.

Had the size of the cattle stock been dependent solely on the grazing base of the pastoral economy, then it is likely that it would have declined over time. But this was not the case. At no time did the cattle stock ever attain a magnitude approaching this level.

The primary object of cattle raising and holding was to secure a supply of draft animals for farm work. In the earlier

1. This was true at least for the okrug of Toplica, see V. Nikolić, "Arhivski prilozi...u Prekuplju" Arhivski Almanah (Beograd, 1962) p 156.
part of the period there were shifting cultivators, and there were always transhumants, but both these categories held oxen for draft purposes. There were a few nomads in the south of the country who did not cultivate the land at all, but these held sheep, not oxen. In presenting the early census figures, (1846, 1859 and 1866) Jakšić specifically designated all oxen and bulls as draft animals.\(^1\) The livestock census of 1900 and 1905 still designate only 8.4% and 8.7% of the ox stock as being held other than for draft. These were probably former draft animals being held over winter for fattening and sale for slaughter. By this time, an incipient shortage of draft stock was developing, as is evident from the high proportion of cows, and even of yearlings being held for draft.\(^2\)

This resulted in the underexploitation of the full potential of the country's reserves of grassland, as was observed at least up to 1900. The wide high plains in particular could have supported a much higher grazing ratio.\(^3\) Their grazing capacity was particularly valuable for summer pasture. But as all the oxen were needed down near the arable during the busy season of the year, they had to be supported from the much more restricted supply of valley grazing. Not only were the animals held in the valleys for this purpose, they were also raised there. According to the Avramović survey, only farmors of more than ten hectares bought animals in for their farms.\(^4\)

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2. S.O. 1907-08, p 347.
3. FAO fo 2643 despatch of 10.5.1877; E. de Borcgrave, op cit p 110; F. Bianconi, op cit p 281; E. Lazard & J. Reggo, La Serbie d'aujourd'hui, II, p 39.
and this group in 1905 accounted for only 11.3% of all farms.\(^1\) Valley pasture resources could pose severe and increasing downward pressures on potential stockholdings, particularly in the most densely cultivated regions. In the Belgrade region in 1902, a researcher noted that \(^2\)

"there are villages (for example Slanci) where the inhabitants are compelled to leave some of their arable land unploughed for the sake of pasture."

However, this limitation was not too rigid. In Eastern Europe (in particular), it was long ago observed that the most inflexible limitation on the cattle stock tended to be the supply of natural meadows, whose fodder producing capacity set an upper limit to the amount of stock which could be overwintered.\(^3\) Although the spread of cultivation made inroads into the resources of uncultivated land - by definition - the area under meadows remained virtually unchanged at about 310,000 hectares from 1900 to 1911. Before 1900 however, the trend is uncertain, both on account of the relatively low quality of the statistics and because of the uncertainty attending the classification of different types of grassland, including meadows, which were not usually enclosed and which often suffered from being grazed when other pasture resources ran short.\(^4\) The 1897 figure - 355,000 hectares - is admittedly rather higher than those for 1900 and after and, as in respect of other crop areas (though not of yields) the 1897 figure has been fairly reliable, this does suggest a decline in the area under meadows. On the other hand, the consi

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1. I.K.S. Izveštaj..., 1912 i 1913..., p 90.
3. V. Simkovich, "Hay and History" Political Science Quarterly, 1913.
for 1847 and 1867, (which of course exclude the Pasalik of Nis) indicate areas of only 150,000 ha and 139,000 ha of meadows, while the 1883 survey of the annexed territories indicated only 26,900 ha in this area. As we have already noted a probably sharp decline in stockraising in this area after the 1876-78 war, so it is also likely that part of the former meadow area reverted to open pasture or was ploughed up; but even on the most favourable construction it seems unlikely that there were more than 190,000 hectares of meadow in Serbia (including the pasalik of Nis) at the time of the 1867 survey, and that between that time and 1900, the area sown for hay increased by at least 60%. A supplementary hay source of growing importance was the gradual spread of clover; this rose from 3,600 hectares in 1900 in steady stages to 8,600 in 1908 and reached 12,800 in 1910 by which time (because of the relatively high yield of clover) it provided 10% of the hay crop, whereas in 1897, it contributed but 2%. Though it can hardly be said that the provision of 10% of the hay crop by clover by 1910 represents a very strong move towards the intensification of animal husbandry, this in conjunction with the evident expansion of natural meadows does indicate that the supply of cattle fodder was maintained despite the curtailment of pasturing.¹

¹ This supply of hay could be augmented for fodder purposes by the much increased supply of arable by-products, such as straw.

¹ Hay and clover cultivation and yield statistics are taken from V. Jakšić, "Stanja zemljoradnje..." loc. cit p 85; H. Dj. Milićević, Kraljevina Srbija, p xxxii; Statistika XVI, pp 365, 371; Statistika XVIII, pp 73, 215; S.D. 1907-08, p 254; Handelsmonat 1910, p 12.
Not only did the expansion of arable greatly increase the supply of these products in itself, but the move away from maize (whose stalk was of very low value) to the cereal grains further increased this supply. Moreover, in the early days when there was little pressure on supplies, wheat was cut

"less near the ground than at home, because the straw is generally thrown away".

Similarly the maize stalks were left in the fields to rot. This kind of waste appears most unlikely to have persisted after it had ceased to be economically rational. If anything, such materials, because of the shortage of hay, were pressed overmuch into use: it was claimed that the supply of winter fodder was insufficient to support the livestock population, so that

"there remain a large number of livestock that are scarcely fed at all through the winter. In their feed the largest part is supplied by inferior forms of food: chaff, straw, maize stalks, foliage, pumpkins, etc."

At least one enterprising sadruga in Rudnik bought in maize stalks at 0.01 dinar a bundle, and chopped them up small with a cutting machine they had procured, in order to feed to their livestock. Poor food, but it had about 30% the nutritive value of hay, and 3/4 the value of wheat straw. Add to this the use for fodder of a considerable portion of the barley crop, and its highly nutritious straw, and it may be seen that the forage supply, though inadequate, proved much more elastic than the simple capacity of the water meadows.

1. A. Boué, La Turquie d'Anatole, III, p 4.
3. E. Pašić, Prav Rudniški Okrug..., pp 92-3.
b. The Export trade to 1906.

Between 1843/47 and 1902/06 the export trade in cattle (predominantly of oxen) grew at a rate (in terms of the number of animals exported) of about 2½% per annum, a rate far in excess of any possible expansion in the production of the pastoral economy. The fluctuating, but persistently upward trend of this trade is shown in figure IV. (1).

According to our model, as developed so far, in a simplified form, this enormous expansion in cattle exports carried with it the following implications. If output of this pastoral activity were static, then disposal of a rising quantity of the product must have meant a very severe fall in self consumption. In this case the substitution would be between animals disposed of for cash and animals eaten at home. Some awareness of the significance of what was happening was shown by the authorities; on the basis of an extremely dubious calculation they concluded

"qualitatively, we have a very backward and inadequate stockraising economy - that which the Serbs export they take from their own mouths, to the damage of their diet."

There was in their opinion no "superproduction". At best, therefore, the expansion of arable husbandry provided no more than an increasing substitution of grain diet for meat. Given what we have ascertained about the retardation of grain marketing, it appears that its baleful effects could have been biting into peasant living standards.

From standard sources for Serbian foreign trade statistics and S. Dj. Milošević, Spoljna Trovina Srbije od 1843 - 1875 godine, (Beograd, 1902), pp.14-5. For 1843-61, this source aggregates cattle and horse exports, and the figures have been adjusted downwards on the assumption of a constant cattle-horse ratio for 1843-66.
However, as we have already shown, there was sufficient flexibility within the pastoral economy to sustain a rise in production, and that although no large a rise in the export trade on the basis of an unchanged livestock population must certainly have meant that there was some diversion of output away from self consumption and toward the market, there could also have been a net gain. Total ox output has been calculated for the early 1860's, and for 1896/1904. The method of calculation is set out in Appendix I to this chapter, and the results are tabulated as Table IV. 2, below.

**TABLE IV. 2.**

**Ox Output and usage early 1860's and 1896/1904.**

<table>
<thead>
<tr>
<th></th>
<th>Early 1860's</th>
<th>1896/1904</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual ox export</td>
<td>18,000</td>
<td>55,050</td>
</tr>
<tr>
<td>Annual slaughter</td>
<td>38,500</td>
<td>15,550</td>
</tr>
<tr>
<td>Annual output</td>
<td>56,500</td>
<td>70,600</td>
</tr>
</tbody>
</table>

For sources and method of calculation see Appendix I to this chapter.

Thus it is evident, that in simple terms of the number of head of oxen produced — ignoring for the moment qualitative differences over the period, the output of oxen for slaughter or export rose 25.0% between the 1860's and 1896/1904, and out of that total, while exports rose 205.0%, domestic slaughtering fell 59.6%.

Considering that annexation of the 1878 territories in itself provided a 15.7% increment in the productive potential in ox raising, the residual expansion in the production total was not very great, perhaps no more than 6%, with the consequence that food supply per capita from ox slaughter must have fallen about 80.6%.
There was however a very important compensating tendency to offset this massive fall, for the direction in which the total output of the cattle raising economy took was not necessarily in the direction of expanding the supply of mature oxen.

Within a more or less static cattle stock, but with a much expanded supply of storage fodder, there is evidence of an increase in output from cattle raising, in the form of a rise in the cow population and a corresponding diminution of the number of oxen, though this tendency is not perceptible till after 1890, as indicated by the following table:

Table IV. 3.
Cow stock per 100 oxen 1859/66 - 1905.

<table>
<thead>
<tr>
<th></th>
<th>Old Frontiers</th>
<th>Korea</th>
<th>New Frontiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1859/66</td>
<td>80.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td></td>
<td>69.1</td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td></td>
<td>87.9</td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td></td>
<td>95.6</td>
<td></td>
</tr>
<tr>
<td>1905</td>
<td>114.4</td>
<td>83.9</td>
<td>106.5</td>
</tr>
</tbody>
</table>

Sources: as for Table IV. 1.

Thus within the old frontiers, assuming no change in fertility, and a cow stock which had risen from 237,000 to 264,000, we might expect the production of calves to have risen by 11%, and for Serbia as a whole between 1890 and 1905, for the production of calves to have risen by 41%. In practice the rises in the calf population work out at 23% and 61%. (Though, as the calf population of larger Serbia in 1890 was no higher than that of smaller Serbia
in 1859/66, it is fair to assume that cattle raising was in decline probably till the '50's and then began to expand fairly sharply).

The disproportionate rise in the calf population could be caused either by improved fertility or by lower wastage or slaughter, for only a negligible number of calves was ever exported. It was unlikely to have resulted from decreased slaughtering for veal; several French consular reports of the '50's point out there was little incentive for sale or slaughter of young animals because of the low cost of pasturing them, at least till 2 years of age. On the other hand, while the sale of calves of 6 months or less through the fairs ran at 574-884 a year in the 1860's, it jumped to 2,000 a year in the early '70's, 3,100 in 1883, to 4,680 mean in 1891-5, 7,230 a year in 1896-1900 and 9,900 in 1901-5, or from 0.6% of the stock in the 60's to 5.1% after 1900.2

On the other hand, the stock of animals of 1-2 years of age remained unchanged. In 1859/66 it was 103,000; within the same boundaries in 1905 it was 97,000. For Serbia as a whole, it was 118,800 in 1890, 119,000 in 1905. In 1859, 1866 and 1890 the stock of yearlings was equal to that of calves (in 1890 slightly higher), but by 1900-05 it was apparent that 60-70,000 calves were being slaughtered during the calendar year after that of their birth.3 Those only passed into trade to a negligible extent, but

1. AAE,CCB t. 2 Report on the commerce of Serbia dated 29.1.1849, fo. 53; despatch of 22.5.1855 fo. 319; despatch of 22.6.1855 fo. 322.
3. Compare stock of calves and yearlings in 1900 and 1905, in stock table, appendix I to this chapter.
they made a sizable augmentation to the meat stock of the villagers. A very small sample, slaughtering in the opština abattoirs of Kolubara and Grocka popovit in December 1907, which would have been almost entirely for village consumption, shows the slaughtering of 46 cows, 21 calves, 13 animals of 6-24 months, and only 22 oxen.¹

Though these opština appear to have slaughtered cows at a high rate, this was a year when future expectations for the cattle trade were poor and in the normal way, the slaughter of cows could not have contributed much to the domestic meat supply. Allowing for wastage and slaughter of 1/9 of the cow stock, of which wastage accounts for 7.2% and slaughter, as a residual for 3.9%, and for an annual export of 5,031 cows p.a. in 1862-6 and 5,717 in 1896/1904, the annual availability of slaughtered cows for meat was 4,250 in the first period, and 5,960 in the second.²

It is reasonable to assume no change in the slaughter weight of these animals over time. At no time did the peasantry take prime animals for slaughter. Even in the earlier part of the period, animals were only slaughtered for domestic consumption when they had reached the end of their capacity for useful service.³ Villagers who wanted an ox for slaughter would usually get together to buy up an old one cheaply. They did not compete in the market for superior animals.⁴ This is reflected in the relative weights

¹. D. A. S. KNP.3:45 XIX. ¹. As this was a year of difficulty for the export trade, the ox slaughter is probably unusually high.
². Both these figures probably understate true consumption. They assume that wastage resulted in total loss, whereas it is more likely to have resulted in meat cases in premature slaughter.
³. Chr.(S) 1671 (1) p 843; AAE.CCB t 2 dispatch of 22.5.1855, fo.319
⁴. P. Tomić "Stočarstvo" Hrvatska Vršina, p 169,
of oxen for home slaughtering - 252 kg, \(^1\) and of export animals, 300-400 kg.\(^2\)

According to the same source, the slaughter weight of oxen in domestic slaughterhouses was half the live weight, 126 kg. That of cows was 92.6 kg, of yearlings 53.3 kg, and of calves 35.3 kg. Thus -

Table IV. 4.
Meat supply for domestic consumption from the cattle stock, early 1860's and 1896/1904.

<table>
<thead>
<tr>
<th>Carcass Weight</th>
<th>Number of Head</th>
<th>Weight of meat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1860's</td>
<td>1896/1904</td>
</tr>
<tr>
<td></td>
<td>kg.</td>
<td></td>
</tr>
<tr>
<td>Oxen</td>
<td>126</td>
<td>19,550</td>
</tr>
<tr>
<td>Cows</td>
<td>92.6</td>
<td>4,250</td>
</tr>
<tr>
<td>Yearlings</td>
<td>53.3</td>
<td>60-70,000</td>
</tr>
<tr>
<td>Calves</td>
<td>35.3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,245</td>
</tr>
</tbody>
</table>

Sources see text pp.246-7, 282 and for carcass weights see M.N.P. 1906. 2. pp 155-6.

Note. Assumption has been made that calves and yearlings were slaughtered in equal quantity.

Thus the rising cattle export only cut into the supply of slaughter meat in relative but not in absolute terms. Nevertheless, per capita availability of "beef" contracted to the extent that the total supply of it remained little changed while population expanded. Again our original model is dented but fundamentally left intact.

\(^1\) M.N.P. 1906, 2. pp. 155-6.  
2. See below, p 250.
However, the value of an exported ox was much higher than the value of an ox slaughtered at home. In consequence, the expansion of the export trade represented rather more than the simple diversion of slaughter oxen from self consumption to cash; it also represented a considerable increase in the gross output of cattle raising.

The reason for this is that the Austro-Hungarian market demanded a better animal than the spent peasant ox. The trade in oxen for this market was, by the end of the century if not before, in the hands of the Budapest merchants and their agents, who sought out those animals which looked most suitable for fattening and slaughter and left the broken down over-age oxen for the peasant market.

It seems highly probable that the Austro-Hungarian market took up all beasts of reasonable quality as were offered it, and that, in the earlier part of the period, such supplies were very limited. At this time Turkey was still a major importer of Serbian oxen. In 1843, Austria took only 56% of the Serbian ox export, the Turkish provinces 44%. A substantial part of the latter export was probably destined for ultimate consumption in Dubrovnik after a prolonged journey on the hoof, and the decline of the Dubrovnik trade appears to have gone together with the decline of the cattle

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2. E. Lazard & J. Hesse, La Serbie d'Aujourd'hui II (Genbloux 1960) pp 34-5.
trade into Turkey. By 1560, 87% of Serbia's cattle export was sent to Austria, by 1670 93%, and by 1875 160%. It seems highly probable that the Turkish trade sought animals no better than those destined for internal consumption, but that Austrian preference for better quality animals was of long standing. In 1835, butchers' beef sold in Zemun at 80.4 contines per kg, and across the Sava in Belgrade at 58.0, but the former was noted as being of superior quality, and the latter as "of the worst quality", being the product of spent animals. At that time, the weight of oxen exported to Austria was estimated at 300-400 kg, and as precisely the same range was noted by Kostić as pertaining in the 1890's, and as the mean weight of oxen consigned by rail for export to Austria between 1890 and 1905 was 356.5 kg, it seems that the Austrian market was taking throughout the period an animal of much the same weight, about 350 kg. This may be compared with the peasant ox at the domestic slaughterhouse weighing 252 kg, live.

Weight and quality were interlinked. The price differential between the two animals was almost certainly considerably greater than would be accountable to the 39% higher weight of the export animal. The price divergence between good and bad oxen in 1856 was enormous. For example, at the Ilidžan fair at Valjevo where Austrian, Serbian and Turkish buyers were present, good oxen traded at 35-45 ducats, medium oxen at 18-23 and bad oxen at 8-12.

This range was not exceptional.

2. AAE.CCB.t.2. despatch of 2.5.1855, fo. 319; despatch of 22.6.1855, fo.fo.322, 323.
4. K. Kostić, Srpska Izvoznđa Trgovina..., p 65.
5. See standard sources for rail freight statistics 1890-1905 (p. below)
The qualitative difference arose because the ox exported to Austria-Hungary was younger than that slaughtered at home. (It was probably also a better animal irrespective of age). It was not a prime steer - of these Serbia had none to offer - but an animal which had worked several years at the plough. Its normal age at export was probably five to seven years, rarely less, whereas the domestically slaughtered ox was reckoned to have reached the end of its useful life at eight. The peasant therefore had to assess whether the higher price he could obtain for the animal from the export trade was sufficient to compensate him for the loss of a year or two's service at the plough.

The weight difference between the exported and domestically slaughtered ox arose because the Austro-Hungarian market sought animals which were at least in store condition, if not in such a condition as to be ready for immediate slaughter. Prior to export the animal therefore had to be grazed or stall fed. To achieve this it could not be long past its prime. Therefore it had to be taken from the plough well before senescence.

The domestically slaughtered ox was an old lean animal. The exported ox was younger, and partly fattened.

Given these considerations, oxen were most likely to be exported from high plains regions with extensive summer pasture.

1. Based on a report on a trial consignment of 129 Serbian oxen for the Italian market in 1906, when the Austro-Hungarian market was closed. Abolardo Bokalari, O Kvalitatu Srpskih Volova, (Beograd, 1906), p 9.
reasonably close to the ports, where there was relatively little arable land in relation to their numbers, and therefore a low opportunity cost foregone from their employment at the plough. The people of such areas, unable to expand their arable agriculture very much would also have been under most pressure to maximise their cash earnings, if need be, at the sacrifice of self-consumption, through the sale of their cattle in the best possible condition. This tendency is well illustrated by the earliest port of exit data at my disposal:

Table IV. 5.

Cattle exports by port of exit in 1881

| Port on the Sava | 912 |
| Belgrade          | 1,193 |
| Danube ports of which |
| Ram               | 12,660 |
| Radujevac         | 1,532 |
| Other             | 1,432 |
| Drina frontier    | 59  |
| To Bulgaria       | 5,977 |
|                    | 23,769 |
| Numedia, Turkey   | (9,658) |
| Total             | 33,423 |

Sources: Exports across Drina, Sava and Danube customs houses: G.N.T. I. 17, Beograd 16.10.1858 p 262. The trade of Pirot, (for exports to Bulgaria in 1881): PRO FO. 105,53 No 13 Commercial, 30.12.1885. For the total see standard sources for foreign trade statistics, the balance for Turkey and Italy (the latter probably being the principal market - see the above British despatch) being taken as the residual.

Of those exported across the Danube and Sava, 71.4% passed through the port of Ram. This small port was well placed for
consigning goods to the Bariači railroad, but its internal communications were weak, and its only obvious hinterland was the high plains of Homolje and Zvižd. It was a most unlikely outlet for cattle coming up from the Morava valley. This area was of the type we have just described. Poor, with few river valleys, sparsely populated, but overpopulated in relation to its resources, cattle were its only real source of cash income, and its economy evolved to accommodate this activity. As valley land could not be spared for pasturing, the peasants established temporary settlements (salači) auxiliary to their villages, high in the hills, comprising rude stables and herdsmen's cabins, where the cattle could be grazed through summer, thence to be driven down to the ports for sale. 1 Most of the rest of the cattle export, which comprised 15,635 head driven to Turkey and Bulgaria, was probably the produce of the annexed territories, as by 1875 the whole of the cattle export of pre-1878 Serbia went to Austria-Hungary. Here again, conditions were not dissimilar. In the dry and mountainous Pirot region, which sent nearly 6,000 head of cattle to Bulgaria, "the difficulty of trade lies in the cheapness of the products, and the natural position itself, by which nearly the whole of the population of this district are forced to breed cattle and cultivate vineyards". It imported grain from Bulgaria. This trade, as a consequence of difficulties in commercial relations with Bulgaria, disappeared totally by 1884. 2

2. PRO FO 105 53 No. 13 Comm. of 30.12.1885.
Several influences caused the practice of cattle exporting to spread from these traditional cattle exporting areas during the era of the Great Depression and after. The most powerful was probably the persistent and strong improvement of cattle prices, at a time when cereal prices were sagging. These rose (according to export data) from 80.0 dinars a head in 1862/66 to 134.6 dinars in 1871/75, to 162.9 dinars in 1889/93, and 202 dinars in 1899/1901.¹

These price changes were almost entirely 'real' for at most, the diversion of the small residual going to Turkey in the early 1860's to the Austrian market, would have raised the mean price of exports by 3% of 13% or 5% and, as we have seen, the quality of oxen exported to Austria-Hungary did not change between 1856 and the early 20th century. Reported consul Killet in the late 1860's, "the popularity of cereal cultivation has diminished and the cultivators are turning their interest back to large cattle, whose sale is always assured on the Steinbruck and Vienna markets."²

This change in relative price levels must render highly questionable the inference that the rising proportion of the beef supply exported was simply the result of an increasing forced sale of pastoral produce due to the retardation of progression towards trade in cultivated produce. The focus of ox exporting seems to have shifted accordingly to the centre and west of the country, particularly in the region of the Kolubara valley.³ But because

¹. Standard sources for foreign trade statistics.
². R. Millet, La Serbie Economique..., pp 68-9.
in such regions, relatively few proprietors would have held extensive grazing near their villages, it became the practice among many to hold oxen for stall fattening through the winter, and these, compared with the other farm animals, received the best feed available. It appears that stable fattening was applied to about 27,000 oxen annually around the turn of the century; at least this may be inferred from the statistic of oxen held in 1900 and 1905, at the time of the year end consuses, of over two years of age, and for purposes other than draft. 17.5% and 15.9% of these were held in the two western okruzi of Podrinje and Čačak. Very few were so held in the east of the country.2

But these would have accounted for less than half of the cattle export at the time the consuses were taken; only a minority of cattle raisers would have had the necessary winter feeding resources, and fewer still sufficient local pasture for fattening. Nevertheless, new developments came to the assistance of those farmers - a numerous group - who needed to sell their animals at the fairs while still in potentially fattenable condition, and so obtain a better return from them than when they were finally spent. This was through the utilization for summer fattening of the rich but undergrazed high pastures in the south of the country. The two most extensive high pasturing areas, Zlatibor and the Stara Planina, were remote from communications lines and their underutilization also derived from restrictions on their use.

1. H.N.P. 1906-2, pp 200-8; N. Hilojović, Našva..., p 44.
2. S.G. 1907-08, p 347.
On Zlatibor (Užice okrug) the state owned about 60,000 hectares of rich abundant grassland, and in 1878 it acquired eighteen large pastoral properties in the Stara Planina (east of Pirot and Vlasotinci) whose use had been barred to the peasantry and which had been proclaimed state property during the administration of the Niš Pašalik by Midhat Pasha. The state exploited all these properties by putting them out under leases, and these were taken up for the most part either by merchants or syndicates, who used them as summer grazing for animals that they had bought in lean condition in the spring.

This type of organization appears to have developed on a large scale only when the opening of rail communications afforded improved access to the Austrian market; it was probably barely worthwhile when the necessity of driving the animals over long distances tended to nullify the advantages of building them up on the high pastures, but by the beginning of the twentieth century, 6,000 oxen a year were being grazed on the Zlatibor high pastures alone.

Even this probably understates the extent of this activity.

"Each year, several thousand large and small cattle are driven out from Zlatibor, which the Užice merchants drive in fatted condition mainly to foreign markets. In spring they buy lean oxen at all the fairs in Serbia, particularly Katva and Kolubara, and oxen, and so much are these fattened in a few months that one animal can attain 500 kilograms weight. Through summer they graze 15-20,000 head of horned cattle on Zlatibor, not counting the domestic livestock there of the surrounding villages."

In Autumn, the herds converged on Uzice, whose streets were temporarily choked with them, as they started on their journey to the railhead at Kragujevac. This business was eventually to evolve into a highly capitalistic enterprise, connected with Invozna Banka, which not only organized itself on a cartel basis, but proposed more positively, "to improve the whole trade in Uzice okrug," by means of a stockraising "institution" on Zlatibor, which, it was envisaged, would generate substantial employment.

It was thus, by the greater use of stall feeding, and by the more intensive exploitation of the high pastures, in conjunction with the use of railway transportation, that oxen were raised to fatten or store condition in order to meet the demand of a buoyant export market, at a time when pasture resources were becoming increasingly scarce. It can hardly be said however, that this represented an appreciable intensification of animal husbandry. Only the fattening process showed any sign of intensification, and then only with stall fed animals, while the hay that they ate still came for the most part from the natural meadows. Rather, it represented organizational change, stimulated by an advancing price level for a product whose total supply was rather inelastic, directed toward the more efficient use of such extensive resources as were available.

Physical output change did not quite match the rise of population during this period. In constant price terms, the

2. Ibid, pp 84-5.
supply of exported animals and home slaughtered meat appears to have risen 78.8% and 84.2% between the early '60's and the turn of the century, while population slightly more than doubled. But when we take into account that the exported ox was not only heavier than the domestically slaughtered ox, but also more valuable, weight for weight, and that the price of oxen (and meat) rose substantially more than the general price index, we may infer that ox raising probably contributed more to the real income per head of the peasantry at the turn of the century than it had in the 1860's. This could only have been achieved through the market mechanism, and is worth noting because it was achieved despite little intensification of the process.

As the growth of the export trade depended on oxen being taken early from the plough, it might be argued that this growth was only achieved at the cost of diminishing inputs of draft power into agriculture. But such an argument would have to assume that the stock of cattle had always been fully utilized for this purpose, and such was not the case. According to the official statistics, the arable area increased from 306,000 hectares in 1867 to 1,030,000 in 1900-02. While maize was often planted under the hoo, this

1. We take domestic consumption of beef in the early 1860's and the turn of the century as the lean ox equivalent of 41,627 oxen and 41,032-44,548 oxen respectively. See Table IV. 4. Assuming that oxen sent to Austria-Hungary were 3% heavier than these, and that 87% of the ox export went there in the earlier period and 100% in the later, then the lean ox equivalent of ox exports in the 1860's was 10,000 (0.87 * 1.39 + 0.13) = 24,104 and at the turn of the century it was 1.39 * 55,050 = 76,519. Total production rose therefore from 65,731 lean ox equivalent to 117,551-121,067.
was not the case with wheat whose area increased from 90,900 ha to 313,500. Saving of the labour power of oxen could thus be achieved by an increased use of hoe cultivation in respect of the maize crop, and indeed, this is probably what happened. Notwithstanding this, the area under wheat alone in the later period was larger than the combined area under wheat and maize in the earlier, so no amount of substitution of hoe for plough cultivation could have sufficed to reduce the necessary volume of ploughing work. Thus there is no reason to regard the increase of export and slaughter production as being offset by reduction in inputs into agriculture; on the contrary these inputs could easily have risen proportionately to the rise of goods output.

Unfortunately it is impossible to measure the input of stock raising into arable agriculture for either period, but on the basis of sown areas it could have risen by between 27% and 200%. Thus we are more likely to underestimate than to overestimate by assuming that it rose pari-passu with arable production.

c. The cattle trade during and after the tariff war.

The prolonged phase of export expansion in the cattle trade came abruptly to a halt at the beginning of the tariff war with Austria-Hungary, and gave way to decline and collapse in a very few years. The gathering of the political storm clouds round this trade since the 1890's has already been noted, and of course,

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1. i.e. at most to the extent that arable cultivation increased, and at least to the extent to which wheat cultivation at the turn of the 20th Century exceeded wheat and maize cultivation combined in the 1860's.
it did not go unremarked by the Serbian government. Following on a serious crisis for the export trade in 1901, the largely state-owned Beogradska Klanica experimented with the slaughter and export of Serbian beef to Western Europe, the same strategy which had been adopted for disposal of pork exports during periods of crisis in the hog export. But Serbian beef proved even more difficult to place than Serbian pork, for unlike the hogs, the oxen delivered to the Klanica were not really in slaughter condition, as Serbia lacked the capacity to finish them. "It is known"—I quote a government publication—"that Austria-Hungary, desirous of maintaining our dependence on her market, accepted and purchased even our most mediocre oxen." One may question the motivation, but the fact was approximately true. Unfortunately, as long as Serbia had to continue dependence on the export of mature plough oxen, her exports would continue to be mediocre, good enough for the central European market, but not good enough for Western Europe. Thus the Klanica's experiment was abandoned after a few years.

There remained, however, the alternative of exporting the cattle live by rail through Salonska into the Mediterranean market. As the animals would not be in heavily fattened condition like the exported hogs, they might be expected to survive their journey, and could if necessary, be brought to slaughter condition after arrival. In any case the kinds of market on which the Serbians had

2. See above, p. 113
3. See data for annual ox carcass exports to Western Europe by the Klanica, which reached a maximum of 2,400 head in 1903. S. A. D. K. P. S., Izvestaja...u 1902..., p 22; Izvestaja...u 1903..., p 9; Izvestaja...u 1905..., p 17.
their eye, such as Egypt, Malta and Italy would not be seeking prime cattle, and afforded reasonable prospects for the trade. Thus, in broad terms the export strategy was worked out: the meat packing industry would dispose of the hog export, and cattle would be exported live through Salonika. Export of live oxen to the above mentioned markets was commenced at the start of the tariff war, in an atmosphere of considerable optimism.1 The Egyptian market alone, exported to through intermediary of the firm of W. Johnson & Co. Ltd., of Liverpool, was confidently, if mistakenly, expected to be able to take 40,000 live oxen a year.2

But the strategy proved only a very qualified success in the short run, and the long term prospects were even worse, for while it was apparent that the eventual settlement with Austria-Hungary would permit a fair sized hog quota, the aggregate import quota for cattle had to be shared with Rumania, which had long ceased to be a hog exporter and therefore had to be accorded much the greater part of the quota of beef.3 Thus while the problems of the hog industry during the tariff war could be construed as an interim difficulty, the major part of the Austrian market for beef was lost permanently. And, as was discovered, even allowing an export subsidy on oxen freighted through Salonika,4 the trade was sharply diminished, so much that Izvorna Banka which had become an active participant in the Salonika export was soon negotiating with the Kuman to take off.

1. PRO FO. 368 47, despatch of 13.8.1906; No. 25 comm. of 27.8.1906; No. 26 comm. of 9.9.1906; No. 32 comm. of 3.10.1906.
3. Serbia's eventual beef quota, agreed at 35,000 head in 1906, was cut back to 15,000 in the 1910 treaty. D. Djordjević, Carinski Bran, p 627.
4. PRO FO 368 126, No. 31 comm. of 17.4.1907.
its hands large numbers of animals of which it was unable to
dispose.\footnote{1} Everything seemed to militate against the success of
this trade: there was an acute lack of stabling facilities for
storage of oxen at Salonika, which may however have been alleviated
by a subsidy from the Serbien government to get stables built for
the Serbien traffic at that port; the shortage of rail freight cars
led to accumulation of animals at the points of supply, which were
in turn inadequately supplied with stabling, which resulted in
severe losses through wastage; freight charges were too high for the
trade to support;\footnote{2} and infectious diseases among the animals
exported led to market difficulties with the importing countries.\footnote{3}
Export to Egypt was gravely affected by the so-called Johnson affair.
The circumstances of this were as follows. In 1907 Izvozna Banka
and its export associate Đaka Popović contracted a supply of cattle
for the Egyptian market through the firm of Johnson, to whom a large
line of credit was advanced. But, expecting the more profitable
Austrian trade to reccommence, Izvozna Banka tried to stall on delivery

\footnote{1} S. Ignjič, op cit p 86.
\footnote{2} S. Ignjič, op cit p 86.
\footnote{3} Difficulties were encountered with the Egyptian and Kalteno
veterinary authorities, who complained from Alexandria of cattle
plague contamination, and from Valetta of Anthrax (which was
admitted by the Serbians). They however denied that all the
infected animals came from Serbia, but regarded Salonika as an
infected port, and they also thought that infection could be
transmitted to their cattle through transit in contaminated
shipping. Italy also prohibited the import of Serbian cattle,
'following complaints', but these may have originated, not on
veterinary grounds, but from British objections to the use of
subsidized shipping. FR 368 47, No. 89 comm. of 23.11.1906;
FO 368 219, No. 44880 comm. of 21.12.1906; FO 368 326, Serbian
ministry of foreign affairs - British legation, 28.2.1909;
of the cattle, whereupon Johnson blocked the credit. The bank sued successfully through the courts in Alexandria, for the return of its money (180,000 din.) but Johnson evaded payment by declaring himself bankrupt, and thereby brought down a chain of associates engaged in the operation. Even in 1911, after the signing of treaty relations with Austria, the export trade to Salonika remained depressed in consequence of the simultaneous outbreak of the Italo-Turkish war, which denuded Salonika of Italian shipping on which the transit of Serbia's cattle had been dependent. Thus, whereas live cattle exports had attained 72,000 head in 1905, the subsequent reduction was abrupt and seemingly permanent:

<table>
<thead>
<tr>
<th>Year</th>
<th>Export (ooo head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1905</td>
<td>72</td>
</tr>
<tr>
<td>1906</td>
<td>11</td>
</tr>
<tr>
<td>1907</td>
<td>13</td>
</tr>
<tr>
<td>1908</td>
<td>21</td>
</tr>
<tr>
<td>1909</td>
<td>35</td>
</tr>
<tr>
<td>1910</td>
<td>37</td>
</tr>
<tr>
<td>1911</td>
<td>18</td>
</tr>
<tr>
<td>1912</td>
<td>4</td>
</tr>
</tbody>
</table>

Standard sources for foreign trade statistics:

Under the circumstances it is not surprising that provisional figures for 1910 revealed a small downturn in the cattle stock, whereas previous consuls had shown a slow but steady rise. Unfortunately tables breaking this stock down by type do not appear to have been published, but it seems probable that ox numbers fell heavily, with the cow stock continuing to rise. Arable cultivation was expanding rapidly, as was the need for income from this source.

3. This was offset to some extent by the export of ox carcasses to Austria-Hungary. This export amounted to 21,562 oxen in 1911 and 20,586 in 1912. Ibid, p 12 and I.K.S. Izvētāj...u 1912 1913 Godini, p 73.
with the livestock trades in difficulties. The draft power of the
cattle stock was already inadequate, so the producer could not
respond to the collapse of the export trade by switching massively
out of ox raising. But it was also evident, that if the cattle
industry had any future it would have to be in dairying though it
had as yet made little progress in this direction.¹

d. The pastoral economy of sheep and goat raising.

Organizational and structural change to adapt to conditions
of rising density of settlement is again the theme of this section.
Here, commercial relations with Austria-Hungary were only of
peripheral importance, because these animals were not kept mainly
for commercial purposes, and no produce which was vulnerable to
Austro-Hungarian trade sanctions was exported. But it was not on
this account a less vital component in the commercialization of the
economy, because so much of the peasant's wellbeing derived from the
self-consumption of the produce of this sector, particularly as so
high a proportion of the output of hog and cattle raising were
diverted to earning cash.

The most valuable products generated by sheep and goat
raising appear to have been milk products, a vital supplement to
what in the more backward regions was a very low meat diet, and
wool or hair, both mainly for self consumption, for the Serbians
were claimed, by peasant standards, to be exceptionally heavy
wool users.²

¹. La Serbie...urin, 1911, pp 116-7.
Exports were a residual item; principal among them were woolfells, which constituted about 22% of the value of the live animal. Over the period, this export of sheep and goat skins fluctuated from year to year, but after a rise in the early '60's, remained remarkably constant quantitatively, though prices and thus value tended to rise slightly. There was also a southward trade in sheep and goats across the Turkish frontier, amounting to an annual 1-2% of the total stock, but which seldom yielded as much as a million dinars. Wool and tallow exports, which had been of some importance in the 1860's, disappeared in the 1880's, not because of trade obstructions, but because they were no longer generated in surplus to domestic requirements. The only impact that the tariff war had on sheep raising was to encourage it, as market conditions for the disposal of hogs and oxen deteriorated.

The goat, which was highly regarded as an efficient milk producer, as well as a provider of hair, which had some internal commercial significance, had been held in substantial numbers throughout the country at mid-century, but was steadily excluded from the richer areas thereafter, to become a residual stock confined to the leanest pasture, mainly in the annexed territories. 490,515 goats had been held in pre-1878 Serbia at the time of the 1859 census, and 451,249 in 1866. But although this figure was augmented by 119,268 goats in the annexed territories (in 1883), the total

1. In 1900. See price statistics for that year in S.O. 1900, p 235 (average for Serbia).
2. Analogous conditions were to occur again during the slump in the 1930's. When forced out of the market, the peasant turned to sheep raising, which secured self-sufficiency in many basic needs. Thus while the hog population of Yugoslavia fell by 11% between 1931 and 1934, the sheep population rose by 5%. See table in J. Tomasevich, Peasants, Politics, and Economic Change in Yugoslavia, p 516.
number in the country remained at 496,000 in 1905, of which 296,000 were to be found in the four okruzi which corresponded roughly with the area of the annexed territories. In this year it was found that 79.9% of the geographic distribution of goats was associated with the relative quality of uncultivated land, the statement of association being acceptable at the 1% level of uncertainty. (For this calculation see appendix II to this chapter, p. 287) This represents a rationalization of production; peasants in richer areas were no longer prepared to accept a measure of underutilization, and potential damage to their land when it became scarce, but the goat was used to exploit with increasing thoroughness such lands as were fitted for no other purpose. There was therefore probably little danger of goats wrecking land which could have been used for grazing other animals.

Two basic sheep types were raised in Serbia, both indigenous, the Krivivir (or Krivi Voj) and its variants, and the variants of the common Serbian hill sheep. The latter types were found throughout the country, but the Krivivir (and the similar Pirot sheep) were raised in the east and north east. Quantitatively and qualitatively, the Krivivir produced the best fleece, weighing about 3 kg, whereas the average sheep fleece weighed only 1.25 kg. Stockraising was by no means sufficiently specialised to designate the Krivivir simply as a wool producer, for like all sheep in Serbia it was held in ewe flocks and its milk producing capability was exploited. But it was grazed by extensive summer pasturing, in the classic manner of the range.

1. S.G. 1907-08, p. 350.
2. R. Millet, op cit p. 70.
reared wool-sheep, on the high dry plains of eastern Serbia which were ideally suited to this kind of husbandry, and wool appears to have been its most important product. The peasants who raised the Krivigr in flocks of up to 1,000 head also practiced some sporadic agriculture, but were almost as dependent on their flocks for food as they were for money. Acknowledged as skilled sheep raisers, they were little interested in alternative forms of work. The quality of the wool they sent to market in large quantities was highly esteemed. In the early 1860's it was estimated that the output earmarked for export markets and traded through the Zaječar market amounted to about 200,000 okn, while roughly equal quantities were traded through Faradin. The system of husbandry probably resulted in a rather slight yield of milk, which was barely adequate to meet the full needs of the producers, for little appears to have been brought down to the villages.

In the wetter Zemadija on the other hand, where the hog thrive and provided the cash income, a variant of the common hill sheep, the Kraljevo, seems to have predominated, and was noted as the best milking sheep. In general, however, it is characteristic of unimproved mountain sheep that their fleeces would be light, coarse and of long staple, often pigmented, and with a tendency to

1. Put Ličajskih Pitomaca... po Srbiji rodine 1863 (Beograd, 1867), pp 51, 64-5.
3. See quoted passage on p 271 below.
4. Put Ličajskih Pitomaca... p 84. In 1862 and 1863, wool exports were 338,000 and 333,000 okn. The inference is that Faradin's main role was probably to supply the domestic market (1 okn = 1.28kg.)
5. Ibid, p 51.
kemp, and therefore of the least value for industry. As milkers, they would be inferior to goats, with which the herds were usually mixed, and their best positive characteristics would be their fertility, resilience and capacity to make effective use of low grade and residual food, and their good quality as mutton animals. This type of sheep, "the mother of the poor" would be held in relatively small flocks, whose maintenance did not require the participation of male labour, and would release little wool into commerce.

But, held on the farmsteads, rather than in distant pastures, its output was sold consumed to a much greater extent than that of the Krivivir. Whereas, in eastern Serbia, despite the huge flocks, it was difficult to obtain milk and meat in the villages, both were readily obtainable in the Sumadija.

Sheep numbers in Serbia neither rose nor fell significantly during our period but within an apparently static overall sheep stock, significant geographical shifts took place. Sheep raising seems to have begun to decline in the valley and plains areas after 1873, and to have intensified in the uplands. This was particularly true of the mountainous 1873 territories, and even if the census totals should be treated with caution, the shift within them is unmistakable.

2. Put licojskikh Pitanaca..., p 51.
### Table IV. 6.

**Sheep population of Serbia 1859-1910**

(000 head).

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-1878 area</th>
<th>Vranje, Niš, Toplica and Pirot okruzi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1859</td>
<td>2,385</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>1866</td>
<td>2,677</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>1879-83</td>
<td>3,127</td>
<td>353</td>
<td>3,480</td>
</tr>
<tr>
<td>1886</td>
<td>3,201</td>
<td>419</td>
<td>3,620</td>
</tr>
<tr>
<td>1890</td>
<td></td>
<td></td>
<td>2,964</td>
</tr>
<tr>
<td>1895</td>
<td>2,473</td>
<td>616</td>
<td>3,094</td>
</tr>
<tr>
<td>1900</td>
<td></td>
<td></td>
<td>3,061</td>
</tr>
<tr>
<td>1905</td>
<td>2,247</td>
<td>913</td>
<td>3,160</td>
</tr>
<tr>
<td>1910</td>
<td></td>
<td></td>
<td>3,268</td>
</tr>
</tbody>
</table>

a. Based on estimates; census figures for remaining years.
b. The total column contains an estimate produced by the British consulate for 1879, the figure for the annexed territories in 1889 is from Kiliđavd and the figure for the pre-1878 area is the residual.

**Sources.** *Brčkavornia IV* p 123; C Fr (S) 1879, p 904; N.B. Kiliđavid; *Kraljevina Srbija*, p xxxv; H.N.P. 1906-2*, p 229; N.S.B.S. 1895, pp 346-7; S.G. 1907-08, p 350; *Brčkavornia*, 1916.

This shift of sheep (and goat) raising from the plains to the upland regions was the necessary and logical producer response to the structural problems caused by the rise in the density of settlement and the extension of tillage in the plains, at the expense of pasture. Not only were the lowland pastures diminishing in extent, but they had to be given over increasingly to horned cattle to provide the necessary draft power to support the increasing arable agriculture. This displaced the sheep to thinner pasture of which it made more efficient use. As the remote mountain areas could be made to support a far higher animal population than hitherto, and as settlement in them, while still thin, was increasing...
rapidly, so their sheep population rose rapidly as well, though it involved the necessity of setting up temporary dwellings (salaši) high in the hills, remote from the villages, from which to handle their summer pasturing.¹

The multiplication of sheep raising in the mountains and its relative decline in the plains led to the displacement of the more extensively reared and larger krivir type whose pastures early became overstocked in favour of the small mountain sheep, with the consequent tendency of average carcass size to diminish.

Table IV. 7.
Relative carcass weights of Serbian sheep 1862-1908.

<table>
<thead>
<tr>
<th>Year</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862-1863</td>
<td>100</td>
</tr>
<tr>
<td>1890-1894</td>
<td>89</td>
</tr>
<tr>
<td>1895-1899</td>
<td>83</td>
</tr>
<tr>
<td>1900-1904</td>
<td>75</td>
</tr>
<tr>
<td>1905-1908</td>
<td>80</td>
</tr>
</tbody>
</table>

Source and method of calculation. Standard sources for price statistics were used to note the average price of sheep, of their fells, and of mutton in each of the above years. (For 1862-3, the export valuation of fells had to be used in the absence of price statistics). The value of the fell is subtracted from the price of the sheep and the price of mutton is divided into the residual, to produce an approximate measure of the quantity of mutton obtainable from each carcass. The upturn in carcass weights in the last period is readily explicable by the re-establishment of sheep raising in central Serbia, during the tariff war, as the hog became increasingly unsaleable.

The maintenance of the numerical strength of the Serbian sheep flock therefore concealed a diminution in the value of its production, and within this diminution a switch towards milk and meat.

² Put Iicejakih Pitomac... p 87.
and away from wool. To the outsider, whose judgment tended to be heavily influenced by the fleece raising qualities, or by the size and purity of the breed, Serbia’s sheep raising standards appeared to be deteriorating, and the way in which this process was seen by the contemporary observer is well summed up in the following official report.

"Stockraising is declining as the land for it is diminishing… the traditional fine reputation of Knjaževačka wool is due to good natural conditions and the good breed of sheep. The skill of the local peasants in rearing sheep gave as good and as large a quantity of wool as possible. In this the peasants were so successful, that in addition to a sizeable consumption of wool in their home industry, they exported before the war [of 1876-78] 40,000 ekn, and today they export scarcely 10,000. Knjaževačka wool is particularly sought for Pirot carpets, for it is much better and finer than Pirot wool… Besides this, the Paračin factory also seeks it and pays for it better than any other wool in the country. But with the destruction of that good breed of sheep, that wool as well, whose reputation was so good, has disappeared in Knjaževac okrug, and in its place there comes onto the market the coarse wool of our ordinary sheep."

The observer, however, is confusing technical with economic efficiency. By technical criteria, a worse sheep was displacing a better, but in so doing was increasing the efficiency with which resources were being used within Serbian agriculture as it became less land intensive. The small mountain sheep converted into useful commodities a feed supply whose opportunity cost was low, releasing the better land for more productive activities than sheepraising. In the second half of the nineteenth century, sheep flocks in most areas of Europe dwindled, as capitalistic graziers were

2. CBo. 1901 H.2. CIX, p 355.
were forced out by the competition of newly opened areas like
Australia in which factor markets were more favourable to the
expansion of extensive, wool orientated, sheepraising. And
instead of adding to their flocks, the small farmers who turned to
raising milk and meat, to exploit the widening differential between
the price of these products and the price of feed to produce them,
selected the cow and the hog as the to most (economically) efficient
feed converters. Wool flocks lingered on in the uplands, but
(partly because of their presence) the general purpose small peasant
flock did not return. There were few areas comparable to the
Serbian uplands where peasant population was rising, with a consequent
increase in the relatively labour intensive general purpose mountain
flock.1

So, curiously enough, the process of development resulted
in the sheep being used more rather than less for the purpose of
self consumption; the export trade statistics indicate (though they
cannot confirm) the diminution in the trade in wool.

The decline of the wool export is evident from the 1860's,
even before the establishment of the first major woollen mill (1882)
began the process of turning a substantial net export into a
substantial import:

1. This point is broadly confirmed by comments in N.W.P. 1906, 2, pp225-6.
The only major export product generated after the decline of the wool export was woolfells. No significant manufacturing industry based on these, except the old Guridiia craft, ever developed. As late as 1912, 97% of all sheep, goat, lamb and kid skins went out in raw condition. There was little incentive to develop a Serbian tanning industry on this raw material base, because no recipient country ever put any pressure on the import of what was regarded as a cheap raw material for its own industry. At least marketing never became a problem for the product.

The transformation observed from wool to milk resulted in the stockraisers seeking to monetize part of the latter product, though commercial sheep-dairying never attained large dimensions. Milk continued to be produced mainly for self consumption as sir (soft perishable sheep cheese) rather than for the hard, durable kaskavlj which was better suited to transportation. Thus the

2. In 1902, this trade was reported to be enjoying the stimulus of American demand for motoring jackets. C.ER.3) 1902, p 13.
following leaves a rather exaggerated impression: 1

"The manufacture of kašmiri has begun to arouse the interest of people here and they have begun to attempt its manufacture. Large amounts are consumed in Salonika & Constantinople, and it is produced in large quantities in Pirot and Vranje chiefly by Macedonian graziers called Crnovunci. [literally: the black wool people]. They told us in Niša that a certain Petar Vasić of that town leased livestock on the hillsides and tried to make this cheese with the help of a certain Jew, and that this business was going well with them."

A continuing stream of sheep and goats continued to be exported throughout the period, but showed little tendency to increase, and the trade never attained significant dimensions. Only in two years did it, barely, surpass a million dinars.2

It mostly went southward to Turkey, (and therefore was unaffected by the tariff war.) Expressed as an export of fat rams for the Turkish market, it seems to have had developmental potential. Lapčović protested that the animals should be slaughtered and exported frozen to European markets, and their hides and wool made available to domestic industry, rather than enter the "barbaric" and "bankrupt" export on the hoof and subsequent cheap sale.3 But these animals had only been fattened at the end of their useful life; their quality was consequently so low that they realised less, even after fattening, than the average sheep on the internal Serbian market.4

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And the export of fresh (or frozen?) mutton had already been tried. The experiment began in November 1902, when the Belgrade Klanian started sending 2,000 ram carcasses a week to England. It was apparent from the start that prospects for the success of the venture were slim on account of the very low quality of the meat; it was soon abandoned and not repeated. The Turkish market was probably the best outlet for what was only a by-product; holding of all purpose sheep was economically useful to a peasant economy, but not as a growing source of cash income. For that, other more useful attributes would need to be sacrificed.

4. Wool supply and the woollen industry.

It was ironically the lure of cheap wool supplies which played an important part in attracting foreign capital into development of the woollen industries of the Balkans, after 1878, just when these supplies were on the point of disappearance. This region received part of the migration of capital from the Czech woollen industry that took place after the collapse of the Crundwirk. A combination of sales to the local market buttressed by state orders for the military would support a woollen factory in most of the territories, and cheap wool would provide the factory with the cutting edge over the importer. According to one calculation, a woollen mill established in Bosnia-Herzegovina could have obtained its wool 10.4% more cheaply than in Austria, and one of Bohemia's largest woollen manufacturers pressed the Bohemian administration vigorously to concession him rights to set up a woollen mill at

---
Zaiajovo which was clearly intended to use locally purchased wool supplies; his plans, like those of a subsequent suitor for the same concession only failed to materialize because of the hostility of the authorities. A similar suit in Serbia achieved success however, with a friendly administration. On its projectors, Münch & Schumpeter, woollen manufacturers of Moravia, was lavished a concession laden with every privilege short of tariff protection, which was the one enticement which, because of the Austrian trade treaty, the Serbian government was not empowered to concede.

1,200,000 dinars of the entrepreneurs' money were sunk in the initial investment, and a scale of production was envisaged which would require substantial sales to the consumer market as well as military contract deliveries, for it was noted in the late 1860s that the factory was equipped with eighty looms, but that only fifty were usually at work, the rest being held in reserve for government orders. It was therefore by no means insulated wholly from competitive pressures; although it was in a position to sell to the state and to the market at differentiated prices, it still had to anticipate fierce Austrian import competition in the market, on which it would sell the greater part of its output. So it could hardly have been indifferent to wool supply conditions. Nevertheless the concessionaires willingly committed themselves to the exclusive use of Serbian wool. Their choice of location only makes sense on the basis of this intention.

1. P.F. Sugar, Industrialization of Bosnia-Hercegovina 1878-1918, pp 144-7
2. Schumpeter - shortly dropped out of the partnership for the Paradin mill, and subsequently sought a concession in Bosnia.
3. C Br (S) 1867-68, p 17.
Paradin, where the factory was built, was one of the principal markets for Serbian wool, particularly of the Pravivir type. The wool trade, and the wool washing trade which it supported, and which utilized the waters of the Crnić river (which was also to provide the factory with its power supply) were, by one report, almost the sole reason for the town's existence. On the other hand the only logical place to put a factory which would process imported wool supplies for the domestic market would have been Belgrade, and certainly not a small town in the centre of the country.

Yet as we have already noted, the period during which the woollen industry established itself was marked by a simultaneous upsurge in wool imports, and, in fact the Paradin factory soon became heavily dependent on imported wool supplies. For all the high reputation of the wool of eastern Serbia, the apparent intention of the firm to utilize it was a serious error of judgment, for it was much better suited to carpet manufacturing than to cloth production. "... for the making of carpets... only Balkan wool... of Diotski manjavi and sometimes Pravivir is used, and no other type, not even the finest Merino can replace it." But carpet making needed a coarser staple than was suitable for cloth, and the indigenous wool that the Paradin factory purchased could only be used after the costly process of extracting the coarsest parts. Even so the factory's early output,

made largely from indigenous wool, was characterized by "a sort of stiffness which cramped movement."  

Despite its defects, this kind of wool was probably a great deal better than that obtainable from the hill sheep which was rapidly displacing the Krivir herd, so the supply of native wool available to the manufacturer probably deteriorated even from this. It is evident that manufacturers of woollens in neighbouring Bulgaria faced similar circumstances, so that the growth of the woollen industry in that country failed to establish linkages with Bulgarian agriculture:  

"The reason...lies predominantly in the fact that agriculture in a backward country is much too backward to be able to produce materials suitable for industrial processing. The leather industry has little use for hides that have been damaged by dirt and perforated by warbles because of a lack of minimum standards of proper care in livestock raising. Similarly, the wool provided by the indigenous sheep in a backward country tends to be much too coarse for many industrial uses. It is therefore not surprising at all that in 1909 almost half the wool used by the industry was imported from foreign countries. The corresponding figure for 1912 is even more impressive."

But this was not solely the result of backwardness, but also of the pattern of Balkan agricultural change during this period. By expanding flocks of upland sheep, and by running down the herds of Krivir, the peasant was responding quite rationally to the problems of intensifying agriculture. He offered the manufacturer coarse, shaggy wool. It was pointed out that if the animal was

1. E. de Borchgrave, op cit. p 102.
shorn early, not only would the wool be of superior quality, but a second shearing would also have been possible. However, it was noted that peasants were reluctant to do this because it would interfere with the milk yield. In itself, this was an odd assertion, but the Serbian sheep stock consisted mainly of ewe flocks, and while it would scarcely matter if a ram or mother were shorn early, the early shearing of the ewe could have disastrous consequences for the lamb in the event of a late cold snap. So it could not be shorn in time to get a second shearing, in which case the logic of the situation would be for the peasant to defer shearing as long as possible - and to let the wool coarsen and get shaggy - so as to maximise the weight of the clip. The manufacturer might not pay so well for coarse, shaggy wool as for wool in premium condition, but the domestic market as a whole was much less discriminating, while coarseness and length of staple may well have been an asset in carpet making. Nor could the manufacturer offer much of a premium to induce the peasant to produce the kind of wool he wanted, because if he were going to pay over the odds for his supplies, he might as well import them. Indeed the industry not only complained of the quality of Serbian wool but also of the price that had to be paid for indigenous supplies.

So manufacturer and peasant producer tended to go their separate ways, the manufacturer to import a high percentage of his materials and the peasant, if he had wool to sell, to sell it to other peasants. Interdependence offered little advantage to either party. Nothing very much could be done about this. Stung by

2. Ibid, p 260.
3. Ibid, p 261
his critics and under pressure from the government to maximise his use of indigenous wool, Künch (owner of the Paradin factory) with government assistance tried to propagate the breeding of good fleeces animals, but with little success, while enjoying for the time being the right to import 75% of the raw material for the factory. Kerines and Electorals were imported for crossing with the indigenous stock.¹ The imported stud rams were distributed to "the better householders of the region"² and some transient success was claimed. "Already from different places, particularly near the town [of Paradin] a much finer wool is beginning to be carried to the factory.³"

But there is no evidence that this made any difference in the long term. Though the larger sheep raiser in the Korava valley region might find it worthwhile to rear a superior wool animal, such an enterprise would be valueless to the small sheep raising peasant of the hill regions. Even if the resulting cross-breeds were lucky enough to survive the meagre pasture and severe conditions of mountain grazing, the gain in cash income from wool would be more than offset by the loss of milk and meat.

Other disadvantages to the industrial purchaser of Serbian wool were also observed; there was no possibility of bulk purchasing on markets which were by now highly fragmented, and the purchase of domestic wool had to be financed from dear domestic credit, an

1. Ibid, p 269.
2. N. Kostić, op cit p 50.
important consideration as it all had to be purchased at the time of the shearing. The conclusion of Milivoje Kostić that if the import of wool had been forbidden to the Serbian woollen mills "we would have today a much better breed of sheep" needs to be qualified with the rider "or no woollen industry".

2. M. Kostić, Srpska Invoca Trgovina... p39.
APPENDIX I.


Stock (000's)\(^1\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Calves</th>
<th>Yearlings</th>
<th>Cows</th>
<th>Oxen</th>
<th>Dulls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1859/66</td>
<td>110.4</td>
<td>103.2</td>
<td>237.1</td>
<td>294.1</td>
<td>26.6</td>
<td>771.3</td>
</tr>
<tr>
<td>1890</td>
<td>110.6</td>
<td>118.8</td>
<td>235.1</td>
<td>340.0</td>
<td>14.7</td>
<td>619.3</td>
</tr>
<tr>
<td>1895</td>
<td>143.9</td>
<td>135.3</td>
<td>289.5</td>
<td>329.5</td>
<td>17.3</td>
<td>915.4</td>
</tr>
<tr>
<td>1900</td>
<td>189.4</td>
<td>126.1</td>
<td>307.3</td>
<td>321.9</td>
<td>17.5</td>
<td>956.7</td>
</tr>
<tr>
<td>1905</td>
<td>178.6</td>
<td>119.0</td>
<td>330.8</td>
<td>310.5</td>
<td>23.5</td>
<td>962.5</td>
</tr>
</tbody>
</table>

Annual wastage was estimated by the veterinary officials at 6% of the stock, including 10,000 head of oxen.\(^2\) This implies wastage among animals other than oxen of 7.2% p.a.

Thus wastage of yearlings leaves 92.8% of their number at census time available for addition to the stock of mature animals at end of year -

<table>
<thead>
<tr>
<th>year</th>
<th>calves</th>
<th>yearlings</th>
<th>cows</th>
<th>oxen</th>
<th>dulls</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>110,200</td>
<td>1901: 111,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1896</td>
<td>125,600</td>
<td>1906: 110,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provision for the maintenance of the stock of cows and bulls (which presumably covers replacement for wastage, slaughter and export) "in the experience of the ekonomika" was 1/9.\(^3\) The veterinary officials seem to have counted wastage of 6% (as above) on top of this which looks to me like double counting. Thus this provision would annually absorb the following numbers:

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1. Sources as per Table IV, 1.
2. Em.N.P. 1906, 2, p 163.
3. Ibid.
Additionally we must adjust for expansion in the cow and bull stock, and contraction in the ox stock. In the '60's we will assume both to be stationary.

<table>
<thead>
<tr>
<th>Year</th>
<th>Maintenance of cow and bull stock</th>
<th>Provision for wastage of oxen</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1/9 of stock)</td>
<td>(10,000 p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1860's</td>
<td>29,300</td>
<td>10,000</td>
<td>39,300</td>
</tr>
<tr>
<td>1891</td>
<td>27,800</td>
<td>10,000</td>
<td>37,800</td>
</tr>
<tr>
<td>1896</td>
<td>34,100</td>
<td>10,000</td>
<td>44,100</td>
</tr>
<tr>
<td>1901</td>
<td>36,100</td>
<td>10,000</td>
<td>46,100</td>
</tr>
<tr>
<td>1906</td>
<td>39,400</td>
<td>10,000</td>
<td>49,400</td>
</tr>
</tbody>
</table>

This number will be sufficient to replenish the breeding stock, and to make good wastage among oxen. Thus there remain available for slaughter and for replacement of slaughtered and exported oxen:

<table>
<thead>
<tr>
<th>Year</th>
<th>Input to maintain stock</th>
<th>Expansion of cow and bull stock (per annum)</th>
<th>Expansion of ox stock (per annum)</th>
<th>Entry to mature animal stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860's</td>
<td>39,300</td>
<td>nil</td>
<td>nil</td>
<td>39,300</td>
</tr>
<tr>
<td>1890/5</td>
<td>37,800</td>
<td>11,400</td>
<td>-2,300</td>
<td>46,900</td>
</tr>
<tr>
<td>1896/00</td>
<td>44,100</td>
<td>3,700</td>
<td>-1,500</td>
<td>46,300</td>
</tr>
<tr>
<td>1901/5</td>
<td>46,100</td>
<td>5,800</td>
<td>-2,300</td>
<td>49,600</td>
</tr>
<tr>
<td>1906/10</td>
<td>49,400</td>
<td>say 5,000</td>
<td>say 2,300</td>
<td>52,100</td>
</tr>
</tbody>
</table>

Taking the period 1896-1904 as a whole, the inflow of animals into the ox stock is 70,600 p.a. mean. But, in order to maintain a stable stock we should add back the annual decline in numbers of 1,900 p.a., making an inflow to achieve stability of 72,500. The mean total stock was 325,700, mean annual export of oxen was 55,050, and all animals...
which were not exported we assume to have been slaughtered after six years in stock (i.e. at eight years old).

Let us assume that all animals for export are exported after N years in stock, i.e. at N + 2 years old. Now the total stock will be composed of six annual cohorts of animals each of 72,500 head except that (6-N) cohorts will be reduced by the number exported - i.e. 55,050 p.a.

Therefore total stock,

\[ 325,700 = 6 \times 72,500 - (6-N) \times 55,050 \]

whence

\[ N = 4.014. \]

i.e. the mean age at which animals were exported was 6.01 years. We may use this figure with some confidence as it accords very well with the contemporary estimates quoted on p. 251.

Now we have so far assumed an unchanged rate of cattle mortality between 1860-66 and 1896-1904, and as the age at export, as indicated by the unchanged quality of the export trade, was probably unchanged between these dates, we are able to test this assumption.

Let the size of each annual cohort in the '60s be L except for cohorts of more than 4.01 years in stock which will be reduced by the mean annual export of 18,000.

Therefore total stock 1859-66

\[ 294,100 = 6L - 18,000 \times (6 - 4.01) \]

whence

\[ L = 54,973 \]
Now assuming an unchanged stock, and the same mortality rates as in 1896–1904, we estimated annual net inflow to stock at 56,500 per annum. This implies excess mortality among oxen (assuming unchanged mortality among cows and yearlings) of about 1,500, or much less if we assume that the greater mortality was spread among the cows and yearlings as well.

But given the error implicit to our statistics, calculation method and assumptions, so small a divergence is of no significance and it is evident that mortality among cattle had not altered greatly between the two periods. We can therefore ignore possible mortality changes in our calculations.

Thus in the 1860's, head 1896–1904 head
Annual export - 18,000 Annual Export - 55,050
Annual slaughter - 33,500 Annual slaughter - 15,550
Ann. production 56,500 70,600

(these figures do not of course relate to the identical area, as the second set include the annexed territories).
### APPENDIX II.

**GOAT POPULATION AND QUALITY OF GRAZING (1905).**

<table>
<thead>
<tr>
<th>Okrug</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beograd</td>
<td>1</td>
<td>20.01</td>
<td>3.78</td>
<td>1.888</td>
<td>459</td>
<td>335</td>
<td>72.9</td>
</tr>
<tr>
<td>Valjevo</td>
<td>2</td>
<td>33.01</td>
<td>4.12</td>
<td>1.248</td>
<td>304</td>
<td>293</td>
<td>61.9</td>
</tr>
<tr>
<td>Vranje</td>
<td>3</td>
<td>28.19</td>
<td>105.59</td>
<td>3.7457</td>
<td>337</td>
<td>125</td>
<td>37.1</td>
</tr>
<tr>
<td>Kragujevac</td>
<td>4</td>
<td>28.23</td>
<td>6.74</td>
<td>1.2389</td>
<td>510</td>
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<td>7.272</td>
<td>587</td>
<td>330</td>
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</table>

Col. 3. land area (000 ha) under various types of grazing and waste in 1905 (Aggregate of cols. 6-10 of table on p 238 of S.G. 1907-08).

Col. 4. goat population (000 head) in 1905 (p 350 of S.G. 1907-8).

Col. 5. goat population per hectare of grazing (Col. 4 - Col. 3.)

Col. 6. value of arable in 1905 (din. per hectare) S.G. 1907-8, p 241, Col. 2.

Col. 7. value of pasture in 1905 (" " " ) S.G. 1907-8 p 241 Col. 4.

Col. 8. (Col. 7 - Col. 6) x 100% - an index of the relative quality of uncultivated land.
A regression was calculated for the dispersion (hundred hectares per goat) of the goat population, on a logarithmic scale (y) against the relative quality of uncultivated land, x, for which the (logarithmic) coefficients of y and the coefficients of x obtained were:

$$\Sigma x = 911.2, \quad \bar{x} = 53.60 \quad \Sigma y = 205.04, \quad \bar{y} = 12.6613$$
$$\Sigma x^2 = 772.6 \quad \Sigma y^2 = 604.41 \quad \Sigma xy = 1730.68$$

The best equation was $y = 0.1246 + 0.2227x$

$R^2 = 0.6377, \quad R = 0.7985$

Analysis of variance

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<tr>
<th>Sum of Squares</th>
<th>Variance</th>
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<tr>
<td>Total</td>
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<td>Regression</td>
<td>385.42</td>
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<tr>
<td>Residual</td>
<td>218.99</td>
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</table>

$F = 26.40$

where $n_1 = 1, \quad n_2 = 15$, acceptability at 1% level is indicated.
CHAPTER V

RAW MATERIAL SUPPLY, IMMIGRANT ENTREPRENEURSHIP AND THE DEVELOPMENT OF FOOD PROCESSING INDUSTRY IN SERBIA

a. The importation of industrial entrepreneurship.

The trade in primary products out of village Serbia provided a basis for the emergence of modern processing industries. The preponderance of the basic foodstuffs, cereals, and meat in the cash economy of the village tended to result in a bias of Serbia's early industrialization towards the working up of these products, and in the establishment of a close connection between industrial development and the land economy. This connection was not necessarily a favourable one to the development of industry, for the quality of the raw materials in question left much to be desired from the point of view of modern manufacturing. Gerschenkron has noted the problems of utilizing peasant primary products in modern industry, and as the arguments put forward are obviously applicable to Serbia, so the Serbian industries may have had to develop despite the nature of raw material supply rather than because of its availability.

In this chapter, we shall stress the key role of immigrant enterprise in introducing and building up these industries. In this respect, we take as a starting point John P. McKay's seminal study of the role of the foreign entrepreneur in the industrial

development of Tsarist Russia. Mackay stresses the importance of the foreign industrialist as a source of enterprise to accelerate the utilization of idle or underemployed resources through the establishment of unfamiliar technologies, whose success would interest and encourage the attention of domestic businessmen to the revealed profit possibilities to be realized through emulating them, and to force them to widen their perspectives in response to competitive pressures. Emphasis is thus shifted somewhat away from the problem of capital supply.

Like Russia, the Balkan states sought - at an official level - to encourage the inflow of foreign capitalistic enterprise, and Serbia, surprisingly, was in the vanguard of this movement, for as early as 1873, a law was passed - which remained operative till superseded in 1898 - for the promotion of large scale industry. The 1873 concession law offered prospective industrialists a 15 year monopoly in the mechanized production of their product, freedom of import and export duties, 30 years rent free site, with timber cutting rights, and a ten year direct tax holiday. Analogous legislation was not passed in Romania till 1887, in Bulgaria till 1897, or in Greece till 1920. The operation of this law did not meet the hopes of the legislators of an inrush of foreign capital, but a list of 1884 shows that 33 firms had been given concessions under the 1873 law, of which all but two appear to have been in operation. Unfortunately, the concession system was

1 J. P. Mackay, Pioneers for Profit (Chicago, 1970)
2 E. de Borchgrave, In Serbie Administrative ..., pp. 186-7
used as a means of giving hand-outs to persons of influence, who were then free to try hawking their privileges about the European financial markets. Assistance to industry was frequently abused:  

"Experiments have been made from time to time in granting state aid to industrial undertakings but the recipient, flushed with the possession of means on which he had expended no toil, has frittered away the assistance in idle existence at coffee houses".

On the whole, the record of foreign capital penetration into Serbian industry achieved little of the task which, by Mackay's criteria, was set for it. The register of defunct companies in the Public Record Office bears melancholy witness to the ineffectuality of British promotions in Serbia. Companies formed themselves, usually on the basis of concession rights, for a wide range of tasks, including contracting, engineering, meat packing, distilling, banking, weaving, and of course, minerals exploitation and not a single one managed to set up a viable and lasting enterprise. The contribution of other western European states was only a little more positive. The plans laid were frequently too grandiose for the means controlled by their promoters, and the mismanagement of corporate finance was the rule rather than the exception.  

2 Added to this was the obstacle of a nascent economic nationalism, not so strident as in the Romanian case, but still sufficient for a British consul to warn prospective competitors for a major construction contract of the "dangers of tendering for the scheme ... An outcry against foreigners is easily

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1 C Br (S) 1893, p.33.

2 See, as a good example of this the exploits of the British-Irish meat packing ventures, on pp. 297-9,322-3

raised and there is already strong opposition to the present contract being given to other than natives. The slightest hitch or interruption of the works ... might be made to serve as a plausible excuse for cancelling the contract, and confiscating the security ..."¹

With specific reference to the processing of primary products, the difficulty of the foreign entrepreneur operating in the Serbian market resulted from his motivation. It was usually the case that he wanted to purchase and manufacture produce to supply markets for which, for one reason or another, established supply sources were inadequate.² Thus, while he would have a clear idea about what he wanted to sell, and conditions pertaining on the market for it, he usually knew next to nothing about the capacity of the Serbian economy to supply produce of the requisite quantity, type and quality. Failure then came about through inability to adapt and manufacture the available supply to meet the requirements of the export trade.

For the converse of the same reasons the native entrepreneur was equally incapable of establishing this kind of industry. He too knew his markets, only his market perspective was bounded by the narrow confines of the Balkan trading network; where native enterprise was to be found engaged in modern manufacturing, It was usually occupied with mechanizing the production of goods which were already familiar on the home market, particularly those manufactured by the pre-existing handicraft industry. He was rarely a product innovator, and typically an import or handicraft substituter.³

¹PRO FO 105 111 No. 9 comm. of 1.7.1895.
²This tendency will be explored more fully in Chapter VII.
Between these two groups, both ill equipped for developing the processing of raw materials, stood a third group - the immigrant businessmen. The form of immigrant enterprise on which this chapter focuses is theirs. Lampe is of the view that "a wider access to immigrant entrepreneurs and skilled labour from Central Europe" was one of the reasons for the relatively successful development of industry in Romania compared with the other Balkan states,¹ and the Serbian experience testifies eloquently to the vital entrepreneurial significance of this group,² within the criteria set by Hackay. They were often men of little capital, but of great adaptability, who brought in not only scarce technical skills, but also the will to venture their resources in introducing new products into the Serbian economy, and the breadth of vision to be able to think in terms both of export markets and domestic demand, even where none had formerly existed for their product. These men, often refugees from their own lands, came to stay, identified themselves speedily with the host community, owned and managed their enterprises, and probably financed their expansion from internally generated resources. It was very largely as a result of their enterprise that the Serbian meat packing, milling and brewing industries were built up. Only one major concern, the state financed Belgrade export slaughterhouse (the 'Klanica') was set up other than by their enterprise, and this was not the first entrant into the trade, besides which, its role in developing the meat packing industry was, as we shall see, equivocal.

¹Lampe and Jackson, op.cit. p.4.
²Also see Lampe, thesis, pp. 227-32.
b. The meat packing industry to 1905.

From the internal, Serbian point of view, a meat packing industry was desired more on political than economic grounds, because of the vulnerability of Serbian hog exporting to Hungarian protectionist pressure. Eventually, in 1806, as a result of the crisis of the time the political need was translated into economic action. And it was during the commercial war with Austria-Hungary that the meat packing industry is conventionally depicted as coming into its own, and making a signal contribution to Serbia's ability to survive Austrian economic sanctions. But the supply and market problems of the Serbian meat packing industry were of considerable complexity, and, with the exception of the Belgrade Klinica, it was set up by entrepreneurs whose main problem was that of adapting Serbian supply to external market conditions. In this respect the mere establishment of slaughterhouses solved no problems at all.

The hog production of western Serbia which was offered to the market in lean condition was useless to the meat packers, as it was not ready for slaughter. This effectively ruled out meat packing ventures in western Serbia, and every single slaughterhouse project, successful or otherwise, located itself within the maize-fattening belt, competing for those hogs which were most readily accorded access to Budapest. Even after fattening, the meat of the Serbian hog was of such poor quality as to encounter difficulty in penetrating the consumer market of western Europe, though it might be perfectly

\[1\] See above p2. 108-9
acceptable on Budapest. Scientific hog breeding was developed much later than that of the other domestic meat animals, and in the early 19th Century it is likely that the Serbian hog was not greatly inferior to its British counterpart. But this was no longer the case in the 1830's when the basic breeding stocks had been fixed and the techniques of accelerated development were the normal practice. The best pork was raised from the Berkshire type of hog, quick maturing and susceptible to intensive feeding, and slaughtered after 6-7 months at 40 - 60 kg. live weight, the meat being well formed but not fatty. The bacon animal - classically the Yorkshire - was larger, brought on more slowly, white skinned, and with well developed hams, slaughtered at about 90 - 120 kg. at 8 - 9 months. Raised any further than this the hog would put on fat rather than muscle, but if well reared before fattening, the meat would still be suitable for curing, and might be preferred by producers who were equally interested in raising for lard. This type of hog was more characteristic of German and US raising than raising in Britain. However, the Serbian hog, which was of this basic type, was raised extremely slowly on natural fodder of variable quantity and quality, frequently not being exported or fattened till it had reached 1 1/2, 2, even three years of age. Although slow developing it was resilient and resistant to disease and adverse climatic conditions, and when fully mature, it put on fat efficiently. But its meat was coarse and sparse, and the carcass yielded a high proportion of bone and offal.

Given the nature of the raw material with which they had to work, packers of Serbian pigmeat could follow four different market strategies.

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1. They could compete for sales at the bottom end of the western European market. The basic quality of their product would be unavoidably low, and the need for protracted transportation meant that the meat must be heavily salted. The sort of market which would accept low grade salt pork was that for naval stores.

2. They could concentrate instead on the market for cured and seasoned specialities, such as were in demand in the German and central European markets. This required investment not only in slaughtering but also in processing, but materials of prime quality were not necessary.

3. They could compete in the Austro-Hungarian market against domestic meat packers, handicapped by Austro-Hungarian industrial protection, as well as agrarian protection, but offsetting this by savings in freight and handling costs, as well as state cost reducing privileges.

4. Instead of being constrained by the nature of the product in the form it was offered then, they could try to persuade producers to modify their techniques to yield an animal akin to the speedily raised Danish bacon hog.

All four approaches were tried, with varying success.

The earliest meat packing venture on record was for the export of salt pork to England in the late 1830's, but it appears to have come to nothing.¹ Then, in 1852-3 a Manchester firm of marine provisioners, Richard Woodward & Son attempted to set up a large pork packing establishment, probably at Sandervvo. Woodward brought four skilled workers out with him in 1852 with another thirty expected to follow, "for the

¹Ami Doud, La Turquie d'Europe III, p.142.
purpose of teaching the Serbians how to prepare lard in a better way and to cut, pack and cure their pork.\textsuperscript{1} By October the enterprise was purchasing supplies in Serbia at £8-10,000 a month,\textsuperscript{2} and by December, was employing 61 Serbian workers.\textsuperscript{3} Motive was the securing of cheap supplies.\textsuperscript{4}

"Before California became the principal consumption market for salt meats the English drew most of the provisions for their fleet from US entrepots. Today, this market being effectively closed because of the high price, they have needed to look elsewhere ...".

In 1861, a French entrepreneur was organizing the packing and export of salt meat in Belgrade,\textsuperscript{5} but with no more than transient success. Passing judgment on the failure of these two ventures, the British consul mentioned that, although "difficulties had been thrown in the way by interested opposition", he rather thought that\textsuperscript{6}:

"the quality of the article in which they dealt and which was unsuited to the purpose to which they applied it had much more to do with the failure than obstacles of any other kind"

Later attempts were no more successful.

There was another flurry of enterprise in the early 1880's. A London firm held a concession awarded in 1882 to 'James Maryson Durnum' on the basis of which it proceeded to erect a factory in Belgrade for the packing of "salt pork, etc" but had failed by

\textsuperscript{1} PRO FO 78/600, no. 12 cons. of 19,8,1852.
\textsuperscript{2} PRO FO 78/600, no. 18 cons. of 24,10,1852.
\textsuperscript{3} PRO FO 78/600, no. 23 cons. of 31,12,1852.
\textsuperscript{4} AAE CC B, t.2, despatch of 16,9,1852, fo. 250.
\textsuperscript{5} W. Denton, Serbia and the Servians (London, 1862), p.7; AAE CC B, t.2, despatch of 10,1,1863, fo. 4.
\textsuperscript{6} C Br (S) 1863, p.235. It was subsequently noted that Serbian hogs "are not what is called a flesh race and so are useless for salt pork for the navy". C Br (S) 1871 (2), p.553.
1884.\(^1\) This may have been the same venture as another of the same period described as an Anglo-American or American killing and curing project, which fell through for unknown reasons.\(^2\) Also in the year 1882, another concessionary project in the hands of "The Scotch Syndicate of Edinburgh" collapsed during the building of an establishment near Pezarevac, and achieved no better success after being passed over to "Servian and Austrian capitalists".\(^3\)

The most ambitious of all these unsuccessful slaughtering projects was an attempt in 1890-91 to establish stockyards and a slaughterhouse near the railway junction at Niš. Behind this scheme, and its promoter, one Alfred Marshall, stood Irish capital, including "Boyd and Co. of London and Cork, who are deeply interested in the pork trade with the U.S.A."\(^4\) and "Messrs. Lunham of Cork", a former employee of whom, A. H. Sunner was sent as manager of the Serbian factory.\(^5\) These firms were obviously interlinked, as T. Lunham Boyd held 20,000 ordinary and 100 founders' shares, and T. Lunham held 2,000 ordinary and 5 founders' shares.\(^6\) Despite this backing, the company, with a nominal capital of £144,000 including £4,000 in £10 founders (deferred ordinary) shares, found difficulty in raising sufficient funds. Only £108,429 out of £140,000 ordinary stock had been

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\(^1\) E. de Borchgrave, op. cit. p.189; A N. F 12 7179 Reverseaux-Min. des Aff. Ets. 26.8.1884. The latter describes the firm as of "Jens, Marioli, Bournouesse, of London".

\(^2\) PRO FO 105 42 No. 8 comm. of 27.4.1883; J. Mallat, La Servie Contemporaine, II, p.197.

\(^3\) C Br (S) 1886, p.10; C Br (S) 1887-88, p.23. It is not unlikely that all this material refers to the same project.

\(^4\) PRO FO 105 91 No. 71 comm. of 29.9.1891.

\(^5\) PRO FO 105 91 No. 2 comm. of 4.5.1891.

\(^6\) Register of defunct companies 1891, No. 5053, P R O Box 33771; Summary of capital and shares at 25.8.1891.
issued (5s. paid) by 25.8.1891 and of these £30,000 had been awarded to Marshall in part settlement for transfer of his concession to the company. The remainder of the ordinary stock had been floated not only on London but also on Belgrade, and the deficiency of 31,571 shares indicates that the issue flopped.\textsuperscript{1} Of the shares which were taken up, as many as 14,000 representing an investment of 87,500 gold dinars, went onto the Belgrade register.\textsuperscript{2} Djordjević quotes a higher figure for Serbian participation of 100 - 150,000 dinars.\textsuperscript{3} In any event, the extent to which the company depended on Serbian capital was the subject of unfavourable local press comment.\textsuperscript{4}

Notwithstanding the deficiency, the company went into business. Its prospectus was studiously imprecise about the market prospects for its products, though it calculated their value at "the current price for Canadian bacon in Britain". The most likely outlet was disclosed by the estimate of the manager that "he can supply the Royal Navy with pork at £1 a barrel less than Denmark".\textsuperscript{5} This was the real intention, as the company seemed to consider its prospects as critically determined by the price at which the state would be willing to supply it with salt.\textsuperscript{6}

\textsuperscript{1}Ibid; prospectus of Serbian Bacon Curing Company Ltd. under cover of PRO FO 105 93 No. 46 comm. of 28.4.1891.

\textsuperscript{2}PRO FO 105 93 No. 46 comm. of 28.4.1891.

\textsuperscript{3}D. Djordjević, Crniški Rat ..., p.390.

\textsuperscript{4}PRO FO 105 93 No. 43 comm. of 5.4.1891.

\textsuperscript{5}PRO FO 105/91, No. 2 comm. of 4.5.1891.

\textsuperscript{6}Of which it estimated its requirement at 1,200 tons a year, for the expected processing of 60,000 to 100,000 hogs. Concession of slaughtering rights, under cover of FO 105, 81, No. 71 comm. of 10.7.1890. For salt supply dispute see FO 105 93 No. 50 comm. of 15.5.1891; No. 68 comm. of 15.9.1891.
Though Niš was a good location from the point of view of rail consignment of goods via Salonika, it was not, contrary to the claim in the prospectus, in a major hog rearing region. Since the opening of the railway, the Niš region appears to have concentrated on the export of wheat surpluses, rather than on the maize feeding of hogs. And in a whole year's export, probably that of 1890, only 467 hogs were consigned from Niš to Austria-Hungary. Marshall seems, however, to have anticipated that he would not be offered produce in slaughter condition, for he intended the company to undertake the feeding of hogs and the sale of corn to their owners in the stockyards, from which he expected it to earn substantial profits. But—among other reasons, the collapse of the venture, before the factory had even started to produce was attributed to uncertainties as to the company's market prospects. The British consul wrote of "financial difficulties among the promoters of the company which had led to the preparing of several different reports respecting the price of pigs, maize, etc, and that these reports had been so much at variance with one another that the shareholders did not know quite what to believe and looked upon liquidation as the safest move". The Serbian government, with which the company had been in dispute over the price of salt, also pulled out its support and intervened to force the company to return deposits and calls made on the Serbian shareholders. British shareholders were not so fortunate.

1 A N F 12 7179 Pinard-Ribot, Niš 25.8.1891.
2 See prospectus in PRO FO 105 93 No. 40 comm. of 28.4.1891.
3 PRO FO 105 93 No. 65 comm. of 10.8.1891.
4 PRO FO 105 91 No. 60 comm. of 4.12.1891 and No. 87 comm. of 22.12.1891.
5 PRO FO 105 91 No. 76 comm. of 3.11.1891.
From the examples quoted it is evident that British packing enterprises were launched with an eye to supplying the marine provisioning trade with salt pork, but that the quality of the raw material was probably too poor, and its price too high for this market to utilize.1

German enterprise in Serbian meat packing was much more successful, though it was not without its casualties. The first such operation of which I have record was the attempt of a Hamburg firm to establish a slaughterhouse at Smederevo, which was operating successfully in 1883, though it subsequently disappeared. It had been drawn to Serbia for the production of lard, salted and smoked meats to replace American supplies which had been shut out of Germany by the US-German hog conflict.2 Similar considerations may have drawn P. J. Kleefisch and K. Scheuss of Köln to set up a small slaughterhouse at the Velika Plana rail junction in the Morava valley on the basis of a concession awarded them in 1889.3 Notwithstanding an inauspicious start, this was the first survivor of many attempts at meat packing in Serbia. The following year's frontier closure attracted the attention of the government, and that of economics minister Kosta Taušanović in particular, to the possibility of breaking the Hungarian stranglehold on the livestock export by the establishment of a large scale export meat packing industry. So Marshall chose a very opportune moment to appear offering

1The large number of abortive attempts to supply the British market (which did not cease in 1800) is an indication of the incompatibility of the product with the market it was hoped to exploit, the reasons for which I have indicated above, but it should also be added that no British company flotation ever succeeded in establishing a viable business in Serbia, despite the fact that more British enterprises were started there than enterprises of any other non-native origin.

2Translation (into French) of an article in Norddeutsche Allgemeine Zeitung 21.9.1883 in ANF 12 7179.

3A Milovanović-Kleifish i Šeun. Carinik (Beograd) II. 1893, p.70.
his grandiose scheme for slaughtering 100,000 hogs a year in a single establishment. Marshall was "not attracted to the idea of competition" and with Taušanović behind him, persuaded the government successfully to grant him a 15-year monopoly of mechanized meat packing, with the specification that "all other persons" working with machinery should close down when his factory began production. Thereupon he would "take over at a valuation certain machinery belonging to one Scheuss of Velika Plana". Scheuss enlisted the assistance of the German representative and fought back, allegedly, with heavy bribes - and when the rival project collapsed filed for transfer of its concession to himself.

The German firm made money. In moralistic tones, the Belgian representative reported that:

"The slaughter ... of hogs on a larger scale could constitute quite a remunerative operation in Serbia. We see the proof of it in the Kleefisch & Scheuss establishment at Velika Plana which, according to all appearances, does very good business. But this is an enterprise operated within modest limits and personally directed by the owners of the capital employed."

This contrasted favourably with "large joint stock companies founded for work in distant countries" - like Marshall's. The British representative described the Kleefisch-Scheuss establishment in very

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1 PRO FO 105 81 No. 67 comm. of 28.6.90.
2 A G B M. M. Kostić, "Podaci" fo. 59 (Luka Čolović).
3 PRO FO 105 81 No. 68 comm. No. 71 comm. of 10.7.1890.
4 Contract of transfer of concession between Marshall and the company in defunct companies register 5033/33771.
5 PRO FO 105 81 No. 41 comm. of 10.4.1891.
6 TRO FO 105 91 No. 65 comm. of 10.8.1891. Which he did not get as the Serbian government were considering working the concern as a state monopoly.
7 C De de Dudzelec, "Compte rendu ... "R.C. LXXV, p.14.
similar terms. No doubt, the competence with which the enterprise was run contributed greatly to its success and encouraged the owners to expand and diversify. But the critical decision may well have been to adopt the second approach to disposing of the output enumerated above (p.295) - that is of sending it out as manufactured specialty produce. Djordjević notes that Kleefisch-Scheuss began by exporting dressed carcasses but quickly turned over to manufacturing processed meats, and their business was noted in 1891 as "sausage, pork and poultry curing". In 1896, the meat packing trade did a great business in exporting dressed carcasses, because the Hungarian embargo on meat shipments was withdrawn before that on livestock. But, as was pointed out in the press, the dressed meat trade would not easily be sustainable once the livestock embargo was lifted and packers had to compete for supplies against Steinbruck. The pioneering success of "The distinguished slaughterhouse at Velika Plana" in exporting cured meats, salami and rendered lard, was an example to be followed. The writer was concerned that, at this time, prior to the introduction of the refrigerator car into Serbia, dressed meat could not be freighted for long distances. Even such heavily cured foodstuffs as the Velika

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1C Dr (S) 1889-90, p.14.
2D. Djordjević; op.cit., p.574.
3C Dr (S) 1889-90, p.14.
4The third, and most protracted livestock prohibition of 1895-6 was imposed both on live animals and on meat in December 1895, was withdrawn on meat only on 19th February 1896 but was maintained on live exports till the 22nd August. K. Stojanović, Ekonomsko Stanje Srbije ..., p.41.
5Svinjarski produkti "Srpska Zastava (Beograd) VI, 52 of 4.5.1896, p.1, cols. 1 and 2.
Planina slaughterhouse exported gave rise to carrying problems and in consequence, the enterprise worked only in winter, suspending operations when the weather improved, the practice which had been adopted by meat packers in the American west before the introduction of the refrigerator car. Milivoje Kostić visited the Velika Planina factory in 1895. He described its meat processing arrangements in detail, and was favourably impressed by the enterprise. He mentioned of the meat products only sausage, smoked hams and bacon, salami, blutwurst, leberwurst and lard. These appear to have been the only products for which the firm slaughtered hogs (and oxen as well, for blending purposes). Even so, adoption of the second approach to exporting Serbian hog production did not withstand the test of time. The firm began by sending all its output to Germany, and still exported its sausage, lard and ham mainly to Germany in 1890, where it was said to compete successfully with American produce (i.e. for the lower end of the market). But by 1900 (if not before), two thirds of the above products were consigned to Austria-Hungary and only a third to Germany. The German market became relatively still less important for Velika Planina in 1901-5, and from 1897 the firm attempted to process beef for the even less selective Serbian market. It is evident that the produce it could offer was barely competitive in Western European markets.

1 Milivoje Kostić, Pisarn a Puta ..., p.21.
3 Milivoje Kostić, op.cit., pp. 18-22.
5 Milivoje Kostić, op.cit., p.22.
6 L.M 1900, p.286.
7 L.M 1901, p.326, passim.
But with favourable trading conditions on the Austro-Hungarian market between 1890-1905, the firm was encouraged to expand. In 1895-6, the slaughterhouse manager, Wilhelm Schumacher was brought into partnership, and put 300,000 dinars into the original factory, while Scheuss set up a second factory of his own alongside it. And in 1901, Kleefisch left Velika Planina to found yet another slaughterhouse, again on the railway, in the Morava valley at Jagodina, which was producing by 1902. Although until 1905 it was more interested in handling poultry, the new Kleefisch enterprise was equipped with the most modern machines and with skilled workers and so represented the most modern industrial slaughterhouse of the time. It stuck to the formula of exporting "high quality suhorsamte robu" i.e. salami, etc. But, it, too, appears to have sent all the meat to Austria-Hungary, and only the poultry to Germany. In contrast the only other German slaughterhouse project of this period, the Kolberg enterprise in Belgrade, did good business in dressed carcasses in 1890, and set an example of cleanly work, but by implication, did not undertake further processing and soon disappeared.

2 See below, p. 338
3 Proizvodne Snage, p.542.
4 S G 1902, pp. 325-6, passim
5 "Svinjarski Produkti" Srpska Zastava VI 52 p.2. Col. 1.
A similar approach was followed, but less successfully, by a Belgian meat packing project, *La Belgo-Serbe, S.A. d'Alimentation*, incorporated in 1902 on the basis of two concessions awarded to a group represented by Auguste Chenais, a dubious French projector who was obviously taking refuge within the accommodating framework of Belgian company law. *In Belgo-Serbe* also appears to have had a business in making "conserved meats" in Zagreb, and set up its Serbian factory at Paracin evidently for the same trade. ¹ "Dr" Chenais, who had a conviction in France for the illegal practice of medicine, and who was wanted by the French police for "abuse of confidence", proclaimed the firm's willingness to undertake the "chemical preparation of poultry and meat for export" using his own patent formula.² *La Belgo-Serbe* struggled for two years against low sales and shrinking margins, before collapsing.³ The only recorded output of the firm was that of 1902, when it slaughtered a total of 128 hogs and 14 oxen, sending the produce to Austria-Hungary.⁴

¹The documents on this project are to be found in ²*BE 2911 IV Van den Steen - Min Aff Ets Belgrade 30.9.1902* and *Van den Steen - Min Aff Ets Belgrade 2.5.1902*, and in ³*2911 VI. Report of Berghelynck for 1903 on Belgian enterprises in Serbia, under cover of Van den Steen - Min Aff Ets 5.1.1904*. Chenais was (at this time) clearly a projector by profession, as this was only one of a string of concessions he picked up in Austria-Hungary and Serbia. Despite his appalling antecedents, there is little reason to suppose that the Paracin venture was anything other than a serious operation, for at least one of his other projects was developed as a very successful mining operation, at Majdanpek. (⁴*S.A des Mines de Cuivre de Kishanpek*).

²*Trovoinsko Zanatlijski Šemtizam 1902-03*, p. 237.
⁴*S.G 1902*, pp. 325-6.
Its problem was probably one of margins. The fundamental dominance of the Austro-Hungarian market had not been broken. Insulated (except in respect of imports from Serbia) from the world market in hogs, prices of pigment in Austria-Hungary had settled at a level well above the world market price, and had carried Serbian hog prices up correspondingly. This meant that there was no margin to be made from purchasing hogs on the Serbian market and offering the product on the international market. According to one report (in 1903) "today the price of hogs is about one dinar a kilogram but salt meat and lard sell on the world market at 05 para - 1 dinar". That left the Austro-Hungarian market as the only alternative, and the differential tariff between live animals and meat forced margins down on that market as well. The German owned factories were able to insulate themselves to some extent by processing the meat they sent to Austria Hungary into various specialties, and certainly seem to have maintained the volume of business they did, but even they were contemplating going out of business, on account of the price scissors in which they were caught, and which were the "immediate cause" of the closure of the relatively weak Belgian enterprise.

This gives some idea of the difficulties encountered by meat packers in utilizing Serbian supplies, which understandably discouraged domestic capitalists from emulating them. But the possibility of establishing export slaughterhouses with domestic capital had long been discussed. Hungarian interference with the livestock export

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1 See Table V.1, p.317
2 See Table V.1, p.317
even before 1878 evoked propaganda for the "emancipation" of Serbia's trade, by building slaughterhouses and also by establishing internal livestock markets on the Steinbruck model. By this means, it was hoped that the trade might be diverted from their prototype. How exactly such markets, if they were built, would "emancipate" the trade from Hungarian control, without being coupled to the establishment of slaughterhouses which could dispatch the goods other than by the Hungarian railway system was never made clear. But advocacy for the establishment of such markets (with slaughtering facilities tacked on as an afterthought) reflected a long established commercial jealousy on the part of the Serbian livestock exporting interest of their Hungarian competitors. If the Serbian livestock export could be forced through certain central markets in Serbia instead of being traded on Steinbruck, then the trade would be more profitable for the domestic interest; Hungarian merchants could be excluded from picking up supplies except at these markets, and prices could be manipulated by a domestic merchant cartel. This longstanding issue would invariably be raised whenever the livestock export ran into difficulties. Rumours of the imminence of a prohibitive tariff in 1872 brought the matter up.

1 This aspiration was never expressed in so many words but, given the mercantilist attitudes of the merchant class, I think this the most probable construction to be placed on their agitation. Actually this squabble had its antecedents far in the past. For details of an incident which arose in 1830, as a consequence of an attempt by Serbia to force the Austrians to purchase in Serbia and of the Austrians in retaliation to try to force Serbian merchants to bring their hogs into Austrian markets see D Milić, Trgova Srbije 1815-1839 (Beograd, 1959), pp. 185-6.

2 Jedinstvo (Beograd) IV 11, of 16.1.1872, p.25.
and various projects took form in the difficult years after 1878. In 1881, Jovanović, Minister of Finance, sounded out the views of the merchants on a scheme for establishing domestic stockyards and slaughterhouses. This evoked considerable enthusiasm from respondents, though they displayed a notable reluctance to get involved financially and stressed their expectation that the project would be granted state financial backing.¹ The cry for a public export slaughterhouse and stockyard was raised again in 1884,² and in 1889 for a "Belgrade entrepôt" financed by the Government and the Municipality which would divert trade from Steinbruck.³ We have already noted that the government was contemplating setting up a state slaughtering monopoly after the frontier closure of 1890 and,⁴

"When, in 1895, Austria-Hungary forbade the entrance of our hogs onto its market, ostensibly because they were diseased, the Belgrade merchants convened a meeting on 18.6.1895 which was attended by the king in the hotel 'Bulevar'. There, voices were raised unanimously against Austrian chicanery and the resolution was carried 'that a great livestock market and stockyard should be erected in Belgrade, and, since slaughterhouses are also of enormous value, slaughterhouses should also be set up'".

The capital needed to execute a scheme of the magnitude envisaged was so large as to make necessary a joint-stock issue, and the Srpsko Akcijarsko Društvo za klanje i preradu stoka was launched with a nominal capital of 1,250,000 dinars, and sweeping concessionary rights,

¹A G B Vladimir Jovanović papers, papers relating to the problems of the hog trade, ZPO K-XIII/II/18.
²"Podižimo Klanice "Odjak (Beograd) I-14 of 3.11.1884, p.2 cols 1-3; AAE CCB t6 despatch of 8.4.1885, fo. 426.
³PRO FO 103.79, despatch of 26.1.1889.
⁴Spomenica B T O 1880-1930, p.56, Col. 2.
to set up stockyards, slaughterhouses and ancillary services in Belgrade. The government undertook to link it to the railway, to build sidings, and to establish postal and telegraph communications. It's commitment in fact went a great deal further than this for, notwithstanding the 'patriotic' agitation for it, the issue flopped, and the government was pressured into taking up most of the capital itself. Dr. Lampe submits this as evidence of the weak capacity of the Serbian market to absorb joint stock issues, but against this it can be objected that the future prospects of the enterprise were not such as to inspire much optimism. The agitation for this enterprise, like the propaganda for previous and similar schemes came from the enterprise's prospective customers, who had not, however, been much attracted to the idea of involving themselves financially. The fundamental object of the project was to serve notice on the Hungarians that they no longer held the Serbian livestock trade in their pockets, and thereby to pressure them into a more accommodating commercial policy. So, if the slaughterhouse venture succeeded in achieving its proponents' objects, it would find itself in competition for supplies with Steinbruck, and

1 PRO FO 105. 111. No. 20 comm. of 27.12.1895.
3 It was believed by Vujić, who was Serbia's representative in Vienna in 1903, that "the veterinary chicaneries fortunately compelled us at last to build slaughterhouses, and from that time, these chicaneries ceased, and Budapest already feels the loss of Serbian livestock ..." M Vujić, "Najnovi Obrt u Trgovinskoj Politici" Glas Srpske Kraljevske Akademije, 2-i razred LXVI, pp. 188-9.
notwithstanding its concessionary privileges, (which would have the
effect of an export subsidy), its competitive prospects would be
cloudy; if on the other hand the Hungarians were not brought to terms,
there was no guarantee that they might not obstruct the company’s
meat exports, just as they obstructed those of livestock and this would
force the company to funnel its output through Salonika, onto the very
problematic external market. In that case, Belgrade would be the worst
possible location for the enterprise. The only way its profitability
could have been ensured would be for the state to have used its export
tariff to discriminate against merchants trading through Steinbruck.
One such measure seems to have been passed to assist it: it was noted
that "... owing to the action of this association, a law was passed
prohibiting the export of live pigs to Austria-Hungary under the weight
of 2½ cwt". Unless the author of this comment was alluding, in error,
to the Austro-Hungarian embargo on imports of hogs of below this
approximate weight, the intention of this self-embargo would have been
to have ensured that the Belgrade Klania received all small hogs raised
in the country for export. These would have been of a different type
to the lean hogs excluded by the Austro-Hungarian embargo.²

Yet so far from giving any differential tariff concession to the
meat exporter, such as allowing meat exemption from export duty, a
privilege normally accorded to concessionary manufacturers of export
commodities, the Klania complained, year after year, that the level of

¹"The Pork and Bacon Curing Industry of Belgrade" Journal of
the Board of Agriculture X, (1903/4), pp. 102-3.

²The concern of the slaughterers and the state to promote the
breeding of smaller bacon animals is dealt with on pp.314-6 below.
export duties it had to pay discriminated severely against its produce. Discriminatory action against the merchants using the Steinbruck trade was never contemplated, for this would damage the interests of the Klans's most vocal supporters; as far as they were concerned it merely offered an invaluable fall-back when normal trade relations with Steinbruck were obstructed. "We add" wrote one observer, "that the three large abattoirs ... have been extremely precious each time Austria-Hungary has closed its frontier. The Serbian exporters have used them in order to prepare fresh or salt meat for distant markets". This was a government financed industry, run in the interest of its customers. The 1903 report to shareholders stressed emphatically that their interests were being sacrificed to the interests of producers and merchants, "for whom it primarily exists". It was under no pressure to produce a good dividend - since most of the shares were government owned - and in 1901 passed its dividend in order to reinvest its funds in new capacity, and passed it again in 1903 and 1904 although the year's operations showed a profit.

The project was launched during a period of crisis, so no time could be lost while the company was building its permanent facilities. As neither hogs nor meat were being allowed into Hungary, production would have to go out through Salonika, so temporary slaughtering facilities were installed in a disused brewery at Nis, which were much used.

1 S A D K P S, Izveštaj ... u 1902, p.8; Izveštaj ... u 1903, p.7; Izveštaj ... u 1905, p.7.

2 T Daveluy, La Serbie. Notes historiques, statistiques et commerciales, (Bruxelles, 1907), p.54.

3 S A D K P S, Izveštaj ... u 1903, p.7.

4 Ibid, p.9; Izveštaj ... u 1902, p.7; Izveštaj ... u 1905, p.9.
better located for the southbound rail-borne export. Though the capacity of this temporary abattoir was substantial, it was limited to the production of dressed carcasses, so twenty refrigerated rail-cars were acquired by the government for disposal of its output. Shortage of such equipment was alleged to have been the main limitation on its capacity. When it opened for business late in 1898, the productive capacity of the new installation in Belgrade was similarly limited to carcass dressing. The caution of private investors was justified by the out-turn. The moment the frontier with Hungary was reopened, in September 1896, live hogs from Serbia began to pour across again. In 1897, the live export recovered from 50,000 to 120,000, and the output of the export packers shrank from between 60 and 80,000 to less than 30,000 hogs equivalent, and was to diminish still further by 1899, the first full year of the Belgrade Klačica's operation. Thus, despite its reported capacity to handle 500 hogs a day, it exported only about 13,000 in 1899, earning the equivalent of only 1½% on its paid up capital.

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1. Spomenica B T O 1880-1330, p.150, Col. 2; C Be 1897, R C XCVII, p.302.
2. C Br(s) 1895-96, p.17; H. Vivian, Servia, the Poor Man's Paradise, p.117, n.
4. PRO FO 105 114 No. 9 comm. of 10,9,1896.
5. See Tables III. 9 and V. 1, pp. 162, 317
6. C Be 1901 R C CXIV, p.397, and below, pp. 320-1
7. Table V. 1, p.317
8. C Be, loc.cit.
As an exporter of dressed carcasses the Klanica was clearly not making much headway against Hungarian competition on the Austrian market, and decided to diversify its export potential by building satellite installations for curing and preserving with a view to sending salt pork to England and France. In 1901, it leased one of them to a Danish entrepreneur who entered into a contract with a London importer for the supply of salt and cured pork, and the other to a French firm which worked up hams and bacon for consignment to France and French Africa. Great hopes were attached to both projects, which were for a short time successful. Permission was granted for the transit through Germany of 200 refrigerated carloads of pork (about 2,000 tonnes) for London via Oostende, and a trial consignment of salt pork was despatched to Oran via Genova, as it was reported that French Africa was becoming a very heavy importer of such produce.

Thus in 1901, while 13,800 hogs were slaughtered in the Klanica for consignment to Vienna, 16,000 were absorbed by the English market (together with a none too promising consignment of scraggy Serbian sheep carcasses) and 13,400 were sent to France. Neither market would touch the Serbian oxen, and the lard which was generated by the processing of the carcasses was disposed of on the German market. Business continued to be brisk in 1902, but the UK trade subsequently collapsed.

1 "Pork and Bacon Curing Industry" loc. cit. p. 106; PRO FO 105 141 No. 3 comm. of 25.2.1901.

2 PRO FO 105 141 No. 3 comm. of 25.2.1901.

3 C Br(S) 1900-01, p. 11.

4 PRO FO 105 140 No. 34 comm. of 11.10.1901.

5 "Pork and bacon curing industry" loc. cit. p. 105; S G 1901, p. 326.
substantially for the reasons which had defeated the previous attempts to tap the English market; the Klanica's quality control was inadequate, and high freight costs were also blamed for making the produce uncompetitive. By 1903, the preservation of meat was abandoned. In 1904, Serbian meat exports to England had dropped to a mere £100.

By 1903, Austria was again the largest taker, and by the eve of the Tariff war, the Klanica had been forced back to seek what outlets it could in the dressed meat trade with central Europe. Its export hog turnover shrank from its 1902 peak of 46,000 to a mere 7,600 per annum in 1903-5. All the meat exporting forms were reported to be in difficulty during this period, but it may be noted that the solidly established German packers maintained their sales of specialty goods with much greater success, though as noted (above, p. 303) they too had been forced back to mainly Austro-Hungarian outlets. The Klanica had tried approaches 1 and 3; both were found wanting. Only the sale of specialties - and for the central European market at that - offered a viable business in free competition with the live export trade, and this required management and labour skills which the Klanica evidently lacked.

Thus by 1905, the meat packing trade had reached an impasse with symptoms of imminent decline if market conditions remained unchanged. Serbian meat could not compete in central Europe with Serbian hogs processed in Hungary and by reason of the quality of the product, it

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1 S A D K P S, Izvestaj... u 1903 god., p.7; C Br(S) 1904, p.20.
2 C Br(S) 1904, p.20.
3 S G 1903, p.349.
4 M N P 1907, 1, p.37.
5 See Table V.1, p.317.
7 S G 1900, p.286; SG 1901, p.326; S G 1902, pp. 325-6; S G 1903, pp. 348-50; S G 1904, pp. 378-9; S G 1905, pp. 370-1 and Table V.1.
could not compete in western Europe either. So packers were inevitably interested in the fourth option open to them of encouraging producers to raise an animal from which meat of good quality could be produced, in high proportion to carcass weight.

The precedent for doing so had been established, and the potential rewards were alluring. The Danes had been confronted by the same problem, for they had experienced the erosion and destruction of the live export trade in fattened hogs through Altona as a result of increasing harassment by the German authorities in the 1880's and definitive prohibition since 1896. Producers had responded to these problems in a positive way, however, by the diversion of their output onto the large, expanding and unrestricted English market. In those days of mounting agricultural protectionism, the open door to England exerted a magnetic attraction to primary producers; success in exporting to this market seemed to offer unparalleled security and prosperity. Serbian authorities and traders were not immune to this attraction, and they were well informed as to the circumstances of the Danish experience. They knew that the British market sought high quality bacon animals, rather than the big lard hogs which had been sold in Germany, and that the Danes had made the appropriate changes in their breeding and raising methods, with enclosed pasture and sty rearing, and massive inputs of barley and buttermilk, as well as creating the necessary slaughtering and processing capacity.¹

On the other hand, it was going to be no easy task to apply the fruits of the Danish experience to the realities of animal husbandry in Serbia. Even in Denmark, small producers had difficulty in emulating the

¹A well informed account of the Danish experience may be found in MNP 1006, 2, pp. 303-313.
pioneering success of those disposing more easily the capital and skills necessary to the adoption of intensive hog husbandry, and had continued the Altona trade as long as they possibly could, which made it unlikely that much could be done in Serbia as long as Steinbruck stayed open. In any case, few Serbian peasants had access to high quality enclosed pasture so their hogs continued to be raised to slow maturity on the open range. Dairying was almost non-existent, and maize, the main feedstuff of the arable economy, was much less well suited than barley for accelerated meat raising, though more efficient for building fat. Attempts by government agencies in promoting cross-breeding with the Berkshire porker and pure bred Yorkshire bacon hogs (which had been integral to the development of the best Danish bacon breeds) were claimed to have improved fertility, though to have lowered disease resistance, but the high hopes placed on cross-breeding were largely unfulfilled, as its value was predicated on the unrealised intention that the animals should be reared appropriately. Though improved stockraising practice was slowly beginning to penetrate to the Serbian village, the process would inevitably be a slow one. From 1906 onwards the problem was going to have to be faced again with a renewed urgency. But until that time it was probably not in the peasant's interest to intensify his hograising system; so long as the Austro-Hungarian market was open, the price he received was remunerative.

1Ibid, pp. 311-2.
2R J McFall, op.cit., p.248.
3La Serbie à l'Exposition Universelle de 1905 à Liège (Belgrade, 1905), p.116.
### Table V.1

**Hogs Slaughtered and Packed for Export by the Five Serbian Slaughterhouses 1890-1911**

<table>
<thead>
<tr>
<th>Year</th>
<th>Beograd Klania</th>
<th>V-Plana (both)</th>
<th>Jagodina</th>
<th>Mladenovac</th>
<th>Total</th>
<th>Customs c</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td></td>
<td>(3,000)</td>
<td></td>
<td></td>
<td>(3,000)</td>
<td></td>
</tr>
<tr>
<td>1891</td>
<td></td>
<td>(7,000)</td>
<td></td>
<td></td>
<td>(7,000)</td>
<td></td>
</tr>
<tr>
<td>1892</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td></td>
<td>8,400</td>
<td></td>
<td></td>
<td>8,400</td>
<td></td>
</tr>
<tr>
<td>1894</td>
<td></td>
<td>17,000</td>
<td></td>
<td></td>
<td>17,000</td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1896</td>
<td>9,665</td>
<td></td>
<td></td>
<td></td>
<td>(60,000)</td>
<td>80,000</td>
</tr>
<tr>
<td>1897</td>
<td>11,713</td>
<td>4,925</td>
<td></td>
<td></td>
<td>16,638</td>
<td>29,900</td>
</tr>
<tr>
<td>1898</td>
<td>5,737</td>
<td>(7,000)</td>
<td></td>
<td></td>
<td>(12,700)</td>
<td>18,500</td>
</tr>
<tr>
<td>1899</td>
<td>13,182</td>
<td>(8,000)</td>
<td></td>
<td></td>
<td>(21,200)</td>
<td>21,100</td>
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<td>1900</td>
<td>19,468</td>
<td>7,600</td>
<td></td>
<td></td>
<td>27,300</td>
<td>29,100</td>
</tr>
<tr>
<td>1901</td>
<td>43,280</td>
<td>21,100</td>
<td></td>
<td></td>
<td>64,380</td>
<td>50,800</td>
</tr>
<tr>
<td>1902</td>
<td>45,860</td>
<td>29,700</td>
<td>3,014</td>
<td></td>
<td>78,800</td>
<td>88,100</td>
</tr>
<tr>
<td>1903</td>
<td>10,710</td>
<td>24,800</td>
<td>3,580</td>
<td></td>
<td>39,300</td>
<td>42,200</td>
</tr>
<tr>
<td>1904</td>
<td>7,447</td>
<td>24,600</td>
<td>2,452</td>
<td></td>
<td>32,900</td>
<td>32,400</td>
</tr>
<tr>
<td>1905</td>
<td>6,297</td>
<td>15,244</td>
<td>2,514</td>
<td></td>
<td>24,055</td>
<td>34,800</td>
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<tr>
<td>1906</td>
<td>20,878</td>
<td>6,145</td>
<td>1,638</td>
<td></td>
<td>29,661</td>
<td>26,800</td>
</tr>
<tr>
<td>1907</td>
<td>31,023</td>
<td>11,100</td>
<td>6,400</td>
<td>5,800</td>
<td>54,400</td>
<td>57,700</td>
</tr>
<tr>
<td>1908</td>
<td>39,800</td>
<td>19,500</td>
<td>(6,000)</td>
<td>4,800</td>
<td>(70,000)</td>
<td>58,300</td>
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<td>1909</td>
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<tr>
<td>1910</td>
<td>18,191</td>
<td>25,176</td>
<td></td>
<td>10,000</td>
<td>53,400</td>
<td>47,700</td>
</tr>
<tr>
<td>1911</td>
<td>68,319</td>
<td></td>
<td></td>
<td></td>
<td>81,800</td>
<td>155,500</td>
</tr>
</tbody>
</table>

| Total | | | | | | |
|-------| | | | | | |
| 13,600 | | | | | | |
| 81,800 | | | | | | |

a. Includes output of the company’s temporary slaughterhouse at Niš.

b. Includes an additional 128 hogs slaughtered by La Serbo-Belge at Paraćin (see p. 305 above)

c. Among other reasons, divergence between customs and slaughterhouse totals may be due to exports from municipal and other minor un-mechanised enterprises.

**NOTE.** Bracketed figures are estimates. Italicised figures are conversions from meat output and meat export data, converted according to the Klania’s rule (following Budapest practice) of obtaining a slaughter weight by deducting 22.5 kg. per head and 4% from live weight. See M.N.P. 1907, p. 228.

**SOURCES.** Packing by individual slaughterhouses 1890-1908 unless otherwise indicated, see annual industrial statistics in S.G 1886-97, p. 320; S.G 1898-99, pp. 354-5; passim. For Belgrade Klania, 1890-1905, see S ADK P S, Izveštaj o radu u 1805 godini, p. 17, and for provincial slaughterhouses in 1907, see M.N.P. 1907, p. 38. For Velika Plana 1890-94, when it was the only mechanised concern working for the export market, data has been derived from statistic of meat export by slow freight train, see S.N. LVIII (1891), 177, p. 952; S.N LXIX (1892), 276, p. 1248; S.N LXII (1895) 191, p. 550; S.N LXII (1895), 233, p. 1182. For 1910 and 1911, see Handelsmuseum, 1910, pp. 25-4 and Handelsmuseum, 1911, p. 29. Total column (v) is a straight summation of cols. (i) - (iv) except in 1896, for which see C.N. 1897 R.C. XVII, p. 302. Customs totals are calculated (according to NOTE above) from data in standard sources for foreign trade statistics.
Whatever the harm done to producers, the tariff war should have come as the saving grace to the hard pressed meat packing industry by creating for it a monopsony on Serbian hogs. It is true that the new conditions closed the third option (that of selling carcasses on the Imperial market) and did little to alleviate the problems associated with the first (the low quality of Serbian meat by the standards of the world market), and that the third option (that of selling specialty goods) was rendered increasingly difficult because the transit facilities of the Austro-Hungarian railways were withdrawn, and because the Kianica had closed down what processing capacity it had. So too much turned on the fourth option (that of getting producers to raise Danish type produce), which was at best only a long term hope. But the trade entered the tariff war with the assurance that the government was aware of its problems, and had an interest in mitigating them. Yet the out-turn was very disappointing. As shown in Table V.2, Serbia 'lost' the export of over 100,000 hogs a year during the tariff war period.

**Table V.2**

**Export Trade Loss to Hog Producers during the Commercial War**

<table>
<thead>
<tr>
<th>Mean Annual Export of Live and Slaughtered Hogs</th>
<th>1901-5</th>
<th>1906-10</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (dinars)</td>
<td>176,300</td>
<td>70,100</td>
<td>106,200</td>
</tr>
<tr>
<td>Income (million dinars)</td>
<td>18,785</td>
<td>5,641</td>
<td>13,144</td>
</tr>
</tbody>
</table>

a. Mean price of fattened hogs on Serbian markets 1903-5 and 1906-8. See S.C. 1907-08, p. 376, col. 18. Comparable figures were not published for subsequent years.

For total live hog export to 1906 see Table III. 9. In 1907-10 live hog exports were 14,802, 11,216, 20,262 and 13,455 head. See standard sources for foreign trade statistics. For slaughtered hogs see Col. (vi) of Table V.1.
So, taking into account the lowered price of hogs (which was a direct result of tariff war conditions, for hog prices were continuing to rise in Hungary), the annual loss to producers was about 13.1 million dinars, a very large sum when set against the 60 - 80 million dinar range of total farm exports during the period 1901-10. This was, however, mitigated for producers by the amount of maize released for export by the non-export of an annual 106,200 fattened hogs. Now the mean weight of an unfattened hog at slaughter was 84.3 kg. and the mean weight of fattened hogs leaving the country by rail in 1901-5 was 148 kg. Thus, at least 64 kg. per hog was put on by maize fattening. The ratio for fattening achieved at Steinbruck in the 1870's was 1 kg. of live weight for 5 kg. of maize input. Taking this ratio, each hog required 320 kg. of maize to fatten it, so the non-export of 106,200 hogs should have released 34,000 tonnes of maize per annum. The average price of maize at export in 1906-10 was 117 din. per tonne, so this maize realised about 4.0 million dinars. The net loss to producers of export earnings was therefore about 9 million dinars.

That is to say, they lost (compared with the previous quinquennium) about half of their earnings from hog-raising. This loss is a good measure of the extent to which the slaughtering industry failed to offset the effects of Austro-Hungarian sanctions.

In 1907-1910, 81% of this reduced export passed through the meat packing establishments, slightly more than half of this being handled in the Belgrade Klinica. Why, then, did the meat packers, who between them

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2 S.D. 1901, Table 22; S.D. 1902 - 1905, each Table 32.
3 C Br (A II) 1877 (II), p.71.
had a virtual monopsony over Serbia's hog export production, fail to exploit this position successfully?

Djordjevic claims that the industry, at least initially, lacked the capacity to handle so large a potential input.¹

"The meat export question depended on the capacity of the Serbian slaughtering industry to process the contingent of hogs earmarked for export. In 1908, there were four slaughterhouses in Serbia ... The Klanica at Belgrade which could slaughter 200 hogs a day had the largest capacity. Its greatest turnover, achieved, according to Austro-Hungarian data, in 1902 amounted to 45,960 head processed in a year. The Schumacher and Scheuss slaughterhouses at Velika Planina produced at first only fresh meat but soon turned to meat products. The Kleefisch factory at Jagodina traded similarly. The Paja Jovanovic slaughterhouse at Mladenovac began working in 1908 and built up its business well. It was calculated that all these slaughterhouses could process half the contingent of live hogs formerly exported to Austria-Hungary ...

The processing industry could not fully resolve the problem of the hog export. Its capacity, at its utmost limits, did not exceed 50,000 pieces a year. Up to the Customs War, Serbia exported 120,000 hogs to Austria-Hungary. On this basis, 70,000 had to find another outlet ..."

The author proceeds from this to discuss attempts at exporting surplus hogs by rail through Salonika.

These two statements are clearly contradictory. If it was calculated correctly that the slaughterhouses could process half the hogs formerly exported to Hungary (130,000 p.a. in the previous quinquennium), then there should have been processing capacity for 65,000 hogs in addition to the mean previous meat export of 45,700 hogs per annum, or a total of 111,000 hogs per annum. On this basis, 65,000 would have to find another outlet.

And 111,000 is probably not a bad estimate of the packing capacity of the industry. 45,960 head were slaughtered at the Belgrade Klanica.

¹D Djordjevic; op.cit. pp. 374-5, 376.
in 1902 for export, but in the same year it also slaughtered 15,889 fattened hogs as part of its regular trade for domestic consumption.\(^1\)

Thus at a minimum (and this accepts Djordjevic's doubtful assumption that the Klanića was pressed to capacity in 1902), the Klanića could handle at least 61,600 hogs a year. If its capacity was only 200 hogs a day, as Djordjevic claims, the Klanića must have had to work 6 days a week, every week, at full steam to process its throughput in 1902, which is unlikely in what was still essentially a seasonal trade, thus the Belgian estimate that it could handle 500 hogs in 24 hours is more probably correct.\(^2\) An official publicity sheet claimed (no doubt optimistically) that it could kill and dress 3,000 in 24 hours.\(^3\)

Furthermore, the capacity of the provincial slaughterhouses was also substantial. Velika Plana had processed nearly 30,000 hogs in 1902, Jagodina 3,600 in the slack year of 1903. In 1907 it was to handle about 6,000, about the same throughput as Mladenovac which began work late in 1906.\(^4\) Thus it appears there was capacity in the provinces for the throughput of an additional 42,000 hogs, so that altogether, on the basis of best throughputs actually achieved, the industry as a whole could handle over 103,000 hogs a year.

As the total slaughtered for export came nowhere near this total in any year before or during the commercial war, it is highly unlikely that the export of meat was ever impeded for lack of slaughtering capacity.

It should be noted that in 1890, when the first slaughterhouse at Velika

\(^1\)J. Grgašević, *Industrija Srbije i Crne Gore* (Zagreb, 1924), p.93.


\(^3\)J. Grgašević, *Industrija Srbije i Crne Gore* (Zagreb, 1924), p.93.

\(^4\)See Table V, 1.
Plana was the only large scale exporting organisation, favourable market conditions brought about the export of the equivalent of 60-80,000 hogs in slaughtered condition, as a result of the mushroom emergence of a large amount of scratch capacity to cash in on the boom. So it is surprising, if there were really inputs going begging for lack of capacity in 1908-10, that only one new meat packing project, that at Nijadenovac, ever got off the ground. For there was no want of interest. Two more British projects came forward, petitioning for meat packing concessions. One, in the hands of C. King-Spark failed to obtain a concession, but another offered by Edward Liebmann, whose backers appear to have included Lunham Boyd, who had been a major shareholder in the earlier unsuccessful Serbian Bacon Curing Company project of 1890-91 was given a concession to process a minimum annual 12,000 hogs. Liebmann sold his concession for a share in the paper of a company formed to exploit it, Anglo Serbian Trading Company Ltd., in which he also appears to have invested a substantial sum in cash, and had himself appointed manager of the company's business. The firm was set up to take over the installations at Paraćin of La Belgo-Serbe, which it planned to equip with cold storage, and other plant, probably including a cannery. But enthusiasms then seem to have cooled, and to have degenerated into a protracted struggle between Liebmann and the London board; as late as 1911, the installations had still not been completed, though the firm

1 PRO FO 368 47 No. 50 comm. of 10.12.1906.
2 Ibid; Register of defunct companies PRO 1910. 13455., PRO box 112882 Summary of capital 31.12.1911.
3 PRO FO 368 580 No. 26 comm. of 11.10.1911.
4 Ibid; PRO Box 112882, loc. cit. Prospectus of A S T C; and summary of capital.
5 Prospectus, loc. cit; PRO FO 368 126 No. 47 comm. 22.7.1907 (Enc.)
6 PRO FO 368 580 No. 26 comm. of 11.10.1911.
was evidently trading, and losing money on an inadequate turnover.\(^1\)

It would appear that sufficient supplies of hogs, on whose processing the project was originally based, were not forthcoming, for by 1911, the business advertised itself as a poultry slaughterhouse.\(^2\) It was liquidated in 1913.\(^3\)

Djordjević also notes projected packing operations in 1908 at Šabac, Smederevo and Gradiste, which were dropped for lack of capital, and enquiries of prospective American and Italian concerns, which did not bear fruit,\(^4\) while Milić notes a German project, of Philip Frank of Berlin, which was also never put into execution.\(^5\) Lack of capital is a very easy way to attribute the non-realisation of projects, and might well have served as an adequate explanation of the difficulties of domestic enterprise. But, except during crisis conditions, the failure of western European firms to acquire the capital needed to launch and see projects through is more likely to have arisen from the collapse of inflated market expectations - as seems to have been the case with the Liebmann enterprise. And the market conditions faced by those firms which did operate through the commercial war period were not such as to attract new entrants into the industry.

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\(^1\) Lampić, thesis, p.248. 
\(^2\) Trgovinsko Zasavski šematizam za 1911, p.204. 
\(^3\) PRO Box 112882, loc. cit. 
\(^4\) Djordjević, op.cit. pp. 485,518. 
As previous experience had shown, the output of the slaughter-houses could be sold in Western Europe, though it would only be profitable if a very low price were paid to producers. However, as in the face of the commercial war there was no alternative short of closing down the industry, vigorous attempts were made to attract Western European interest in taking Serbian meat which were crowned with initially spectacular success. For late in 1906, the Belgrade Klinično Društvo landed a huge contract for the supply during 1907, on account of the firm of E. Bijon of Bordeaux, of 15,000 tonnes of salt pork. To deliver this, it was estimated that it must process about 150,000 hogs, or virtually the whole of the country's annual hog export production. That, in the opinion of Politika, disposed of that question. The price looked attractive too, so much so that the Government was able to persuade the Klinično Društvo, in exchange for a loan of 200,000 dinars to post a fixed price of 80 para per kg. of live weight which, taking into account the relatively low cost of delivery to the hog supplier, compared favourably with the return obtained from Steinbruck.

The Belgrade Klinica was immediately besieged with hogs brought up by producers who had been caught with stock on their hands at the end of the 1906 provizorium, and began slaughtering at full swing. But, given the nature of the material which it was obliged to work, prospective profitability diminished, and priority was given to the purchase and processing of sty-reared hogs in preference over the range reared animals which comprised the great bulk of the country's production. The meat packers all wanted enclosure raised, intensively fattened hogs

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2Ibid; D Djordjević, op.cit., p.375.
3D Djordjević, op.cit., p.375.
reared on potatoes, barley and milk waste - in short, they wanted bacon raised according to Western European practice, and expressed the opinion that "hogs reared by present methods ... do not satisfy their requirements and they only buy, slaughter, and process these out of necessity and at a risk". The fattened Serbian hog was worth no more on the western European market than the smaller, intensively raised animal, and would inevitably command a lower price on this than on the Austro-Hungarian market to whose demand structure it accorded better. In consequence, the Klinciago soon ran through its credit and had to cut its offer price to 45-50 para per kg. live weight, which constituted a strong discouragement to production, and supply for the Bizon contract was never completed. The importance of the Austro-Hungarian market had been confirmed, and the size of the prospective quota to be permitted in the provizorium which was being negotiated in 1907 occupied the main attention of the hog producing interest. As it was still anticipated that this quota would be permitted to enter Hungary in live condition, prospects for the meat packing trade looked bleak. It was logically foreseen that... If such a treaty is concluded with Austria Hungary ... this in itself would strongly check and curtail the development of our hog husbandry in its present form. A successful and enduring export of the excess hogs in slaughtered or processed condition could not be calculated on. [This is] because the slaughter and processing of hogs of the type raised in Serbia up to now, would in future be a questionable proposition because of the difference between the price realised by hogs exported in live condition for the Austro-Hungarian market, and the price at which domestic slaughterhouses would purchase hogs for processing and export to the further European markets ... It is undoubted that the

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1 MNP 1907, 1, p.226.
2 D Djordjević, op.cit. p.398.
3 MNP 1906,2,pp 295-7.
price fetched by that limited number of hogs which would be exported to Austria-Hungary would regularly exceed - possibly even more than in the past - the price at which the domestic slaughterhouses could profitably purchase them for export in processed condition. Consequently, there would be (as up to now) a cessation of work in the domestic slaughterhouses throughout the duration of the live export to Austria-Hungary until the agreed quota of hogs had been exported. The frontier would then be closed to further exports according to the treaty, the price of hogs will fall somewhat, and the slaughterhouses will begin to purchase them and process them for export to Western Europe till the end of the year in question. At the beginning of the new year, the frontier would reopen and once again it will be more profitable to export the hogs in live condition ... This could be stopped ... if the quota were to be divided by producers or exporters beforehand. But this would prevent any quantitative advance in hog raising as the domestic slaughterhouses would be even less able to work than if such limitations did not exist".

On the other hand, if the alleged conservatism of the peasantry could be overcome and they could be persuaded that the lower price of the hog for the Western European market could be offset by the lower cost of raising a true bacon animal, then the problem would be resolved. ¹

"Since with the end products of fattened hogs (particularly lard) Serbia could not possibly compete in price with the enormous quantities of the same products which come onto the European market from America, it will be most valuable to produce meat hogs for processing. So we need two types of hog ...".

Yet the authorities were unable to offer any satisfactory explanation as to why within the given structure of the agricultural economy, sty rearing should constitute a more efficient allocation of resources than range rearing; the Danish experience, so frequently alluded to, based on the massive input of barley and buttermilk was not self evidently applicable in Serbia, at least in the short run.

The difficulties of the Serbian meat packing industry were not wholly a consequence of the problem of disposing of an input which was not well suited to the western European market. Lack of refrigerated railcars and of cold storage capacity made it a matter of some urgency for the industry to undertake the reprocessing of the carcasses, and in particular the production of specialty goods. The Klancica must therefore have been compelled to reactivate its reprocessing capacity but appears only to have concentrated on that unsatisfactory old standby, salt pork.¹

After 1907, it frankly abrogated the basic function for which it had been set up, and on account of which government aid had been expended. What it wanted was favourable conditions for exporting to Austria. The interests of this concern (in which so much state capital was invested) must surely have influenced the terms of the provisional trade treaty with Austria-Hungary, in 1908, for they read as if the firm had drawn them up for its own convenience. Live export was prohibited, and the whole of the Serbian quota of 70,000 hog carcasses was given to the firm.²

The interior slaughterhouses were left in the cold, to fend for themselves on the world market, even though by itself the Belgrade Klancica probably did not have sufficient capacity to handle this amount of business. However, it had to sell over a fairly stiff tariff of 30 krone a quintal (compared with 14.40 in 1906)³ and, although its privileged position enabled it to process its largest year’s throughput since 1902, the

¹This appears to have been the type of product supplied for the Dijon contract. C Be 3.1.1908, R G CXXXIX, p.271.
²D Djordjević, op.cit. pp. 448, 485.
³Ibid, p.452.
business "under the stringent conditions of the new treaty has not proved remunerative". When the treaty conditions expired, the Klanca marked time. It managed to get a trickle of business - in salt meat again - which it worked up on account of another French firm, A. Gasseau & Cie, from which it managed to make sufficient profits to pay out dividends of 4.25% and 6.3% on its capital in 1909 and 1910, on what appears to have been a low turnover, but what it was really waiting for was a return under the impending 1910 treaty of the kind of conditions it had obtained in 1908, with the bonus of a tariff reduction to 9.40 krone a quintal.

The privileged position of the Klanca infuriated the hog raisers, who wanted an open market for the Hungarian livestock trade, and also the interior slaughterhouses which wanted a share of the quota. It would be interesting to know why this enterprise, whose operations had not, up to 1907, been organised in the interests of its shareholders, but rather in the interest of the trade as a whole, then acquired a privileged position which was in general detrimental to the wider interest. A clue may be found in a remark by Djordjevic, concerning parliamentary criticism that the firm was giving preference to customers belonging to the Radical (i.e. government) party.

1 PRO FO 368 326 No. 3 comm. of 6.1.1909.
2 Handelshemuseum, 1910, pp. 23-4.
3 See Table V.1, p. 317.
4 C Be 1911 R C CLVI, p. 262.
5 D Djordjević, op.cit., p. 627.
6 D Djordjević, op.cit., p. 376.
However, a more satisfactory response to the problems of the tariff war was offered by the interior packers, in particular in the example of a new enterprise, that of Pavle (Paja) Jovanović, a small Budapest meat packer who brought his equipment with him to establish a business in the slaughtering and processing of hogs, mainly for salami, in the outbuildings of a tavern at Mladenovac (Beograd okrug). This was a good Morava valley location in a township which had built up a flourishing livestock and cereal trade since the establishment of the railway, and which since 1904 had also been a junction point for a new branch line to the livestock centre of Arandjelovac. His prospects looked bright and, financed by the Belgrade private banker Nikola Bosković, he expanded energetically by acquiring his own site and erecting a factory on it. As his re-equipment plans outran Bosković’s resources, he used personal contacts to bring in Milan Pavlović, a wealthy and ambitious Belgrade importer who advanced the firm a sizeable sum in 1908 and put in Milivoje Kostić, who could offer considerable experience and first class contacts in the export business, as a manager. This firm aimed at and successfully acquired a reputation for producing processed meats of the highest quality. Concentration on re-processing is evident from the fact that in 1907 its output was 42% lard by weight whereas the industry as a whole produced only 25.3% lard (itself a big increase over 1906). In order to produce specialty goods Italian and German master butchers were hired to supervise the production of Hungarian.

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1 Trgovinske Novine, 9.1.1907; A G B, M M Kostić "Autobiografija", fo. 35.

2 M M Kostić, loc.cit.


4 Kostić’s affirmation of this (Podaci, fo. 169) is supported by two independent sources, S C K Srbija u Imenom Pogledu ..., p.31, and Spomenica B T O 1880-1930, p.196, Col. 2.

5 M N P 1907,1, p.38.
French and Neapolitan sausage. It was widely exported but the German, French and Italian markets took up most of the output.

Even so, the tariff war period was one of considerable difficulty for the firm as it was, also for the other meat packers in the interior. During periods when the Austro-Hungarian frontier was open, as it was for a time in 1908, and subsequently in 1911, the Belgrade Kruševac had the exclusive right to export meat across it, and could easily outbid the interior slaughterers, which still had to compete on the external market. And when the Imperial market was closed, the price of hogs fell so low that producers held off maize feeding them. By 1910, the prolonged uncertainties of the trade, coupled with the expectation of a reopening of the Imperial market once the treaties had been ratified, brought about a dearth of hogs to slaughter at a price which would make the operation remunerative. The Bladenovac and Jagodina factories both closed down temporarily during that year, the Bladenovac factory, reportedly "on account of competition". However, they still conceived their long term prospects in a favourable light for the Jagodina firm took the opportunity of using the closure for rebuilding and expansion work, while the Bladenovac slaughterhouse reopened again in 1911 under new ownership. (The problems of the Bladenovac firm were partly of its own making, and Pavlović put in his mortgage, forcing Jovanović

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2 G 1907-08, p.460.
3 D Djordjević, op.cit. p.486; I K S, Izveštaji ..., u 1911, p.25.
4 D Djordjević, op.cit., p.376.
5 I K S Izveštaji ..., u 1910, p.8; C Be 1911 R C CLVI, p.262.
6 Handelsmuseum 1910, p.24; Handelsmuseum 1911, p.29.
into bankruptcy, probably in order to buy up the business cheaply)\textsuperscript{1}.

Notwithstanding their relative disabilities, the output of the interior meat packers seems to have grown during the commercial war, while that of the Klanica declined. They had all at first taken shares in the unsatisfactory Dijon contract,\textsuperscript{2} and had been hit by the 1908 provizorium. But, with their relatively flexible and complex product structure they appear to have been much more adaptable than the Belgrade firm.\textsuperscript{3} Then, in 1911, when the Hungarian frontier was reopened, the Belgrade Klanica was reinstated in its monopoly of exports across it (with the very minor exception of a small slaughterhouse set up at Gradište,\textsuperscript{4} and was able again to post very high prices for hogs\textsuperscript{5} which reflected the great buoyancy of the Imperial market. Once more, the interior packers were squeezed out of the market, and did a meagre year's business.\textsuperscript{6} A regulation which appears to have been introduced to help them, to the effect that only hogs of 150 kg. or more might be slaughtered for the Austro-Hungarian market, seems to have had little effect,\textsuperscript{7} and we may conclude that, in so far as it had any at all, it could only have discouraged the breeding of the lighter bacon animals, in other words, to have run counter to all the efforts which had been put in to stimulate their production.

\textsuperscript{1}A G D, M M Kostić, "Autobiografija" fo. 36; Idem, "Podaci", (Anastas Pavlović) fo 109.

\textsuperscript{2}C Be 3.1 !908 R C CXXXIX, p.271; "Srpsko meso za Franzusku" Trgovinske Novine, 9.1.1907.

\textsuperscript{3}The reaction of the German firms was to apply for concessions to expand their output of canned beef and pork "and the working up of secondary abattoir products" and for a sausage works. C Be 1910 R C CLI, p.461.

\textsuperscript{4}T K S, Izveštaj ..., za 1911, p.11.

\textsuperscript{5}T K S, Izveštaj ..., u 1911, p.24.

\textsuperscript{6}Ibid, p.25; Handelsmuseum 1911, p.29.

\textsuperscript{7}T K S, op.cit., p.26.
d. Poultry.

In the interwar period, poultry raising was to become one of the principal growth elements in the development of central European agriculture, and the successful beginnings of the poultry trade in Serbia were evident in the last decade or two before the Balkan wars. In 1891 the export of poultry products (mainly live fowls) amounted to only 0.1% of total (official) exports, by 1897, 1.6%, by 1901 4.9% and by 1912, 9.9%, by which time eggs had become the principal product.\(^1\) The growth in the export trade in poultry, live and slaughtered, and eggs is set out in Table V. 3.

Unfortunately, impressions on the development of poultry raising are necessarily for the most part qualitative, except in respect of exports, for although there was known to be a large and active internal trade in poultry products, this is not recorded in the optimal scales statistics. Production is also difficult to estimate with confidence, and intertemporal comparisons are impossible. As was the practice in connection with the other forms of animal production, only stock figures were recorded by the state and even these only begin in 1900. We have had cause to cast considerable doubt on the reliability of the livestock censi with respect to holdings of animals, and we may seriously doubt the capacity of Serbia's statistical organs to put together a meaningful statistic of the number of fowls in the country, particularly as most of them were not conveniently kept in organised barnyards but roamed free in pursuit of such forage as they could garner.

\(^{1}\)Compare totals in Tables V. 3 and I.8.
<table>
<thead>
<tr>
<th>Year</th>
<th>Live</th>
<th>Slaughtered</th>
<th>Eggs</th>
<th>Total</th>
<th>Prices</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>55</td>
<td>5</td>
<td>1</td>
<td>62</td>
<td>96</td>
<td>46.2</td>
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<td>1897</td>
<td>414</td>
<td>418</td>
<td>61</td>
<td>891</td>
<td>94</td>
<td>25.6</td>
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<tr>
<td>1898</td>
<td>659</td>
<td>676</td>
<td>106</td>
<td>1,441</td>
<td>92</td>
<td>78.1</td>
</tr>
<tr>
<td>1899</td>
<td>976</td>
<td>993</td>
<td>354</td>
<td>2,002</td>
<td>100</td>
<td>100.0</td>
</tr>
<tr>
<td>1900</td>
<td>1,381</td>
<td>992</td>
<td>847</td>
<td>3,220</td>
<td>107</td>
<td>150.0</td>
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<tr>
<td>1901</td>
<td>1,510</td>
<td>1,056</td>
<td>746</td>
<td>3,311</td>
<td>94</td>
<td>176.2</td>
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<tr>
<td>1902</td>
<td>1,707</td>
<td>1,044</td>
<td>513</td>
<td>3,264</td>
<td>90</td>
<td>180.8</td>
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<tr>
<td>1903</td>
<td>1,735</td>
<td>315</td>
<td>611</td>
<td>2,661</td>
<td>82</td>
<td>161.5</td>
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<tr>
<td>1904</td>
<td>1,444</td>
<td>165</td>
<td>285</td>
<td>1,894</td>
<td>85</td>
<td>110.8</td>
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<td>1905</td>
<td>1,219</td>
<td>59</td>
<td>943</td>
<td>2,221</td>
<td>93</td>
<td>118.8</td>
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<td>1906</td>
<td>142</td>
<td>72</td>
<td>2,730</td>
<td>2,044</td>
<td>206</td>
<td>71.5</td>
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<td>1907</td>
<td>583</td>
<td>404</td>
<td>802</td>
<td>1,789</td>
<td>100</td>
<td>89.3</td>
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<tr>
<td>1908</td>
<td>428</td>
<td>91</td>
<td>1,005</td>
<td>1,522</td>
<td>133</td>
<td>57.0</td>
</tr>
<tr>
<td>1909</td>
<td>82</td>
<td>-</td>
<td>2,217</td>
<td>2,299</td>
<td>140a</td>
<td>81.8a</td>
</tr>
<tr>
<td>1910</td>
<td>3,500</td>
<td>719</td>
<td>2,922</td>
<td>7,141</td>
<td>106a</td>
<td>337.4a</td>
</tr>
<tr>
<td>1911</td>
<td>3,682</td>
<td>680</td>
<td>3,940</td>
<td>8,502</td>
<td>129a</td>
<td>320.6a</td>
</tr>
</tbody>
</table>

Standard sources for foreign trade statistics.

a. To 1909, live poultry exports are expressed in terms of the number of pieces, and from 1910-12 in kilograms. Comparison of relative price movements with slaughtered poultry would tend, however, to suggest that the change is purely nominal, and therefore the indices for 1910-12 are calculated as if the two units were interchangeable. The indices have been weighted and calculated by the standard method from price and quantity statistics.
Thus, for example, let us look at poultry statistics in the okrug of Kruševac, an important producing area. 1909 was a very bad year for poultry exports; the commercial war with Austria-Hungary was at its height, and at the same time low exports of poultry products combine with high valuation prices to suggest simultaneous supply difficulties. Yet the Kruševac agronomes were reporting the successful development of poultry raising in their area, the adoption of improved strains, and the thriving trade it was supporting, though they admitted that "the merchants were unable to tell exactly how much was being exported". However, whereas in 1900 the okrug reported a poultry stock of 308,000, figures of 46,000 and 142,000 were given for 1908 and 1909. Similarly, doubtful and erratic trends reported from other areas do not tend to improve our confidence in the official statistics, while the compilers of the exile estimates of national income and wealth seem to have ignored the official statistics altogether and come up with their own.

Whatever the absolute production figure, there can be no doubt that poultry raising was an important source of income in kind as well as an increasing cash earner. In 1900 an official of the agriculture Ministry wrote

"... Poultry, after bread is the principal food of the population of Serbia ... there is not a house in Serbia where a chicken, turkey, goose or duck is not eaten at least on Sundays and feast days".

1 See Table V.3.
2 M.N.P. 1908-09, 8, p.927.
3 S.G 1907-08, p.346.
4 M.N.P 1908-09, 8, p.823.
5 M.N.P 1908-09, 8, pp. 803-8104 (Beograd and Timok, the only other okruhi reporting, in conjunction with statistics in S.G 1907-08, p.346.
6 S.C.K, Srbija u Imovnom Poglедu ..., p.46.
7 L.R. Iovanovitch, L'Agriculture en Serbie, (Paris 1900), p.75.
and even if production did not respond to the rise of the export trade, poultry had a far greater non-money importance to the peasant economy than its growing and already substantial money earning side, for, according to the estimates of the Geneva committee, poultry production was worth some 35 million dinars while the best level achieved by exports was only 8.3 million.

Even though it formed an important component of the peasant diet, poultry raising, until it provided a major export product, was not an activity to which the peasant household devoted much care, and the birds were only foddered in winter when it was impossible for them to forage. This may have been because the rearing and sale of poultry and eggs were regarded as the perquisite of the womenfolk and earnings derived from them entered into their personal budgets, and not into the budget of the household. With the possible exception of the north west of the country, this relationship did not break down, so although the government engaged considerable expense and effort in propagandising the development of poultry raising, in the (justifiable) belief in its promising prospects for trade, it was unable to interest the peasants in its promotional activities, though they were (for once) well founded in relation to the economic conditions pertaining. The intrusion of the claims of the household head into an increasingly large commercial activity was resisted strongly. Vulović writing in 1906 of the

1 S C K, op. cit., p. 63.
2 L R Ioanovitch, op. cit. p. 73.
3 M. Avramović, Naše Seljačko G Audio 1912, p. 16.

Particularly in respect of its promotion of poultry exhibitions. Handelsmuseum 1912, p. 16; M N P 1908-09, 8, p. 894; A N F 12 7179 despatch of 27.1.1908 (report of Teržer for 1904).
4 M Avramovic, op. cit., p. 38.
Podrinje region remarked

"Till recently I remember that it was a disgrace among our folk for men even to sell poultry and to bring money from it into the house, rather the women alone raised poultry on their own account. However, today every house earns good money from poultry".

Such an attitude, founded on the internal economic logic of the Serbian household economy, would surely be a serious barrier to progress towards the rationalisation of poultry raising, which entailed investment in the establishment of barnyards and the systematic input of agricultural feedstuffs. Yet there can be little doubt that economic conditions were highly favourable to the expansion and rationalisation of this activity. According to the 1908 figures, ownership of poultry was strongly associated with those regions with relatively intensive agricultural systems and substantial crop surpluses; it did not thrive in the environment of extensive economy. Moreover, although its expansion would necessitate the improvement of farm infrastructure - as would the intensification of any other branch of animal husbandry - poultry raising was capital saving as well: the exile committee estimated the output of poultry raising at 35 million dinars on a stock worth only 8.2 million, whereas for the sum of all other stockraising activities, it estimated output at 238 million dinars on a stock of 710 million, suggesting that capital in poultry stock could turn over 13 times as fast as capital in animal stock. Capital costs even in usury would be low relative to output, and the greater part of the flow of earnings from poultry raising would represent a return to labour. If market outlets were satisfactory such a low intensity user of

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2S C 1907-08, p.340.
3S C K, op.cit., pp. 45-6, 63.
capital and land would meet the development needs of the agricultural economy to perfection.

Thus the crux of the matter turned on the development of a marketing system which could conveniently dispose of produce drawn from a wide area, and in this respect the activity of internally generated commercial enterprise offered at best only a partial solution, even though it developed suddenly and with great rapidity. It was concerned only with the export of live poultry (and to a more limited extent with eggs) for sale to the adjacent Hungarian markets across the big rivers. It became the practice of more affluent families in the Mačva to send out young men in the winter with a cart and several hundred dinars to travel the villages of the northern and western provinces, and buy up fowls with a view to reselling them on the market at Hungarian Mitrovica.¹ 129,000 fowls (nearly double the entire export of the country as late as 1894) crossed the Mitrovica ferry in 1897, 224,000 in 1900, 400,000 in 1902 and 506,000 in 1904; similarly, Gradiste, another point concerned primarily with local trades expanded its export of poultry from 154,000 to 490,000, 565,000 and 825,000 during the same period, and similar trades on a much smaller scale were engaged in poultry and in eggs (which only began to be exported in 1894) in other of the small Sava and Danube ports.²

But the systematic development of trade required the establishment of less haphazard regular trading links with a much wider catchment area, and politically one which was not totally dependent on the Hungarian market remaining open, for with the closing of the frontier in 1906 this piličar³ trade was destroyed (unless it developed a successful smuggling

¹ S Panić, Mačvanski Pečalbari (Belgrade, 1912) pp. 10, 11-12.
² See standard sources for foreign trade statistics, for example S S T 1897, pp. 204-5.
³ Piličar: petty poultry merchant.
network) and this caused a good deal of disruption among those peasant families which had grown to depend on it. Particularly with respect to the export of eggs, a commercial infrastructure with warehousing and rapid disposal facilities was needed, and this the pillakar trade could not supply.

Such organisation and infrastructural needs presented an opportunity which was taken up by immigrant enterprise and capital in the form of the Kleefisch-Scheuss-Schumacher group of meat packing operations, which initiated the long distance export (mainly to Germany) of poultry products, and who for a long time were the only participants in this market. Even in 1895, when Milivoj Kostic visited the Velika Plama establishment, the firm was heavily engaged not only in the preparation of pork based produce but also in the slaughter and curing of chickens for export, and in the preservation, packing and freighting of eggs, besides exporting poultry caged in live condition. The subsequently founded Jagodina enterprise which was part of the same business network also engaged in the same trades; even before the tariff war, the whole of the export of slaughtered poultry, and most of that of eggs went out for export through Belgrade by rail; in 1900 95% of exported slaughtered poultry and 41% of exported eggs were consigned to Germany, very largely through these enterprises.

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1 S Panić, op. cit., p. 12.
2 MNP 1006. 2, p.328.
3 M M Kostić, Pisma s Puta..., pp. 20-1, 22.
4 La Serbie... à Liège 1805, p. 120.
5 S S T, 1900, pp. 188-9.
6 L R Iovanovitch, op. cit. p. 74. The Belgrade Klānica appears also to have experimented briefly with the export of poultry and eggs. SADKP S, Izveštja o radu u 1902, p. 21; "Pork and bacon curing industry..." loc. cit. pp. 105-6.
It was the prospect of slaughtering and exporting poultry rather than hogs that attracted or diverted the attention of the Belgian speculators who attempted to establish themselves at Paracin for their enterprise advertised itself as specialising in the "chemical preparation of poultry and meat for export", and the subsequent establishment of Anglo Servian Trading Company Ltd. to pack meat at the same premises, under the very unfavourable circumstances resulting from the tariff war, also advertised itself as the "Poultry slaughterhouse, Paracin". ¹

It is an obvious possibility that either or both of these attempts were frozen out by the German group, rather than by their own inadequacies, but, while the export of eggs established itself as a solid business prospect, the experience of the poultry slaughtering business was not altogether favourable. The main difficulties encountered, both in respect of poultry and eggs, and particularly the former were in securing a sufficient quantity of throughput and, in common with other attempts at manufacturing from Serbian raw material, in securing supplies of suitable quality, in this case, fowls which had been fattened sufficiently by the peasants to make them marketable in the Northern Europe. Though when Kostić visited the Velika Plana establishment, the firm was regretting its inability to obtain a sufficient volume of supply, it was nevertheless having to refuse a considerable proportion of the supply offered it, as being insufficiently fat,² and a subsequent attempt by Schumacher to process poultry for the domestic market entailed the firm in heavy losses.³ Eventually, just as the Belgrade Klanica was forced effectively also to

¹See above, pp. 305,322-3
²M M Kostić, op.cit., p.21.
move into the hog fattening business itself because of its inability to secure supplies in finished condition, so also the Velika Plana and Jagodina slaughterhouses were reported in 1911 to be engaged in fattening poultry, which they exported live as well as slaughtered.¹

The real success of this group came, however, in their dealing with the quantity and supply collection problem, particularly with respect to eggs. Soon after establishment of the firm, a branch for the collection of supplies had been set up at Aleksimac as well as a network in the interior to maintain contact with the country merchants.²

By 1911 it was conducting most of its dealings through a purchasing establishment at Niš, (through which the other major exporters in the business also dealt) and a chain of 30 or 40 egg purchasing warehouses scattered throughout the country, staffed by their own salaried officials.³ This implies that the growth of the egg export may have come about at least in part not through the increase in supplies from any one region but by a steady widening of the market. Nevertheless the activities of the firm triggered off a certain amount of native initiative on the production side, for also at Aleksimac was established a large commercial barnyard and breeding establishment owned by one Petar Trifunac which actively propagandised the development of improved poultry raising,⁴ while another, organised on co-operative lines to reduce selling costs was set up in 1909 at Topčider.⁵ The larger Serbian banks also entered the commission business in exporting poultry and eggs.⁶

¹In Serbie ... à Turin, 1911, p.129.
²M M Kostić, op.cit., p.21.
⁴In Serbie ... à Liège, 1905, p.121.
⁵In Serbie ... à Turin, 1911, pp. 128-9.
⁶Ibid.
It was fortunate that the poultry trade had geared itself from the start to the demands of the German market, and that the exporters showed themselves to be sufficiently flexible to concentrate on the egg business which tided the trade through the commercial war period. Whereas 59% of Egg Exports went to Austria-Hungary in 1900 and 23% in 1906, by 1910, 99% went to Germany, and the Pesth market was merely used for the offloading of damaged and addled produce, when commercial relations were restored in 1911. While Austria-Hungary continued to permit the transit of eggs through her territory, the door was closed to import or transit of poultry in any form, and although a certain amount was got out through the Mediterranean route, this was no more a profitable proposition than it was for other animal products, particularly in respect of slaughtered poultry whose export ceased altogether in 1910. It was generally held that the rise in the egg export during the tariff war was the result of the collapse of the poultry trade, but it is evident that it derived from more solid and positive causes than this, because the return of a large scale poultry export in 1911 and 1912 did not correspondingly diminish the export of eggs - which, on the contrary rose strongly to new record levels.

It is impossible to say whether the production of poultry expanded before the Balkan wars, or whether the expansion in the trade in poultry products was brought about solely through the increasing commercial

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1 Standard sources for foreign trade statistics 1906, 1910.
2 "Privreda i Financija ..., loc.cit.
3 M.N.P 1907, 1, p.59.
penetration of an unchanged supply, though in any case the expansion need not have been large as it is unlikely that more than a quarter of total production ever reached the export market (with an unknown quantity reaching domestic markets). But as economic conditions strongly favoured the expansion of poultry raising as an activity intensive of labour but not of capital or land, then the exploitation of Serbia's poultry supplies by the export market offered the peasantry an opportunity not only to enhance their cash incomes at the expense of self consumption but also to enlarge their incomes in absolute terms.

This could not have been achieved satisfactorily through the offices of native merchant enterprise, which lacked the organisational capacity to build a solidly based supply and disposal network, but rather awaited the intervention of the German businessman who could supply both, though not without considerable difficulty. Once the way had been demonstrated by this form of pioneering commerce, the activity of the foreigner became less relevant in a developmental sense, and possibly obstructive to further development because of the cartel like structure within which he appears to have worked, but the barriers to the more or less rapid expansion of the trade to approach its real potential had been broken down, and offered an opening which native enterprise could exploit.
e. The wheat trade and the milling industry.

The growth in the production of and commerce in cereals provided an expanding raw material base for enterprises in milling and brewing. On the assumption that all wheat produced in the country which was not exported was milled in some or other fashion, milling accounted for the bulk of Serbia's industrial production throughout the period under consideration. Thus the most notable feature of the milling industry was not so much its expansion but its gradual evolution from its original primitive structure to a partially modernised trade. The steam mill did not make its appearance till the 1860's, and as late as 1908, rather more than half of the wheat milled in the country was handled within the framework of village stream-mills (potočar). 1 The potočar (which survives in parts of Bosnia to this day), of entirely wooden construction, was set up with a crude horizontally mounted paddle wheel immediately below the millstone, which was powered by water sluiced along a wooden trough from a fast flowing stream. In 1867 there were 7,510 of these, and the first census of the annexed territories recorded an additional 1,638 of them, suggesting that there were about 9,000 in post annexation Serbia. 2 Even the potočar may have been for Serbia a very late innovation, for in the 1850's watermills were reported to be a rarity, "consequently the hand mill is in universal use". 3 And the 1867 census showed that there were still also 306 svača, which the Vuk dictionary gives as horse-mills. 4

1 See Table V.6. below p. 352
2 Cf. Br (S) 1887-88, p. 12; Državopis V, p. 115
3 E. Spencer, Travels in European Turkey in 1852, (London, 1851), p. 86; AAE CC t. 2 despatch of 22.6.1855, fo. 322.
Unit output of such mills was, naturally, very small, but the value added by the industry was substantial. According to an official estimate the net wheat production of Serbia in 1867 was 67.1 million oka\(^1\) (86,000 tonnes) and the net wheat export of 17.7 million oka left about 67,000 tonnes to be milled in the country, or 8 - 9 tonnes per mill. Taking the millers' mark-up at 30\%\(^2\) which was usually paid in kind,\(^3\) on the pre-1876 value of wheat - 100 - 150 dinars a tonne, the income of a mill would have worked out at some 240-400 dinars per annum and of the industry as a whole, at 2-3 million dinars, from wheat alone. A substantial amount of business would also arise from the milling of other cereals. The potočari produced only the coarsest flour of 100% extraction, and left the urban market for finer counts to the Hungarian mills, which exported back to Serbia, her own wheat as flour.\(^4\)

The business of milling appears to have been highly profitable, a high yielding investment such as might be owned by a wealthy townsman or peasant; for example in 1864, ten townsmen of Negotin declared ownership of eleven watermills. All were merchants, whose real estate was valued at 985 - 3453 Imperial ducats. (The average for all taxables was 159 ducats).\(^5\) But the primitive local techniques did not extend to the construction of the larger type of river mill with a vertical wheel and it appears that up to the 1870's the larger rivers were mainly free from this type of navigational obstruction. But the lure of supernormal profits caused them to spread, particularly in the interior, where they

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\(^1\)V Jakšić, "Stanje zemljinoradnje u Srbiji" Glasnik S U D, XCI, p.9.
\(^2\)AAE CCB t.7 despatch of 7.7.1888, fo. 301.
\(^3\)C Br (S) 1887-88, p.12.
\(^4\)C Br (S) 1871 (2) p.552.
were insulated from Hungarian competition. Boue noted their rarity and it seems that what few there were were owned by Prince Miloš and his associates. ¹ They had mainly to be built and operated by craftsmen from the Habsburg lands. ² Till 1850, it is claimed that none of these existed on the Morava at all, that the peasants had to take their grain to the potocari, and that till about 1875 not a single watermill existed on the Morava between Ćuprija and the mouth of the Resava. But by 1879 there were four, and although they might be "worth" only 50-80 ducats each (600-960 dinars), they produced an annual income greater than their "worth". ³ And at Niš, a "very fine mill with two waterwheels" on the Nižava was auctioned in the 1880's for "£2,000 - £2,400" (50-80,000 dinars). ⁴

At about this time, steam powered mills began to appear and watermills converted for the milling of white flour. Such installations were reported to be highly profitable. ⁵ The first steam mill was erected in 1863, in Belgrade, ⁶ and by 1870, there were "three or four". ⁷ The building of steam mills appears to have boomed in the 1880's. In 1884, fifteen were listed as major enterprises (with perhaps as many minor ones) ⁸ Karic (in about 1886) indicates there were about 39, ⁹ in 1888 there were 84, ¹⁰ and in 1891, 97. ¹¹ As indicated in Table V. ⁴, the

¹ A. Boué, op.cit. III, p.83.
³ A Aleksić, "Morava ..." Glasnik S U D ² Odelj. XI, pp. 55–6 Denton compared the rental income on a watermill, which he put at £80 p.a. with the wage of a 'prefect' or mayor of £85. W. Denton, op.cit., p.188.
⁴ C Br (S) 1887-88, p.12.
⁵ F Bianconi, Carte Commerciale, Royaume de Serbie (Paris, 1885) p.32, col. 2.
⁶ J Grgašević, op.cit., p.69.
⁷ C Br (S) 1871 (2) p.552.
⁸ A N. F 12 7179 despatch of 28.8.1884.
⁹ V Karić, Srbija ... (Beograd, 1887), p.418.
expansionary trend then slowed down, and recommenced after 1900. In the 1890's there was a swing towards watermilling, not of the old potocar type, but through the multiplication of relatively highly capitalized turbine mills, whose number rose from 10 in 1890 to 82 in 1900. Thereafter, their number declined again, but the total number of units rose from 181 in 1900 to 275 in 1912. Fixed capital engaged appears to have trebled between 1891 and 1908.

Expansion of the industry was largely based on urban demand. Despite the large and rising wheat export, the milling industry never secured more than a toehold in this trade. Till 1901, Serbia was a net flour importer, and even in that year her gross flour export was only 787 tonnes. Only in 1910, did her gross flour export exceed 10,000 tonnes, or about one eighth of her total wheat and wheat flour export, and probably not more than a twelfth of her total large-scale mill throughput. It is true that up to 1900, the export of milled grain to Austria-Hungary was rendered difficult by the Mahlverkehr system under which Hungarian millers of imported grain could obtain a drawback on the import duty on that grain, but even so, the principal outlet for Serbian grain was the great Danube port of Braila, where it was cleaned and sent to Western Europe in unmilled condition. Even during the commercial war, when large quantities of wheat were rail-freighted to Salonika, much of it was milled by the great Alatini mill of that town, despite increasing evidence of overcapacity at home.

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2 See standard sources for Serbian foreign trade statistics.
3 C Be 1901 CXIV, p.393.
4 Izveštaj o Trgovini s Hranom u Braili, (Beograd, 1906), p.3; La Serbie... à Turin, 1911, pp. 273-4.
5 In 1901 Romanian flour exports amounted to only 4% by weight of those of wheat, in 1910 only 3%. Statistical Abstract for the Principal and Other Foreign Countries ..., 1900-1910/II, (London, 1913), pp. 182-3.
6 T K S, Izveštaj... za 1911, p.19.
7 Handelisæwnn 1910, p.22; C be 1911 R C CLVI, pp. 267-8.
# Table V. 4

## Growth of the Large Scale Milling Industry 1891-1912

<table>
<thead>
<tr>
<th>Year</th>
<th>Steam powered mills</th>
<th>Water powered mills</th>
<th>Fixed capital engaged total per mill</th>
<th>Throughput (000 tonnes)</th>
<th>Value Added (M. din.)</th>
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<tr>
<td>1891</td>
<td>97</td>
<td>7</td>
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<td>32</td>
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<td>36</td>
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**Sources:**
- S G 1896-97, pp. 314-5; S G 1900, p.281; S G 1903, p.344;
- S G 1907-08, p.449; La Serbie ... à Turin, p.252; I K S,
- Izvestia ... u 1910 god. Tablice 1 & 4; M M Victorovitch,
- Le Mouvement Economique en Serbie avant et après la Guerre
  1878-1923, (Poitiers, 1924), p.29, for "eve of war" figure.
The dependence of the large scale milling industry on its domestic urban markets (and to a much lesser, but growing extent on peasant demand) largely accounts for its structure and growth pattern. Though there was a considerable amount of internal trade in flour, the mills tended to be located close to the towns they served. It is not surprising that the industry concentrated from the first on Belgrade, where there was at least a substantial and relatively sophisticated urban market, whose demand for white flour had been made effective by imports from across the Danube. Three of the four large mills working in 1882 were located in or near the capital, and five out of the 15 larger mills identified in 1884.

In 1900, 24.3% of the capital engaged in power milling was still located in the same area, and in 1908, the power mills in this area handled 36% of total throughput.

Nevertheless, the industry tended to expand by the multiplication of units, first in the larger and then in the smaller towns, with the resultant tendency that the mean size of mill showed no tendency to rise over time. We note that nearly all the mills built before 1893 were steam powered, and therefore mostly users of coal. As such they would have been almost wholly dependent on imports (for the only large mine in Serbia was run as a supply source for the state railway and arsenal). It is therefore not surprising that of the 45 large steam mills noted in about 1887, only 2 or 3 were located other than on the railway or on a navigable waterway.

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1 E de Borchgrave, op.cit. pp. 180-1.
2 A N. F12 7179 despatch of 26.8.1884.
3 S G 1900, p.281.
4 S G 1907-08, p.449.
5 In terms of fixed capital per mill. See Col. 4 of Table V. 4.
6 C Br (S) 1887-88, p.12.
The expansion of the number of water powered units between 1893 and 1898 from 8 to 77, while the growth in steam powered mills was very slow, seems to be a symptom of the geographic expansion process, only this time the direction of the push being towards the smaller towns, mostly off the rail and water ways, with requirements for smaller and more intermittent supplies. Investment per mill fell from an average of 52,000 dinars to only 38,000, throughput per mill from 470 tonnes to 245 tonnes.¹ The post 1900 re-expansion of steam milling and contraction of watermilling reversed this process.

The charges and costs of the milling industry per unit of cereal milled are set out in Table V. 5. These show a heavy fall in costs per unit of output, between 1891/4 and 1905/8, of 54%. Comparison of these costs with charges shows that the industry was becoming less competitive up to 1901-4 and more competitive subsequently. But up to 1897/1900 there was no improvement, and in fact a sharp deterioration in labour productivity, part of the lowering of costs arising from a more than proportionate lowering of wage rates. Though coal costs do not seem to have risen much during this period, the cost of wood fuel, on which the more isolated mills would have been dependent, probably did.² A combination of falling wage rates and rising fuel costs would have favoured a shift to the low labour productivity, power – cheap water milling system, even though geographic trends offer a more satisfactory explanation of causation. But they can hardly serve as an explanation.

¹ Calculated from Table V. 4 data.

² Lampe's coal price series rises from 105 in 1896 to 110 in 1900 and 110 in 1905, but his firewood price rises from 73 in 1896 to 100 in 1905 (Intermediate data for firewood were not available). Lampe thesis, pp. 405,407.
<table>
<thead>
<tr>
<th>Period</th>
<th>Milling Charges</th>
<th>Milling Costs a</th>
<th>Labour Input b</th>
<th>Wage Rates c</th>
<th>Wage Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891 - 1894</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1893 - 1896</td>
<td>84.0</td>
<td>81.3</td>
<td>94.2</td>
<td>95.1</td>
<td>89.6</td>
</tr>
<tr>
<td>1895 - 1898</td>
<td>88.1</td>
<td>83.3</td>
<td>101.2</td>
<td>83.9</td>
<td>85.0</td>
</tr>
<tr>
<td>1897 - 1900</td>
<td>85.5</td>
<td>81.5</td>
<td>110.4</td>
<td>82.5</td>
<td>91.1</td>
</tr>
<tr>
<td>1899 - 1902</td>
<td>88.5</td>
<td>76.2</td>
<td>100.9</td>
<td>83.2</td>
<td>84.0</td>
</tr>
<tr>
<td>1901 - 1904</td>
<td>87.1</td>
<td>73.8</td>
<td>90.4</td>
<td>85.3</td>
<td>77.1</td>
</tr>
<tr>
<td>1903 - 1906</td>
<td>64.3</td>
<td>55.5</td>
<td>87.3</td>
<td>87.5</td>
<td>76.4</td>
</tr>
<tr>
<td>1905 - 1908</td>
<td>54.1</td>
<td>46.0</td>
<td>76.2</td>
<td>89.5</td>
<td>68.3</td>
</tr>
</tbody>
</table>

Milling costs appear to have been calculated exclusive of the cost of the cereal throughputs.

a. Although these appear to have been struck without allowing for profit, they almost certainly include some capital items. They do not include state and local taxes, which being itemised separately, I have deducted from the handbook figures for milling expenses.

b. Based on aggregate hired employment. In a small scale industry like milling, however, it is likely that entrepreneur-labour was a significant, though unquantifiable item.

c. Estimated. No series for wage rates in milling exists and the index was constructed from the price series of unskilled labour. Wage cost series was reached by multiplication of data in the two preceding columns.

Source: As for Table V. 4 with wage rates from standard sources for price statistics.
in themselves, for after falling heavily to 1895/8 wage rates only recovered very slowly, and fuel costs continued to rise.\(^1\) The most likely explanation of the fall in costs from the turn of the century, is to be found in the rapid increase in mill throughput after stagnation in the 1890's, assisted by a probable improvement in the technology of milling, and an increase in the penetration of the larger units into the erstwhile monopoly of the small town mills.\(^2\) There is some evidence for the latter trend, but for want of data, the suggestion is speculative. Nevertheless, it is undeniable that the productivity of labour in the milling industry increased markedly, by 23.8% over the entire period, resulting (because of a fall in wage levels) in a fall in wage costs of 31.7%. The balance of the fall in costs (of 54%) must almost certainly be attributed to an improvement in the efficiency of fuel utilization, itself a suggestion of improved technology.

Despite the expansion of steam milling, and in the number of water powered mills which were regarded by the state statistical office as of sufficient scale to be "industrial", the remaining unmechanised mills handled substantially more grain in 1900-08 than they had in the 1860's and were therefore probably at least as numerous. In the face of the steady growth of the larger scale milling industry they continued to mill 33 to 77% of the harvest, or between 60,000 and 200,000 tonnes a year, their trade fluctuating much more than that of their larger competitors.

\(^1\)The coal price index jumped from 110 in 1905 to 200 in 1908. The next entry in the firewood series is 118 in 1911. Ibid.

\(^2\)See below, pp.356-7
Table V. 6
LARGE AND SMALL SCALE MILLING 1900-1903

<table>
<thead>
<tr>
<th>Year</th>
<th>Wheat harvest less net export</th>
<th>Throughput of large scale mills</th>
<th>Residual available for milling by village mills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- in thousand tonnes -</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>1900</td>
<td>122.5</td>
<td>52.3</td>
<td>70.2</td>
</tr>
<tr>
<td>1901</td>
<td>161.2</td>
<td>62.0</td>
<td>99.2</td>
</tr>
<tr>
<td>1902</td>
<td>260.2</td>
<td>61.1</td>
<td>198.9</td>
</tr>
<tr>
<td>1903</td>
<td>248.2</td>
<td>78.3</td>
<td>167.9</td>
</tr>
<tr>
<td>1904</td>
<td>233.8</td>
<td>82.2</td>
<td>151.6</td>
</tr>
<tr>
<td>1905</td>
<td>213.4</td>
<td>79.1</td>
<td>134.3</td>
</tr>
<tr>
<td>1906</td>
<td>267.9</td>
<td>90.2</td>
<td>177.7</td>
</tr>
<tr>
<td>1907</td>
<td>173.9</td>
<td>116.6</td>
<td>57.3</td>
</tr>
<tr>
<td>1908</td>
<td>276.6</td>
<td>125.0</td>
<td>151.6</td>
</tr>
</tbody>
</table>


It is evident that the village mills were serving as lowly capitalised marginal capacity, in which function they may indeed have been more efficient than power equipment, with its need for intensive utilisation. Thus, although according to Lapčević, the village mills were being driven out by their capitalistic counterparts, the competitive pressures may have been felt at least as acutely in the opposite direction. As late as 1910, it was reported that most of the industrial mills were "hard pressed by the competition of the little water mills, particularly on the Morava", and they resorted in 1911 to a campaign, in which they were...


2C Be 1911 R.C CLVI pp. 267-8.
partially successful, to subject their smaller rivals to harassment by the authorities. Though little peasant flour reached the urban market, whose demands were met mainly by the big milling enterprises, the peasants themselves continued to take their families' food grain to the village mills.

White flour was not a product indigenous to the Serbian economy and the modest demand of the capital had been met by imports somewhat in excess of 1,000 tonnes per annum. The modernisation of the milling industry was carried out, not so much to achieve economies arising from a superior technology, but in order to manufacture a product that the traditional industry could not make - that is to say, white flour.

To give it its due, we may discern some part of the initial stimulus as arising from the activity of the state. A very early attempt - probably the first - at establishing a steam mill resulted from the purchase in 1849 of milling equipment from Belgium by the state. It was, however, unable to make it function and it was acquired by a Prussian engineer in about 1855, who intended to use it to exploit the demand for white flour in Belgrade which was being met by imports.

But in the early years, private or semi-private Czech enterprise was to predominate in the industry. In 1851, a political refugee, Anton Njemec, arrived in Serbia with a little capital realised from the sale of his mill at Ljutomilišta in Bohemia and with plans for the founding of an industrial empire in Serbia. He took a lease on a state-owned watermill at Bratinac (Požarevac Okrug), and undertook its major conversion to

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1 K S, Izveštaj ..., u 1911, pp. 18-19.
2 Between 1,600 and 4,000 tonnes p.a. in the period 1904-08.
3 AAE, CCB, t. 2, despatch of 22.6.1855, fo. 322.
4 J. Grgašević, op. cit., p. 68; F Kanitz, Serbien ..., (Leipzig, 1888), p. 15.
mill white flour; in order to obtain the good quality white quartz millstones that were needed for the mill, Njemec appears to have gone to the length of opening up a hitherto unknown quarry near Trstenik. In 1858 he sublet this mill to his kinsmen from Ljutomiliška, the Bajloni family. Engineer rather than entrepreneur, Njemec went to Belgrade, built Weifert's brewery for him, and in 1863, established in Belgrade the country's first steam powered mill, which was sold shortly afterwards to another Czech, Vjetčka. The Bajlonis left Bratinac in 1869, acquired the lease of another old state owned mill at Mali Crnić (Pošarevac) on the Miava, equipped it with water turbines for the milling of white flour in 1870, installed auxiliary steam power in 1873, undertook a major expansion in 1878 and in 1883 added to their enterprise another Belgrade steam mill which they acquired from a group of Serbian businessmen (Karabiberović i Komp). Another of the Belgrade mills in 1884 belonged to a Czech, J. Brabec, and this group of Czech owned mills formed the substantial nucleus of the early power milling industry.

These enterprises seem to have had no difficulty in finding outlets for their produce, and to have stimulated a rapidly widening demand for it which went far beyond substituting the modest supply which had been imported. Grgasević appears to be fully justified in observing that:  

1J Grgasević, op.cit., p.68.
2Put licejskih pitomaca ..., p.124.
3Apart from his milling interests, Vjetčka established a malt and alcohol factory in Belgrade probably around 1875 which subsequently "attained a business turnover that was hitherto unheard of" Srbija na Balkanskoj izložbi ..., p.218; J Malat, op.cit. II, p.199.
4J Grgašević, op.cit. pp. 68-71; Srbija na Balkanskoj Izložbi u Londonu 1907, p.214.
5A N. F 12. 7179 despatch of 26.8.1884.
6J Grgašević, op.cit. p.72.
"Following the introduction of modern milling, the townsmen began to get accustomed to the use of white flour, ... and brought about the need for the watermills to be converted increasingly into modern mills near the consumption centres".

The consumption of white bread has in many countries long been associated with a more "modern" style of living, and the Serbian bourgeoisie have never been slow in wishing, through their consumption habits, to distinguish themselves from the lifestyle of the peasantry. And the evidently powerful demonstration effect among urban consumers was probably working within an exceptionally favourable environment for the expansion of the industry in the '80's, as significant falls in the basic price of cereals would have tended to blur the impact of the relatively high cost of milling finer flour.

The success of the Czech enterprises indicated that market conditions were highly favourable for ventures in milling. There was also considerable ease of entry into the industry. As late as 1908, the mean fixed capital employed in "industrial" milling entreprises was only 43,500 dinars, and circulating capital requirements were very small. The mean employment was 4.2 workers, and value added 12,000 dinars. Enterprises of the average size, or even smaller, were evidently viable for the mean scale of milling enterprises in 1908 was actually smaller than in 1891, when capital per mill was 32,700 din., employment 5.35, and value added 16,700 dinars. Such a scale of investment was within the means of wealthier merchants, and milling (in its more primitive form) had long been accepted as a secure investment. Moreover, the exporter of the equipment provided the means of learning unfamiliar techniques. Mallat, referring to the statistics for 1901 noted:

1 S G 1907-08, p.449. For circulating capital requirement see Tablica 4 of I K S, Izvesčaj ... u 1910 in which it is shown that circulating capital requirements were smaller than for any other industry.

2 S G 1906, p.371; S G 1907-08, p.449.

"These machines (for milling) are all of English construction, and the houses which sell them send out mechanics to set them up, start them working, and often to manage them for some time while teaching the operation of them to the Serbians".

This helped the demonstration process to operate as powerfully in creating new capacity as it did in absorbing the output, and the dominance of the immigrant entrepreneur was submerged at least numerically by the inflow of native enterprise. As a Belgian observer remarked in 1889, steam milling was "an industry for which the population shows a great predilection".¹

But although the provincial mills were largely set up by native enterprise, the market for white flour outside the larger centres was probably created by the large milling groups, thrusting outward geographically for sales beyond the confines of their established markets. Again, the Bajlonis seem to have been in the vanguard of this movement, setting up chains of warehouses through which the local flour dealers and the grocery trade were supplied. As early as 1888 a Valjevo grocery wholesaler, Marković i Bacanović, with a substantial trade in the town and region of Valjevo, was drawing on Bajloni's depot at Obrenovac (as well as on another Obrenovac flour dealer) for supplies, though Valjevo was connected with neither rail nor water communications.² By 1907, Bajlonis were servicing the demand for flour throughout the country with a chain of 14 depots, and the throughput of their mill at Mali Crnić, near Požarevac had expanded from the 800 tonnes milled in 1869, to 5,000 tonnes milled on their own account, as well as an

¹C Be 17.5.1889, R C LXVII, p.101.
²I A V. Dnevnik Bakaljske Radnje Markovića i Bačanovića 1.6.1888 - 30.11.1890, entries dated 26.7.1888, 4.11.1888, 28.4.1889 and 24.5.1889.
unstated amount milled on fee.\textsuperscript{1} The establishment of a strong selling organisation on these lines may well have been the key to sustaining a large turnover. The failure of Serbian firms to dispose of their excess production in Macedonia was attributed to their weak organisational basis there.\textsuperscript{2}

\textsuperscript{1}Ministarstvo Narodne Privrede, Srbija na Balkanskoj Izložbi u Londonu 1907, p.214. We may assume that this extended "puff" for the Bajloni firm, with details of medals won at international exhibitions, etc., is indicative of an attempt by them to break into the export market.

\textsuperscript{2}I K S, Izveštaja ... u 1910, pp. 14-15; Izveštaja ... u 1911, p.20; T K S., Izveštaja ... za ... 1911, p.19.
Both the product and the techniques of making it were introduced into Serbia from outside in the latter half of the nineteenth century. The alcoholic beverages of Serbian mass consumption were wine and *rakija* šljivovica, both of which were produced and manufactured, for self-consumption and for sale, on a very large scale, in the villages. To most peasants, beer was an unfamiliar commodity, the techniques of making it were not known, and even at the end of the period, it was seldom to be found outside the towns.\(^1\) They did, however supply it with most of its barley, though not with hops, which despite at least one government inspired attempt to cultivate them,\(^2\) had to be imported. Initially, at least, the only centres which would be likely to generate a substantial demand for this new good were the capital and perhaps one or two of the larger towns.

Thus, the industry was not easy to introduce. Beer sold commercially was unlikely to displace the consumption of home produced wine and *rakija* in the villages, and could not compete with these beverages on price even in the towns. In this respect, it was further handicapped by the introduction of a stamp duty of 12 dinars per hectolitre, in the late 1880's,\(^3\) which would have added about a quarter to its price. Finally, at least in the capital – by far the largest market – it would have to compete with imports from the powerful Austro-Hungarian brewing industry.

\(^1\)H Vivian, *op.cit.* p.118.
\(^2\)C Br (S) 1887-88, p.101.
\(^3\)Ibid., p.11.
These adverse considerations determined the selling strategy of the industry, and adaptation to them was the key to its remarkable success. From the very outset, beer had to be sold as a high price, luxury product, associated with prestige, and therefore with consumption in public. For the domestic brewer, the principal market was therefore the cafe trade, with the outlet as far as possible tied to selling his product. As early as 1839, a brewery of a sort was working in Belgrade, and enjoyed royal patronage. Known as the Kneževa Pivara, it set up a catering establishment (gostionica) alongside it, at the back of which, in the 1850s "stretched a fine large park. All the better people of Belgrade came there to cool themselves with cold beer, and sometimes to hear a military concert and watch the theatre. The prince himself was a regular visitor". Half a century later, the marketing formula was substantially unchanged: "As there is no music, nor strolling, nor theatre, in the small towns of our country, to bring people together at holidays, beer is the only link which brings families together at these times ... Ići na Pivo - [to go on the beer] means to represent one's self in society, to live a more cultured life. In consequence, bad quality beer in the pivnica [beer hall] is preferred to good wine at home, while cafe amusements displace household meetings. Families who do not go out to the beer do not have opportunities to be prominent; they do not form the elite of that township, and are in danger of occupying a lower place in the aristocratic ranking".

The holding of at least one outlet tied to the brewery may have been the usual pattern. The small brewery of the Valjevsko Udeoničarsko Društvo had a kafana attached to its premises, and when the Jagodina

1 S Šumarević, "Uz starog Beograda-prve fabrike" Politika 29.5.1966, p.12
2 J Grgašević, op.cit., p.99.
3 S Pašić, Kroz Rudnički Okrug ..., (Sremski Karlovci, 1903) pp. 145-6.
brewery bought out a smaller rival in Kragujevac in 1890, it did so in order to close it down, and to turn the buildings into a distribution agency and a beer hall, presumably tied to its own output. The holder of a lease of a small unmechanised brewery in Užice, Čačak okrug, in 1904, described himself as innkeeper. It is likely that his tavern was the sole outlet, as, asked about competitive pressures, he replied that there were none.

The larger brewers at least, competed for the kafana trade. The Belgrade kafana were the market for the local breweries, and Kostić noted that the beer of the brewery of the Zajčarsko Industrijsko Udruženje "is consumed mainly in the Zaječar beerhalls (pivnice)". Competition between brewers took as its principal form rivalry to offer attractive service to the kafana, thus it was on the matter of terms of delivery to the cafe trade that the first brewers' cartel agreement was reached. As an up-market product, the output of the breweries also had to be of good quality, or at least to appear to be. Bianconi reckoned Belgrade beer as of the best quality, "better than the Viennese". The beer of the Niš brewery was reported to undersell Weifert's Belgrade beer, but its relatively poor quality made it uncompetitive. The aggressive and successful Jagodina brewery appears to have used branding techniques to increase its market penetration.

1 M D Popović, Kragujevac ..., p.372.
3 C Br (S) 1886, p.9.
4 M M Kostić, Plana s Pute ..., p.103.
5 I K S, Izvještaji ... u 1911, p.21.
6 F Bianconi, op.cit., p.32, col. 2.
7 C Br (S) 1887-88, p.11. It may subsequently have been improved. See S. Andrejević, Ekonomski Razvoj Niša 1830-1946 (Niš, 1970), p.48.
8 M M Kostić, op.cit., p.154.
The establishment of this industry was, even more clearly than in the cases of the meat packing and milling industries, the work of immigrant entrepreneurship. No interest in the industry was evinced by foreign capital, (except in 1911, to take over and expand the already long-established brewery at Jagodina), while the role played by native enterprise was minimal. As we have seen, it involved new and unfamiliar techniques, and the creation of its own market under rather adverse circumstances. In its early days, it was entrepreneurial and labour skills which were needed, rather than capital inflows, for the industry was at an unmechanised stage and required a mastery of craft rather than heavy investment. The craft was of course central European, and it was mainly from the German and Czech lands that the immigrant brewing masters came, and, having made their enterprises successful, settled permanently in Serbia.

Two of the earliest established breweries were located, not in Belgrade but deep in the interior, where no doubt, they were relatively well insulated from Austro-Hungarian competition.

One of these was established in Čačak in 1854 by a German cooper, Ferdinand Krenn, who was probably a man of little capital but "understood a little about preparing beer". As "a novelty" the taste for his output spread, Krenn became rich, and the original "primitive" installation was replaced by a modernised steam brewery in 1884. Another was established in 1852 in Jagodina, by Jovan Kosovljanin, whose name suggests that he was an immigrant from Kosovo. This too was unmechanised, and in the early
1880's was operated by a German, J. Wanderer. At this time, Kosovljjanin's son, Mihailo, appears to have been studying the brewing trade in Bohemia.¹ A little later – before 1890 – he returned, took over the management of the brewery and mechanised it.²

Even earlier, perhaps, a small brewery was established in Belgrade by the (probably) German "Brothers Velni" who called their brewery "Unterzeich". It was advertising in 1852, but its success seems to have been transient.³ But the following year, Ignjat Weifert, who owned a brewery across the Danube at Pančevo took a lease on the Kneževa Pivara. His son Georg, who learned his skills in Bavaria, appears subsequently to have run it, and then in 1873, to have closed it when he opened in its place the largest and most modern of the Serbian breweries. This was possible for the Weiferts were clearly substantial capitalists.⁴

In the 1860's a steam brewery was set up at Valjevo, by a Cincar immigrant, Dimitrije, son of Nikola Dimitriades, who, subsequently ruined by his activity in the highly speculative plum trade, sold up in 1867 to Josef Aichinger,⁵ a Bavarian brewer, who had worked at the Weifert brewery in Pančevo. This came into competition in 1874 with another Brewery in Valjevo founded by a local joint stock company, which eventually led to the closing down (in 1891) of Aichinger's and the emergence of Aichinger as managing director of the joint stock brewery.⁶

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¹E de Horchgrave, op. cit. p.180.
²M Popović, op.cit. p.372; J Grčašević, op.cit., p.103.
³V Milenković, Ekonomski Istorija Beograda, p.122. Translation of foreign names from Serbian texts is always a problem. The probable original was "Velni".
⁶J Grčašević, op.cit., p.105.
⁷Balance sheet of Valjevsko Udeoničarsko Udruženje, loc.cit.
A brewery had been set up in Kragujevac while that town had served as capital by Jovan Weinapel at the behest of the prince. A more long-lasting establishment seems to have been set up in the 1860's by one Dobler, and to have been equipped by Nikola Mesarović, an innkeeper or similar of Srem (in Hungary) with steam power and equipment brought from Vienna, and managed by a Czech brewing master. It passed in 1880 into the hands of Argust Klaper, an Austrian brewing master, and in 1890 was bought out and closed by the Kosovljanin firm.

In 1885, a brewery was set up by Jovan Apel at Aleksinac on what was then the Turkish frontier. In 1884, he opened a second brewery, which was equipped with steam power, in Niš, and closed the old Aleksinac brewery down in 1899. The Niš brewery was modernized in about 1903, and "on the eve of World War I", its output had been pushed up to 6,000 hl. p.a.

The second big Belgrade brewery was established on an unmechanised basis "before 1870" by a company which included Ignjat Bajloni, the Czech miller. The Bajlonis took it over altogether in 1881, transferred it to their compatriot Brabec in 1883 and took it back in 1888.

Table V. traces the development of the brewing industry from 1881 to 1912. Prior to 1881, no statistical information is available, but the scale of production almost certainly remained at a petty level until the early 1870's when the two big Belgrade breweries were established on an altogether larger scale. With their opening, the basic structure of the industry had been established, and as comparison of the 1881 and subsequent output figures indicates, sales appear to have stagnated till the 1890's.

1M Popović, op.cit., p.372.
2J Grgašević, op.cit., p.106.
3M Popović, op.cit., p.372.
4J Grgašević, op.cit., p.104.
5This brewery supplied production figures up to 1898, see S G 1898-99, pp. 325-6.
7J Grgašević, op.cit., p.104.
<table>
<thead>
<tr>
<th>Town</th>
<th>Brewery opened</th>
<th>BEograd</th>
<th>Jagodina</th>
<th>Valjevo</th>
<th>Zajecar</th>
<th>Čačak</th>
<th>Šabac</th>
<th>Aleksinac</th>
<th>Niš</th>
<th>Negotin Kragujevac</th>
<th>Total (000 hectolitres)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Welfert</td>
<td>Kosovaljakin</td>
<td>Aichinger</td>
<td>Lalić</td>
<td>Kren</td>
<td>Kurtović</td>
<td>Apel</td>
<td>J/S</td>
<td>1889</td>
<td>c. 1870</td>
</tr>
<tr>
<td>1888</td>
<td>26.8</td>
<td>2.6</td>
<td>1.8</td>
<td>1.5</td>
<td>1.4</td>
<td>4.0</td>
<td>.8</td>
<td>0</td>
<td>10</td>
<td></td>
<td>50(est.)</td>
</tr>
<tr>
<td>1889</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
<td>39.0</td>
</tr>
<tr>
<td>1890</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>n.a.</td>
<td></td>
<td>45.7</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
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<td>n.a.</td>
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**Sources:**
- Total production 1888-92, S.G. 1893, p. 165; 1893-1908, S.G. 1907-08, p. 437; 1909, *La Serbe... à Turin 1911, pp. 252-5*.
- 1911, Y.K.S. *Izveštaj... u 1911. godini*, p. 21; 1912, Y.K.S. *Izveštaj... u 1912 i 1913. godini*, p. 72.
when they were stimulated by the relative scarcity of wine in consequence of phylloxera (and the high duties on wine imports). Unlike the milling industry, so much of whose expansion arose from the multiplication of small locally based units, six of the nine breweries surviving in 1908 had been among those just listed, which had been established before the wars of 1876-8, and these six accounted for about 95% of total beer production. As has been seen, with the exception of the Jagodina brewery, the trade was dominated by immigrant entrepreneurship from central Europe. Native entrepreneurship only really moved into the industry in the 1880's and '90's and by then it was too late to establish anything but a local toehold in an industry in which competition was becoming increasingly national in scale. A small unmechanised brewery was set up at Zajecar by Jovan Lalovic, probably between 1883 and 1888, and still existed in 1908, but was eclipsed even in local importance by a new mechanised brewery erected in 1895 by a company set up in the town by Zajecar merchants under the name of Zaječarsko Industrijsko Udruženje. A similarly organised, though smaller brewery was set up in 1889 in Negotin. Also in the 1880's a small brewery was set up by Panta Kurtovic at Sabac, but its sales dwindled and it ceased production in 1900 or 1901. This appears to have passed into the hands of the local Šabacka Okružna Banke, and to have operated under its control from 1909 or 1910, and to have represented for it an investment of about 250,000

1 H Vivian, op.cit., p.118.

2 Though unlisted by de Borchgrave (1882) it was described in 1887 as a "large brewery building". S Maćaj, "Crnoredčki Okrug" (dated 1.5.1887) Glasnik S U D. LXIII, p.4. A secondary source gives the date of establishment as 1870, but it is probably unlikely to have had a permanent installation till later. Proizvodne Snage ..., p.538, Col. 1.

3 M Kostić, Pisma s Pute ..., pp. 97-104.

4 Statistika Država Balkanskog Poluostrva, p.80; J Grgašević, op.cit., p.106.
dinars, or about half the value of its share capital.\(^1\) With the possible exceptions of the Zajecar joint stock brewery and the Sabac brewery under bank control, the inflow of native enterprise made little quantitative difference to the size of the industry. The day of the protected small town brewery passed with the building of the railways, and in 1908 the two big Belgrade breweries accounted for nearly 80% of production.

These had had to fight off cut-throat competition from imports in the 1880's,\(^2\) and had long been pushing sales in the provinces. Even before a rail link had been established, a visitor to Leskovac, shortly after annexation discovered Weifert's beer to be the mainstay of the local kafane,\(^3\) and given the national market network the Bajloni's built up for their flour, it is likely that they did the same for their beer. The beer of the Jagodina brewery was distributed throughout south western, southern and eastern Serbia, that of the Zaječar company throughout the east central region.\(^4\) And although breweries existed in only six provincial towns after 1900, all 42 towns and townships were able to quote beer prices in their annual price statistics consistently after 1902.\(^5\)

In the face of this sort of competition, the small breweries had to struggle for survival; competition from Belgrade and Jagodina beers contributed to the collapse of the Kazgjevac brewery in 1890,\(^6\) Apel's Nis brewery,

\(^1\) It is not listed as operating in S G 1907-08, but is mentioned as a steam brewery in M N P 1908-9, 8, p.1024. Also see balance sheets for this bank in S N of 14.4.1911, 9.3.1912 and 1.12.1913; J Grgašević, op.cit. p.106.
\(^2\) C Be 4.10.1889, R C LXVIII, p.269.
\(^3\) S L Popović, Putovanje po Novoj Srbiji, p.381.
\(^4\) M M Kostić, op.cit. pp. 103,154.
\(^5\) See standard sources for price statistics. Before 1900 such data was available only for 25-28 out of 42 towns.
\(^6\) M D Popović, op.cit., p.372.
reported in 1888 to be uncompetitive with Weiferts, subsequently appears to have closed temporarily for conversion into a slaughterhouse. His Aleksinac brewery closed in 1898 and Kurtović's Šabac brewery closed in 1900. Even the Valjevo brewery, with a share capital of 124,800 dinars in 1908, made only a miserable 1% on employed assets in that year, which tends to bear out Grgašević's contention that after 1902, "it entered into such a condition that its existence was brought earnestly into question".

It was probably because of the intensity of competition that later enterprises were only able to sustain a precarious existence on the fringe of the market, and that all the six founding families retained their hold on the market and on their individual enterprises right through the period.

Yet the discomfiture of the smaller breweries, a result of the pressures of oligopolistic competition, in no way betokened a malaise within the industry. Consumption of beer per capita was rising steadily from 2.04 litres in 1890/92 to 3.12 litres in 1906/08. Intense import competition, which re-emerged at about the turn of the 20th Century and on the eve of the tariff war was taking about 10% of the domestic market, was ended by protection in 1906. But this did not permit the brewers to raise their prices, rather to expand production, which in 1907 exceeded home market consumption. The Kosovljani brewery was reported to be selling successfully in Greece, Turkey and Egypt. The export trade fell away after 1908, but the production statistics indicate that this was probably due to the buoyance of the home market. This gave rise to a

1See above, pp. 311-2
2Balance sheet of Valjevsko Udeo udoničarsko društvo loc. cit.
3J Grgašević, op. cit., p.105.
4G. G. 1907-08, p.438.
5Ibid.
6Ibid, p.379.
7J Grgašević, op. cit., p.103.
further wave of investment in the expansion and updating of plant, which was further to be stimulated by the acquisition of Macedonia, a new home market, but without a single brewery. For the first time, foreign capital evinced an interest in investing in the industry: the Czech Pražská Úvěrní Banka, which had just set up a major sugar factory in Serbia, took a controlling interest in the Jagodina brewery in 1912, turned it into a joint stock company (Mihajlo Kosovljanin A.D.) and erected new modern plant and buildings. In 1912 and 1913 7 million dinars of new investment were poured into the industry, 23.6% of total industrial investment in those years, although in 1910, the total capitalization of the industry was given as only 6,173,000 dinars. It is worth noting that Serbia emerged after the war with the strongest brewing industry in the new Yugoslav state, possessing more than a third of the country's brewing capacity. This is a measure of the achievement of the central European immigrant entrepreneurs in implanting an industry to sell a product, demand for which they had virtually to create from nothing, in the teeth of import competition.

As a grain based industry of some magnitude and of steady if not spectacular growth, there are obvious linkages between brewing and the agricultural economy, and its commercialisation. In the first place, the demand created by this industry for raw material inputs would act to some degree to stimulate the commercial production of these inputs, if it could

1Ibid, pp. 102, 106.
2T K S, Izveštaj sa 1912 i 1913 godinu, p.90.
3J Grčašević, op.cit., p.106.
5I K S Izveštaj ... u 1912; 1913 ..., p.67.
6I K S Izveštaj ... u 1910 ..., Tablica 4.
be shown that it opened up market outlets for their producers. Conversely, there would be an upward linkage as the development of the brewing industry would have been affected to a significant extent by the character of its domestic raw material base. In the second place, we may seek indirect, or spin-off effects feeding back into agriculture other than through the direct supply relationship. The latter proposition may be speedily dismissed as negligible. Brewers' wastes can be applied as an important animal feedstock; and we do have a solitary reference to the Niš brewery selling "the refuse from the vats" for "fattening cows in milk". Yet the dairying trade never developed significantly, rational dairy farming had not incorporated itself into peasant husbandry, and dairy products from the cow stock (as opposed to the production of sheep's milk) were no more than a minor by-product of a type of animal husbandry geared to the provision of draft power and beef. Naturally, an important part of the dairying trade, such as it was, was based, like the brewing trade, on Belgrade, the biggest market for the produce of both industries, but I can offer no evidence of any mutually sustaining linkages.

In respect of direct supply linkages from agriculture into brewing, the only material concerned is barley.

The brewers did not supply data to the government on their barley purchases, only on the value of total raw material inputs, and the barley input of the breweries varied according to the quality of beer they produced. However, on the basis of some figures supplied by de Borchgrave, we may estimate that roughly 30 kg. of barley was used per hectolitre of beer produced, so that the industry would have processed about 1,400 tonnes of barley per annum in the 1880's, 2,100 tonnes in 1900, and 3,200 tonnes in 1908.

1 C Br (S) 1887-88, p.11.
2 E de Borchgrave, op.cit. pp. 179-80.
Though of some significance in the 1880's these figures are small in relation to the export trade in cereals in the '90's and after, small even compared with barley exports in these years. And in any case most of the barley purchased domestically could as easily have been exported, as the Belgrade breweries probably absorbed rather more than 80% of barley inputs, and the only other large producer (at Jagodina) was also on the railway, before the building of which it had only been a very small concern. Thus the impact of brewery demand for barley on the agricultural economy was negligible.

Conversely, Serbian agriculture did not provide the breweries with a favourable raw material base; their success was despite rather than because of their linkages with Serbian agriculture, for they suffered from unresolved difficulties in purchasing malting barley which met their qualitative requirements. Brewing required the input of spring grown barleys, preferably of selected malting strains, of high gravity. But the Serbian peasant economy was attuned to the cultivation of maize as the basic spring crop, with hard grains as winter crops. Winter barley was of low gravity, and tended to be raised as animal fodder on marginal lands for which the more valuable wheat crop was unsuitable. Spring and winter barley were, however, grown in roughly equal proportions, and were generally mixed indiscriminately, as fodder, which product was not suitable for brewing. However, the 1897 cultivation statistics indicate that many areas in the Morava valley raised spring barley in substantial quantity, but little of the winter variety, probably for reasons which were alluded to in connection with the cultivation of maize. In consequence, the Morava valley breweries, at Jagodina and Niš seem to have been well supplied locally with

2. Ibid.
barley for their malthouses, though not necessarily of a quality which
would have enabled them to compete with the Belgrade breweries, which had
easy access to first class imported malt and malting barley from the
Vojvodina. In 1924 it was noted that the Niš brewery, drawing on the
Aleksinac factory which had evidently been turned into a malthouse,
imported raw material but the greater part of the malt it made was of
barley taken from the locality.¹ The Jagodina factory "has at all times
a large quantity of malt and is never surprised by the appearance of
greater consumption. It has already from time to time supplied the need
of the Zaječar brewery in malt ..."².

Complaints of difficulty in securing malting barley were not
uncommon, particularly during the boom in output at the end of the period,³
and the tendency in the Šumadija only to grow barley on inferior land may
have caused to some extent the relatively poor showing of the small
breweries of that region. The Kragujevac brewery even maintained a plot
on which it grew its own barley to supplement its local purchases.⁴ Kren,
the Čačak brewer claimed that (despite the small size of his enterprise
which could barely have needed 30 tonnes of barley a year), the quantity of
barley available to him and the quality of the malt was "not always
adequate".⁵ And the Valjevo brewery attributed its poor showing in 1907
to shortages of raw materials.⁶

¹ J Grgašević, op.cit., p.110.
² M M Kostić, op.cit., p.154.
³ I K S, Izveštaj ... u 1910 godini, p.8; Izveštaj ... u 1911 godini, p.21.
⁴ M Popović, op.cit., p.372.
⁵ B Perunić, op.cit., p.624.
⁶ Balance sheet of Valjevsko Udeoničarsko Udruženje, loc.cit.
Even where spring barley was relatively abundant, the cultivation of proper malting barley was unknown,⁴ and the high quality beers made by the Belgrade brewers depended on supplementing locally obtained barley with imported supplies of first quality grain and malt which continued to be imported in substantial quantity throughout the period.⁵ Efforts were made by the brewers to encourage the rational cultivation of barley, and on the eve of the first world war, the Jagodina brewery attempted to improve its supplies by the distribution of seed developed for brewing purposes, a programme which might very well have succeeded had the war not supervened, for similar attempts a few years later in Croatia worked out well.⁶ Such efforts seem to have begun too late to have had much material impact on agriculture - or brewing - during the period under consideration.

It can therefore hardly be said to be on account of the supply conditions in the Serbian economy, that the Serbian brewing industry expanded so successfully, rather despite them.

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⁵C Br (S) 1887-88, p.11; G Godchaux & E Monnot, Notes sur la Serbie (Bruxelles, 1910), p.25.

⁶Godchaux & Monnot, op.cit., p.25.

g. Sugarbeet

This was the sole example, in the development of the food processing industry, of manufacturing enterprise established prior to the production of its raw material, and thereby creating agricultural supply. As we have already seen, attempts were made by manufacturers of other foodstuffs to promote the cultivation or raising of inputs for their industries which accorded better or more amply with their requirements than those available, but with little success. Thus the establishment of the sugar industry had unique developmental significance. It was, however, established very late, and probably on account of this, as well as of the indifferent communications net, had clearly not attained anything approaching a long run stable pattern of cultivation with respect to the area sown. Finally, it was the only industry in the food processing branch which was founded and expanded by foreign (as opposed to immigrant) capital, the most likely reason for this being the very large investments which were needed: in 1910, the one sugar factory in the country constituted an investment of 8.37 million dinars - more than twice the capitalisation of the entire brewing industry, and the second mill (1912) appears to have swallowed up another 10 million. Between them, the two sugar factories constituted about 12.7% of all industrial investment, (or 14.6% excluding the state arsenal).¹

These investments could not easily have been made on a smaller scale. This was because both sugar mill and refinery had to be established simultaneously. The government (wisely) insisted when granting concessions that (although some flexibility was permitted) the factories must be largely dependent on processing Serbian beets, rather than importing raw sugar for refining as they would probably otherwise have done. Moreover,

¹I K S, Izveštaj ... u 1910 godini, Tablica 4; Izveštaj ... u 1912 i 1913 godini, p.67.
although sugar mills themselves did not need to be large installations, and were, in the Czech lands, quite often small agricultural establishments, a relatively very large milling capacity was needed to generate sufficient raw sugar to justify the existence of a refinery.¹

Though the sugar industry was only definitively established in Serbia in 1906, foreign interest had been manifested in the country's productive potential since the early 1860's. At this time, British interests, who appear to have been sadly misinformed as to Serbia's climate, supplied sugar cane for experimental cultivation.² Projects for beet sugar manufacturing were offered in the early 1880's by Russian,³ Belgian and British interests⁴ (though nothing came of them) but in 1888, the Serbian government appears to have expected the imminent establishment of a sugar industry large enough to satisfy domestic demand and to leave a surplus for export.⁵ Further experiments in beet growing were in progress at the time,⁶ to whose results the government gave publicity, presumably in the hope of attracting foreign interest.⁷

The especial significance of the sugar beet to nineteenth century peasant farming was of course its labour intensity. Here was a way in which, for example, the Bohemian-Moravian farmlands were able to support a very high density of population with a cash income far higher than could ever have been returned to the same cultivated area under cereals.

¹See on the development of the Czech sugar milling and refining industries R L Rudolph, op.cit., pp. 201, n , 204, 221, 225.
²Put Licejskih Pitomaca po Srbiji godine 1863, pp. 94-5.
³C Br (S) 1880, p.885; E de Borchgrave, op.cit. p.187.
⁴D Milić, "Nemački Kapital ..." loc.cit. p.331.
⁵The British representative could see no other logical reason (other than incomprehension) for Serbia's refusal to ratify the international sugar beet convention (banning state-subsidised dumping) of that year. PRO FO 105 70 No. 35 comm. of 22.8.1888.
⁶C Br (S) 1887-88, p.19.
Despite the inability of Serbian farmers to achieve the very high sugar yields per hectare of their Czech counterparts, the Serbian Ministry of the National Economy in 1906 estimated the return from sugar beet at 535 dinars per hectare of land compared with 115 obtainable from wheat, and 101 dinars from maize. Nevertheless, what matters at the end of the day is the annual yield per worker, and it was not clear as to whether the land:labour ratio was sufficiently unfavourable to the latter for sugar beet to be an income maximizing crop. Certainly, until the crop was actually being produced commercially, contemporary opinion was inclined to a contrary view. The lack of success of earlier experiments was attributed to the disinclination of the Serbian farmer to dig the beets in deeply, a suggestion which implies that beet growing was thought to be excessively labour intensive. Ten years later the British consulate again reported pessimistically on the prospects of the then current moves to establish the cultivation of sugar beet for substantially the same reasons: "As there are no large landowners, there will be problems in getting the peasants to grow beet" and a cautious attitude might well have been justified by the dismal experience of the newly established Bosnian sugar industry in the Posavina, where climatic and soil conditions were similar to those of the neighbouring Serbian Šumadija. Positive incentives failed to work for the factory was starved of raw material as yields were disappointing, and the peasants "were forced by government officials and the gendarmerie to plant the crop". However, the Bosnian sharecropper's incentive seems to have

1 MNP 1906. 2 pp. 45-6.  
2 C Br (S) 1887-88, p.19.  
3 C Br (S) 1897-8, p.7.  
4 C Br (Bos) 1894 (sugar) p.2; P.F. Sugar, Industrialization of Bosnia-Hercegovina, p.156. Sugar's source implies that the price offered was too low, but it compares favourably with that offered to Serbian producers. (Sugar's prices quoted are incorrect to a factor of 10).
been weaker than that of the free holding Serbian peasant and the British consulat had to change its tune two years later as "Considerable progress is said to have been made in the cultivation of beet in the country, and the quality of the first crop is reported to be excellent".¹

So it seems doubtful whether the cultivation of sugarbeet really had to wait until the twentieth century on account of hitherto unfavourable factor endowments in agriculture for the acceptance of this crop. Naturally, the farm with surplus male labour power would derive greater advantage from substituting the cultivation of sugarbeet for that of wheat for the market, than would the farm which was relatively short of male labour, and so the outlook for sugar production would improve as the population pressure on the land intensified. But as the relative supply prices of cereal and sugarbeet were strongly influenced by the relative factor endowments of producers selling into the international market rather than those pertaining to Serbian agriculture, it does not follow that only farms with excess labour power would earn more from sugarbeet than from wheat. As we have already argued, the principal problem of the majority of peasant farms was the low productivity of labour caused by the undercapitalisation of production, rather than land shortage as such, so sugarbeet would be cultivated in preference to wheat, if, at given prices, labour could be more productively employed at raising sugarbeet. Of course, the small farmer, with too little land would tend to embrace beet raising with more alacrity than his larger fellow, but the potential development of the crop if prices favoured it, would not be limited to the area farmed by peasants with excess labour power. Moreover, there was the powerful lure of a crop which could turn labour into cash without capital investment, or a long waiting period, an appeal which would entice all farmers, but particularly the smaller ones,

¹C Br (S) 1899 - 1900, p.15.
a situation which the crop purchaser was keen to exploit. The balance of pressures which determined the extent of peasant response is nicely reflected by the following extract from a newspaper article of 1911, which condemned the newly opened sugar mill at Čuprija for ensuring itself of supplies by freely advancing money to prospective producers in respect of the following year's crop:

"The newly opened factory is extending to agriculturalists advances of up to 100 dinars per hectare against bills of exchange or IOU's. The agriculturalist, in accepting this advance willingly assents to all the conditions attached to it, and calculates that he is coming into ready money during a period in which he has nothing left to sell ..."

"I have been an eye witness when many such agriculturalists have declared thirty to fifty hectares of beet, and have taken three or four thousand dinars in advance of growing the crop. I ask them if they really have so much land, and they themselves reply:

'If I had that much land, I certainly would not grow it, [beet] but the main thing is that I have now acquired money to pay off my debts, and I shall sow just enough sugar beet to disindebt myself, but if they think this is unlawful, well, the courts are open to them, but nobody has complained to me ...'."

It is worth noting that, if the above article is reliable, and the figures are at least internally consistent, the peasants in question were by no means dwarf holders, for to raise enough sugar to pay off three or four thousand dinars of debt they would have to plant about ten hectares of it, which would, at least (on the basis of the 1897 census) put them above the 80th percentile of property holders. And the thirty or fifty hectare peasant, who by implication would have enough land to eschew the growing of beet, would have been a rare fellow indeed.

A much more critical determinant of the extent to which the crop could be cultivated was the cost of transporting the beet to the factory from such areas where suitable irrigated land was available. In 1908, the price of wheat (at Smederevo market) was 10 times as high as the price paid

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by the factory to producers for an equal weight of sugarbeet. Easy access to power transport was therefore essential, and so production was concentrated close to the steamer stations on the Danube and Sava and to the Morava valley railway. Considering how thin the communications net was, and considering that the second factory only opened its doors for the 1912 harvest, the expansion of cultivation from 1,100 hectares in 1906 to 3,000 in 1910 is striking evidence of responsiveness on the part of producers. By the latter year, in terms of earnings of farmers, sugarbeet was probably the country's most important industrial crop. Many of those who cultivated it probably committed their whole cash economy to it, for in 1909, the average sugarbeet cultivator planted 0.78 hectares with the crop, and earned 341 dinars from it, an amount rather in excess of that which the average arable peasant with 10 hectares earned in cash from his crops, or substantially more than the 5 hectare peasant (a little larger than the median) earned from his crops and his cattle. In the opinion of contemporary observers, the principal determinants of the future rate of expansion would be the number of new factory locations and the expansion of the transport network; given an outlet for the product, a supply would be forthcoming.

1 Compare Smederevo wheat price in 1908 (S G 1907-08, p.374 with that paid to beet growers (see Table V.8)).

2 Srbija na Balkanskoj Izložbi u Londonu 1907, p.217; M N P 1908-9, 8, pp. 951, 968, 984, 1035.

3 See Table V.8, p.382.

4 M N P 1908-9, 5, pp. 259-60; M Avramović, op.cit. p.35.

5 M N P 1908-9, 5, p.256; C Be 1911 R C CLVI, p.266.

6 Its considerable unexploited expansion potential is suggested by the fact that Jugoslavija in 1928 had 55,400 ha. under sugarbeet. N Popović and D Mišić, op.cit., p.190.
As supply conditions appear on the whole to have favoured establishment of the sugar industry, in some degree independently of relative land-labour endowments, the want of the capital (and enterprise) to establish it appears to have been the main reason for the retardation of its development. Given the difficulty of accumulating the necessary sums internally, this may be attributed to the conspicuous lack of interest in the potential of the industry by Austrian investors. This lack of interest had very positive roots; Serbia was a valuable, effectively protected market for their output. There was no tariff barrier worth speaking of against their imports, and no restraint on their dumping (if need be).

The first sugar factory in the country, which was established in Belgrade, under the terms of a concession awarded in 1898, was an Imperial German investment, disposing an initial capital of $3.5 million marks (4.3 million dinars), which in practice proved insufficient. The highly organised Austrian sugar interest did all it could to destroy it. Exporters resorted to that favourite technique of cartellised industry - massive dumping. Their efforts were backed up by a diplomatic offensive against the firm. This pressure also found a domestic counterpart, according to Dr Milic, in the importer interest, which had long been active and successful in dissuading the government from granting sugar factory concessions.

The factory was ill-prepared to withstand such pressures. Technically, it was poorly equipped. One of the reasons for setting it up was to enable one of the promoters to dispose profitably of second hand machinery, in which he dealt. This was inappropriate to a situation in which local

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2 Ibid; L-A Janitch, La Serbie au point de vue économique, p.27.
3 C Br (S) 1899-1900, p.8.
4 D Milić, "Nemški Kapital ..." loc. cit.
5 Ibid.
labour rates were not particularly low, and where skilled workers had to be imported in substantial number. Even the book-keeping had to be done in Germany. After a short period of unprofitable operation, the company's financial backer, the Turn und Taxis interest of Regensburg, put in its debentures which it held for 1½ million dinars, and closed the factory. 

During this period of its operation, the factory was largely dependent on imported raw sugar for refining. But this should not be interpreted as evidence of its disinclination to process Serbian beet, or of a lack of response by farmers to the market opportunity presented them. It was foreseen that it would be some years before what was an entirely new crop would be grown in sufficient quantity to meet the needs of a large factory, and under its concession it was permitted to import raw sugar for refining for the first five years of operation. Producers did in fact raise 6,200 tonnes of beet in 1900, and 24,500 in 1901. Yields obtained were good—three times as high as those obtained in Bosnia, and considerably higher than those which the Bosnian administration had optimistically estimated as possible and remunerative. Beet production had to be abandoned when the factory closed, but the experience had convinced many cultivators that beet was a more remunerative crop than those they had to cultivate in its place.

1The earliest data on this is for 1910. In that year, the factory employed 147 foreigners and 467 Serbians. Wage rates for unskilled workers were the highest recorded for any industry that year. I K S, Izveštaj ... u 1910 godini, tablica 10.
3D Milić, "Nemački Kapital ..." loc.cit.
4J Grgešević, op.cit., p.117.
5C Br (S) 1897-8, p.7.
6See Table V. 8.
8La Serbie ... à Liège,1905, p.97.
After three years standing idle, the hitherto fruitless attempts of the Turn und Taxis interests to get protection for the factory's output were rewarded by the rupture of Austro-Hungarian economic relations and the new protectionist politics of 1906. No time was wasted by Turn und Taxis in reopening what was now their factory, infusing about 5 million dinars into it, to re-equip and, apparently to increase its beet handling capacity. Several prosperous years ensued, notwithstanding unfortunate labour relations, and a serious fire in 1910. Its impact in restimulating cultivation may be seen from Table V. 8.

Success encouraged emulation, and xenophobia stimulated it. Though domestic investors did not have the resources to do more than take a minority holding in it, a new concession was taken up in 1911 by a company "Srpsko-Ceska Fabrika Secera i Rafinerija A.D." whose principal finance source was the Czech Praška Úvěrní Banka. The undertaking was projected as an example of "slav co-operation" rather than Austro-Hungarian capitalism. Their factory was set up on the Morava valley railway at Čuprija, on a large scale, and with fully modernised electrically powered equipment. The group must have regarded their prospects in a very favourable light for with two factories in operation, part of the output would have had to be exported. The ready response of producers has already been noted on page 377, above.

2D Buzganović, Veliki štrajk na čukarići kod Beograda 1907 (Beograd, 1948).
4J Grgašević, op.cit., pp. 117-8; R Rudolph, op.cit., p.381.
6C Be 1911 RC CLVI, p.268.
TABLE V. 8

BEET CULTIVATION AND THE SUGAR INDUSTRY, 1900-1913

(a) Statistics of sugarbeet cultivation

<table>
<thead>
<tr>
<th>Year</th>
<th>Hectare</th>
<th>Tonne</th>
<th>Per Hectare</th>
<th>Paid to Producers</th>
<th>In Din/ Hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>0.23</td>
<td>6.2</td>
<td>26.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1901</td>
<td>1.10</td>
<td>24.5</td>
<td>21.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1902 - 1905</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1906</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1907</td>
<td>2.17</td>
<td>36.7</td>
<td>16.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1908</td>
<td>2.23</td>
<td>35.0</td>
<td>15.8</td>
<td>18 din/tonne</td>
<td>284</td>
</tr>
<tr>
<td>1909</td>
<td>2.98</td>
<td>66.2</td>
<td>22.3</td>
<td>18 din/tonne</td>
<td>401</td>
</tr>
<tr>
<td>1910</td>
<td>3.00</td>
<td>84.5</td>
<td>28.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1911</td>
<td>5.04</td>
<td>91.5</td>
<td>18.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1912</td>
<td>n.a</td>
<td>200a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1913</td>
<td>8.78</td>
<td>192.6</td>
<td>21.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. estimate

(b) Production of refined sugar (tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>From Serbian Sugarbeet</th>
<th>From Imported Raw Sugar</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td></td>
<td></td>
<td>7012</td>
</tr>
<tr>
<td>1907</td>
<td></td>
<td></td>
<td>7524</td>
</tr>
<tr>
<td>1908</td>
<td></td>
<td></td>
<td>7992</td>
</tr>
<tr>
<td>1909</td>
<td></td>
<td></td>
<td>7770</td>
</tr>
<tr>
<td>1910</td>
<td>6766</td>
<td>4226</td>
<td>10992</td>
</tr>
<tr>
<td>1911</td>
<td></td>
<td></td>
<td>9540</td>
</tr>
</tbody>
</table>

(b) C Be 1910, R C CLI, p.460; Handelsmuseum 1910, p.22; I K S Izveštaj, u 1911 godini, p.27.
h. Developmental aspects of the food processing enterprises.

Small though the total was, the food processing industries whose development we have discussed provided about half of total gross industrial output according to the calculations of Dr. Lampe, (though a rather smaller percentage of value added). His figures are tabulated in a slightly reorganised form below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Milling (Million dinars at 1888 prices)</th>
<th>Brewing</th>
<th>Meat Packing</th>
<th>Sugar</th>
<th>Total</th>
<th>As % of Industrial Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1898</td>
<td>8</td>
<td>3</td>
<td>.3</td>
<td></td>
<td>11.3</td>
<td>43</td>
</tr>
<tr>
<td>1904</td>
<td>14</td>
<td>3</td>
<td>3.5</td>
<td></td>
<td>20.5</td>
<td>51</td>
</tr>
<tr>
<td>1908</td>
<td>20</td>
<td>5</td>
<td>5.8</td>
<td>3.1</td>
<td>33.9</td>
<td>49</td>
</tr>
<tr>
<td>1911</td>
<td>20</td>
<td>7</td>
<td>21</td>
<td>5</td>
<td>53</td>
<td>50</td>
</tr>
</tbody>
</table>


These were not of course the only industries which made substantial use of, or were dependent on raw materials from the farm economy; such a list must also include plum drying, jam making, distilling, hemp processing, tobacco manufacturing, silk producing, tanning, and woollen textiles, some of which we shall consider in the context of the raw material basis for production.

The developmental linkages between the food processing industries and the farm economy were of some importance. Firstly, we should stress that the meat packing industry, though it failed to satisfy the expectations aroused during the tariff war, did at least permit to a modest degree the maintenance of the hog raising sector, which would otherwise have had to close down almost entirely. And the pressures and activities of this industry to secure the modification of hog supply had some long term value, even though they were unsuccessful within the necessarily short-term horizons...
of the meat packers. The same might be said of the efforts of the brewing industry to promote the supply of malting barley, and of the Turn und Taxis sugar factory, which used its position to promote the sale to beet growers of agricultural machinery manufactured by its German parent. Of more immediate significance was the creation by the poultry product exporting firms of a much wider commerce than would otherwise have been possible in poultry and, particularly, eggs. The key contribution of the sugar industry was, of course, that it created its own supply.

At least in the food industries - and it was not inactive elsewhere - immigrant entrepreneurship appears to have been very largely responsible for their establishment and development. These industries were, of course, based on a relatively simple technology, they were not capital intensive, and they were intensive of craft and managerial rather than technological skills. These they disseminated without difficulty for they were the kind of skills to which a peasant society was receptive.

For example, Milivoje Kostic, visiting the Velika Plana meat factory during a period of difficulty with Austria-Hungary noted "what is particularly important to mention is that this abattoir prepares the local peasants as good butchers, and in the summer they were called on to slaughter in many places when the export of live animals was forbidden". And, although the immigrant enterprises were for the most part marked initially by very unsophisticated techniques, the usage of both capital and technology were steadily deepened over time as they expanded. Such industries were eminently well suited to take root in the economy of a country such as Serbia, which though not within the lowest income category, was extremely

1 D Milic, "Nemacki Kapital ..." loc.cit.
2 M M Kostic, Pisma s Puta ..., p.20.
backward technically and educationally. What the Volksdeutsch or Czech artisan - capitalist was capable technically and financially of innovating, the Serbian businessman was capable of emulating. The extent to which the vanguard of immigrant enterprise drew behind it a tail of native emulators varied according to the competitive structure of the trade. In milling, there were few barriers to entry, and the dominance of the immigrant firm diminished very markedly, though not to insignificance. In brewing, on the other hand, the tendency towards oligopolistic competition with product differentiation exerted severe pressures on the latecomer, so that the industry's expansion depended heavily on the existing firms. In the poultry business, the innovating immigrant firms appear to have sown up the trade within a fairly tight cartel structure, and thereby to have insulated themselves from competition. In the meat packing trade, native enterprise should have been able to follow that of the immigrant firms, despite the special circumstances of this industry. However, it was probably the dominance of the state-capitalist Belgrade Klanica, and the policy it pursued which, more than the immigrant enterprises, deterred investment in the industry. The Mladenovac factory was admittedly in Serbian hands by 1911, but no substantial meat packing concerns were set up by native enterprise, with the exception of meat product processing establishments in Belgrade (1888 and 1911) and Kragujevac (1907). But despite the somewhat disappointing response of native enterprise in these industries, it should also be remembered that most of the immigrant founders and their families speedily naturalised themselves to the host country, did not expatriate their profits, and turned them to further investment both inside the industries which established them, and outside these industries, particularly in mining (Weifert) and banking.

1 J Grgašević, op.cit., pp. 94, 97 and see p. 504 below; Lampe, thesis p. 304.
In several respects, the sugar industry was the exception to prove the rule. Too capital intensive and (probably) too complex technically for introduction by the artizan-capitalist by 1900, its adoption by Serbian native enterprise was ruled out for the same reasons. Again it was heavily dependent on foreign labour, to an extent which the other food processing industries were not. In 1910, the milling industry employed 96.8% Serbian labour, and brewing 95.8%, whereas the sugar factory needed 24.0% foreign labour.¹

Even when this enterprise had demonstrated the profitability of the sugar industry, the aspirations of Serbian competition had to be satisfied with minority participation in the Czech bank's Čuprija factory, under Czech technical direction. Yet the example of this industry demonstrates a significant means by which foreign capital investment could stimulate development in an underdeveloped economy - where the technology and aggregate of capital required would inhibit native competition, but where nonetheless powerful backward linkages into agriculture would open up new opportunities for the farmer. In the long run, Mackay's effect (emulation of the success of foreign capital investment) might operate, once the country had attained the level of industrial sophistication, say, of Tsarist Russia during the same period, but for a country of Serbia's backwardness, the same would be achieved more satisfactorily in the short run by the import of immigrant entrepreneurship. But both forms of entrepreneurial import had a role to play.

¹I K S, Izveštaj..., u 1910 godini, tablica 10.
CHAPTER VI.

IDLE AND UNDERUTILIZED RESOURCES IN LABOUR

INTENSIVE COMMERCIAL CROP PRODUCTION.

The powerful response on the part of producers to the belated opportunities created by the establishment of sugar manufacturing was symptomatic of their requirement of less extensive means of earning money than was offered by the raising of cereals for trade. As we observed in Chapter III, the problem posed by the expansion of cereal agriculture was that while it provided a means of raising the total production of a given area, it could only do so, given unchanged per capita capital inputs, at the cost of declining average productivity per worker because, at the then pertaining price relationship between grain and pastoral produce, the marginal product of labour in the expanding arable sector was below that pertaining in the relatively diminishing stockraising economy. Given also, that during the Great Depression era, when the need to undertake the transition was becoming increasingly urgent, relative prices were moving against the farmer moving out of pastoralism and into arable farming, so the productivity problem was further intensified. In the light of this analysis, the reluctance of farmers to enter the market in arable produce became readily comprehensible. We further noted that the time lag between the growth in commercial crop production, and the emergence of conditions which favoured the capital intensification of arable farming, being a very long one, of thirty or forty years, the intervening period promised to be one of developmental stagnation, or would have so promised but for the organizational rationalization of the still extensive stockraising economy. However, we should
not exclude the possibility of there having existed developmental short-cuts within agriculture, in the form of the introduction of new market products, offering a relatively high yield per hectare, which did not necessarily call for increased capital intensity.

There is no reason for thinking that such new crops would necessarily offer a lower return to labour than the existing arrangements, even though they would likely be more labour intensive. This is because the price received by producers could reflect world market price relativities rather than those previously pertaining within Serbia, so that it should be possible for producers, if faced with a reasonable choice of alternative intensive market crops, to select for cultivation those which, in the light of Serbian factor market conditions, would yield an economic rent to labour. Bearing in mind that the output of the small Serbian economy would be unlikely for most crops to turn the world market price against the producer, that rent would be unaffected by internal developments.

The questions we must put concern the commercial cropping opportunities (other than for cereals) available to the Serbian farmer; and the means by which such opportunities were created. The farmer could hardly be expected to combine his function with that of the merchant. He could not produce a commercial crop for the world market, even if he was aware of the latter's existence and even if the crop were produced for domestic and local trade demands, unless a mechanism were provided for the world market to take it up.
The physical means of transport were by no means the most pressing of problems. Most commercial crops were considerably more valuable in relation to their weight than the cereals, and those that were not could sometimes be processed down in weight before leaving the farm. Good communications would obviously facilitate the development of trade in such commodities but their lack would not render it impossible. The principal problem was not of getting the crop to market but of bringing the market to the crop.

This function, of unifying supply sources with consumer markets is the principal developmental function of the merchant. There is a tendency among economic historians of pre-industrial economies to pay attention to the formation of a commercial bourgeoisie principally in terms of its significance as a source of capital accumulation, and social stratification, rather than as the driving force of that "engine of growth", commodity trade. Similarly, entrepreneurship studies tend to focus on innovational decision making within industry and financial institutions, rather than in commerce, notwithstanding the well known fact that successful enterprise is at least as much a measure of decision making in selling as in modifying the techniques of production. This is no philosophical digression; the development of the Sorbian farm economy was in no small measure dependent on the success of merchant enterprise in unifying markets, that is to say, in opening up for the producer the opportunity to sell new goods into new markets.

As we noted in Chapter V, the creation of new industries, selling new products - beer and white flour - onto existing markets,
or processing existing products for world markets was very much the achievement of the immigrant entrepreneur, coming into the Serbian market with a knowledge of consumption and production patterns in the outside world, rather than of the domestic entrepreneur, whose innovational capacity was limited largely to adopting industrial techniques for manufacturing existing products for existing internal markets. The arguments are essentially no different when applied not to manufacturing but to commerce. It was rare to find in this field the native merchant entrepreneur who had sufficient awareness of the possibilities of exploiting demands for produce on the world market, the knowledge of how to exploit them, and the organizational and financial capacity to do so.

d. Plums.

Only one entirely new commercial crop of any significance — sugar — was introduced into the Serbian farm economy during the period with which we are concerned, but several quite important ones, in particular wine, plums, silk, hemp and tobacco were cultivated to a greater or lesser extent, mainly for self consumption and for local trade, but did not pass in any considerable volume onto the world market, except after and in consequence of stimuli given to their trade by the intervention of outside interests. All these were relatively intensive crops which could produce a high money yield per hectare: an official publication of 1906 shows their yield (compared with wheat at 115 dinars) as

<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield (per hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>plums</td>
<td>173</td>
</tr>
<tr>
<td>native vines</td>
<td>535</td>
</tr>
<tr>
<td>American vines</td>
<td>1,328</td>
</tr>
<tr>
<td>hemp</td>
<td>307</td>
</tr>
<tr>
<td>tobacco</td>
<td>493</td>
</tr>
</tbody>
</table>

All, in some or other form could be absorbed by international commerce, should the requisite outlets be established.

Of these, the most glaringly underutilized resource must have been the plum. Within the area of the Serbion state as it was in 1047, there were about 13.4 million stands.¹ (The subsequently annexed territories were not significant plum growing regions; according to the 1897 cultivation census they only contributed 1.6% of the total number of stands,⁴ and there is no reason for thinking that their production had been any more significant hitherto).

On the assumption that yields per hectare did not change over time, we can make a rough estimate of plum production in 1847. In 1900–08 mean yields were 28 quintals per hectare.³ In 1897, there were 97,971 hectares of fruit trees, of which 95.48% were plums, or 93,546 ha. of plum trees, comprising 26.256 million stands.⁴ This indicates a density of 280.67 stands per hectare, and 9.976 kg. per stand, suggesting output in 1847 of about 133,700 tonnes within the narrower and 135,900 tonnes within the wider frontiers of the country. This immense quantity of fruit, however, only sustained an annual export of about 500 tonnes of weak liquor, and about 100 tonnes of prunes, altogether the equivalent of no more than about 2% of the crop, though per capita production must have been about 124 kg. per annum.

1. See Appendix I to this chapter p.425
2. Statistika XVI, p. 365
3. S.G. 1900, pp 186–92
4. Statistika XVI, p. 366
The larger part of this was probably distilled to rakija kljivovica, in the villages, in the 20,729 distilling bottles that the country possessed in 1867. Apart from this, the plum could be and was made to serve in its raw state as food for men and beasts alike. Raw plums are of course highly perishable, very bulky in relation to their value, and vulnerable to damage in transit by ox-cart on the rough roads. They could not therefore be exported to any appreciable extent. There was, however, some trade in rakija kljivovica, which being stable and relatively much more valuable in relation to weight could withstand transportation. But its market was severely limited. The taste for it existed only in the Balkans, and then mainly in areas which raised the raw material themselves. Potential supply far outweighed the potential market, and it was only from certain areas on the fringes of the belt in which the plum was cultivated that this liquor could be disposed of by way of trade. For rakija marketed in Kragujevac okrug, the sole outlet, even after opening the railway, was Belgrade. In 1908, 41,260 hectolitres (hl) of rakija was marketed in the okrug and 40,290 hl were consigned from railway stations in the okrug for internal destinations; it is hard to see how it could have gone anywhere else but the capital. Had it enjoyed any export outlets it would not have been consigned for internal freighting. There was some trade in rakija across the Great Morava to the plum deficient regions in the east, but even here, the

1. Đržavina V, p 115.
2. F. Kanitz, Forbien...p 94; R.T. Nikolić 'Poljanica i Kljura...'
4. Bad road conditions could sometimes render even the export of processed plums impossible from some of the remotest regions.
peasants had some plums to supply household needs, and in any case they distilled their own rakija komovica from maro de raisin. Few export sales to the north were possible, and up to 1875 between 90% and 99% of rakija exports were sent south to Turkey. Export sales rose to about 24,000 hl per annum in the late 1850’s and then stagnated. After 1862, market penetration in Turkey was impeded by increased duties, and after 1880, tariffs in Turkey and Austria against Serbian rakija were raised to prohibitive levels and the trade contracted abruptly. In fact the cut off was not so abrupt as the official trade figures suggest, for the merchants turned to smuggling, particularly into the Sandžak of Kovi Pazar. And this resulted in a trade of very considerable magnitude. There is little direct reference to this in the literature: Ignjić mentions smuggling of rakija into the Sandžak after 1909, but only in passing. But a French consular despatch of 1903 estimated the contraband export of liquor as double the amount officially exported, though as we shall show, this was probably an underestimate. What, if they were not smuggling the liquor across the frontier, could the two kiridžija of Rača area (Užice okrug) have been doing, carrying rakija regularly to the tiny frontier township of Bajina Bašta, itself in a major plum producing area? We have sufficient data for estimating the volume of this trade. Out of 179,000 hl of rakija sold on Serbian markets in 1904, 41,200 were sold in Cačak okrug and 13,100 in

2. See table VII 6 below, p. 477
3. AAE. CCB. t. 4 despatch of 24.5.1865, fo. 59.
4. S. Ignjić, Užico i Okolina... p 87.
6. S. Trojanović, Naše Kiridžija, p 44
Užice okrug.¹ As local abundance would have precluded the possibility of any substantial purchases for town consumption, nearly all of it must have been sold for sale outside this area. If it had originated locally, then we might assume it was passed up the Ibar and West Morava valleys for distribution through Kruševac - as indeed some was - but the greater part of it had probably not originated locally at all. Čačak and Užice okruži only produced 34,000 hl altogether. Allowing for self-consumption, about 30,000 hl of the traded rakija must have been brought in from outside. The only place from which it could have come was from the north-west - particularly Rudnik okrug, but why in that case should producers be shifting their output in a south-westerly direction, away from the internal market? It therefore seems that sales of rakija in Čačak, Rudnik and Užice okruži (for which we have data between 1898 and 1903) are probably a good approximation to the size of the export trade. On this basis the customs figures could underestimate the real export of rakija by about 2.3 million dinars in the early 20th Century.²

But although the rakija trade - which appears to have been in the hands of the wine merchants - was evidently capable of holding onto its traditional outlets by legal means or otherwise, its ingenuity fell far short of establishing new and wider outlets. Some thought this a practical possibility; a Šabac newspaper editor complained in 1906 that demand for it could greatly be increased if only the Serbs would "educate" the taste of the German market. If they did

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¹ G.D. 1904, pp 464-5
² N.M. II:6 "Ibar..." N.M.Z. III p 561.
³ See Appendix II to this chapter. The former Rudnik okrug was split in 1902 into the new okruži of Rudnik and Čačak.
⁴ AAE, CGB: t. 7 despatch of 3.9.1888, fo. 353; N.D. Popović, op cit p. 69.
not, some "Schwab" would move in to derive the profit from manufacturing and exporting the product himself.¹ His observation was prescient, for in 1908 a German speculator, F. von Pilis, applied for and obtained a concession on a proposed distillery at Paradin which would produce liquor from plums, cherries and grapes, and the project invited the rivalry of British and French interests.²

But a really large trade in rakija blastovica was not in prospect, least of all for the areas of very large plum surplus in the north-west of the country. According to a report of 1848, from the region of Sabac, consumption of rakija was enormous. But all of it was consumed in the households and no money was earned from its sale. In the view of the reporter, as the production of the commodity was not earning any money, the return seemed hardly commensurate with the effort.³

Though distilling them was undoubtedly a convenient way of packaging plums, it was not one which could get them out on a large scale to the world market. Yet another existed, which was to dry them and export prunes. It is worth noting that, because of slow communications, a very large part of the international trade in fruit was conducted in dried or otherwise preserved form, and there was a very large market for such fruit in western Europe: we have only to note the trades in jam, in Spanish marmalade, in Greek and Turkish raisins and currants, in dried and sugared dates and figs to see the

². DeAg. KNP (T) 1908, III. 2, Pilis-K.N.P., Berlin, 23.5.1908; FO 368 580 No. 11655 comm. of 29.3.1911; FO 368 724, No. 23037 comm. of 24.5.1912.
³. S.S. List 2.3.1848, pp 67-8.
way such trades developed, and implanted new consumer tastes in the receiving countries. And prunes particularly were held in high esteem by the Victorians. So it was that only across the Drina, in Bosnia, plums were being brought onto the international market on a very much larger scale. Here, they were dried on the farms and exported through the Sava ports of Banja Luka and Brčko, eventually to find their way through Trieste to markets as far afield as the U.S.A. and Brazil. In 1858, while a mere 46 tonnes of prunes were exported from Serbia, 1,633 tonnes of Bosnian prunes left through Banja Luka and 2,450 tonnes left through Brčko.1

As the Serbian and Bosnian plum belts were parts of a continuous plum growing region, stretching inland from the Sava, the failure of Serbian growers to participate in this trade must necessarily be explained partly, at least, in terms of a failure of market communications.

b. Wine.

Similarly with wine, another major product of the Serbian village economy. In 1847 there were 381,300 mešaka (21,900 hectares) of vineyard in Serbia, and in 1867, 410,700 mešiška (23,600 ha.)2 Additionally the Pasalik of Nis was also a substantial wine growing area, with 18.9% of the total area under vines after annexation, (and 17.5% of the population).3 Viticulture was more evenly dispersed than plum growing, but tended to concentrate in the Morava valley and the east of the country.

1. CvDr. (Boa) 1858, pp 457-9; S. Dj. Kilošević, op cit p. 10.
3. Državnis XIX, p 97.
1880's data suggest that in a normal year production would have been about 20 hectolitres per hectare,\(^1\) which points to aggregate wine production in 1847 of 438,000 hl and in 1867 of 472,000 hl. These must be taken as very rough, order of magnitude figures. Allowing for the annexed territories, the figures would increase to 540,000 hl and 582,000 hl. These make per capita production in 1847 about 49 litres and in 1867 about 39 litres.\(^2\)

Wine supported a very considerable volume of internal trade. A remark of Ani Boué (1837) suggests that this trade fluctuated violently with the harvest but was nevertheless substantial. For although\(^3\)

"the Serbians in general make little use of wine... in those years in which much is produced, much is consumed, and at a cheap rate"

The last few words indicate a market situation. The volume of this trade is difficult to estimate. But rather later, in the late 1880's (when a sizeable export had developed) a British consul recorded that

"one of the principal wine exporters of Belgrade furnished me with the following figures [for]
'annual wine production'.

These totalled some 270,000 hectolitres. This was broken down by region as follows:\(^4\)

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1. ALL F12 7179 Reverseaux-Ferry 25.3.1884. Appears to refer to harvests of 1882 and 1883.
2. This accords well with an estimate of 1873 that the country's output amounted to 36 litres per capita. B. Jovanović, Srpska Zagranica Vinojina (Beograd, 1873) pp 54-5
3. A. Boué, La Turquie d'Europe, III p 23.
4. C. Dr. (3) 1887-88, p 49.
Krajina 150,000 hl. (55.6\%)
Nis 30,000 "
Kruševac 20,000
Požarovač 15,000
Smederevo 15,000

Belgrade, Gornja Reka, Knjaževac and Jagodina each 10,000 hl.

But aggregate production at this time was much larger. A French estimate of 1884 estimated the annual production of the country at 680,000 hl,\(^1\) and a Belgian estimate for 1836 was 900,000 hl.\(^2\) The vineyard census of 1889 put the harvest in that year at a (doubtfully) high 1,620,000 hl. Furthermore, the distribution of production was entirely at variance with the figures quoted above. Krajina produced only 13.7\% of the total.\(^3\) However, the consular figures become meaningful as estimates of commercial production. This was intimated by the rider that regions which were not included in the list "produce only sufficient for home consumption.\(^4\)

And they were after all supplied by a trade source whose own interest would have been the amount available for commerce. Now as exports during the three preceding years averaged 42,000 hl per annum, it is implied that there was an internal trade of about 230,000 hl per annum, or about a third of total output. Even this may be something of an understatement if the commercial wine production of the pašalik of Nis is taken fully into account. A complaint was made by the peasants of the region to the Russian consul in 1841 about the fiscal effects of the 1839 Hatić of Gulhane:

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1. AA.E.CCB. t. 6 despatch of 4.10.1834, fo. 334.
3. Državnica XIX, p 97
4. C.Br. (S) 1837-50 p 45.
"... they have begun again to seek a levy on wine of 4 para per oka and for rakija of 8 para per oka... we announce that we will pay, but that we will no longer cultivate vineyards and gardens... we do not sell wine and rakija dearer than 8 or 10 para per oka."

The throat was, of course, idle. The township and district of Vlasotinci and the environs of Niš in particular were noted for a large scale of commercial wine growing, and in the 1870's, 20,000 hl of wine per year were estimated to have flowed through Pirot to Bulgaria, while Dobrić wine went out to Bosnia and Stara Srbija.

A French despatch of 1883 put the wine production of Niš and Pirot okrasi as high as 570,000 hl. This, however, looks like a conversion of a round-figure guess of 1 million akova, the akov being the local unit of volumetric measure, of 0.57 hl. Out of this, it was estimated that 350,000 hl were consumed locally.

"there are thus 220,000 hl to dispose of by export to the non wine growing regions of Serbia".

That is to say, at least 38.6% was traded. Now the 1889 census figure — which is itself probably generous — indicates production in these two okrasi of 505,200 akova — about half of Millet's estimate.

Scaling down commerce accordingly, we are left with 311,000 hl entering trade compared with the British consular estimate for the same region of 30,000. This adjustment would therefore raise the volume of internal commerce by 81,000 hl to 311,000 hl, or between 35% and 46% of the crop.

References:
3. V. Karić, Srbija..., p 772
5. AAE, CCB, t 7 despatch of 29.10.1880, fo. 372. Reproduced in R. Millet, La Serbie Economique..., p. 140, but with 570,000 hl altered, probably in error, to 670,000 hl.
Before 1879, when Serbian wine began to enter the world market, there is evidence that the internal market was becoming over-saturated with supplies. The problem was particularly acute for the areas of large potential surpluses in the east and south of the country, which suffered from a lack of good communications with the consumer markets of the capital and the west. In 1863, wine sold at Knjaževac at 53.9 groš per tovar, in Negotin at 55.3 groš, in the capital at 80.6 groš, and at 154.9 groš at Valjevo. The Knjaževac wine region was probably the most isolated of all, but, as a densely populated area short of arable, but with good conditions for wine growing, it had probably been amongst the earliest of suppliers to the trade. The student party which visited the region in 1863 noted:

"The Knjaževac region produces a good wine which is believed by experts to be one of the best in Serbia. Till twenty years ago, this was the only really well known Serbian wine, under the name of Tinok wine; but subsequently it was overtaken by the Krajina wine. Were this wine in a place where it could easily be exported, surely it could withstand competition with the Negotin."

The wines of Negotinska Krajina to the north of this region enjoyed much better market access because of their proximity to the Danube at Raduževac. The main wine producing district here was located on the slopes of a ring of low hills which flanked the southern and western approaches of Negotin town. Four of the opštine within these hills (Rajac, Robičnica, Križić and Ișvor) were noted in the early 1860s as among the most important wine producing hillside in the country, with 4 - 5,000 potika each of vine.

In 1853 the output of the Krajina hills was estimated as 7-8 million oka in a good - average year. D. Kaslovarević describes the region,

1. Državna II p. 123.
4. A.P. Ivanović "Opisanio okružija Krajinskog" Glasnik Društva Srbske slovannosti V (1853) p. 247. If these are fluid oka, this would be about 40 - 46,000 hl.
in the period before 1890 as

"a pure vineyard zone, where the population engaged in viticulture. Within this zone, the other branches of agriculture were only practiced for domestic needs."

By the 1860's or 70's, it appears that about 50,000 hl per annum of Krajina wine were sent by boat to Belgrade, supplies also being sent to the Morava valley, the south west, the Kačva and Pirot.

But although apparently displacing the Tinok wines, the Negotin producers too were encountering outlet difficulties. Danube transport from Negotin to Belgrade was expensive because of the need to navigate upstream across the Iron Gates. So their products in turn were being squeezed on Belgrade market, not only by low price wine imported from Hungary, which nevertheless since 1869 had been handicapped by the imposition of a consumption duty (trošarina) on imported drink, but also by wine from the more easily accessible Smederevo vineyards. Although

"the wines of Smederevo are not as highly esteemed as those of the Krajina...the products of Smederevo are very much in demand by the consumers of the capital who accept them provided they are cheap"

Again the same pattern as with the Tinok: boom, and then stagnation.

In 1853, the economy of this viticultural region was glowing with prosperity, filled in the west with

"pure, hardworking and wealthy Serbs",

about whom

"one can indeed say that the beneficial Serbian freedom has borne fruit to abundance".

2. Ibid, p 177
3. AAR. CCB/6, despatch of 6.6.1883, fo. 209; B. Jovanović, op cit p 52.
Two decades later, an investigator into the state of the vineyards found that most of the vines were very old, somewhat neglected, and that there was little effort being made to renew the vineyards or to lay out new ones. Interest in innovation was low and as

"these wines are very cheap for domestic use, consequent on the high production and only a small export trade; so it does not pay the producers to work at the improvement of their wines."

Conversely, in the Smederevo wine growing region,

"on this great river, and being so near to Belgrade, and to all other centres on the Danube, Smederevo is very favourably placed..."[and the] "many new vine plants which are visible show that in this branch of cultivation, the development of our domestic economy, which till recently was represented at Smederevo in a bad light, will soon begin to move forward...

And despite the superior reputation of the Negotina, he showed that the price commanded by wine in Smederevo was nearly as high as that in Belgrade, and far higher than that in Negotin.2

To stimulate the high but evidently stagnating volume of commerce, it is clear that export outlets were needed. The problem was further intensified after 1878 by the shutting out from their former markets of the wines of the annexed territories.3 Likewise, before 1869 a trickle of Serbian wine had been exported to Romania, which then levied a penal duty on it, forcing some diversion of the trade into the Turkish provinces. It was claimed that the resultant lack of market access was thwarting the big export potential of the Krajina.4 Nothing was done, worth speaking of, about it. The

1. Kilutin Savid, Beležke o Vinodolju Krajinskem i Smedorevskom... (Beograd, 1874) pp 8,11,19.
2. Ibid, pp 22,24,49.
3. PRO PO 10953, Ro. 13 comm. of 30.12.1885; V. Karić, op cit p 772.
government negotiated with Romania to reduce the tariff, and a test
consignment of some exceptionally strong Kogotin was sent by private
individuals to Russia by the Black Sea. But there was little or
no regular export trade. Some Kogotin could be obtained in Vienna
"at lokales frequented by Serbs"
but a large Budapest wine merchant was of the opinion that it was
only with great trouble that it could be obtained.

The various processes connected with the raising, reeling
and weaving of silk are probably among the most labour intensive
of all forms of peasant economy. Nevertheless the processes involved
were of varying intensity. As noted by T.C. Smith, writing of Japan,
those variations gave rise to regional specialization between mixed
farming areas which raised the cocoons, uplands which produced silk
yarn, and paddy regions which worked up cloth. In the relatively
labour scarce economy of Serbia we might expect the first of these
processes to attract more attention from the point of view of trade
than the second or third. Producers could not carry this division
of labour to its logical extreme as was apparently practiced in parts
of Macedonia, where owners of mulberry orchards sold mulberry leaves
to silk raisers at one zwanziger the oka, or the foliage of a whole
tree for a thaler.

"So someone who has 60 mulberries can collect in his
pocket 50 thalers [the equivalent of about 300 dinars]

1. Ibid.
3. Ibid p 51.
p. 80.
without any labour; he who still wants to rear cocoons with his mulberries will usually triple this sum."

In Serbia, this would not have been possible because of the absence of the large pre-industrial Macedonian šaršija towns with their underemployed lumpen-proletariats. Silk raising and mulberry orchards could not be dissociated.

Thus a British consul writing in 1865 was expressing a very reasonable doubt in noting that:

"it is generally admitted that the climate of Serbia is favourable to the rearing of the silk – but it is very much doubted whether the peasants are disposed to give their attention to the subject"

For commercial purposes, that is to say: domestic use was another matter. Silk is claimed to have been introduced into Serbia by the Austrian authorities during the occupation of 1717-1739 and was protected by the state, presumably as a supply source for the Austrian silk manufacturing industry, but its raising, and all stages of its manufacture survived this period as a branch of folk industry for household consumption, if for no other reason, as part of the peasant woman’s routine. Output is unknown. There was however a trickle of external trade which was probably growing.

Coarse, unequal and rough Serbian silk yarn was found on Trieste market before the 1840’s. A. Đouše noted the township of

1. Put Likojskeh Pitanaca...p. 167
2. See below p 410
3. C.Br. (3) 1863-64, p 395.
4. F. Bianconi, Carte Commerciales, Nr. 4, p 29.1
5. AAE.GCB t.2 despatch of 3.3.1850, fo. 357.
Svilajnao as one of the places where it was raised - the place derives its name from the commodity - but only *because certain families rear it for their private needs.*

However, a few years later, Paton (1845) visited Renavac, the richest man of the place, noting that *Svilajnao is the only place where silk is cultivated to any extent, the Renavats family having paid especial attention to it."

Austrian business interest in Serbian silk appears to have been quickening. Two offers by businessmen from the Hapsburg lands for the development of the silk raising industry in Serbia were made in 1841 and 1846. Yet Dr. Kilić claims that the production of silk was "vegetating". Nevertheless we may suspect that a growing activity in the Serbian silk market was probably a reason for the sudden interest of the Vataborani telaj government to intervene with the object of promoting production in 1845 or 1846, inaugurating a period of intermittent state solicitude for the industry which extended over several decades. An optimistic writer of 1873 (when the industry was on the point of collapse) noted that *Our government has done everything possible to promote this important branch of the national economy and therefore a satisfactory outcome is inevitable.*

It set up nurseries to supply mulberry seedlings, and organized the distribution of cocoons and the collection of cocoons. It wanted

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4. Ibid, p 231.
5. Ibid, pp 231-3.
to keep the whole business in its own hands so it rejected the
offers alluded to above. This was a mistake, for the trade was
utterly dependent on disposing of the cocoons to Austrian purchasing
interests, as producers discovered to their cost in 1848.1

"By private information which we have obtained,
nobody will buy silk cocoons in Austria. The
people who raised silkworm eggs this spring in
the hope of profit now find themselves deceived.
The reason for this, that the manufacture of silk
has ceased, is the unrest in Europe, which shakes
every trade and manufacture. Many merchants are
threatened by this unrest with collapse".

Thus for the period of the 1848-49 crisis the programme
appears to have been left in abeyance. Positive evidence of
state activity is confined to 1846, 1847 and, after the crisis, from
1850.2 But it appears that during the '50's the state persevered
with its efforts, for in 1858, the state establishment at Pešarevac
was still distributing mulberry plants. A trickle of exports of
silk manufactures continued to find their way onto the market
through the intermediary of petty Jewish traders who sold them at
Tuzla (Tinipcara) and Trieste.3

Nevertheless, it may be doubted whether the efforts of
the state did much to stimulate foreign trade; it is more likely
that producers who took seedlings from the nurseries wanted to
make silk materials for their own purposes. But because of
changing needs, such demands were diminishing. In a revealing

1. C.S. List', II, 21 of 25.5.1848, p 161.
3. AAR.CCB. t.2 despatch of 3.3.1858, fo. 366.
comment, it was remarked that at the village of Districa, where the white mulberry abounded, silk making had at one time been practiced

"in almost every house"

but was now in high decline since the adoption of hemp raising, and silk was only needed to provide thread for stitches. ¹ By the early 1860’s, the industry at the township of Gradište, which had produced only for domestic needs

"in most recent times had weakened";
in another area even the local nurseries had been abandoned.²

Such commercial silkraising as did survive into the 1850’s and ’60’s was probably, as at Jagodina, geared to meeting the demands of the domestic rather than the foreign market, and probably supplied silk yarn.³

The prospects for this had little future. On the one hand, the quality of the product was probably too poor to compete in the international market. On the other, the return to labour was too low to make it worthwhile to many producers. The attempt of the government in the 1840’s to stimulate the industry was probably on the right lines insofar as the emphasis was clearly on the raising and export of cocoons, which seems to have accorded much better than silk manufacture with Serbian factor relativities, but as the market for cocoons had plainly failed by the 1850’s, the decline of the industry was virtually inevitable. Nevertheless, the Serbian

¹ Put idejskih Pitanaca..., p 31.
² Ibid., pp 7, 95.
³ Put idejskih Pitanaca..., p 165.
mulberry orchards and the established silk raising skills in some at least of the Serbian villages constituted an idle resource open to the future importer of silkworm eggs or cocoons to exploit.

d. Hemp.

Hemp was raised throughout Serbia mainly for domestic self-consumption, but in the plains round Leskovac and Vranje, where it succeeded particularly well, it was raised as the principal commercial crop. In cash terms it yielded 307 dinars per hectare (1900-04), compared with 50 - 115 for cereals,¹ and as it did not require much capital to support its cultivation, it may be assumed to have been a highly labour intensive crop, particularly as it was normally delivered to the market in picked condition, and the picking process alone (which was immensely laborious) raised its value by 50% over unpicked condition.² Moreover, although much of the hemp raised passed on to the market as raw material, it was also open to the producer to add further value to the product by working it up into rope, as many did. As prepared hemp and rope had very high value-to-weight ratios, they could be traded easily without modern communications, and in the rather overpopulated valleys which concentrated on the crop it is easy to see why both production and trade in hemp expanded.

According to the official statistics on cultivation,

¹ H.S.N.P. 1906.2. pp 45-46.
² On the basis of picked and unpicked hemp export figures 1899-1901 the markup would be 56%, from 407 to 635 din/kg. The valuations above, however, appear to refer to hemp in picked condition, though nowhere is this specifically stated, but even unpicked hemp would still have been a fairly high yielding product. See standard sources for foreign trade statistics 1899-1901.
Serbia's production of 4,910 tonnes of hemp in 1897/1900 had risen by 31% by 1907/08, but that growth was heavily concentrated in the area where it was already grown principally for commercial purposes, the okrug of Vranje (particularly round Leskovac and Vranje towns). Here production rose from 788 tons by 89% during the same period, so that the proportion of the total crop raised in Vranje okrug rose from 16% to 23%. However, by no means all of the hemp that passed into commerce originated from the Vranje and Leskovac areas, as experts of hemp, raw and prepared, and of rope exceeded the production of these areas, while according to one estimate for the end of the period, the approximate 800 tonnes of rope exported annually represented only about 30% of production, the rest being absorbed by the home market. Evidently the production of hemp was also being increasingly monetised in other parts of Serbia and the last of the three hemp processing plants to be established in the country before the Balkan wars was located in the Great Morava valley near Svilajnac, in a region whose production was reported in 1909 at a zero 114 tonnes. This was nevertheless directed mainly to industrial purposes. This process would probably have been carried much further had other areas been as well favoured climatically for the crop as Vranje okrug.

Ropemaking was urban craft which, however, was gradually moving away from the towns and into the villages. This was not a situation characteristic of the working up of agricultural raw materials.
materials in the area of pre-1878 Serbia, for here since the
displacement of the Turks, the towns had been fairly small places
serving in the main a local commercial, administrative and craft
manufacturing function for the surrounding villages. Low pressure
on landed resources had resulted in the absence or very restrained
existence of an urban proletariat. But conditions in the former
Pashalik of Niš, when it was annexed in 1878, were much more akin
to those in Turkish Macedonia where, as elsewhere in Ottoman Turkey,
the large târîkich town survived. The Bulgarian historian N. Todorov
has discussed this phenomenon of the târîkich town, with a large wage
earning proto-proletariat, seeing it as a product of the feudal
system and the period of its decay, when notwithstanding the
availability of abundant land, in an absolute sense in relation to
population, the ownership structure and insecurity of land relations
tended to extrude the peasant population to eke out a living in the
towns.¹ In Serbia, the collapse of Turkish rule had led to an
accompanying diminution of urban population, not only among the Turks
who left, but also through the ruralization of the Serbian population.
The repeat of this process after 1878 in the annexed territories was
no longer possible because of the infilling of the land in the
intervening years of population growth, and although there was
relatively little growth in the population of the towns here, the
existing urban proletariat remained largely locked into the
prevailing low wage urban economy, which favoured the establishment
of hand manufacturing industry. Repopulating, because of the local

¹ N. Todorov, "The Genesis of Capitalism in the Balkan Provinces of
the Ottoman Empire in the Nineteenth Century" Explorations in
availability of raw material, tended to be the dominant branch of hand manufacturing in Leskovanac and Vranje.

After the annexation, the masters of the craft were able to form themselves into обмаф (guilds) according to the provisions of Serbian guild law. After about 1690, a division emerged, as the traditional укар (ropemaker) techniques in the towns began to be displaced by those of the салери, who adopted the German handicraft ropemaking techniques, whose main advantage appears to have been in the quality of the product and a greater versatility in producing a wider range of goods. The салери were probably more substantial craftsmen than the укар, as unlike the укар who usually worked alone, the салер needed two assistants and rather more complex equipment. This seems to have been in essence a defensive adaptation, for there was probably very little in the укар technique which could not also be acquired easily by the peasantry. This could have baleful effects for the urban укар worker if the level of remuneration for his work - on which his livelihood was totally dependent - became determined by the rate at which peasants working in their homes during the dead season would be willing to perform this kind of task.

In the town of Leskovanac itself, there appear to have been 300 ropemaking masters in 1879, and an unknown number of their assistants. In 1920, there were 439 masters and 164 assistants, totalling 603, and by the early 20th Century the town's ropemaking

industry engaged 1,200-1,500 people. From the beginning of the tariff war the number declined to about 600 again. A similar trend is evident for Vranje, where in 1884, there could not have been more than 65 masters, but where there were about 127 at the turn of the century.

But in the villages, the trade not only expanded up to 1906, but seems to have gone on expanding afterwards. In the 1880's peasant ropemakers were probably measured only in hundreds; Milicevic, in about 1883, estimated that around 1,000 people in the Leskovac region (including the town) earned a living in manufacturing from hemp, suggesting that there were 4-600 of these in the villages. To these we should add some 200 or more ropeworkers (most of whom were probably rural) who in 1880 were excluded from the newly formed ropemakers' guild at Vranje. So in the 1880's there were altogether probably 6-800 village ropemakers in the southern Pomoravlje. In 1895, however, there were estimated to be about 3,000 ropemakers in Leskovac and its villages, and in the same area in 1910, there were about 4,000 seasonal ropemakers (to which we should add several hundred full-timers). In all of Vranje okrug there were about 4,000 ropemakers in about 1903, but according to a report of 1912, their numbers had by then attained 7,000.

1. Ibid, p 77.
2. V. Karioy op cit pp 101, 416.
3. i.e. 77 guildsmen in 1900, and 50 outside the guild in 1899, see N. Vuço, Raspadanje Etnafa u Srbiji, I, (Beograd, 1954) pp 74, 388.
7. S. Dimitrijevic op cit p 76.
It would be convenient if we could integrate these figures but dangerous, because of the "round figure" characteristics of the estimates, and the different dates to which they relate, but in very rough terms it does appear that substantially more than half the producers were urban in the '80s, rather less than half around 1900, and that up to 90% were rural by the Balkan wars.

Ironically, only a very small minority of these were, in law, supposed to be manufacturing rope at all - only the guildsmen of whom there were 207 masters in Leskovac and Vranje in 1900\(^1\) had the legal right to produce rope for the market, and not surprisingly the užarski (ropemaking) guilds expended endless effort in futile attacks on non-guild work, and in getting its access to the market impeded. But this was a firmly established trade in numerous non-guild hands, which involved little skill to acquire, and on which the osnaf were only grafted in 1880. Even the guildsmen were realistic enough to direct their petitioning towards the control rather than outright suppression of non-guild ropemakers.\(^2\) They succeeded in getting the authorities to harass their competitors at the point of sale, so that instead of cordage being offered openly on market days at Leskovac, the square was mobbed by innumerable furtive sellers of their product.\(^3\)

\(^1\)N. Vušo, op cit. I pp. 74, 77.
\(^2\) Ibid. I, p 363. The position of non-guild village craftsmen was legally rather ambiguous. Art. 123 of the osnaf law of 1847 provided that they should be allowed to work without guild letters on petty craft work from house to house in the villages but not to set up in a regular way of business. It was open to question whether the peasant užar's work could be construed as legal within this article. Ibid. I, p 345.
\(^3\) In 1901. Ibid, I, pp 317-8.
There was an element of desperation in these attempts to curtail competition for the business was not in a healthy condition; while it was reputed that in former times ropemaking offered a decent living, it was regarded by the end of the nineteenth century as a trade in which men

"only work for the bread to feed them".¹

M. Vučo gives some comparative figures which purport (not very successfully) to illustrate the decline in daily earnings (and strengthens his argument by pointing to unsold inventories),² but the problem was real enough. The užar made his living from the margin between the price at which he purchased his raw material (hemp) and the price at which he could sell the same or a slightly lesser weight of finished rope. The trends in the prices of hemp at Leskovac and Vranje and in the price of rope at customs valuation between 1884 and 1908 are shown in figure VI (1), together with the resultant protracted down-trend in the piece-wage of the ropemaker. (It should be noted that the wage difference between Leskovac and Vranje may be exaggerated. Vranje rope workers probably had to pay more than those of Leskovac for their raw material, as the Vranje rope industry drew partly on hemp supplies brought from the Leskovac region,³ but, as Vranje was nearer the frontier, so they have have obtained a compensating higher price for their output). The ropemaker felt this pressure on his earnings with especial severity during periods (particularly in the 1880's and 1900-03) when the margin between raw material costs and finished product prices narrowed, because there was

¹ "samo radi da se lebom hran" does not permit a literal translation. 
Ibid. I. p 413.
² Ibid. II p 78.
³ M. Dj. Viličović, op cit p 301; V. Karić op cit p 741.
FIGURE VI (1) RAW MATERIAL COSTS, ROPE PRICES, AND ROPE-MAKER'S MARGINS
1884 - 1908

Data.

<table>
<thead>
<tr>
<th>Year</th>
<th>Price of Prepared Hemp</th>
<th>Rope Price (at Export)</th>
<th>Ropemaker's Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leskovac</td>
<td>Vranje</td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>0.55</td>
<td>0.30</td>
<td>1.87</td>
</tr>
<tr>
<td>1885</td>
<td>0.57</td>
<td>0.79</td>
<td>1.54</td>
</tr>
<tr>
<td>1886</td>
<td>0.48</td>
<td>0.76</td>
<td>1.49</td>
</tr>
<tr>
<td>1887</td>
<td>0.61</td>
<td>0.99</td>
<td>1.46</td>
</tr>
<tr>
<td>1888</td>
<td></td>
<td></td>
<td>1.22</td>
</tr>
<tr>
<td>1889</td>
<td></td>
<td></td>
<td>1.36</td>
</tr>
<tr>
<td>1890</td>
<td>0.52</td>
<td>0.70</td>
<td>1.07</td>
</tr>
<tr>
<td>1891</td>
<td>0.53</td>
<td>0.75</td>
<td>1.07</td>
</tr>
<tr>
<td>1892</td>
<td>0.46</td>
<td>0.80</td>
<td>1.07</td>
</tr>
<tr>
<td>1893</td>
<td>0.46</td>
<td>0.82</td>
<td>1.02</td>
</tr>
<tr>
<td>1894</td>
<td>0.52</td>
<td>0.65</td>
<td>1.01</td>
</tr>
<tr>
<td>1895</td>
<td>0.50</td>
<td>0.75</td>
<td>1.01</td>
</tr>
<tr>
<td>1896</td>
<td>0.45</td>
<td>0.72</td>
<td>1.01</td>
</tr>
<tr>
<td>1897</td>
<td>0.49</td>
<td>0.70</td>
<td>1.02</td>
</tr>
<tr>
<td>1898</td>
<td>0.48</td>
<td>0.70</td>
<td>1.02</td>
</tr>
<tr>
<td>1899</td>
<td>0.45</td>
<td>0.69</td>
<td>1.03</td>
</tr>
<tr>
<td>1900</td>
<td>0.55</td>
<td>0.65</td>
<td>1.02</td>
</tr>
<tr>
<td>1901</td>
<td>0.60</td>
<td>0.75</td>
<td>1.01</td>
</tr>
<tr>
<td>1902</td>
<td>0.66</td>
<td>0.80</td>
<td>1.05</td>
</tr>
<tr>
<td>1903</td>
<td>0.71</td>
<td>0.80</td>
<td>0.91</td>
</tr>
<tr>
<td>1904</td>
<td>0.60</td>
<td>0.75</td>
<td>0.91</td>
</tr>
<tr>
<td>1905</td>
<td>0.67</td>
<td>0.75</td>
<td>1.00</td>
</tr>
<tr>
<td>1906</td>
<td>0.77</td>
<td>0.86</td>
<td>0.97</td>
</tr>
<tr>
<td>1907</td>
<td>0.73</td>
<td>0.87</td>
<td>1.09</td>
</tr>
<tr>
<td>1908</td>
<td>0.64</td>
<td>0.83</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Sources. Standard sources for foreign trade and price statistics. Note erratum in 56 1905.p 319 where hemp price is in col.59 not col.58 as indicated by heading. Pre 1890 hemp price is averaged from monthly statistics.
no putting out system: the užar bought his hemp on credit from the merchant and subsequently sold it back to him as rope. An adverse movement in the market could easily leave him with zero return, or loss, for his work.\(^1\) Leskovac užari reacted to their declining earnings, by leaving the industry on a massive scale. Many went into the new Leskovac factories (mainly in the textile industry) where the pay was also low, but nevertheless better than for užar work.\(^2\) Others emigrated to Bulgaria where, since effective independence (1878), the state had been trying to foster a rope industry of its own, levying high tariffs on rope from Leskovac and Vranjo. This migration was of long standing: higher wages had been drawing skilled ropeworkers to Bulgaria in about 1890\(^3\) and after the Bulgarian tariff had been increased again (1906), \(800\) workers according to one report, \(^4\) \(300\) according to another\(^5\) emigrated to that country. Falling wages are variously ascribed to the intensification of competition from imports within Serbia itself and alternatively to the increasing obstruction to the export of rope to its traditional markets. Neither influence would have encouraged village people to enter the trade on an ever larger scale as full time workers moved out, even though a wage which was unacceptable for a livelihood might have been adequate to remunerate the peasant for work in his free time. What seems probable, however,

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2. Three užari quoted their earnings (per day) to Lapčović as 1.0, 0.60 and 0.80 dinars. Trajković quotes male day wages in 1910 in the Leskovac mills at 0.80–1.20. Ibid; D. Trajković, Jstorija Leskovska Industrije (Beograd 1961) p. 50. But note that the užar was usually assisted in his work by the labour of his family.
3. G.Dr (3) 1839–90, p 19.
4. S. Dimitrijević, op cit p 78.
5. "Izvoz kudelje i užarije" loc cit.
is that the ever increasing need of the peasantry to open up new sources of cash income dovetailed with the pressure on the cordage merchants to put out work at falling rates, as well as for control of the business to pass from the hands of independent craftsmen into those of merchants, whose numbers (at Leskovac) rose from 3 in 1890 to 29 in 1900.\(^1\) Thus it seems likely that it was the activity of the merchant group (at least in part) which spread this trade into the villages (and in doing so eventually undermined it in the towns). And although the production of the raw material was undoubtedly increasing, that increase was gradual. The 1889 census figure was 7,200 hectares, the 1897 figure 8,200, the 1904 figure 13,500. Only in 1910 did it reach 15,500.\(^2\) Yet the number of people engaged in the production seems to have risen 4-500\% between the early 1880s and the end of the period. Rough though our data are, it would appear that as about 20\% of the crop was exported towards the end of the period without having been worked up to rope, (at the beginning of the period this item was negligible). So output per producer of rope fell to about a third of its former level. In the process of becoming a peasant occupation, ropework became a part-time occupation as well.

This of course allows for a quite considerable increase in the amount of rope produced notwithstanding the vexations of the export market, as is indicated by the foreign trade figures (see Table VII, 10).\(^3\) While the export market was stagnant, the home market was probably absorbing a steadily increasing quantity of rope.

1. S. Dimitrijević, op cit p 59.
3. p. 499 below
This was partly obtained by the displacement of imports, but while imports showed a persistent downtrend we may nevertheless expect that home market consumption was rising to some extent. Savic estimated that on the eve of war, the home market absorbed about 2.5 M dinars of rope (71% of production).  

1. How big it had been hitherto it is impossible to say, yet in the 1850's it was very small indeed - five ukari of Negotin (protesting about import competition, at a time when total imports of cordage were worth about 30,000 dinars) claimed that not only could they meet the entire needs of their town and okrug, but those of two more similarly sized okrug towns as well.  

2. (On this basis two dozen ukari could have supplied the entire Serbian market. Potentially they could have turned out only about 70,000 dinars worth of cordage).  

But growth in the home market combined with the displacement of imports was clearly no substitute for an expanding export trade, and although the curtailment of the export market was partially contrived by trade barriers, there could be little expectation of ever recovering the traditional Balkan outlets - Bulgaria, Turkey and Romania, for each of these was successfully expanding as well as protecting its home industry.  

4. Growth possibilities only existed in the wider European market, and there, Serbian rope was uncompetitive.

1. K.H. Savic, H.I.Z. I, p 293.
3. Assuming that each could make 7 kg. of rope a day, value 1.4C din per kg, in line with the upper limit to production by Leskovno rope-workers in Ibid, II p 78.
Even in the north of Serbia, Austrian rope production was preferred, at least for heavy duty. And this was the root of the problem.

Serbian rope merchants did half-heartedly try to sell on the wider market, but their efforts were foredoomed to failure. De Borohgrave, in 1883 communicated that

"Proka G. Kasmitch of Leskovac would like to deal direct with Belgium in this article."

In 1885, a rope sample was sent to Paris for examination. The report on it was that the raw material was of excellent quality but the manufacture was "dostatable". The consensus of opinion however was that the defect also lay in the retting process. Hemp producers tended to oversoak the raw hemp before separating the fibres from the leaf, so as to soften them as much as possible and to make the scutching easier. Consequently although the product looked very white and attractive, it was too weak for heavy duty. Such fibre was only taken at a discount but producers were probably quite well aware of the defect in their product, but uninterested in learning to do the job the hard way:

"They soak the hemp for thirty days, in the Baška for only four. So our hemp rots away in the water, and becomes whiter and weaker; while the Baška stays hard but is harder to rub. Although eighteen years ago the Ministry of the National Economy supplied a foreign master for soaking hemp through the firm of Trajkovic, nevertheless he did not help at all, because the peasants did not want to obey him as the rubbing of the harder hemp was difficult, and they did not want to labour."

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2. E. de Borohgrave, La Serbie Administrativa... p 200.
3. A. de Cubornatis, La Serbie et les Serbes (Florence, 1897) p 147.
4. C.Brand (S) 1902 p 14; C.Brand (S) 1902-3 p 15.
Symptomatic of the increasingly inappropriate relationship of the hemp fibre and rope industry to the factor structure of the Serbian economy in the early twentieth century were two attempts of firms to get their work done by penitentiary labour. It was becoming increasingly clear that if Serbian hemp and hemp products were ever to seek a wider market than the Balkans - and even there they were losing out - both semi-manufacture and final manufacturing would have to be mechanised. Though this would diminish the capacity of the economy of the southern Pomoravlje to provide earnings from the hand working of hemp, it would nevertheless permit an offsetting expansion in sales of the raw material.

e. The Serbian merchant.

Plums, wine, silk and hemp; this does not exhaust the list of agricultural resources which were potentially exportable but whose production passed at one or other period through a phase of moribundity for failure to match this supply with world market demand. Whatever the mechanism for so doing, it was only too evidently absent from the internal economy. Stimulus had to come from outside, and in the meantime the only relatively intensive product which could be exported other than within the Balkan trading network was grain.

Explanation of a negative phenomenon is not altogether a satisfactory means of analysis. Lack of internal capital was advanced as one reason and was obviously not to be disregarded but

The structure of Serbian commerce itself probably inhibited the widening of commercial horizons. Particularly in the earlier part of our period the Serbian merchant engaged in a rather undifferentiated type of trade. On the one hand he was a shopkeeper, selling most things. Take Denton’s description of a Sabac store: it dealt in meal, pulses, bacon, dairy products, glassware, needles, buttons, tape, thread, mops and brooms, pottery, ironwares, toys, matches, pencil and pens, drapery and clothing, hats and boots, clocks, musical boxes, mathematical instruments and iron furniture; the archetypal frontier store in fact. Each year, usually in the spring, the slack season when peasant purchasing power was lowest, the merchants would shut up their stores, to travel to the fairs and markets at Leipzig, Budapest, Vienna and Trieste to restock, financing their purchases on long but expensive supplier or bank credit at these centres. For the inland merchant, Belgrade gradually assumed this role. On the other hand the merchant was also a produce dealer, taking payment in kind. Noting the

2. AAE.CC£.b.2, despatch of 7.2.1852, fo.219; despatch of 23.5.1851, fo. 194; despatch of 25.9.1853, fo. 267-8; CCB.t.7, despatch of 10.4.1880, fo. 198; CCB. t.1 despatch of 27.5.1844, fo. fo. 322-3.
3. C.Dr.(s) 1863 pp 242-3; FRO FO 105 42. Report on the Servian Railways, No. 8 comm. 27.4.1883.
4. C.Dr.(s) 1897-98, p. 2.
slowness of credit settlement in the Serbian market a French consul reported:

"such long delays are explained by the exchange trade which is generally practiced by the merchants of the large towns, sole intermediaries between the foreign producers and the local consumption. In each village they have associates or agents who sell their goods to the peasants, and are most often paid in kind. These goods thus form the material of the export trade."

Thus it came about that besides acting as a universal supplier, Denton's Sabac shopkeeper also held a colossal store of acorns — worth £40,000 he claimed — which were being held back from sale for the central European tanning trade to await a recovery in prices. The anatomy of such a business — it may indeed have been the very shop which Denton visited — is apparent from the accounts and letters of the Sabac firm of Ilić brothers. Their principal business was as bakal — spicery or grocer. Sales went na teftor — that is to say, customers bought what they needed and the debt was entered in the ledger (teftor) against their names. Take the account of Svetozar Obradović, credit customer from Milatovac village, who himself was probably a small storekeeper.

By June 1883 he owed the Ilić firm 363.65 dinars, ran up a further 13 dinars of debt in August, and extinguished the whole of it in March 1884. The next day he promptly ran up a new debt of 1,278.65 dinars for coffee, sugar, cooking oil, pepper, sweets, rope, chocolate, candles and scissors. In what manner he settled his debt is not known, but it may well not have been in cash. To deal

1. AAE. CCB. t.7. despatch of 22.4.1883, fo 240.
with out-of-town customers, Ilić brothers used the services of village agents. One of these, Antonović, collected debts for the firm in Likodra village. As he informed Ilić in February 1882:1

"Today see the account with Karica, widow of the late Milan Radivojević, from which we deduct 16 hogs, 4 sucking pigs, 6 sheep, a lamb, a cow in calf, an ox, a heifer, yet another cow, 493 oka of plums, 261 oka of wine, thence leaving Karica still with a net debt to me on the old account of the sum of 224 dinars."

Not a dinar evidently changed hands in cash. Karica Radivojević seems to have been a slow payer, but that was only the norm.

After Antonović had succeeded in collecting 7 hogs, a sheep and two lambs from Jevto Stanovirović in May 1877, there was still 985 groš outstanding on his account. And he was evidently still creditworthy, for in May 1879, Antonović obtained from him 6 hogs, 2 sucking pigs, a lamb and 250 oka of plums, leaving him with a debt only slightly below the former one of 837 groš.2 Obrad Katić of Likodra, got even longer credits: in February 1892, Antonović extracted 153 dinars worth of goods to offset a debt of 12,700 dinars outstanding since 1886.3

To dispose of this heterogeneous assortment of merchandize other than on the internal market, not to mention the 25 hogs, 2 oxen, 2 rams, a sucking pig, 2 turkeys, 602 oka of rakija, 55 oka of good maize and 55 oka of maize for hogs among other items received from two customers in 1883,4 a firm such as that of Ilić would have found it very difficult to do other than pass the goods along to someone else to export them.

1. Antonovic, of Likodra - Braće Ilić. 6.2.1882, Trgovina Braće Ilić, Knj.12 loc cit.
3. Ibid, dated 20.2.1892.
As noted by a writer of 1873,¹

"Merchants who engage in international trade either mainly engage in importing or indeed in exporting, but seldom is there importing and exporting joined together in a single individual."

Thus in practice, what happened was that the shop-bound Serbian merchant was dependent on an incoming dealer to provide an outlet for what he had collected.

In the following chapter, we shall examine the means by which new trades did in fact develop, and the consequences for their development of the observed passivity of domestic enterprise.

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¹ B. Jovanović, op cit p 8.
APPENDIX I. — PLUM CULTIVATION IN 1847.

Figures were published for each okrug except Jagodina in various editions of Cica Srećeov’list za Srbske Zemljodolce (C.S. list') sometimes of the number of plum trees, sometimes of the number of fruit trees, and in three instances of both. In those three instances, all of which happened to be major fruit growing areas the mean ratio of plums to other fruit worked out at exactly 9:1. The same ratio was therefore assumed to pertain in areas for which the data was less complete. According to the census of 1857, fruit growing in Jagodina okrug accounted for 5.29% by area of all fruit growing; (V. Jakšić, "Stanje zemljoradnje..." Glavnik S.H.O. XLI p 92). Though the use of an area statistic for this okrug increases the error, it is fortunately a small item.

The table below sets out the C.S. List' data, and derived data in brackets.

<table>
<thead>
<tr>
<th>Okrug</th>
<th>Plums</th>
<th>Other</th>
<th>Total</th>
<th>Ref. (C.S. List)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Valjevo</td>
<td>2,184.5</td>
<td>(247.2)</td>
<td>(2,421.7)</td>
<td>11.7. 17.2.48 50</td>
</tr>
<tr>
<td>2. Knjaževac</td>
<td>76.4</td>
<td>(8.5)</td>
<td>84.9</td>
<td>II.8. 24.2.48 58</td>
</tr>
<tr>
<td>3. Sabac</td>
<td>1,06.2</td>
<td>(202.9)</td>
<td>2,029.1</td>
<td>II.9. 2.3.48 67</td>
</tr>
<tr>
<td>4. Užice</td>
<td>554.9</td>
<td>(61.7)</td>
<td>616.6</td>
<td>II.10. 9.3.48 74</td>
</tr>
<tr>
<td>5. Kraljina</td>
<td>194.8</td>
<td>(21.7)</td>
<td>216.5</td>
<td>II.11. 16.3.48 82</td>
</tr>
<tr>
<td>6. Crnaroka</td>
<td>224.5</td>
<td>(23.0)</td>
<td>247.5</td>
<td>II.12. 23.3.48 90</td>
</tr>
<tr>
<td>7. Aleksinac</td>
<td>120.9</td>
<td>(13.4)</td>
<td>134.3</td>
<td>II.13. 30.3.48 98</td>
</tr>
<tr>
<td>8. Požarevac</td>
<td>1,220.8</td>
<td>(135.6)</td>
<td>(1,356.4)</td>
<td>II.14. 6.4.48 105</td>
</tr>
<tr>
<td>9. Gubrica</td>
<td>464.1</td>
<td>(51.6)</td>
<td>515.7</td>
<td>II.16. 20.4.48 122</td>
</tr>
<tr>
<td>10. Čaštak</td>
<td>981.6</td>
<td>126.4</td>
<td>1,108.1</td>
<td>II.17. 27.4.48</td>
</tr>
<tr>
<td>11. Radnik</td>
<td>468.0</td>
<td>(52.0)</td>
<td>(520.0)</td>
<td>II.19. 11.5.48 147</td>
</tr>
<tr>
<td>12. Smederevo</td>
<td>444.4</td>
<td>(49.4)</td>
<td>(493.8)</td>
<td>II.20. 18.5.48 155</td>
</tr>
<tr>
<td>13. Podrina</td>
<td>533.4</td>
<td>103.3</td>
<td>636.7</td>
<td>II.21. 25.5.48 161</td>
</tr>
<tr>
<td>14. Beograd</td>
<td>1,557.2</td>
<td>116.7</td>
<td>1,673.9</td>
<td>II.22. 29.5.48 171</td>
</tr>
<tr>
<td>15. Kruševac</td>
<td>277.4</td>
<td>(30.8)</td>
<td>(308.2)</td>
<td>II.23. 8.6.48 178</td>
</tr>
<tr>
<td>16. Kragujevac</td>
<td>1,578.6</td>
<td>(175.4)</td>
<td>(1,754.0)</td>
<td>II.24. 15.6.48 186</td>
</tr>
<tr>
<td>17. Jagodina...add</td>
<td></td>
<td></td>
<td></td>
<td>14,921N fruit trees of which</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90% or 13,429,000 will be plums.</td>
</tr>
</tbody>
</table>
APPENDIX II.

LAWFUL AND CONTRABAND EXPORT OF RAKIJA FROM SERBIA.

It is very likely that a high proportion, if not virtually the whole quantity of rakića traded in the okruži of Čačak, Rudnik and Užice in the period 1893-1908 passed into the export trade, mainly in contraband. Before 1902, the two okruži of Rudnik and Čačak had formed the single okruž of Rudnik.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sale of rakija at markets in hl.</th>
<th>Total hl.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Užice</td>
<td>Čačak</td>
</tr>
<tr>
<td>1898</td>
<td>15,502</td>
<td>24,924</td>
</tr>
<tr>
<td>1899</td>
<td>15,547</td>
<td>26,505</td>
</tr>
<tr>
<td>1900</td>
<td>14,674</td>
<td>16,242</td>
</tr>
<tr>
<td>1901</td>
<td>11,930</td>
<td>20,700</td>
</tr>
<tr>
<td>1902</td>
<td>17,356</td>
<td>20,859</td>
</tr>
<tr>
<td>1903</td>
<td>15,581</td>
<td>30,541</td>
</tr>
<tr>
<td>1904</td>
<td>13,135</td>
<td>41,233</td>
</tr>
<tr>
<td>1905</td>
<td>12,070</td>
<td>36,728</td>
</tr>
<tr>
<td>1906</td>
<td>21,113</td>
<td>42,505</td>
</tr>
<tr>
<td>1907</td>
<td>8,185</td>
<td>24,111</td>
</tr>
<tr>
<td>1908</td>
<td>13,926</td>
<td>41,385</td>
</tr>
</tbody>
</table>

Source: Market scales figures, e.g. 1898-99, pp 422-3, Rasmin
This total was now expressed as a 3-year moving average:

<table>
<thead>
<tr>
<th>Year</th>
<th>hl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1898-1900</td>
<td>37,800</td>
</tr>
<tr>
<td>1899-1901</td>
<td>35,200</td>
</tr>
<tr>
<td>1900-1902</td>
<td>37,200</td>
</tr>
<tr>
<td>1901-1903</td>
<td>42,700</td>
</tr>
<tr>
<td>1902-1904</td>
<td>50,500</td>
</tr>
<tr>
<td>1903-1905</td>
<td>51,700</td>
</tr>
<tr>
<td>1904-1906</td>
<td>57,400</td>
</tr>
<tr>
<td>1905-1907</td>
<td>49,900</td>
</tr>
<tr>
<td>1906-1908</td>
<td>51,600</td>
</tr>
</tbody>
</table>
The more or less free export of rakija ended in 1880. From this time lawful rakija exports were depressed to a quarter or less of former levels. There is no reason for supposing that the contraband export appeared only coincidentally with publication of the market scales figures; it seems more probable that it had been practiced since 1880.

On appendix figure (1) has been plotted the recorded volume of rakija exports up to 1879 and the 3-year averages of production of Rudnik, Čačak and Užice okruži between 1893/1900 and 1906/8. A rough trend line has been drawn linking the two sets of data to serve as an approximation to the probable maximal (lawful and contraband) export of rakija during those and intervening periods.

Reading off from this figure, we take maximal exports of rakija 1880-81 as 27,000 hl, 1882-85 as 28,000 hl, 1886-91 as 29,000 hl, 1892-94 as 30,000 hl, 1895 as 31,000 hl, 1896 as 32,000 hl and 1897 as 33,000 hl. These provide an upper limit, and lawful exports during the same period a lower limit, to rakija exports. The volume of lawful exports of rakija throughout the period is taken from standard sources for foreign trade statistics, and both lawful and total rakija exports throughout the whole period under survey are reproduced in Table VII 6. It should be noted that although the trade in rakija would include a certain amount of rakija konovica, made from grapes, virtually none of this commodity was produced in the area from which rakija exports were drawn.
1947-1958
PROBABLE MOVEMENT OF EXPORTS OF PAKISTAN

ANNEX X11 P. 12 (I)
CHAPTER VII
THE EXPLOITATION OF SERBIAN PRIMARY PRODUCTION

Having established the existence of substantial underutilized resources in the primary product sector of the Serbian farm economy, and the ineffectiveness of native enterprise in creating outlets for them, we turn to the means by which they were eventually exploited, and to the interaction of incoming and domestic enterprise in their further development.

In all cases, initial stimulus was given by the intervention of interests from outside, either import interests from the consuming countries, or, as was notably the case in the plum trade, by the activity of immigrant merchant enterprise. These two agencies appear to have had radically different long-term effects on the trades to which their intervention gave initial stimulus.

Foreign interest in the Serbian market as an import source would usually develop in consequence of bottlenecks in supply from traditional sources, which made world market prices soar. Serbia would then come into the market as a marginal supplier. Then the crisis would pass, prices would ease, normal supply sources would re-enter the market, and foreign importers would lose interest in the Serbian market. This would be the crucial point. If Serbia remained a marginal supplier then her trade would collapse. But what made any country a marginal or intra-marginal supplier? To speak of high or low cost production would be to oversimplify. Part of the cost of production - and a very sensitive part - would be made up of the cost of the commercial infrastructure within which the trade was organized. Boom conditions resulting from an international supply crisis in a given commodity were usually fairly short lasting, and would generally give way to a period of abnormally acute competition, the importer reaction to which would be to pull out from exploring new supply sources, unless they
were peculiarly promising, and let supply come to him. In the short run, though supply elasticity on the Serbian market would be low, medium run elasticity of supply might well be much higher. It would often be the case when prices fell, that peasant producers, having adjusted themselves to market production of a new commodity would continue to meet the demand of the market, if it existed. But what was only too likely to happen was that as the market fell, so they would find that outlets vanished: the foreigner pulled out, his internal trading network collapsed, and the peasants found themselves with a product virtually unsaleable at any price.

If on the other hand, the importer's activities stimulated the participation and competition of native interests, operating independently of his organization, then there was a reasonable chance, perhaps after a hiatus, for the trade to sink roots, and to integrate itself firmly into the international supply network for the commodity. Alternatively, the same thing was even more likely to happen, if the initial stimulus had been given by immigrant merchant enterprise, whose trading base was established within the country, and which was too deeply committed to the trade to pull out because of short term difficulties.

A second point arises in connection with immigrant enterprise to which we have already referred in the context of food manufacturing, and that is the problem of overcoming the difficulty of matching the Serbian product with the pattern of international demand. To do this would often entail the adaptation of existing supply, usually through some kind of manufacturing process, in order to deliver it onto the world market in a form which was acceptable to it. The reaction of the state to this problem was to order suppliers to produce to certain specifications, and to police the market to see that they did; the reaction of the foreigner was to complain about the quality of the good with which he was supplied, and to pull out as soon as it could be dispensed with. Neither reaction was very helpful. The short, or even medium run possibilities of getting peasant producers
to change their production methods in such a way as to produce a standard-ised high quality good were low, for this probably entailed the adoption of processes too intensive of capital or of technical skills or both - as in the case of the hog industry - for them to be able to adapt rapidly. Means had therefore to be found to achieve a reasonable quality of output within the capacity of the peasant producer, and this meant that the merchant had to know at least as much about supply conditions for his product as about demand conditions on the external market. It was this kind of information that the incoming importer lacked, but which the immigrant merchant was likely to possess.

a Revival in the silk trade in the 1860's and 1890's

At the end of the 1850's the prospects for the languishing commercial silk raising trade changed abruptly. The big French and Italian silk industries found themselves suddenly faced with destruction as the silkworm disease called rébrine ravaged the silk raising districts. This contamination did not prevent the formation of cocoons and therefore of silk but it prevented cocoons from being used for supplying eggs to restart the production cycle, as these would become infected immediately after being hatched from the cocoon. The hunt therefore was set in motion to secure uncontaminated supplies of silk worm eggs. There would then be taken back to France and Italy, for raising to cocoons, but as these in turn would also become contaminated, so a continual annual import of eggs from unaffected areas began to be established. Therefore the purchasers were interested solely in purchasing eggs or cocoons for egg extraction (as opposed to reeling) and displayed little interest in purchasing semimanufactured silk.

The revival of the Serbian silk rearing industry in response to this demand came about wholly through importer intervention. Serbia was, of course, only one of many countries tapped for supplies, Japan being the

1 Put Lisajskih Pitomaca...po Srbiji godine 1863, pp 6-7, 165
outstanding example in this instance of a new supply source being drawn into the world market. For a time, at least, it appeared as if the Serbian farm economy was about to receive the powerful stimulus of a new, high yield, and labour intensive trade, which, however, might accord fairly well with the factor structure of the Serbian village, being at the least intensive end of the silk raising process.

In about 1859, Italian importers began to explore the interior of the Balkans for the purchase of cocoons in order to obtain healthy eggs, buying directly from the producers, and using local merchants to purchase on their account. By 1862, they appear to have driven prices sharply up against themselves, but nevertheless in that year "the Italians and the men of Skodar [in Albania] swarmed all round Old Serbia [the Kosmet region] and Macedonia like locusts, and in every town, wherever there were cocoons to be had, they bought up the lot, for the sake of the eggs."¹

Soon after they had begun to exploit the production of the silk raising centres of Macedonia and the Niš pašalik, the buyers also began to appear in Serbia. For the first few years, they were probably few in number, and in 1861, a buyers' ring was formed which appears to have operated in Macedonia, in Vranje and in the Korava valley towns of Svilajnac, Paraćin and Jagodina. French purchasing interests from Lyon were working at the Danube township of Gradište. Both Italian and French purchasers found it necessary to reinforce their positions by taking partners locally, or by appointing local agents. In fact they were drawn into organizing the trade very early on, rather than hoping that they could obtain worthwhile quantities merely by bidding round the producing areas; they had to distribute silkworm eggs "free of charge" in advance to producers, "wherever there are mulberries",

¹ This is quoted from the text of a remarkably informative letter which Sreten L Popović received from a friend in the silk trade, and which he reproduced in full in Putovanje po novoj Srbiji which was written about 1880. See reprint (Beograd, 1950) pp 523-6
that is to say, to set up a putting out system. The merchants would then
organize extraction of eggs from the cocoons which the peasants had raised
for them, part of which would have to be returned to them for the production
of next year's crop. They would send the rest to Italy or France, where
they would be distributed among the silk raisers.¹

As the merchants had no interest in Serbia as a supply source for
silk, only for eggs to sustain established silk raising and manufacturing
industries, no moves were made to establish cocoon drying or silk manufactur-
ing facilities for Serbian supplies. The trade therefore depended upon the
ability of Serbian producers to supply healthy cocoons, which they seem to
have been able to do when using indigenous eggs. But the quality of their
cocoons was low, and caused improved strains to be introduced from outside,
which in turn led to the introduction of pébrine contamination.² Thus
although mark-ups were high - the price paid in Trieste was five times that
paid to the Serbian producer³ - they reflect high risk as well as the
imperfection of competition. The group with whom Bartoš Pikić, merchant of
Vranje was associated clearly made a killing in 1860 and 1861 but in 1862⁴

"... in Italy, they discovered that the silkworm disease was raging
here [i.e. in the Balkans] as well, and we could not sell the eggs, we
gave them on approval [na bericet], that is to say, our eggs,
their labour and foliage for food, and they would give us one fifth
of the proceeds; but that seed, in truth turned out to be sickly,
and we who had thus contracted collapsed totally."

Pikić went on to say that silk growing soon went into decline after
that, but it is doubtful whether the Serbian silk boom was seriously affected
by the contamination of supplies. However, the demand for an annual inflow
of healthy silkworm eggs to maintain the French and Italian industries was

¹ Putićeških Pitomaca... pp 6-7, 165-6; S L Popović, op cit pp 524-
526. It is very likely that both sources are discussing the
activities (independently) of the same Italian purchasing organization.
² Đ Pikić, "Uticaj Josifa Pančića na razvoj avlarstva u Srbiji"
Lo XX (1973) pp 234, 239
³ Putićeških Pitomaca... p 166
⁴ S L Popović, op cit pp 525-6
soon to diminish, as the disease came to be eradicated by the technique of Pasteurisation. Thus, if the Serbian industry was to survive, it would not only need to adopt improved silkworm strains, but would also have to adapt to the offer, not of eggs which France and Italy no longer needed, but of dried cocoons or raw silk in competition with other producers in a buyers’ market. This is precisely what the Japanese, who came to dominate the export trades arising from silk raising, learned to do. They too enjoyed a boom in silkworm egg exporting in the 1860’s, but this declined to virtually nothing over the next two decades, and peasants who had raised silkworm eggs for export turned to raising cocoons for reeling. Out of a relatively modest export of eggs a massive export of raw silk was built up. But because of the difficulty in getting peasant production to meet export requirements, a rapid build up of modern equipment for reeling was also needed. Thus if it were to survive the initial pre-Pasteurisation boom, on which its export of silkworm eggs depended, the Serbian industry needed attention to be paid to cocoon raising, killing and reeling. This attention would not be forthcoming from the silkworm egg purchasing trade, and therefore opened an avenue for the activity of the state, but one it made no attempt to explore.

The interest of the state in silkraising was re-awakened after the publication of the report Put Lisceških Pitomaca... in 1863, and the more specific report which followed it, which was submitted to the Finance Minister by Josif Fančić, and which drew on the same material. These documents took it for granted that Serbian silkworms would be raised for the export of eggs, and Fančić’s recommendations were that the state should

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1 D Kilić, "Uticaj Josifa Fančića..." loc cit p 235
3 Schoolmaster Fančić conducted his lycée on the journey which led to their report. The report that he submitted to the finance ministry contained minor divergences from theirs.
D Kilić, "Uticaj Josifa Fančića..." loc cit pp 235, 238-40
take a more active part in the business of seed distribution with the aim of improving the quality of the output. The report was accepted, and acted upon, and, in so far as the action of the state was needed to speed up the improvement of the silkworm strains produced, it may have been responsible for the short lived boom in cocoon and egg exports of 1865-70. Pančić was undoubtedly correct in believing that qualitative improvement was urgently necessary.

TABLE VII. 1 SILK, COCOON AND SILKWORM EXPORTS 1862 - 1875

<table>
<thead>
<tr>
<th>Year</th>
<th>Silk (kg)</th>
<th>Cocoons (kg)</th>
<th>Silkworms (kg)</th>
<th>Value (000 din.)</th>
<th>Cocoon price at export valuation (din.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862</td>
<td>740</td>
<td>3,140</td>
<td>220</td>
<td>42</td>
<td>3½</td>
</tr>
<tr>
<td>1863</td>
<td>480</td>
<td>410</td>
<td>260</td>
<td>31</td>
<td>3½</td>
</tr>
<tr>
<td>1864</td>
<td>510</td>
<td>-</td>
<td>680</td>
<td>73</td>
<td>-</td>
</tr>
<tr>
<td>1865</td>
<td>742</td>
<td>7,400</td>
<td>890</td>
<td>178</td>
<td>3</td>
</tr>
<tr>
<td>1866</td>
<td>760</td>
<td>10,400</td>
<td>900</td>
<td>192</td>
<td>9½</td>
</tr>
<tr>
<td>1867</td>
<td>720</td>
<td>15,840</td>
<td>1,450</td>
<td>352</td>
<td>9½</td>
</tr>
<tr>
<td>1868</td>
<td>580</td>
<td>8,060</td>
<td>1,290</td>
<td>262</td>
<td>9½</td>
</tr>
<tr>
<td>1869</td>
<td>330</td>
<td>13,570</td>
<td>150</td>
<td>158</td>
<td>9½</td>
</tr>
<tr>
<td>1870</td>
<td>320</td>
<td>15,550</td>
<td>1,180</td>
<td>302</td>
<td>9½</td>
</tr>
<tr>
<td>1871</td>
<td>150</td>
<td>7,590</td>
<td>310</td>
<td>118</td>
<td>9½</td>
</tr>
<tr>
<td>1872</td>
<td>290</td>
<td>5,160</td>
<td>30</td>
<td>58</td>
<td>9½</td>
</tr>
<tr>
<td>1873</td>
<td>130</td>
<td>5,400</td>
<td>20</td>
<td>29</td>
<td>9½</td>
</tr>
<tr>
<td>1874</td>
<td>20</td>
<td>1,990</td>
<td>-</td>
<td>10</td>
<td>4½</td>
</tr>
<tr>
<td>1875</td>
<td>20</td>
<td>1,270</td>
<td>-</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

Standard sources for foreign trade statistics

Importers reported increasing dissatisfaction with the quality of Serbian cocoons, only one variety of which was suitable for their needs, and that, barely so, and Serbian cocoons sold at a heavy discount on the Japanese. They appear to have stopped buying domestic Serbian silkworm eggs in the mid 1860's, and both the government and the Italian purchasing organizations tried introducing Japanese eggs into Serbia, the latter distributing them to producers in the normal manner against contract delivery of the cocoons,

1 D Milić, "Uticaj Josifa Pančića..." loc cit pp 242-4
2 AAE-CCB t 4 despatch of 12 9 1865, fo 107
3 While Japanese cocoons commanded 4fr per oka in 1866, Serbian cocoons fetched 2.40 - 3.20, depending on quality. AAE-CCB t 4 despatch of 4 6 1866 fo 233
while government nurseries also tried to encourage the raising of the high yielding French mulberry.\(^1\) Success was very limited, the costs of organization, particularly of foreign supervisory personnel, became increasingly burdensome as the market began to ease. The trade, which was still wholly dependent on the willingness of the foreigner to bid on the Serbian market, simply folded up with the withdrawal of foreign interest. This set at nought the pains of the state to achieve improvements in supply conditions, while ignoring the essential problem of strengthening external market relationships.

It is tempting, in view of this record of entrepreneurial failure, to seek no further cause for the collapse of the trade than the absence of domestic initiative in participating in a trade which would have required the ability to organize the process of semi-manufacturing and market relations for the disposal of raw silk on a large scale. But it is also questionable as to whether the factor balance of the Serbian producer during the 1860's was favourable to the growth of a raw silk trade.

On this issue the evidence is mixed. We have already noted the doubts expressed by the British consul as to whether commercial silk raising could attract the interest of the peasantry.\(^2\) However, Milan Pantić, a dealer in the Serbian silk trade believed that ten times the quantity of (evidently improved) eggs that were at his disposal could easily have been placed by him, for the producers were clamoring for supplies.\(^3\) This however may have reflected a response to boom prices.

But the killing, drying and reeling of cocoons for silk were probably, in the absence of machine technology, more labour intensive tasks than the rearing of silkworms for eggs; it is significant that Serbian villages whose own silk industries had been declining or moribund were willing to convert

\(^1\) IRO FO 78 1862. No. 18 cons of 4 5 1865; IAE CCB t 4 despatches of 4 6 1866, fo 233 and 3 9 1866, fo 264

\(^2\) See above, p 404

\(^3\) In about 1865. D Milić, "Uticaj Jonifa Pančića ..." loc cit p 244
to egg rearing though silk and silk products were also easily marketable articles. Therefore the adaptation of Serbian sericulture to raw silk production would probably have involved further intensification of an activity which was already probably a little too labour intensive for Serbian conditions. In Macedonia, where sericulture and the trade in silk products attained far greater proportions than in Serbia, the silk processing industries were rooted in the low wage economy of the Serbija towns rather than in the relatively labour-short rural economy. Skopje was noted as the centre for silk reeling and at Gevgelija, Strumica and Valandovo the very houses were constructed so as to facilitate the production and drying of cocoons. The village economy was probably little more receptive to the adoption of these tasks than it was in Serbia.

Thus when foreign interests ceased to explore the Serbian market for cocoons, the trade in Serbia, which was based solely upon the least intensive phase of the production process, collapsed completely. By 1910 much of the former area under mulberries had been cleared or planted with plum trees. Silk production according to an estimate by an official source declined to about a fifth of its former peak, and even this level of production was probably only maintained for the purpose of self consumption. Instead of Serbian silk being produced for the market as once it had been, commercial supply appears to have become heavily dependent on imports. In 1960, Serbia imported 523,000 dinars of silk cloth and 355,000 dinars of half-silk cloth.

But if the boom of the 1860's had one lasting effect, it was probably that it enabled the superior Japanese silkworm to displace the former native variety and thus offer a stronger basis for any subsequent revival in the

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1 The output of the Macedonian cocoon industry is estimated by B Arstitch to have been about 3 million kg. See B Arstitch, La Vie Economique de la Serbie du Sud au XIXème siècle (Paris, 1936) p 97
2 AAE CCD t 7, despatch of 7 7 1868 fo 310
3 Ministère du Commerce, etc, Notice sur l'Agriculture en Serbie, p 14
4 Usporedni pregled apolins trgovine kr. Srbije 1879 do 1890, p 40
industry. After all, climatic conditions favoured the readoption of the industry, and it had been established that the white mulberry flourished on Serbian soil. So there was no particular reason why it should not be revived particularly as demographic conditions were changing, the need for cash incomes intensifying, and the consequent receptiveness to innovation increasing. There was one further attempt by an Italian firm (which came to nothing) to organize the raising of silk in about 1890,1 but it seems to have been on the initiative of the government, in the mid 1890's, that this activity was at last revived, and, although it never attained great magnitude, the steady subsequent year to year expansion of silk raising is evidence in itself of some difference between conditions then and as they had been in the 1860's. The state appears to have carried out its own exporting,2 but activity was maintained only on a very small scale, till it was handed over in 1899 to a private firm, Farkić & Andjelković. This firm set up a processing installation for the killing and drying of cocoons at Lapovo, and organized the trade on a concessionary basis, from 1900. The business was subsequently incorporated in 1903 as Srško Svilarsko Društvo, and the concessionaires appear to have had a monopoly of the silk export. Virtually the whole of the of the Lapovo installation's output was exported to Italy.3

The convenience of the concessionaires seems somewhat to have restricted the area from which production was drawn, and they favoured districts which were well located for transport.4 However, the firm seems to have been energetic, and the number of suppliers on its books rose rapidly and continually. Part of the attraction to producers may have been in that the enterprise carried the financing of the trade, putting out the eggs to the peasants and subsequently collecting 60% of the cocoons, at a contract price, leaving them

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1 Cl Br (S) 1891, p 23
2 D Milić "Uticaj Josifa Pančića..." loc cit p 245
3 La Serbie... à lire, 1905, pp 124-5; Le Serbie a Turin, 1911, pp 141-3;
Srbijska na Balkanskoj izložbi u Londonu 1907, p 56
4 La Serbie ... à Turin, p 144
with the balance for self consumption.  

**TABLE VII. 2 GROWTH OF COCOON EXPORT MONOPOLY 1895-1910**

<table>
<thead>
<tr>
<th>Year</th>
<th>Purchases of fresh Cocoons (Tonnes)</th>
<th>No. of households under contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>1895</td>
<td>1.6</td>
<td>n.a.</td>
</tr>
<tr>
<td>1896</td>
<td>3.5</td>
<td>n.a.</td>
</tr>
<tr>
<td>1897</td>
<td>3.7</td>
<td>n.a.</td>
</tr>
<tr>
<td>1898</td>
<td>12.7</td>
<td>n.a.</td>
</tr>
<tr>
<td>1899</td>
<td>25.7(\textsuperscript{a})</td>
<td>n.a.</td>
</tr>
<tr>
<td>1900</td>
<td>166.9</td>
<td>10,102</td>
</tr>
<tr>
<td>1901</td>
<td>120.8</td>
<td>12,650</td>
</tr>
<tr>
<td>1902</td>
<td>157.1</td>
<td>15,426</td>
</tr>
<tr>
<td>1903</td>
<td>154.0</td>
<td>14,482</td>
</tr>
<tr>
<td>1904</td>
<td>160.5</td>
<td>19,453</td>
</tr>
<tr>
<td>1905</td>
<td>292.1</td>
<td>25,720</td>
</tr>
<tr>
<td>1906</td>
<td>268.6</td>
<td>27,022</td>
</tr>
<tr>
<td>1907</td>
<td>291.9</td>
<td>27,711</td>
</tr>
<tr>
<td>1908</td>
<td>295.5</td>
<td>31,953</td>
</tr>
<tr>
<td>1909</td>
<td>394.1</td>
<td>34,150</td>
</tr>
<tr>
<td>1910</td>
<td>362.0</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} up to 1899, by the state. After 1899 by concessionaires

Sources: *La Serbie à l'Exposition Universelle de 1905 à Liège*, (Belgrade, 1905) p 125; *La Serbie à l'Exposition Universelle de 1911 à Turin* (Belgrade, 1911) pp 137, 142; *C Be 1911, KC CLVI*, p 265

The attempts of the *Svilarsko Društvo* to integrate silk reeling with their business were, however, very weak, and as it monopolized supply, it effectively excluded anyone else from doing so. The 1903 concession included provision for silk reeling, and a small filature was erected,\textsuperscript{2} but its output was negligible.\textsuperscript{3} Only about 1911 was a second filature installed by the company, and 50 looms.\textsuperscript{4} For the families who contracted their services to the company, silk raising could only have been a minor income source, bringing in about 10 – 15 dinars (besides a supply of raw material for home working) but by 1909, about one family in nine was so engaged.

\textsuperscript{1} Ibid, p 138
\textsuperscript{2} A N.F 12 7179 Rapport de Tervör sur la commerce de la Serbie en 1904, Belgrade 27 1 1906
\textsuperscript{3} The production statistics for this factory's new silk output tell their own story. 1903: 302kg, 1904: 142, 500kg, 1905-6: 0 - 362kg S.C 1903, p 349, passim
\textsuperscript{4} *La Serbie... à Turin 1911*, p 138
b The wine trade in the 1880's

The experience of the silk trade demonstrates one reason for supply crisis in the international market – the destruction of damage to traditional supply sources by disease. Its experience also demonstrates the danger implicit to this – namely of transmission of the same disease to the new supplier. In the case of the silk industry, this probably was not a significant direct cause of the collapse of the trade. However in the case of wine, it undoubtedly was. European importer interests were drawn into seeking Serbian wine supplies on account of the phylloxera crisis, but, after an interval, the Serbian vineyards succumbed in turn to phylloxera and to the concurrent *peronospora* outbreak, without being able to surmount either difficulty effectively.

We have seen how, in the 1870's, the health of the domestic Serbian wine trade was in very mixed condition, the structure of the internal market favouring wine growing regions near the centre of the country on account of their relatively low transport costs to the consuming regions at the expense of the longer established vineyard areas to the east where production was stagnating or declining for want of outlets. The arrival of foreign import merchants intent on buying up wines around the vineyards, from about 1879 onwards transformed the prospects of these regions: the Negotin area, obstructed from easy communications with the rest of the country by the iron gates of the Danube, enjoyed superior access to the export market via the lower Danube for the same reason. This also recreated reasonable prospects for the Timok vineyards south of the Negotin area. ¹ Similarly, once the railway had been opened to Salonika (1888) the vineyards of the Niš region enjoyed relatively favourable access to outlets through that port.

The export boom, which began soon after the close of the Russo-Turkish war, was wholly the result of foreign intervention on the Serbian market.

¹ V Karić, *Srbija...* p 883
as world prices soared in the wake of phylloxera. As indicated below, the wine was increasingly being sent to France.

**TABLE VII. 3 SERBIAN WINE EXPORTS 1870 - 1893**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Export</th>
<th>Export to France</th>
<th>Valuation (din/Al)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870-1872</td>
<td>1.3</td>
<td></td>
<td>22.3</td>
</tr>
<tr>
<td>1873-1875</td>
<td>3.5</td>
<td></td>
<td>27.7</td>
</tr>
<tr>
<td>1879</td>
<td>22.4</td>
<td></td>
<td>20.3</td>
</tr>
<tr>
<td>1880</td>
<td>62.5</td>
<td></td>
<td>19.8</td>
</tr>
<tr>
<td>1881</td>
<td>28.3</td>
<td>4.3</td>
<td>24.2</td>
</tr>
<tr>
<td>1882</td>
<td>51.0</td>
<td></td>
<td>27.8</td>
</tr>
<tr>
<td>1883</td>
<td>22.3</td>
<td>3.5</td>
<td>30.0</td>
</tr>
<tr>
<td>1884</td>
<td>7.9</td>
<td>1.1</td>
<td>42.2</td>
</tr>
<tr>
<td>1885</td>
<td>14.1</td>
<td>3.2</td>
<td>33.1</td>
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Standard sources for foreign trade statistics

French interest focussed on Negotin, not only because of ease of access, but also because of the type of wine the region produced. The domestication in France of the American winestock had been necessary as the only effective means of countering phylloxera, because it enjoyed a greater degree of immunity to the disease than the European vine, but in the short run, it wrecked the quality of the product, which was thin and 'foxy'. Negotins, at their best, were of high gravity, (and would therefore travel), full bodied, and almost black in colour. Though not in themselves particularly acceptable to the western palate, they were, because of these properties, most suitable for blending, to impart their fullness to the French product.¹ Short run supply elasticity seemed to be low, but this

¹ C Dáy 4 10 1869 R.C LVIII, p 342. Strength and colour were the two qualities stressed by government publicity, l’instèrre du Commerce etc, Notice sur L’Agriculture en Serbie, pp 9-10
may only have been because of inflated expectations.¹

"Wine which until lately purchased by French houses for adulterative and manufacturing purposes has a much smaller sale now owing to the cupidity of the growers, who, finding a demand for their produce, adulterated it themselves, and thus rendered it unfit for the purposes of the French importers who have lately turned their attention to the Roumanian wines."

This problem had manifested itself at the very outset; a government organ reported disappointing results from the export trade in 1881 because of the low gravity of the produce, and²

"Much more would have been exported had not the producers heard that consumption abroad was increasing. Prices were strongly raised, 20 dinars per okov being demanded although the harvest was at least 15,000 hectolitres greater than had been expected. Purchasers offering only 4-6 francs per okov could not purchase any. Later the price jumped to 10-12 francs, but because of the poor quality the price was not long maintained."

Also, because of the unreliability of the native wine merchants, and their high mark-ups, and so as to ensure correct handling, French importers were advised to establish their own agents in the wine regions.³ The soundness of such advice was attested by the appearance in 1887 of French factors at Negotin, "in residence for the better part of the year, to manipulate the wine themselves."⁴ Stimulus was given to their purchasing in 1888 by the outbreak of the Franco-Italian commercial conflict, which deprived France of Italian supplies.⁵ Moreover, successful trial voyages showed that seagoing ships could get up the Danube as far as Negotin, and this resulted in substantial savings by avoiding transhipment at Braila.⁶ Yet the consequent prosperity was uneasy, for its root cause—philoxera—had struck. Despite vigorous government efforts to keep the blight from crossing the Danube,⁷

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¹ R Millet, La Serbie Economique et Commerciale, pp 115-6
² C Br (3) 1886, p 8
³ R Millet, op cit p 95
⁴ C Br (3) 1886, p 11; D Konovaric, "Vinogradarstvo u Negotinskoj Krajini" Negotinska Krajina, p 177; R Millet, op cit p 106
⁵ E Lazard & J Boghe, La Serbie d'Aujourd'hui II, pp 51-2
and to contain it once it had broken out, it proved to be unstoppable, though it was in the nature of the pest to spread only slowly. It first struck at Cseredervo in 1881, returned the following year, and broke out in the Krajina in 1883. By 1888, it was alleged that one sixth of the vines in the Krajina had been destroyed by it. In 1889, the damage was compounded by the appearance of *Peroonospora*, and by 1891 it was (correctly) foreseen that the Negotin vineyards were threatened with extinction.

Though the wines of the Krajina were the best suited to French blending requirements, importers were not disposed to be too discriminating so long as supplies were in acute shortage, and attention was also attracted to the vineyards of the Morava and the Rib region, particularly after the opening of the railway. *Philoxera* crept southwards only slowly, and while supplies remained sufficient to support the boom, domestic initiative was hardly needed to sustain it. Though the government tried to promote the trade, its efforts, as the following newspaper report shows, were not of a high order of competence:

"The Ministry of the National Economy has instructed the state commercial agency to find foreign purchasers for our wine. The agency has done all it can to assist, and today, merchants from Bordeaux, Fiume, Vienna, Siegmarie, Zurich, Marseilles and Pesth have addressed the agency for information on our wine. Some wanted to be put in touch with our merchants and some wanted to purchase direct from the producers. Almost all asked the agency about the quality and the possibility of purchase of Rosava, Jarodina, Parnac and Župa and Rib wines and asked for samples. With much trouble, the agency got them the samples. Many replied to the agency that they were satisfied with the samples, and that the beginning of September they would themselves come to Beograd and seek handling assistance from the agency in purchasing the wine.

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1 ANP 12 7179 Bresson-Duclerc, 12 9 1881; C.I.F I 20, off B 11 1882, pp 315-19
3 Bresson-Duclerc, 12 9 1881, loc cit; AAE CCB t 6, despatches of 6 6 and 8 7 1883 fo 210, 233
4 AAE CCB t 7 despatch of 3 9 1888 fo 342
5 C Be 20 8 1889, R.C LXVII, p 243
6 AAE CCB t 8 despatch of 31 10 1891, fo 93
The agency received now questions every day about the wine and new requests for samples, particularly from areas near the railway. The agency was not able to respond to these requests because it could not supply sufficient samples. So it replied to these enquiries, and will continue to do so in the future, that it cannot send samples, but if the enquirer wishes to familiarize himself with the Serbian wines, he can inspect the samples of the individual merchants and producers at the state commercial agency itself, and, if satisfied, the agency will direct him to the region and the proprietor for purchase..."

Foreign activity in the southern vineyards was only reported in the later stages of the boom, when supply conditions in the Krajina began to tighten because of phylloxera, and for a short time the Niš wine trade did brisk business. The leading firm here, Brada Tutunovic, displayed considerable energy in trying to break into the export trade. Their business was organized on a substantial scale. As substantial vineyard owners, cellarmen, brandy distillers, and exporters, the Tutunovidi made trial consignments of wine to Hamburg, Stettin and to Salonika, where they established their own agency, in the expectation of developing a major business through that port. To obtain wider publicity for Serbian wine (and for their own business in particular) they obtained the patronage and a subsidy from the Ministry of the National Economy for the organization of a Serbian wine growers conference, with an exhibition of produce, at their establishment in February 1890, but because of the desire of the organizers to confine participation to their own circle, it was insufficiently publicised to be effective. On the whole, their efforts were a failure. Though the Niš vineyards remained phylloxera free till the early nineties, and therefore profited from the difficulties of those in the north, they were eventually contaminated in turn. But apart from that, the entry of Niš wines into

1 "Srpskim proizvodaca vina i vinarskim trgovcima" Novi Glasačnik I 26, of 4 & 5 1888
2 C Br (S) 1887-88, p 46
3 R Millet, op cit pp 114, 140-1, 143; C Br (S) 1887-88, pp 45-6; AEE CCB t 7 despatch of 29 10 1888, fo. fo 372-6; S Andrejević, Ekonomiški Ranov Niš, pp 33-6
4 A R F 12 7179 Lacarré-H A E, Niš, 31 12 1889
5 S Andrejević, op cit p 36
international commerce showed less promise than had been expected. The raw material lacked the fullness and strength of the Negotins. "Light mild and smooth" \(^1\) Niš wines were poor travellers, and were of little use for blending. Thus they failed to attract the key French market, and were mainly taken up in central Europe.\(^2\) A consignment sent to Bordeaux in 1887 proved to be a failure,\(^3\) and, as more competitive conditions returned to the world wine market, with the rapid expansion of supplies from Algeria and Italy, purchasers became more demanding. Supplies from Negotin were dwindling rapidly in 1891, and it was reported that French purchasers no longer considered Serbian wines suitable for their purposes.\(^4\)

So, although the destruction wrought upon the Serbian vineyards by phylloxera was the primary cause of the collapse of the Serbian wine export, just as phylloxera elsewhere had been the cause of its inception, Serbian wines might very well have faded from the view of the international market in any case. Producers were unable except in Negotin to provide what the import trade sought from them, and no autonomously based organization for the export of Serbian wine except Tutunović showed any serious sign of competing for the trade against the importer interests.

c Kremanović-Peranos and the establishment of the Serbian prune export.

We left the plum producer in a situation not dissimilar to that of the viticulturalist or of the silk raiser on the eve of the short lived export booms in those two commodities, in a position whereby new outlets for his produce were needed if the monetization of the crop were to develop on a serious scale, and where traditional outlets for rakija, besides being

\(^1\) J Kallet, *La Serbie Contemporaine*, I, p 106

\(^2\) In about 1890, 5,000 hl of wine were exported from Niš through Belgrade, and only 1,700 through Salonika, the outlet for the French market. A N. F 12 7179 Pinard-Ribot, 25 8 1891

\(^3\) R Millet, op cit, p 141

\(^4\) C Br (C) 1891, p 17
excessively narrow relative to supply potential, were being squeezed by protectionist measures in the importing territories. But the beginnings of the trade in Serbian prunes, which was to transform the whole structure of plum production, owe little or nothing to any crisis-boom for Serbian suppliers, nor, significantly, to the intervention of importers from the consuming countries, but rather to the activity of immigrant entrepreneurship, in this case from Bosnia - Herzegovina.

The appearance and development of the prune export trade is closely connected with the firm of Krsmanović - Paranos, with Rista Paranos, its most dynamic member, and with other businesses which enjoyed close links with this house. During the second quarter of the nineteenth century, the firm of Nića Krsmanović was prominent in the commerce of Donja Tuzla and the river port of Brčko in northern Bosnia. Krsmanović dealt mainly, but not exclusively, in "colonials" at wholesale, that is to say, in such commodities as sugar, coffee and spices, which he imported through Trieste. It was a business of some substance. His future partner, Rista Paranos, was born in the village of Slano near Trebinje, in the Bosnian-Dalmatian borderland. Like many of the youths of the barren karst he was forced out into the world to make a living from trade, and obtained employment with the pack-horse caravans which still traversed in Balkan interior. His work took him to the plum trade centre of Brčko, where, dissatisfied with his present employer, he accepted the offer of employment in the Krsmanović store. He quickly demonstrated unusual aptitude, and acquired increasing responsibility. As the younger Krsmanovići were uninterested in taking over the day to day running of the business, the ageing Nića Krsmanović had Paranos married to his daughter and taken into partnership, in about 1852.

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1 A C E. M. Kostić, "Podaci" fo 76 (Braca Krsmanovic i Paranos)
Miša Kremanović died in the mid 1850's, and soon after that, Miša Paranos and his brothers-in-law moved the business to Serbia, where commercial prospects looked brighter, and the firm was re-established at Sabac and Belgrade, both river ports, which, like Brčko, were well placed to export plums via Plume or Trieste. However, the plum trade was probably not at that time its primary preoccupation. The firm was, at least by reputation, rich when it arrived, and was therefore eligible to enter the big money stakes of the time, that is to say those quasi-feudal, monopolistic operations dependent on princely favour, which paved the way to the protocapitalistic fortunes of the early nineteenth century Balkans. One such investment was in the farming of Bulgarian tenths under contract with the Turkish authorities. The firm collected the tenths in grain, which commodity they sent down the Danube for sale at Calați. It was this which probably drew them to buying their way into the monopolised import into Serbia of Wallachian salt, which they picked up at Galati as a return cargo; by 1865 competitors were to complain of being squeezed out of the trade by them, and their biggest opening came when Miša Anastasijević, who had hitherto dominated the business, was forced to sell up in 1865-66. After this the Kremanović-Paranos firm became the biggest in the Serbian salt import, and owned a string of salt warehouses in the Serbian river ports.

Evidently such operations were successful, for by 1863, before the Serbian plum trade could have earned the firm much money, it was noted as

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1 A G B, K. N. Kostić, "Podaci" loc cit; M. D. Djurić, Sabac kao kulturna žiža Srbije XIX i XX veka, (Sabac, 1937) p 28
2 See for example Katija Ban, "Život Majora Miša Anastasijevića" Gornji zbornik LXXI (1890) esp. pp 263-78
3 A G B K. N. Kostić "Podaci" fo 77 (Braća Kremanović i Paranos) and fo 255/2 (Kragujevačka Kompanija)
5 K Ban, "Život...Anastasijevića" loc cit p 269
6 A G B K. N. Kostić, "Podaci" fo 77 (Braća Kremanović i Paranos); Spomenica B T O 1880-1930, (Beograd, 1931) p 62, col 2
second after Anastasijević among the business houses of Belgrade, and in 1865-67 the partners were buying heavily into Belgrade property.

The large scale export of Serbian prunes was the next enterprise of this by now powerful and wealthy firm. That the firm was the first in Serbia to engage in this trade, and that the subsequent rapid development of the prune export depended on its enterprise and activity was affirmed by several independent sources, as well as by Parenos' widow, who in a newspaper interview of 1933 went still further in claiming:

"In the first years, and later, only the firm of Kramanović and Parenos exported [dried] plums from Bosnia and Serbia. On the initiative of Rista Parenos, the firm of Kramanović and Parenos was the father of the trade in dried plums in Bosnia and Serbia."

(the italics are in the original)

Most of the other names which became prominent in the early days of the trade had strong links with this firm. Rista Danjenović, later to become a leading plum exporter, and reputedly the richest merchant in Šabac, a town which "exported millionaires", went into business after having served with Kramanović-Parenos in Bosnia, and Luka Čelović Trebinjac, wealthy Belgrade banker, merchant, and prune exporter served the firm in Belgrade between 1878 and 1880 before opening his own business with its

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1 AAE CCB t 3 despatch of 11 9 1863, fo 132. According to H D Milojević the firm only began to dry plums for export in 1867, but this information does not appear to have come from the sources quoted.
2 A C B. M M Kostić, "Podaci" fo 79 (Braća Kramanović i Parenos)
3 T Popović, Kosta D Glavinic (Šabac, 1939) p 5, Spomenica Beograd 1860-1930, p 67; A C B. M M Kostić "Podaci" fo. fo 76-7 (Braća Kramanović i Parenos), while some of those sources could have copied information given by others, Glavinic at least was intimately concerned with the prune trade, and is probably completely reliable. Milivoje Kostić may have acquired his information from Glavinic, but he would also have been able to evaluate it from his encyclopaedic knowledge of the Belgrade četnica.
4 N R Djordjević, "Rista Parenos..." loc cit
5 D J Popović, O Cincarenja (Beograd, 2nd ed. 1937) p 346; M S Djurići, op cit p 28
The Krananović-Paranos firm's influence probably also extended to the important prune trading centre of Valjevo, where the trade was dominated by Ranko Codjevac and his associates. Codjevac, whose family was also of Bosnian origin,² has been claimed as pioneering the prune trade in Serbia, but it was also noted that he began propagandizing the drying of plums under the influence of (un-named) merchants from Bosnia.³ These were most likely to have been Krananović and Paranos for the two families were closely connected by marital and business links.⁴ The only prominent merchant in the plum trade of western Serbia who was identifiable of Serbian birth, and not linked with Krananović-Paranos was Joca Jovanović Zapčanin. He was successful but it was concerning his difficulties that the following comment was made:⁵

"The export trade in that period was by no means an easy and congenial task. The merchant exporter was left entirely at his own risk. Alone he carved his routes to other people, alone he maintained relations abroad, alone he opened himself credits. For the successful conduct of the export business were needed great capabilities..."

The establishment of plum drying capacity required the transfer of the technique - it could hardly be described as technology - from Bosnia, where it was relatively long established. It entailed the building and operation of large but simply constructed mud-brick stoves which contained anumber of trays, stacked one above another, onto which the plums were loaded for drying, underneath which a wood fire was maintained.⁶ This

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¹ A G B. M K Kostić, "Podaci" fo 59 (Luka Ćelović Trobinjac); Srovenica B.T.O. 1860-1930 p 161, col 2
² Lj Pavlović, "Istorija i Duhovne Osobine Važnjih Parodica-Godjevšt" Glasnik Geografskog Društva IV, Sv 5 Nov. 1920, p 241
³ Lj Trajković, ed Valjevo i Okolina, p 48
⁴ A G B. M K Kostić "Podaci" fo fo 7E, 81 (Brada Krananović i Paranos) and fo 24/96 (Ranko Codjevac)
⁵ Srovenica B.T.O 1860-1930 p 160, col 1
⁶ A N. F 12 7179 Rapport sur la travail de la récolte des prunes en Serbie, 19 10 1903; F Bianconi, Cartes Commerciales... pp 27-8
stove, or pušnica ("smoke oven") was commonly to be found in the Bosnian plum producing villages, and it afforded a much quicker and more efficient drying method, and a qualitatively superior product, than sun drying, the technique which was occasionally used in Serbia to dry plums for self-consumption.

Despite the obvious simplicity of construction of the pušnica, Serbian farmers seem to have been unable to build their own, and needed the services of a Bosnian specialist for this work. Therefore, the opening up of the Serbian prune export was dependent on the activity of migrant Bosnian builders (dundjari), for whom it afforded a good living. Similarly, operation of the pušnica also called for Bosnian assistance. The very crudity of the stove resulted in the need for skilled operators, for the rate of drying had to be judged nicely. The plums needed to be raised very slowly to about 70°C and maintained at an even temperature. The line between incomplete drying and damaging the fruit by burning was a fine one, and for this reason, all subsequent improved designs incorporated a thermometer set in a window, but this refinement cost too much to be adopted widely, so skill was effectively substituted for capital. "The Bosnians" reported the British consul in 1873, "seem to have a monopoly in the art of drying plums which they do in rude ovens, and numbers of peasants are annually hired to go into Austria and Servia to dry the plums produced there."

The skills of building pušnica and drying plums in them were probably combined; Aksentije Kovačević, a master of plum drying from Bosnia who

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1 L R Iovanovitch, L'Agriculture en Serbie (Paris, 1900) p 45
2 V Karić, op cit p 413
3 LJ Trajković, op cit pp 48-9
4 K Clevinič, "Sušenje šljiva" T 190, of 28-8 1901, p 1
5 For examples see "Ljova Sušnica" Sutra, XII, (1912), 161 p 2 and the Clevinič oven, about which see below, pp.490-1
6 C Br (Bos) 1871, p 607
settled in the Valjevo region, also built drying ovens round this area. He engaged in the trade as well, for in 1862, he owned a prune warehousing business at Obrenovac, on the Sava. Soon after Austria's occupation of Bosnia, the incoming authorities cut off the flow to Serbia of such migrants, and the work was taken over, in Serbia, by upland villagers, but it is interesting to note that the first complaints about the quality of Serbian prunes appear at this time.

As the technique had yet to be diffused widely, the first pre-occupation of Krcnanović - Paranos, on entry into the prune market in Serbia was to set up a system for drying the produce. In the early days, they probably dried much of the produce they handled themselves, and this indeed seems to have been a common practice in the trade. Paranos' widow claimed that even in Bosnia, the people had dried their plums "in a primitive way" whereas Paranos "began to perfect a special kind of dryer for the drying of plums, which the people adopted very quickly." Whatever we may make of this claim, Krcnanović - Paranos seemed to have been known in business circles as the people to address if you had plums to dry.

This was only one of the items of infrastructure that the Krcnanović-Paranos firm had to establish. A further problem, which related to the difficulty of organizing small scale peasant production to meet world market

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1 Lj Trajković, op cit p 49
2 "Izveštaji Komisija za Pregled Šljiva" S F L, (1862) p 224
3 Lj Pavlović, Kolubara i Podgorina, pp 425-6
4 "Izveštaji Komisija..." loc cit; "Sušenje Šljiva I" Videlio IV (1863) 16, p 3
5 A C B. M H Kostić, "Podaci" fo 76 (Erná Krcnanović i Paranos)
6 lecture by K. Glavinić, loc cit; L R Iovanovitch, op cit p 459.
7 N R Djordjević, "Rista Paranos..." loc cit
8 See certain letters of the firm of Despinić in which Stanković in Smederevo is trying to recruit manpower to dry a consignment of plums. M u S. SS. 937/67 of 16 8 1876; 684/67 of 27 8 1876; 364/66 of 30 8 1876; 576/66 of 26 8 1876
standards, arose from the heterogeneity of the fruit grown in the Serbion plum orchards. Though all variants were good enough for distilling, only one, the Rederka or Požarna, was sufficiently sweet and fleshy to be really suitable for drying. Quality was all important, for the prune sold in its main markets as a semi-luxury product, so the trade established big price differentials between the better and the inferior grades. Between the best that Serbia exported and the common "merkantil" grade, the price per kilo varied by upwards of a hundred per cent. In 1863, Germany was taking only prunes of the better grades refusing the cheaper ones. The American market was no less choosy. So the firm attempted to get its suppliers to raise better fruit, and brought in "large numbers of plum seedlings for improving the orchards in the villages, firstly in Valjevo and Kabac okruzi, and later, further afield. After drying, the fruit had to be warehoused, graded by sifting to French trade specifications, and properly packed, processes which needed skilled supervision, which the firm were able to carry out to much higher standards than others who were drawn into the trade.

The strength of the firm's financial resources was brought early into play. Its turnover was dependent on the activity of its network of up-country agents and storekeepers in purchasing the produce from the peasants. Credit was needed by them, for in Bosnia, "the peasant... in the spring calculates on receiving advances [on his plum crop] from the merchants," and trading conditions in the Serbian villages seem to have

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1 La Serbie... à Turin, 1911 p 100; V Karić, op cit pp 353-4
2 Kiljutin Savić, Žijiva, Gatina i upotreba... (Beograd, 1900) pp 54-5; T G XXI 206 or 24 9 1911, p 1 col 1
3 "Rapport sur la travail de la récolte des prunes..." loc cit; N Savić, op cit p 69. The French trade specifications are set out in Jovan Krikner, Industrie und Industriepolitik Serbiens (Belle, 1913) p 141
4 "Sušenje Žijiva, I," loc cit
5 R Millet, op cit p 56
6 A C B. M I Kostić, "Podaci" fo 76 (Brada Kremenović i Paranos)
7 Ibid, fo. fo 76-7; lecture by K Glavinić, loc cit
8 A C B. M I Kostić "Podaci" fo 76 (Brada Kremenović i Paranos)
9 C Br (Beograd) 1871, p 1331
been similar. Only by contracting with the producers was the merchant able to ensure himself a supply. Thus Kremanović – Paranoa reputedly financed the trade by extending interest-free loans to the suppliers who worked with them,¹ and who often packed and graded the produce for them as well.² This was probably the normal practice.³

In addition to extending finance backward down the production chain, normal trade credit had to be extended forward. At this time, the nascent Belgrade money market could not supply credit except at usurious rates, and it is likely that the firm financed its operations through Trieste with which it had strong links. It may therefore have been for this reason that the early plum merchants were actively involved in the organization of financial institutions. The Kremanović were powerful shareholders in Beogradska Kreditni Zavod, and Jovan Kremanović became Serbia's first Central Banker in 1883.⁴ His nephew Aleksa Kremanović was first president and a big shareholder in the powerful Beogradska Trgovska Banka.⁵ Other pioneer plum merchants, Ćelović-Trebinjac, Jovanović-Čapčanin and the Cincar Djordje Vučo were also prominent organizers of banks, which were particularly active in the primary product export trades.⁶

Strong contacts were also needed with world markets, which were generally lacking to the Serbian merchant class. According to his widow, Paranoa was first made aware of the opportunities in the prune trade on a business trip to Germany, while the firm was still trading from Bosnia. The story has an apocryphal ring about it but does serve to emphasize the

¹ Sremsčica B T O 1880–1920, p 39 col 2
² M S Djuritić, op cit pp 28–9
³ For example see A G B. M M Kostić, "Podaci" fo. 85/1 (Djordje Vučo)
⁴ Ibid, fo. fo 77, 79 (Braća Kremanović i Paranoa); Sremsčica B T O 1880–1920 p 57, col 2
⁵ A G B. M M Kostić, "Podaci" fo. fo 77, 79, 83 (Braća Kremanović i Paranoa)
⁶ Ibid, fo. fo 60/2 – 66/8 (Luka Ćelović Trebinjac); fo. 89/3 (Djordje Vučo); A G B. M Kostić, "Autobiografija" fo. 24; Sremsčica B T O 1880–1920, pp 160, col 1, 162, col 1
firm's pre-existent market connections in Germany and initial awareness of demand as well as supply potential: 1

"As soon as he became a member of the Krananovic and Faranos firm, Rista began to take up direct trade links and to procure goods at first hand from lower Germany. On one occasion when he was doing business in Berlin, setting goods aside, he was invited to lunch by a certain manufacturer... After the lunch, cooked prunes were served. The manufacturer asked Rista if he liked cooked prunes, Rista said he did, and asked him where he got them from. The manufacturer replied: from California. How much a pound, asked Rista. Replied the manufacturer, ten marks a pound. Rista asked him if he could sell even better dried plums at five marks a pound. The manufacturer said he could."

But although the German market always absorbed a significant share of Serbia's plum output, the main consumer in the early years was the USA. According to an American estimate of 1863, the US absorbed at least half of Serbia's annual export, while a later (1869) estimate put the proportion at two thirds. 2 This trade passed through Trieste, and about 1860, Rista Faranos' son Sima entered into partnership with Čelović-Trebinjac, so that while Čelović could handle affairs in Belgrade, Sima Faranos could operate from Trieste the better to maintain contact with the American market. 3 Subsequently Sima established himself (at least temporarily) in New York whence he was trading and reporting back to Serbia in 1863. 4

d Serbo-Hungarian competition in the Serbian plum market

From the late 1860's to the mid 1890's the plum export went into depression, in terms both of prices and volume. There was no one cause. The American market was lost to Bosnian and Serbian Prunes; for this the McKinley tariff of 1890 was blamed by the trade, 5 but in any case, California

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1 N R Djordjević, "Rista Faranos..." loc cit
2 Cons. Gen L Schuyler, Foreign commerce of Servia, Athens, 29 3 1863. House Misc. Docs. 46-1 Vol. 4, No. 12, Art I, Consular rep's, 31 v 10, p 95; C Be 4 10 1869, R C LXVIII, p 275. These estimates cannot be verified directly from foreign trade statistics because of doubts on origin arising from the intermediary role of the Austrian market.
3 A C B. K H Kostić, "Pođaci" fo. 60/2 (Luka Čelović Trebinjac)
4 C M P II (1863) 41, p 656
5 C Br (Bos) 1890, p 2
was emerging as a powerful competitor on the international prune market. Californian production was eventually to surpass the combined output of its principal competitors, France, Bosnia, and Serbia.1 By 1896, in consequence of losing the US market, the formerly important prune trade of Trieste was "practically ruined".2

Supply was probably also affected by some kind of wasting blight or disease.3 However, the destruction of the vineyards and protection for the wine-growers permitted the wine price to rise above that of rakia.4 It was probably at this time that rakia, rather than wine, became the drink of the masses, and, as rakia prices remained stable while the price of plum export products was falling, it is likely that substantial supplies were diverted onto the home market.

Recovery, when it came about, was associated with a shift in outlets, in favour of exports through Budapest, and with the growth of the export of rekec (jam). Both these developments reflect the increasing dependence of the trade on the activity of the Budapest market.

Even before the opening in 1884 of the main line railway through Serbia, which connected the Great Morava valley and Šumadija (at Kragujevac) directly with Belgrade and Budapest, at least three Budapest firms were established at Belgrade, whence the produce was probably exported to Budapest by water.5 But the railway brought Budapest within easy reach of abundant but hitherto relatively inaccessible supplies in the central Šumadija and the upper Morava valley. The principal collecting centre in the interior was the railhead town of Kragujevac, where, shortly before the opening of

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1 I-A Janitch, La Serbie au Point de Vue Economique, p 20
2 C Er (A.B.) 1896, p 4
3 "O rdjaven stanju naših šljivovaka i sredstvima da im se ponoge" Đorđević I (1890) 16 pp 121-2
4 See below, p 464
5 "Izveštaj komisije..." loc cit
the railway, two large Jewish import houses of Budapest, Leo Pfefferman and David Brakfeld & Kingor established themselves. The Pfefferman firm alone exported an alleged annual 250-400 wagons of prunes from the town. This would indicate that it controlled about ten per cent of Serbia's prune export.

However Budapest importers were no less interested in exploiting Serbian plum production to obtain a supply of pekmez, "an unsavoury looking compound reduced to pulp or squash by boiling", destined for working class consumption in Central Europe. As with the drying of prunes, transport problems resulted in the processing of pekmez on the spot, but although the producers themselves built mólnice for plum drying, the price of the utensils needed for making pekmez effectively ruled out their purchase by most households. This limited the function of the peasant to that of raw material supplier and the work of pekmez manufacture and trade was undertaken by itinerant gangs. These gangs would first appear in the plum producing villages of the Banat in June to inspect the crop. At harvest time, they would reappear with their "imposing batteries" of equipment, which included huge shallow copper boiling pans of 2-3 metres diameter and 6-700cm. depth. They worked in haste, for the produce was fully ripe, the season was short, and their circuit would probably take in several villages.

Having recruited local labour for the donkey work, and having collected up their supplies of plums, firewood and barrels, they would select a site to work, preferably in the courtyard of a property, but sometimes just by the

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1 K D Popović, Kragujevac i njegovo privredno područje, p 297
2 C Br (9) 1897-8, p 17
3 Rapport sur la travail de la recolte des prunes... loc cit. This view was confirmed to me verbally by Vasa Hikić, retired merchant of Čabac.
4 K Savić, op cit p 127
5 Rapport sur la travail de la récolte des prunes... loc cit; La Serbie... à Zurin, p 93
6 "Kose za bolju proizvodnju pekmesa" T.G XVI (1906) 144, p 1 col 3; Rapport sur la travail de la récolte des prunes... loc cit
roadside. A pit would be grubbed put for a fireplace, on which to boil the plums in the puns. When cooked, the pekmez would be poured with a fair admixture of dust, and wood splinters into often leaky barrels which were taken to the railhead. ²

The pekmezari were mostly foreign, and hailed mainly from Slavonija. Even Serbian pekmezari were dependent on skilled Slavonian workers and in the Kruševac region native pekmez masters only began to be trained after 1918. ³ As a pekmez making operation required large financial resources – the equipment alone being worth about 10,000 dinars – the pekmezari themselves were backed and usually controlled by Austro-Hungarian merchant interests. ⁴ This seems to have been the case from the very beginning; our earliest reference to pekmez production is of the mid 1880's, when it was reportedly undertaken "on account of certain foreign entrepreneurs", and in 1893, "Austrianb appeared in Pešega (Užice okrug) to cook pekmez for export onto the Austrian market. ⁵ The Pfefferznan firm at Kragujevac was exporting pekmez by 1893, its trade reputedly amounting to 3-4,000 tonnes annually. ⁶ Brakfeld-Kinzer also dealt in pekmez as well as in prunes, and a former manager employed by them, Ilija Licikan, a Greek, opened the first permanent pekmez factory in the country in 1896. ⁷ His 1904 production attained the equivalent of six percent of total exports. ⁸

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¹ Ilija, op cit pp 126-7; D Lapčević, op cit p 292; Rapport sur la travail de la récolte des prunes... loc cit; "Pere za bolj proizvodnju pekmeza" loc cit.
² Le Serbie...À Turin 1911, p 93; "Pere za bolj proizvodnju pekmeza" loc cit
³ Ilija, op cit pp 124, 126; O Savić, Kruševac i Enero Uticajna Sfera, footnote 53 to p 99 on p 304
⁴ Ilija, op cit pp 126-7
⁵ V Karić, op cit p 413; S Ignjić, Užice i Skolina, p 83
⁶ "Lujova sušnica" loc cit; M D Popović, op cit p 296
⁷ M D Popović, op cit p 363
⁸ S G 1904, p 378
According to one former participant in the trade at Krujevac, the export trade in fruit products here, too, was in Jewish, Greek and Cincar hands. An article of 1897 expressly regarded pekmez merchants as foreigners. In 1905 it was reported that the purchase of pekmez in Serbia was "increasingly being concentrated in the hands of the representatives of the Diskont und Wechselbank of [Buda] Pest." and in 1907 that 'the majority of our producers stand in a tight relationship with big bulk purchasers from abroad' and that these operated a buyers' cartel.

Austro-Hungarian purchasers were probably drawn into the Serbian market because of supply difficulties at home. In 1892 it was noted that Slavonian plum production was rapidly declining, and that large areas had been cleared of plums during the preceding quinquennium. In 1885, 1,323 tonnes of beštili (pekmez) had been produced in Slavonia, but by 1890, production had fallen to 740 tonnes. During the same period, Serbian pekmez exports rose from nothing to 3,459 tonnes. Prune production in Slavonia also collapsed and between 1890 and 1900, Hungary passed from being a large net exporter of prunes to a small net importer.

The influence of the Austro-Hungarian market also determined the geographical structure of Serbian prune and pekmez production. Pekmez production came to be highly concentrated in that part of the interior which was rail linked with Budapest — i.e. the upper Morava — central Šumadija.

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1 O Savić, op cit loc cit
2 T&O VII (1897) 79, p. 1, col 4
3 H Kostić, Srpska Izvozna Trgovina od 1893-1903 godine, p 54
4 H Karković "Glasovi iz Naroda-Kragujevac" T&O XVII (1907) 216, p 2 Col. 2-4
5 C Br (Bos) 192, p 2
6 See Table VII. 6 below p.477
7 According to statistics quoted in T&O XI (1901) 230, p. 1, col 1
8 See appendix to this chapter, pp 509-11
Between 1889-90 and 1904, while prune exports through Belgrade remained steady (at 10,600 tonnes and 11,100 tonnes respectively), pekmez exports rose from 1,600 tonnes to 13,900 tonnes. In the former year these accounted for 51 per cent of total pekmez exports, and in the latter, 91 per cent.

Conversely, at the western ports, where the prune trades were early established and in non-Hungarian hands, growth took place almost exclusively on the basis of prune exports, which rose from 13,600 tonnes to 29,400 tonnes. Although these exports too seem mainly to have been consigned via Budapest, this was probably only to use the convenience of transit through Austro-Hungarian territory. Thus in 1904, while (at the one extreme) the western okrug of Podrinje dried 59,000 tonnes of plums, it made pekmez from only 1,082 tonnes, at the other, Kragujevac okrug dried about 4,300 and made pekmez from 12,900. There are no convincing supply reasons for these differences, nor was it the case that pekmezri needed to operate near the railheads, for they penetrated in search of supplies which they exported from the remotest regions of the south west as well as those that were relatively near at hand. The demand of the market was almost certainly the critical determinant; central Europe, supplied by Budapest firms operating in central Serbia wanted mainly cheap jam; northern Europe, supplied direct from the west of Serbia, wanted prunes.

Although originally grafted upon the Serbian agricultural economy by incoming firms, the plum based trades did not remain an enclave of the income nor did they give rise to other manifestations of dualism connected with the raising of primary commodities in developing countries. In this connection we will examine firstly the means by which dependence on the incomes was lessened, so that an increasing share of the earnings of the trade could stay in the country, and later the impact of the trade in the formation of primary processing industry.

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1 For 1889 and 1890 prune and pekmez exports through Belgrade see S.N. LVIII, 17 of 22 1 1891, p 68 and for 1904, S.S.T 1904, pp 186-7, 226-7
2 See appendix to this chapter, table iii, p 511
3 S Iagnic, op cit p 85; K D Popovic, op cit pp 268, 296
Dependence on the incomer was to some extent lessened automatically because some of the pioneer firms settled permanently in Serbia. But the tendency had been felt at the very outset for control of the trade to remain outside the country, on account of the lack of the necessary financial resources and world market contacts, to merchants of the Serbian elite. It evoked complaints as early as 1861, and it was never wholly eradicated; their character was expressed in an extreme form by the following tirade from Bosnia in 1875, where analogous conditions developed.

'Instead of our determining the price of our goods so that the purchasers come to us on their knees, as we go on our knees to Vienna, Trieste and Pest to buy their manufactures at inflated prices... our merchants, mainly of Brčko, in whose hands lies the whole of the plum trade, go on their knees to Trieste and Pest, offer all our produce to soulless Jews, particularly plums, as if these would not collapse if they did not do so. What is worse, they sell them in advance to usurers under contract.'

But a similar complaint could still be made in 1905.

'...in fact our export trade has always suffered to the greatest degree from weak capital. This lack of capital has limited the plum trade of home merchants to the pure intermediary role between the Serbian peasant and the Pest wholesale exporter...'

But native competition for a bigger share in the dealing profits did result in development of the commercial system by a means peculiar to this situation. The institutions which would likely possess suitably strong foreign correspondence connections and ample credit resources would be the banks, particularly those of Belgrade and the primary produce exporting centres. Thus several banks were created in Belgrade and the plum growing regions for the express objective of providing credit for the local export traders, Valjevsko Zadruga (of Valjevo) was founded in 1868 with object of extending credit to exporters, particularly of prunes, the town's staple

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1 "Higovi za Srbaku Trgovinu" Srpske Novine I (1861) 45, p 2, col 2-3
2 Bosanac Emigrant (pseud.) "Sljiva i Njen Promet" Zastava (Novi Sad) X (1875) 69, p 2, col 3
3 M M Kostić, op cit, p 52
trade at this period, and similar motives probably explain the establishment of the two other Valjevo banks.\(^1\) And in 1912, the merchants of Arilje township (Ulje okrug) set up a savings bank (štetionica) in order to assist the export trade in fruit.\(^2\) Two Belgrade banks were also founded from similar but more ambitious motives. Srpska Tržožaka Zadruža was founded in 1900 by several Belgrade export houses with the aim of cartellizing the export trades, to organize the "undirected" Serbian exporters and protect them from "heartless outsiders."\(^3\) This in turn spawned Izvozna Banke (Export Bank) of Belgrade to support this objective which arose from jealousy of the commanding position of Budapest market in the Serbian export trades. The Izvozna Banke projectors solicited government aid in the form of tax concessions by advancing essentially "patriotic" arguments.\(^4\) Patriotism consisted of diverting the dealing profits from Budapest to Belgrade hands. Evidently, other banks were promoted for similar purposes, which evoked the complaint from an advocate of the Commercial Schools movement that\(^5\)

"You read every day in public advertisements appeals to patriotism to subscribe the shares of some bank, but you very rarely read an appeal for some patriot to open a vocational school for the education of youth."

From supporting the trade with credit it was only a short step, though a risky one, for banks to enter into the export trade themselves as intermediaries. This they began to do around the turn of the century by establishing brokerage departments which would place the produce collected up by the merchants on the export market against payment of commission.

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1 I A V Secondary material in typescript headed "Valjevska Zadruža 1668 - 1948", "Valjevska Štetionica" and "Valjevska Tržožaka Banke"
2 S Ignjić, op cit p 89
3 Spomenica B T O 1660-1939, p 160, col 1
4 Ibid; A C B. M Kostić "Autobiografija" fo. fo 21-5; Idem, Srpska Izvožna Trgovina..., pp 55-6
5 Rad Prve Konferencije Izdanjanka Tržožaštih i Tržožaško Zanatliških Omladina Kraljevine Srbije, (Beograd, 1907) pp 64-5
The activity of the European 'Universal' bank as industrialist has been well explored, but its analogous role as substituter of commercial enterprise and capital has received little attention. This development was by no means pioneered in Serbia; in Bohemia-Moravia the sugar brokerage business was dominated by bank enterprise to the extent of effectively relieving the sugar manufacturers of their selling function,¹ and Hungarian banks were also actively engaged as intermediaries in the produce trades.²

The technique would scarcely have been difficult to transmit to Serbia, where bank correspondence connections and credit resources made good a most obvious deficiency. In Serbia, bank brokerage or 'komisionarnski' business did not confine itself to handling plums; at the grain port of Smederevo, the old established Smederevska Kreditna Banka opened a grain brokerage department in 1906, and competed with several Belgrade banks which also traded grain at that port,³ while Beogradska Zadružna and Izvozna Banka also engaged in commission transactions in livestock.⁴ But the banks found the plum trade particularly receptive to the services they could offer, for while the Belgrade produce bourse languished, the trade speedily channelled itself through their hands. International connections are what is stressed most heavily in the following advertisement, directed to the Serbian merchant community by the well run Žabacka Trgovacka Banka (of Žabac) in 1902⁵

"The ... Bank (founded in 1898) completes Banker's business, besides which it also practices brokerage business abroad, at a moderate commission with Serbian dried [plums] (packed in sacks) and double stove dried plums (packed in boxes), pekmez, foodstuffs, etc. It has strong business connections abroad. It guarantees solid service in every aspect."

¹ R L Rudolph, thesis, pp 202-7
² A G B. M Kostić "Autobiografija" fo. fo 17-18 and see above pp 170, 458
³ Report to members of Smederevska Kreditna Banka at 36th A C M. in Smedenica Pedesetogodišnji Rada Smederevska Kreditne Banke 1871-1921 (Smederevo, 1929) p 386; M Kostić, Šrpska Izvozna Trgovina...
⁴ T K S, Izveštaj za Godinu 1911, pp 10, 14
⁵ Trgovinski - Znanstveni Časopis 1902-07, p 297
Even a small bank like Valjevská Štedionica, which engaged in prune brokerage, maintained a wide correspondence network. In the 1911 export season it only placed 954 tonnes of prunes, but these were sent to 19 firms in 13 towns as far afield as Vienna, Eger, Munich, Kaiserslautern, Prague, Berlin, Duisburg, Ulm and Danzig, as well as Budapest.¹ Izvorna Banka, one of the largest firms in the produce brokerage business, which in 1907 was exporting to Warsaw, also exported through branch offices at Sabac, Obrenovac and Kragujevac, all towns whose trade was mainly in plum products, and two other Belgrade banks maintained branch offices at Sabac for the same purpose.²

The impact of commercial crop development on the producer - Viticulture after the phylloxera

The export boom of the 1860's in the wine trade evoked a powerful response from the producers, if not from the local wine trade. After the prolonged period of stagnation when the trade had languished for want of outlets, the area under vineyards seems to have begun on a course of rapid expansion. The 1867 census showed that there were 410,700 notika of vines (23,600 ha)³ and in the early 1880's a French consular estimate for the same territory estimated the area under vines at 452,000 notika, with a further 137,000 in the annexed territories making 590,000 notika or 34,000 hectares in all.⁴ The land census of 1889 (which, in respect of cultivated areas probably understated) showed 43,300 ha of vineyards.⁵

Phylloxera rapidly tightened its hold on the Serbien vineyards. By 1893 the wine export had disappeared, and the price of wine on the Serbien

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¹ I A V Valjevská Štedionica, Knj. 137 Kopija pisama, fo. fo 1-70
² S Ignjić, op cit p 67; M M Koetić, op cit pp 56-7
³ V Jakacić, "Stanje zemljoradnje u Srbiji "Glasnik S U D XLI, p 62
⁴ AAE CCB t 6 despatch of 8 6 1883 fo. fo 202-3
⁵ Državopis XIX, p 97
market climbed as set out in Table VII. In 1890, red wine sold at 21 dinars per hectolitre, and by 1894 it had reached 65 at around which level the price settled, protected by import duties which the industry had been granted in 1891 to assist its reconstruction.¹ Output slumped from about 700 - 900,000 hl in the 1880's,² to a mere 146,000 in 1900.³ Even internal commerce shrank drastically from an estimated 311,000 hl per annum in the 1880's⁴, to 31,000 in 1896⁵ and 46,000 in 1900.⁶ By 1893/4 the price of wine which had hitherto been the cheapest beverage on the market surpassed that of rakija, and stayed at a permanently higher level.

TABLE VII. 4. PRICES OF ALCOHOLIC BEVERAGES 1890 - 1908

<table>
<thead>
<tr>
<th>Year</th>
<th>Red Wine</th>
<th>Rakija</th>
<th>Beer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>21</td>
<td>42</td>
<td>57</td>
</tr>
<tr>
<td>1891</td>
<td>39</td>
<td>61</td>
<td>66</td>
</tr>
<tr>
<td>1892</td>
<td>40</td>
<td>55</td>
<td>64</td>
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<tr>
<td>1893</td>
<td>50</td>
<td>51</td>
<td>66</td>
</tr>
<tr>
<td>1894</td>
<td>65</td>
<td>41</td>
<td>66</td>
</tr>
<tr>
<td>1895</td>
<td>61</td>
<td>40</td>
<td>68</td>
</tr>
<tr>
<td>1896</td>
<td>48</td>
<td>41</td>
<td>66</td>
</tr>
<tr>
<td>1897-1900</td>
<td>52</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>1901-1904</td>
<td>66</td>
<td>54</td>
<td>69</td>
</tr>
<tr>
<td>1905-1908</td>
<td>60</td>
<td>47</td>
<td>70</td>
</tr>
</tbody>
</table>

Standard sources for price statistics

Taking the loss of export sales into account, the decline in market output by the early 20th Century was about 90%, though rising prices compensated to the extent of reducing the overall loss of cash income to wine growers to about 70%.

¹ C Be de Dudzeele "Compte rendu..." R.C LXXV, p 70
² See above, p 398
³ S.C 1900 pp 196-7
⁴ See above p 399
⁵ S.C 1898-9, pp 422-3
⁶ S.C 1900 pp 370-1
But the two big wine raising areas examined earlier did even worse than these figures imply, for there appears to have been a relative shift of wine production in general towards the west of Serbia and the Morava valley, and sales, by market area, became more evenly spread across the country, implying that whereas inter-regional trade had been the most substantial element of the old wine trade, the tendency was now for local producers to satisfy local markets. Sales in Timok valley and south Serbian markets now accounted for less than one third of the total. (Compared with an estimated 60% pre-philloxera) i.e. quantitatively their sales fell by about 96%. To all intents and purposes the commercial wine grower of Niš or the Krcjina was wiped out.¹

There can be little doubt that the wine peasants of these regions had become very heavily committed to the success of the wine crop for their cash income for a considerable time, and that this commitment had been reinforced by the resurgent prosperity of the export boom years. Moreover, when faced with the imminent destruction of the source of this prosperity, there was little scope for diversification out of wine and into alternative cash crops, for the opportunity cost of vineyard land was low.

In the initial stages of the collapse, they sought to protect their cash incomes by reducing self consumption and maintaining sales to the market.

By 1890, production was down to an estimated 420,600 hl² — little more than half the output of the pre-philloxera years — yet exports still ran at 34,000 hectolitres,³ and as prices on the internal market had yet to rise, it is reasonable to suppose that the demand of the home market had not much diminished. So self consumption must have fallen very severely. In 1891,

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¹ See wine sales over preština scales 1900-06, SC 1900, pp 370-1, passim
² J Mallat, op cit II, p 177
³ See Table VII. 3 p. 441 above
when prices were definitely rising, it was observed that in many of the viticultural centres, the peasants had ceased to drink wine at all.\(^1\)

Diversification out of wine in practice only meant arable farming, for grain. Fruit trees did not thrive in eastern and southern Serbia, and vineyard land was unsuitable for industrial crops. The collapse of the Krajina vineyards prompted expansion of the arable area, as some of them were ploughed up, and as intakes were made from the pasture and waste of the hillsides. However, the vineyards provided, at best, mediocre tillage, and the understandable pressure on farmers to maximize their cash income from wheat cultivation in the short term soon began to have deleterious effects on these marginal lands which were quite unable to withstand the exhaustion resulting from wheat monoculture, and frequently had to be abandoned.\(^2\) That little was gained thereby is evident from the statistics of wheat exports through Negotin’s port of Radujevac. While cereal exports from Serbia as a whole rose more than fourfold in the two decades after 1880, cereal exports through Negotin rose by less than half.\(^3\)

In the similarly afflicted Pirot region, former vineyards were also of little value for alternative purposes, despite the pressure on the land market in this not very fertile region. Yet in the early 20th Century, much of the former wine bearing land remained out of cultivation.\(^4\) Producers of this region, formerly highly dependent on wine as the dominant cash crop, were similarly obliged to rely on what they could earn from cereal husbandry,\(^5\) but the export statistics for this frontier offer no suggestion that they were successful.

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1 C. Le de Dudzeelo "Compte rendu..." R.C LXXV, p 69
2 D. Kaslovic: "Zemljogradnja u Negotinskoj Krajini "Negotinska Krajina pp 133-4
3 Radujevac exported 4,650 tonnes of cereal in 1880-1, and 5,750\(\text{tonnes}\) in 1900-04, \(\underline{E M F I} (1882)\) 13, p 199 and standard sources for foreign trade statistics
4 J. Petrovic Pralbari, Hvarciti iz Ckoline Pirote, pp 32, 36
5 V. N. Nikolic, "Iz Lužnice i Nišave" Srpski Etnografski Zbornik, XVI, (Beograd, 1910) p 26
Locked into wine raising, producers thus had little alternative other than to try to combat the scourges which ravaged their vineyards by what means they could despite accumulating evidence of the futility of their struggle. Moreover there remained the incentive of making a killing on the market if only the crop could be brought to fruition, thanks to its soaring market price. So, while production sagged ever lower, the area under the vine paradoxically rose, from the 43,300 hectares reported in 1889 to 61,000 in 1893 and 68,500 in 1897.  

Old and infected vineyards were maintained or abandoned, and wine growers set up new ones in the hope that the blight would not spread to them. Their hopes were usually frustrated. In 1897, 57½% of mature vineyards were either phylloxera contaminated or totally abandoned. In the Krajina it was as high as 94%. Despite the great shrinkage in area between then and 1904, phylloxera (and fungus) continued to advance; 55% of vineyards were affected at the latter date. The Niš vineyards had been affected later than those of the Krajina, but were devastated none the less. In 1897 only 27½% of mature vineyards in the Niš region had been affected. But by 1907, when the percentage for the country as a whole had at last begun to fall to 34%, the proportion for Niš had risen to 69½%.

Attempts to combat the blight were a failure, and by 1895, phylloxera destruction in the Danubian vineyards at least was reported to be "terribly complete." This is hardly surprising, for even in France, there was a prolonged failure to restore the industry, and Serbian growers were fated to

1 See table VII. 9 p. 489
2 H.N.P. 1906-09, 8 p 1004
3 Statistika XVI, p 359
4 Ibid, p 353
5 Rapport de Terver sur le commerce de la Serbie en 1904, loc cit
6 Statistika XVI, p 365
7 S.G. 1907-08, p 267
8 C Br (S) 1894, p 19
make much the same mistakes as the French. The basis for the restoration of phlloxera-stricken vineyards was the American vine. But not all American vines were phlloxera immune, nor were they less vulnerable than the native vine to _peronospora_. It appears that the American vines first imported were of inferior quality, and when transplanted direct did not adapt to local conditions. The long run answer was to combat _peronospora_ with copper sulphate, and phlloxera by grafting the native vine to an American vine stock, but this too, was unsuccessful initially, as producers did not understand the technique, and unsuitable carrier vines were used. Discouraged by their failures and by the very high cost of establishing grafted vineyards, producers continued to employ the native vine for most replanting and the blight continued to rage with unabated force. As late as 1909 the majority of vineyards were still ungrafted.

Only a very limited recovery came about, and this was associated not with the efforts of the wine zone peasants who had produced wine for their cash incomes, but with replanting by wealthier people, in wealthier regions, for self consumption and only to a lesser extent for the market.

Apart from its commercial significance for the small peasants of the main wine regions, a vineyard held for self consumption purposes had always been part of the normal equipment of the better off. Prestige entered into it, and so did a desire to ensure a supply of wine of reasonable quality. The most celebrated vineyard in the country was that belonging to the royal family at Smederevo, "arranged as a fine garden". Many vineyards near

1 C Bo 1901 R.C pp 352-3
2 La Serbie...à Turin, 1911, p 79
3 AAE CCB t 8 despatch of 31 10 1891
4 La Serbie...à Turin 1911, pp 79-80
5 N.R.P 1900-09.8, p 1004, also see Table VII p.489
6 La Serbie...à Turin, 1911, p 85
7 Н Савић, Беошко з виноделије, p 29
Negotin were held by merchants and officials of the town, who hired labour to cultivate them.¹ "I have had occasion to drink many of the local wines" wrote Belgian consul de Dudzeele in 1691** and I have certainly drunk excellent ones, notably in private houses. On the other hand I must admit that the great majority of wines found in commerce leave much to be desired...² Consequently, vineyards in the good wine regions were often held by better off peasants from non wine growing areas. It was observed in the 1670's in the Župa wine region (Kruševac okrug) that rows of pivara (fermentation cellars) were to be found in the vineyards, some of which were of elaborate construction, with two floors, because:³

"In some of them there are rooms on the upper floor where wealthier householders stay when they work the vineyards, or during the vintage. This is very necessary to them as not only the men of Župa, but even the Borčobrinci and the people of Kopaonik have vineyards at Župa."

This kind of vineyard owner was not usually concerned as to the commercial possibilities of his vineyard, though there was also a certain amount of relatively large scale commercial viticulture. For example, on the town fields of Kragujevac,⁴

"The proprietors of these vineyards were mainly prominent and wealthy merchants, industrialists, craftsmen and other businessmen of the town, who acquired the plots...either by inheritance or purchase...The whole production served more or less exclusively for the requirements of the proprietors and their households. Only the firm of Pavlović – Božjadšić Brothers, whose vineyard of eight hectares contained 60,000 vines, produced wine with commercial objects...the largest part of this was sold in the town kafane."

The wine of the royal Cmederovo vineyard certainly passed (at any rate in part) into commerce,⁵ and so also probably did that of the vineyard in the Negotin region of Rista Paranor, for his wine was sent to an international wine exhibition at Bordeaux in 1882, where its quality was judged sufficiently

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¹ D Kaslovarid "Vinogradarstvo u Negotinskoj Krajini" loc cit p 165
² C De de Dudzeele, "Compte rendu..." R C LXXV, p 70
³ M Dj Milićević, Kneževina Srbija, p 763
⁴ M D Popović, op cit pp 222-3
⁵ L Pavlović, Smederevo u XIX veku (Smederevo, 1969) p 66
good to be awarded a "distinguished diploma".  

It was this kind of vineyard owner, the relatively affluent bourgeois or peasant who kept a wine plot for self consumption, and perhaps for the satisfaction of maintaining a véranda out of town, and the larger commercial grower who could meet the capital cost of a grafted vineyard, who were in the best position to participate in the gradual restoration of viticulture. Consequently it was not in the old commercial wine regions of among the small wine peasants that the revival took place. We have already noted the pattern of wine growing at Kragujevac; here recovery was reported in the following words:  

"Probably not a single urban region has set up new vineyards so fast in place of the old collapsed ones as has Kragujevac, in the environs of which today every single plot has been renewed and on it erected the fine summer villa of a worthy Kragujevac townsman."

In the Morava wine zone, a fairly prosperous area of mixed stockraising, cereal and horticultural activity, we see that in 1906, attiny 3% of the wine produced went onto the market. In that year, 45.6% of the vineyards were planted with American vines, and only 7.8% with native vines. Consequently, phylloxera and Peronospora damage destroyed only 7.2% of the vines. In contrast, damage extended to 48.9% of the vines in the vineyards of southern Serbia. The south was the poorest part of Serbia, and wine production had always supported a high level of commerce, but when this collapsed, many vineyards were neglected as relatively few owners could enjoy the luxury of self consumption. Only 7.6% of the area was replanted under American vines and a further 4.2% with the native strain. As a further indication of the quality of cultivation there in 1908, the region produced only 11.5% of Serbia's production although it accounted for 25.3%
of the vineyard area.\footnote{Ibid, p 269}

But large scale commercial cultivation did not make great headway, and was not self-evidently profitable. At Smederevo some energy was devoted to restoring the vineyards, but it appears that this was unprofitable at the high rates of interest pertaining, "thus the fact that the Smederevcí have not been able to make a return on their vineyards for twenty years, except in the isolated cases of energetic proprietors with distinguished vineyards or of wine manufacturers who seek publicity for 'rearing' a vineyard - but the balance of yield and profit leads to ruin."\footnote{Smederevac Rodoljub (pseud.) "Trgovina i Radinost - Opštanak Smederevskih Vinograda II" T.G LXI (1911) 255, p 2, col. 2-3}

Wine growing, post-phylloxera, had become too capital intensive to restore the fortunes of the numerous peasantry in the relatively impoverished traditional wine zones. Post phylloxera recovery was largely associated with production for self-consumption among the better off. Without any satisfactory means of recovering, from the yield of alternative cash crops, the incomes of which they were deprived by the destruction of their vineyards, many of the former wine peasants had to seek alternative sources of income other than from the land they owned. Some found it by going on migrant labouring to Romania,\footnote{D. Kasic, "Vinogradarstvo u Negotinskoj Krajini" loc cit p 179} while peasants from the formerly intensive wine growing region of Vlašotinci in the far south of the country were obliged to use their wine growing skills to cultivate the vineyards of Smederevo for their relatively affluent owners.\footnote{Smederevac Rodoljub, "Trgovina i Radinost...II" loc cit 256, p 2, Cols 1-2}

\footnote{The Impact of trade on plumb raising}

The configuration of the Serbian plum belt, in 1897, is shown in figure VII 1. But it must be remembered that its profile changed from year to year.
year as the crop thrived in one area, failed in another—for example, Užice okrug produced 12,000 tonnes of plums in 1900, only 4,000 in 1904, and 57,000 in 1906.¹ The key producing areas—which also happened to be rather more consistent producers—lay in the Banat and the north-west—the okruži of Podrinje, Valjevo, Rudnik and Kragujevac.

Although overlapping the main grain basins in the Morava valley and in the north-west, the plum belt stretched across a zone of only moderately fertile rolling country which was characterised for the most part neither by major grain surplus nor serious deficiency.²

¹ S.G. 1900, p 192; S.G. 1904, p 258; S.G. 1907-8, p254
² See figs VII (i) and III (i)
### Spatial Distribution of Plum Orchards, 1897

#### Table

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Source: Statistika XVI pp 354, 360; P.S.D.S. 1895, pp 340-5

Area numbering follows that on map of administrative divisions, p 144, above.
The extent of this area was the product of natural, rather than transport, conditions, for unlike the region of commercial grain raising, the zone of commercial arboriculture could extend a long way from the main communication routes. Prunes, pekmez and rakija were all concentrates which were usually made at or near the point of plum production, and in relation to their weight these products tended to be much more valuable than cereals or than their own raw material.

<table>
<thead>
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<th>TABLE VII 5</th>
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<td>VALUE AT BELGRADE OF 100 kg OF CERTAIN PRODUCTS IN 1901</td>
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<table>
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<th>Product</th>
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<tr>
<td>Wheat</td>
<td>13.65</td>
</tr>
<tr>
<td>Pekmez</td>
<td>42.95</td>
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<tr>
<td>Prunes</td>
<td>32.00</td>
</tr>
<tr>
<td>Rakija</td>
<td>90.00</td>
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</table>

Sources: S.C. 1901, pp 272, 277, 279 and for fresh prunes, from export statistics.

Moreover, these commodities were (if carefully produced) more or less imperishable and undamageable, and therefore capable of withstanding protracted and rough transportation. Thus the development of a plum export trade even from centres 100 or 150 km from the Sava ports was able to antedate the building of the railway. The introduction of commerce in prunes was the vital step which could transform the plum belt villages into cash cropping regions without investment in communications, for within this zone, plum growing was almost universally possible, returned a fairly high yield per hectare, generated a product with a world market demand, and could withstand long hauls by peasant cart. In Table VII 6 we trace the volume of plum based exports from 1843/51 to 1912. Some idea of the magnitude which the trade in prunes alone attained, having started from virtually nothing in the 1860's, may be gained from the fact that by 1903/7 Serbia's prune export was the largest in the world. During that period, while Serbia exported an annual 35,400 tonnes of prunes, her principal rivals in the
international market, the U.S.A. (mainly California) and Bosnia-Hercegovina exported 22,400 tonnes and 21,600 tonnes per annum respectively.¹

This huge trade, as well as the export of plums and fresh plums, the legal and illegal export of rakija, and the very considerable internal sale of rakija probably revolutionized the money economy of a large area of the country. This enormous trade expansion was accompanied by a great expansion in production. We earlier estimated that there were in 1847 about 13.4 million stands within the frontiers of that date, and as about 1.6% of the total in 1897 were in the annexed territories, so there were about 13.62 million within the subsequent frontiers of the country. By 1897, this had risen to 26.256 million, while between 1897, and 1904-8, the area under fruit rose again from 97,971 hectares to 155,600 ha. (by 58.9%) suggesting an overall increase between 1847 and 1904-8 of 206.3%. Output in 1847 we estimated at 135,900 tonnes and in 1904-8 (average) at 432,300. This expansion was insufficient to cover the vastly increased export of plum based products, and to maintain the level of self consumption per capita.

¹ U.S.A. Dept. of Commerce, Statistical Abstract of the U.S. in 1914 (Washington, D.C. 1915) p 419 (1904-7 only); C Er (Bos) 1908, p 17. The U.S. was, however, a much larger producer.
### TABLE VII. 6 GROSS EXPORT OF PLUMS AND PLUM PRODUCTS 1843-1912

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<th>Fresh Fruit</th>
<th>Prunes</th>
<th>Pekmez</th>
<th>Rakija</th>
<th>Total, in million d</th>
<th>Value, in thousand tonnes of fresh plums equivalent</th>
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For sources and calculation see over
a. Includes all fresh fruit but is composed predominantly of plums.

b. Where the figure is expressed as a range the upper end of the range includes an estimate of contraband export, the lower end includes the lawful export only. For details see Appendix II to Chapter VI, above.

c. Calculated by multiplying prune export volume by 3.63 and rakija volume by 3.36. See Appendix to this chapter. Rakija volume is multiplied by 5.29, the conversion ratio in 1904, when 295,674 hl of rakija biljovica and rakija pravčenica were distilled from 156,427 tonnes of plums. See 1904 p 370

d. Contraband rakija is included at the unit export valuation price of declared exports.

e. Plums only

From standard sources for Serbian foreign trade statistics except as modified by the above notes.

In the 1840's, exports probably did not absorb the output of more than 3,000 tonnes of plums, but in 1904-06 they took up 236 - 262,000 tonnes, leaving 133,000 tonnes and 170 - 196,000 tonnes for the domestic consumption of a population which rose from about 1.09 million to 2.689 million (in 1905). Per capita consumption therefore fell from about 122 kg to 63 - 73 kg of plums. This does however rather overstate the extent to which self consumption was sacrificed for cash income. Over 100,000 tonnes of plums could have been exported in the latter period without affecting the former level of domestic consumption per capita, and as in earlier years the crop had probably been greatly underutilized, to the point where it had been regarded almost as a free good, the sacrifice of utility was only moderate. It would appear that in the first big expansion wave up to the 1880's, producers responded with alacrity to the opportunity of monetizing part of their existing crop, and thereafter expanded cultivation to meet their needs for cash and subsistence.

We should certainly note, therefore, that in addition to the cash

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1 Including the subsequently annexed territories. Population census figure for 1846 of 915,060 (H Vučo, Privredna Istorija... p 171) + 19.1% for the annexed territories.
incomes obtained from plum growing, producers in 1904 were able to retain about 27% of their crop for self-consumption needs, about half this amount being converted into spirit. 1

This expanding sector of the Serbian farm economy was observed by many contemporaries to give rise to considerable prosperity in the plum growing villages, though to a precarious dependence on a highly volatile harvest. 2 It was also very usefully distributed,

<table>
<thead>
<tr>
<th>TABLE VII. 7 USE OF THE PLUM CROP IN 1904</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
</tr>
<tr>
<td>Plum equivalent</td>
</tr>
<tr>
<td>Total Crop</td>
</tr>
<tr>
<td>Distilled</td>
</tr>
<tr>
<td>- for self consumption</td>
</tr>
<tr>
<td>- for the market</td>
</tr>
<tr>
<td>- total</td>
</tr>
<tr>
<td>Prunes (marketed)</td>
</tr>
<tr>
<td>Pekmez (exported)</td>
</tr>
<tr>
<td>Sales of fresh plums</td>
</tr>
<tr>
<td>Self consumed other than as rakija</td>
</tr>
<tr>
<td>% of crop used for self consumption</td>
</tr>
<tr>
<td>Total cash earnings</td>
</tr>
<tr>
<td>Source, and calculation see Appendix to this chapter</td>
</tr>
</tbody>
</table>

for the orchards thrived in the hill villages rather than in the fertile river valleys, 3 and supplemented the production of the arable instead of competing with it for space. First class arable (44 per cent of all arable) was valued on the eve of World War I at 1,960 dinars per hectare, and orchard land (unplanted) at only 1,200 dinars, the price at which second class arable

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1 See table VII. 7
2 for examples see D Jovanović "U Caratuša žljiva i rakije" Privredni pregled III (1925) 46, p 5; Lj Pavlović, Kolubara i Podgorina p 420; T Radivojević, "Lepenica..." N S Z VII, p 317
was valued.\(^1\) Thus the orchards only displaced the produce of relatively unproductive land.\(^2\)

Notwithstanding the inferiority of the land at their disposal plum growing peasants in the plum belt probably earned substantially larger cash incomes than the average peasant who raised cereals and livestock for the market. Table VII. 8 comprises an analysis of the output and cash income derived in 1904 from plum raising broken down by okrug of production. The reason for choosing to use 1904 year for this analysis is data source determined. It was the first year in which the important řekta production statistics were published, and the last in which the export statistics were presented broken down by port of exit - an important guide to the regional distribution of řekta production, which is not even partially available from the rail freight statistics in which plums and řekta were lumped under a single rubric. Conveniently, 1904 was an unremarkable year, better than average for output and export quantities, but, on account of low prices, a 5.2\% worse than average year for export sales. The first point to note from Table VII. 8 is the sharpness with which it reveals the belt character of plum raising. The eight "plum belt" okrugs (which form a compact block) and included 47.4\% of the country's rural population, raised 66.6\% of the plums, earned 68.5\% of the income from plums and plum products, including 91.3\% of the income from řunes, 90.9\% of the income from raw plums, and 63.8\% of the income from the sales of řekta šlijevica. Cash earnings from plums per capita of the rural population in the plum belt okrugs averaged 18.90 dinars compared with 2.21 dinars in the rest of the country. Within the plum belt okrugs 40.6\% of rural households participated, and obtained an income per producer from plums and plum products of 307 dinars. The

\(^1\) C K. Srbija u širokom pogledu ..., pp 36-7

\(^2\) This conclusion is endorsed in A Cebal, "Značaj voćarstva i na koji se način može uvećati proizvodnja voća kod nas" Nežak XXV (1894) 38 p 327, col 2
For sources and calculation see Appendix to this chapter.

<table>
<thead>
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<tr>
<td></td>
<td>10.15</td>
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<td></td>
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<td></td>
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<tr>
<td>1914</td>
<td>19.4</td>
<td>23.0</td>
<td>26.5</td>
<td>29.9</td>
<td>32.9</td>
<td>35.6</td>
<td>38.7</td>
<td>41.9</td>
<td>45.2</td>
<td>48.3</td>
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<tr>
<td>1915</td>
<td>19.5</td>
<td>23.1</td>
<td>26.6</td>
<td>29.9</td>
<td>33.1</td>
<td>35.8</td>
<td>39.0</td>
<td>42.2</td>
<td>45.5</td>
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<tr>
<td>1916</td>
<td>19.6</td>
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<td>30.0</td>
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<td>1917</td>
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<td>36.0</td>
<td>39.2</td>
<td>42.4</td>
<td>45.7</td>
<td>49.0</td>
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<tr>
<td>1918</td>
<td>19.8</td>
<td>23.4</td>
<td>26.9</td>
<td>30.2</td>
<td>33.4</td>
<td>36.1</td>
<td>39.3</td>
<td>42.5</td>
<td>45.8</td>
<td>49.1</td>
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<tr>
<td>1919</td>
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<td>36.2</td>
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<tr>
<td>1920</td>
<td>20.0</td>
<td>23.6</td>
<td>27.1</td>
<td>30.4</td>
<td>33.6</td>
<td>36.3</td>
<td>39.5</td>
<td>42.7</td>
<td>46.0</td>
<td>49.3</td>
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Note: Figures for 1980-89 and 1990-99 are estimates.
The most intense plum producing okruži was that of Rudnik, where 48.5% of rural households earned 444 dinars each in cash from their plums, (but retained one fifth of their output for self-consumption). The farmers within the plum belt okruži devoted an average of 1.54 hectares of land to their plum crop (1905 areal census) and their earnings of 307 dinars compared very favourably with the earnings of arable peasants, who usually enjoyed the use of more valuable land. The five hectares - approximately median - cereal and livestock raising peasant in 1911 took 280 dinars in cash from the sales of these products, but the quantity of produce which this represents would only have raised about 181 dinars at 1904 prices. Contemporary impressions as to the value of their plum orchards to the peasantry thus appear to be well supported by statistical evidence.

It is however, far from clear as to whether plum growing can be regarded as a more labour intensive task than the raising of cereals. The distilling and drying of plums was obviously a highly intensive task, but 23.7% of the plums raised in the plum belt okruži for commercial purposes were sold in raw condition either to the pekare or for general market use. Certainly, contemporaries were not of the view that this represented a labour-intensive form of production. "In most recent times" wrote one observer "plum growing has been developing strongly because the peasants have been that it gives good income and costs very little in toil...they neither plough the orchards nor dig them but nevertheless obtain a good return..." In similar vein another reported "The plum is the one article of our economy in which almost no capital is invested and for which is

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1 S G 1907-08, p 238
2 M Avramović, Hrvatsko Gradinatvo, p 35. For the dating of the survey see Hrvatsko Gradinatvo, p 120
3 See index of prices at export valuation, Table 1, p.37
4 T Radivojević, "Lepenica..." loc cit p 317
expended the least labour power." Yet, in the plum belt okruži in 1904, plums sold raw realized an average of 48.5 din/tonne, yielded 3.073 tonnes per hectare and therefore earned 149 dinars per hectare. The same year, wheat yielded 121 dinars per hectare. But, of course this was reflected in the relative values of arable and orchard land. In 1905, the mean valuation of arable was 479 dinars per hectare, and that of orchards, 585 dinars. However, this additional value had to be created: the Geneva exile committee estimated that the stands in an orchard were worth 38.5% of the value of the land and stands together, which suggests that in 1905, the land under the orchards was only worth 360 dinars per hectare, and the stands themselves about 230 dinars. With 281 stands per hectare (the 1897 average) this represents about 0.80 dinars per stand. A writer of 1894 estimated the cost of planting a single seedling fruit tree at 1 dina, and that allows nothing for the cost of bringing it to maturity. This calculation included the cost of the labour needed for the work. If we discount the value of the stands over 10 years, the minimum period needed for the trees to yield, at 5.83% the going rate of interest on bank deposits in 1905, the value of the stands at planting would only have been about 0.44 dinars, and this assumes a zero return to labour in tending the tree to fruition. Thus to make the decision to plant out rather than buy a mature orchard, the peasant would have to

1 "Điljivarska Trgovina" T.O.V (1895) 219, p 1 col 1
2 See Appendix to this chapter, table viii cols 3 & 5 and S.C 1904, p 258
3 S.C 1904, pp 253, 259
4 S.C 1907-08, p 241
5 S.C, op cit pp 36-7
6 See above p 391
7 A Colba, "Značaj voćarstva..." loc cit, p 328, col 1
8 Ibid
9 H.N.P 1906 1 Gatefold Tabola V (I) mean rate of interest on silver deposits
value his own labour at considerably less than half the going rate. This made orchards much more labour intensive than they appeared to be — for besides the labour in picking the fruit, there was also the labour tied up in forming the capital of the orchard which was very poorly remunerated. But above all, fruit growing was relatively intensive of capital, for it was the cost, in deferred returns, of setting up an orchard rather than the underlying value of its site which contributed to making orchards high priced, high yielding land units. In this respect, the ability of the Serbian peasantry to expand the area under orchards at about 1.9% per annum between 1847 and 1904/5 is evidence of the capacity of Serbian farming gradually to deepen its capital stock, at any rate in a land substituting direction, where little technical skill was involved.

The State and the Cash Cropping Economy

As major providers of export earnings and employment the cash crops inevitably attracted the interest of the state, to ensure the maximization of foreign earnings from them. This led the state into the provision of a sketchy framework of agricultural extension services. In the first place the state saw its role as educator of the peasantry in improved farming techniques, particularly in respect of viticulture and arboriculture, providing not only instruction, but also improved strains, through its nurseries, and in offering encouragement and incentive to adopt improved means of processing the raw material. This latter effort reflected the belief that the price commanded by Serbian produce on the international market could be forced up by work directed to improving its quality. This in turn led it into the second part of its export strategy, policing the export trade to prevent substandard goods from leaving the country, with the object of raising the reputation of Serbian produce on the world market.

But in one key respect, that of its need for indirect tax revenue,
the interest of the state came into conflict with the interest or supposed interest of the producer. This need might have affected its policy toward the plum trade, had it proved politically possible to tax the production of alcohol, and it determined directly its policy towards the tobacco producer.

At first sight, it is surprising to find Serbia absent from the ranks of the tobacco exporting countries of the Balkans. Admittedly, even in Bulgaria this export was a late starter and averaged only 1,600,000 leva (on parity with the dinar) per annum in 1906-10, and its real surge forward was to take place during and after World War I for the supply of central Europe. But in Macedonia, the trade, organized again by Austrian and German enterprise had begun to develop strongly before World War I. And even in Crna Gora, tobacco became a major export item after Italian settlers had been brought in to spearhead the development of tobacco growing. Within a short while, 7,000 families engaged in tobacco cultivation, mainly for the export trade.

The Serbian government, however, found it necessary to sacrifice the tobacco grower to the needs of the fiscus, by monopsonizing its purchase and monopolizing its sale, on the lines of the French Pétrole.

Specific provision was made for Serbia to do so under the 1881 Austrian commercial treaty, so as to provide an indirect revenue source which would not harm Austria's commercial interests. So in 1885 production and trade in tobacco were monopolized, the revenues of the monopoly serving as collateral.

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1 See above p 59
2 C Br (Bul) 1910, p 23
3 L Pasvolosky, Bulgaria's Economic Position... (Washington, D.C., 1930) p 184
4 B Armitage, op cit p 83
6 Treaty of commerce and navigation between Austria, Hungary and Servia, p 15, Parl. Papers 1891 XCIX
for foreign loans. To facilitate administration of the monopoly and to maximize its revenue, production was restricted to certain regions, and the producer became in effect a contractual outworker for the régie, which was then able to regulate and restrict production to that level which best suited its own requirements.\footnote{C Be 1901 R.C. CXIV, p 349} As a monopsonist (vis-à-vis the grower) it fixed prices for the tobacco at the minimal level needed to induce a supply sufficient to satisfy the demand of the domestic market at the very high price it charged consumers. In short, it was solely interested in establishing a not revenue maximizing equilibrium. The low price level it offered producers gave rise to considerable complaint,\footnote{M M Savić, M.I.Z. I, pp 263-4} even the state's own organs admitted it to be unremunerative to the grower. In some areas at least, this policy cost the cash cropping peasantry dearly. For example, the region of Bajina Bašta on the Drina had long enjoyed the high reputation of being the source of the excellent "Bajnovac" tobacco, and in the 1860's the inhabitants were flourishing on its sale.\footnote{K Dj. Milicević, Beležke užut' kroz' pet' okruži. (Beograd, 1862) p 19} But in 1906, the Ministry of the National Economy reported of this region\footnote{K.A.P 1906-9 B p 1137}:

"By the location and composition of the land, much more tobacco would be grown than in today, were other conditions achieved which would enable a profit to be made from the production of this plant"

This was of course a tactful way of saying that the State tobacco monopoly should raise its price to growers. The price the state offered was evidently substantially less than growers could have obtained from the export market, and therefore, the monopoly, in order to protect its own supply source, refused to permit the growers to sell tobacco for export.\footnote{M M Savić, M.I.Z. I, p 284} It should be
recorded however, that the monopoly did make at least one ineffectual attempt during the commercial war with Austria-Hungary to export tobacco to Britain on its own account. 1

Consequently, between 1869 and 1912, tobacco was the only commercial crop (except wine) whose cultivation failed to expand, fluctuating between 1,000 and 2,700 hectares throughout the period. (In 1869, when statistics tended to understate cultivation rather more than in subsequent censuses, 2,100 hectares were recorded as under tobacco). Observers were in general agreement that much more would have been cultivated under free market conditions, 2 and another official source, admitting that the monopoly restricted cultivation excessively, estimated that "up to 30,000 hectares could suitably be used". 3 Annual receipts of growers after 1900 fluctuated at around a million dinars a year. 4 Yet the sacrifice of the grower probably yielded only a small amount of revenue, far less than the monopolization of consumption. And in fact, in Cvea Gora, the state was quite successful both in running an internal tobacco monopoly and in encouraging its export. 5

The state had long acknowledged, at least in a fitful way, its responsibility as educator of the cultivator and provider of agricultural extension services, and the difficulties of the wine and plum trades at the end of the 1880's infused life into the activity of the recently created Ministry of the National Economy within whose province such services fell. A few nurseries were set up in the 1890's, and a "school of viticulture and fruit growing" was set up at Bukovo, in the Negotinska Krajina in 1891.

1 FRO F0 368 126, No. 9 comm. of 26 1 1907
2 LR Iovanovitch, op cit p 37; L-A Janitch, op cit p 24
3 M.N.P 1906 2 p 19
4 Ranging from 770,000 dinars (1900) to 1.5 million dinars (1906). See statistics of the tobacco monopoly in S.C. 1900, p 250, resect
5 A Tamborra "The rise of Italian industry..." loc cit and see above p. 485
But there were still as late as 1897 only six nurseries in the country. As the nurseries were used as the spearhead in the efforts of the state to restore viticulture to its former condition, this was plainly inadequate, and matters were somewhat improved by the enactment of legislation in 1897 requiring each _prez_ to establish and maintain a nursery. By 1911 some sixty of these were claimed to be in existence. The nurseries were supposed under a law of 1895 to disseminate improved techniques, and engage in the distribution of grafts and seedlings.¹ So far as plum growing was concerned, this was probably a move on the right lines, though inadequate in scale. It is claimed to have had strongly beneficial effects on plum raising,² and at least in Beograd _okrug_, the nurseries were heavily patronized by producers, but proved unable to keep pace with the demand for grafts.³

But in dealing with the much less tractable problem of phylloxera control the system seems to have been ineffectual and poorly thought out. Under the 1895 law, provision was made for assistance to be accorded to all nurseries, whether publicly, privately or co-operatively owned, to get the American vinestock into common use.

The Ministry of the National Economy, which was responsible for administering the new law, was aware that it was not only technical ignorance but also the high cost of establishing phylloxera free vineyards which was inhibiting their development. Accordingly, provision was made that the nursery stocks should reach the producer as cheaply as possible, and even, at the discretion of the minister, permitting certain applicants to receive them free of charge. Tax holidays were granted on new hybrid vineyards, and competitive prizes inaugurated for improvements.⁴ However, as the tax

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¹ _In Serbia... A Turin 1911_, pp 78-81, 88
² _Proizvodno _Sparo..._ p 22, col 2
³ _H R P_ 1908-9 p 890
⁴ _I RO_ 105 111 No. 19 comm. of 27 12 1895
concession was only for vineyards of 1,000 vines and over, it appears that the government was primarily interested in encouraging the larger producer. So none of this helped the small commercial grower very much. Of all classes, he was least likely to dispose the capital and skills to set up a hybrid vineyard, despite the assistance proffered by the government. The insignificance of the government's efforts in aggregate is described without the necessity for words by the data in Table VII 9 below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Replantings with American vines</th>
<th>Replantings with domestic vines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1889</td>
<td>43.5</td>
<td>2.8</td>
<td>4.8</td>
</tr>
<tr>
<td>1893</td>
<td>61.0</td>
<td></td>
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<tr>
<td>1897</td>
<td>66.3</td>
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<tr>
<td>1899</td>
<td>67.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>55.0</td>
<td>1.4</td>
<td>4.5</td>
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<tr>
<td>1901</td>
<td>50.9</td>
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<td>4.4</td>
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<tr>
<td>1902</td>
<td>57.0</td>
<td>4.6</td>
<td>5.3</td>
</tr>
<tr>
<td>1903</td>
<td>34.9</td>
<td>4.7</td>
<td>5.3</td>
</tr>
<tr>
<td>1904</td>
<td>55.9</td>
<td>6.2</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Sources: Državonja XIX p 97; Statistika XVI, p 359; AN. F 12 7179 Rapport de Terver sur le commerce de la Serbie en 1904, Belgrade 27 1 1906

Besides its more generalized concern to propagate improved cultivation techniques, the state expended a great deal of less usefully directed effort to improve the quality of Serbian plum exports, which left much to be desired in absolute terms but was not necessarily amenable to much improvement. From the 1860's onward the authorities became disturbed by repeated complaints that Serbian prunes were not reaching their markets in good condition. The most common allegation was that they were imperfectly dried, and therefore inclined to go mouldy. The scarcity of firewood probably had

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1 See for example "Sušenje \v{z}ljivu," I Videlo IV (1883) 16 p 3, col 1 "Izveštaj Komisije..." loc cit; "Ozbiljna opozorna našim \v{z}ljivarskim trgovcima, Berlin, Kart 1896" Težak XXVII (1896) 29, p 292, col 2 and innumerable other references.
something to do with this \(^1\) (and certainly the rušnica was prodigal of fuel), as well as the desire of the producer for his produce to weigh as heavily as possible, both of which considerations were unconducive to conscientious drying.\(^2\)

It therefore sought to propagandize improved drying techniques, and the innovation of drying systems similar to those in use in western Europe. In 1889, it invited competition for the design of improved equipment and gave publicity to promoters of improved ovens.\(^3\) For example it recommended such devices as "a mechanical dryer for fruit and malt" which "the constructor believes... would cost 1,500 - 2,000 dinars"\(^4\) and the less immodestly priced "Ciesenheim" at about 160 dinars.\(^5\) It must have been aware that such equipment was hopelessly out of the reach of the mass of producers, but notwithstanding this, similar high priced equipment was installed at the state nurseries, where tests revealed, not surprisingly, a considerable technical superiority over the rušnica.\(^6\) Naturally, no sales were made of such equipment so efforts at promoting it amounted to so much waste of resources.

According to the view of one merchant, quite minor modifications of the rušnica to improve the system of ventilation could achieve most of the benefit of modern machines for a fraction of their cost.\(^7\) This kind of thinking lay behind the most energetically promoted device of all of them, the Glavinić stove, introduced in 1889, and subsequently improved.\(^8\) As a

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\(^1\) M D Popović, op cit p 99
\(^2\) One favoured deception was the reimmersion of dried plums in water to regain weight and size. J·A Janitch, op cit p 22. Even the much admired French plum producers were not above this practice. R Hearn, Report on the preparation of French plums P 0 Misc. Ser. 346, p 6 (Parl. Papers, 1901 LXXX)
\(^3\) N 8 6 1890
\(^4\) S N 19 12 1890
\(^5\) S N 14 12 1888
\(^6\) Nova rušnica šljiva u Arandjelovcu" G N P I, 16 of 8 10 1882, p 247; La Serbie...h Turin 1911, p 90
\(^7\) S R Lazić, trgovac, "O rušenju šljiva" Tržak XXX (1893) 31, p 242
\(^8\) M Savić, šljiva..., p 84
man of great influence Kosta Glavinić received the wholehearted support of the Ministry of the National Economy to propagate his equipment,¹ and won a bronze medal for the design at the Paris exhibition of 1900.² An attempt at introducing an intermediate technology, Glavinić's stove was a simplified version of the French "Ribes" stove,³ but with sufficiently strong affinities to the ručnica for "more than one producer" to have converted "his oven into one, if not exactly like, then similar at least, to that of Glavinić."⁴ Nevertheless the Glavinić stove cost 200 or 300 dinars⁵ - the cash income of a peasant household for a year - and the government decided to make it available to producers at half price.⁶ But, although the inventor claimed that in 1912, 15,000 out of the 21,000 driers operating in Serbia were "improved"⁷ (another estimate is that there were 10,000 Glavinić stoves in operation in 1914)⁸, these claims are unconvincing. Podrinje okrug was the area of the most intensive prune production in the country and probably the most affluent, yet in 1909 there were only 207 Glavinić stoves in operation there compared with 10,771 ručnice, and only in one area which submitted figures that year did the recorded figure of Glavinić stoves exceed 10% of the total.⁹

However, the state did not confine its attention in respect of promoting the export of qualitatively improved produce to the propagation of advice.

¹ La Serbie...à Liége 1905, p 100
² A G B. M H Kostić, "Podaci" (Kosta Glavinić)
³ In Scrbie...a Turin, 1911, p 91
⁴ Rapport sur la travail de la récolte des prunes... loc cit
⁵ In Serbie...a Turin, 1911, p 90; M Savić, op cit p 64
⁶ In Serbie...a Turin, 1911, p 90
⁷ Lecture by K Glavinić, loc cit
⁸ A G B. M H Kostić "Podaci" loc cit
⁹ MNP 1908-09. 8 pp 965, 1019
and improved drying systems, but sought also to achieve the same result by fiat. In 1895 an inspectorate of prune exports was established by the Ministry of the National Economy, to which all prunes intended for export had to be submitted before leaving the country. The inspectorate had the power to withhold permission for the sale of what it deemed to be substandard produce, and to penalize those who offered it. This move may have been inspired by the establishment of a similar system by the Austrians in Bosnia. It was claimed that, as a result of the efficiency with which this Austrian commission carried out its duties and the severe sanctions which backed it up, the reputation of Bosnian prunes was enhanced to such an extent that they commanded a market premium over those of Serbia.¹ (On the other hand it had always been worthwhile for Serbian exporters to try to pass their produce off as Bosnian).²

But even assuming that such an inspectorate performed its functions effectively, the real question concerning its operation is as to whether it would increase economic welfare in the process.

The liberal economic view of one analyst of such export control schemes as are in operation in many underdeveloped primary exporting countries is that³

"they reflect the familiar failure to distinguish between technical and economic efficiency by placing the emphasis on physical standards irrespective of the value of the resources required for their attainment."

On a less demanding level than that, could producers, with the market for low grade produce closed to them, improve the quality of their produce sufficiently at least to increase the money turnover of the trade? A positive answer was implicit to the plan for setting up the inspectorate. Even the

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¹ K. G. Ispovožnik, "O našim suvim oljivama" TČ X (1900) 214, p 1 col 5
² "Srpska oljiva na Pariskoj Istočnici" TČ X (1900) 210, p 1 col 1
³ P. T. Bauer, Economic Analysis and Policy in Underdeveloped Countries, (London 1965) p 68
critics of the system accepted that it was intrinsically desirable, and directed their complaints at the way its affairs were conducted. But the existence of these commissions merely encouraged evasion, for producers were often technically unable to improve the quality of their produce, and merchants were easily able to sell what they were offered though it might not meet the officially required standard. Thus substandard produce would be held off the market to be exported after the inspectorates had finished work for the season. A good example of the purely obstructive function of the export inspectorates may be found in the complaint of one of their members in 1910, a year of "ceaseless complaints as to the quality of this year's produce" that merchants were freely buying defective plums, and were struggling to evade the rules; one export house went so far as to advertise its willingness to take from producers all the plums they had, defective or otherwise. But even on its own terms the Serbian inspectorate system was little better than a nuisance. The dissatisfaction of the Ministry of the National Economy with the way it worked was reflected in continual changes in the rules. The venality of the commission members, and their susceptibility to political pressures was the subject of frequent comment, and their operation merely burdened the trade with the need to bribe them. They signally failed to stem foreign criticism of the low quality of Serbian prune exports; there was an outburst of complaints from Germany the year after they had been set up, and the complaints were heard throughout the period.

1 MJP 1906-9 1 p 38
2 "Ekonomija i Trgovina-iz Klijinarske trgovine" Politika 2432 of 25 10 1910, p 1 col 4
3 Dim. Joa., "O pregledu suvih æljiva" Odjek IV (1905) 162, pp 2-3
4 "Borba æljiva-nekoliko zanimljivih podataka II" Knjiga X (1911) 248
5 "Klijinarski Trgovinci" Polo Novine X (1897) 165, p 2
6 "Borba æljiva..." loc cit; M M Katic, Srpska Ijesna Trgovina...
But this does not necessarily mean that Serbian prunes were noticeably worse than others offered on the market. The poverty of the Serbian peasantry probably precluded the export of top quality fruit, but the Serbian prune, though worse than the French, was said to be superior to the Californian.¹ This may well have resulted from the relatively labour intensive means of production. One observer compared merchant dried prunes unfavourably with those dried by the peasants, arguing that whereas the former were loaded onto the trays with shovels, the peasants layed them by hand and so avoided damaging the fruit.² In any case, notwithstanding the efforts of the inspection commissions, the quality of the produce remained fundamentally dependent on harvest conditions. Whereas Serbian prunes arrived in Berlin in poor condition in 1910, they were excellent and commanded premium prices in 1905 and 1911.³ There is no evidence that state policing of the export trade did other than to raise costs. In one extreme case, it introduced a regulation which was not even intended to benefit the trade, which required that (regardless of the preference of customers) the produce should be crated rather than packed in sacks. This appears to have been aimed for the benefit of the timber industry.⁴

h The commercial crops as a basis for industrialization

Only in the case of the hemp industry did industrialization of manufacture have a supply creating effect. However, Serbian supplies of plums, tobacco and silk did provide a raw material base for a modern processing industry, but on a smaller scale than did the basic foodstuffs which provided

¹ L. J. Janitch, op cit p 20
² Bosanc Emigrant, "Šljiva i Ijzen Promet" loc cit
³ "Jedan nas uspeh" Štorm IV (1905) 304, p 1 col 1; Handelserzum, 1911, p 16; I K S, Izvadnjev 1911..., p 22
⁴ "Predstavka šabačke Trgovačke Banke Ministru Narodno Privrede" P G XVII (1907) 102, supplement p 1 cols 1 - 2. Also see, quotation on p 462 above, which shows that this bank was able to supply prunes in boxes if so required.
the foundations of the country's emergent industrial structure.

Even in the case of flax, most of the country's output continued to be exported without going through any mechanized manufacturing process.

We have already noted that the development of the hemp industry had brought itself to an impasse. The industrial manufacture of rope produced such enormous savings in cost that in a competitive market the returns to hand manufacturing had contracted to a point where full time labour could no longer compete, and, more seriously, the quality of hand produced output both at the semi-manufacturing and final manufacturing stages was not such as to be acceptable on a growing market. The substitution of machinery for hand rotting, scutching and rope making was therefore essential to the development of production of the raw material, but, as the latter had supported so large an amount of labour, it was impeded by the strong resistance of interests vested in the traditional processes.

Soon after annexation of the pašalim of Niš, what appears to have been a Serbian firm obtained a concession for a processing factory for flax and hemp at Leskovac, but nothing materialised.\(^1\) Subsequently, in 1866, a Belgian firm, Vandenkerchove of Gand, was pressing, and was erroneously believed to have obtained a concession "for the exclusive monopoly of weaving and spinning flax and hemp by means of steam engines for fifteen years". This, crowed the Belgian representative, constituted the most brilliant business one could do in Serbia. Vandenkerchove's main interest in the operation was probably as an outlet for machinery built in his engineering shop, but he dropped the project for the mill he was going to build at Leskovac or Vranje, and shortly afterwards acquired and operated a concession for a monopoly match factory at Belgrade.\(^2\)

\(^1\) J Mallat, op cit II, p 190

\(^2\) B AE CC 2911, VII, Foscelnert – M A E, Belgrade, 16 12 1887; 2911 V van den Steen de Jehay – M A E Belgrade, 2 6 1905; C Be 1830 R C LXIII, p 265; C Be 4 10 1889, R C LXVIII, pp 304-5
Local initiative to exploit this "most brilliant business" was again forthcoming in 1895, and obtained a concession for a similar enterprise, though again it failed to be operated. A possible insight into the difficulties in negotiating the Vandenkerkchove concession is offered by the shrill chorus of complaints by užati who saw their livelihood threatened by this new project, and it was eventually left till 1903 and to a foreign entrepreneur, Karl Wolf of Cuben, Germany, to set up a small hemp processing works at Vranjaka Banja. The concession was attended by a similar outburst from the rope trade.¹

It is at first sight strange that the first steps toward the mechanization and industrialization of the most readily available industrial material in the region should have been left to foreign initiative, and left late at that. After all, emphasis has been laid on the energetic and aggressive entrepreneurship of the Leškovčani, who built up in and around the town a thriving mechanized textile industry, assisted only by the legacy of 'industrial' skills arising for the most part from the decline of the rope-making trade. For in wool, as we have seen, the raw material base of the area left much to be desired; knowledge of the manufacturing techniques needed was zero and had to be 'borrowed' from the experience of Bulgaria, and power supplies were also costly and inadequate.² Yet hemp, hemp pickers and rope workers were easily available.

The big difference, in a single word, was the market. Leškovac only turned to manufacturing woollens, when its traditional Bulgarian supply sources were undermined by protection politics, and it was left with a highly developed market network and nothing to sell through it. The market for Leškovac textiles was, of course, in Serbia itself, and, by exploiting local

¹ N Vučko, Razemene Fanafa u Srbiji, I, p 414. In this case justification was lent by this firm's pro-emption of local hot springs for hemp retting.

² See D Trajković, Istoriija Leškovačke Industrije, Ch. 3 on the formation of the first Leškovac industries
tastes, Leskovac built itself a foothold which could not easily be threatened by foreign competition. For rope, the problem was quite different: the local market was small, fiercely competitive and threatened in any case by overproduction. Balkan export markets were in decline, and because of the bad original processing of the raw material the product was virtually unsaleable elsewhere. Quite apart from that, Leskovac had no ready made market outlets through which to funnel the produce even if the necessary steps were taken to improve its manufacture.

Such steps were taken in 1890, when a "school" for hemp working, or in other words, a proto-factory, was set up in Leskovac with local and central government money, and a manager from Bohemia, employing 130 women and girls and 70 outworkers. The supposed object was to bring about a higher standard of skill in local hempworking, and, notwithstanding the starvation wages it paid, the enterprise showed initial promise - which, however, soon turned sour. The "school" soon abandoned hemp working in favour of white (handloom) woollen cloth, and little enough of that. But the venture was merely bypassing the essential problems, which were at the primary processing stage, and in any case, it appears to have been attuned to selling on the home market.

Apart from this venture, Leskovac interests viewed innovations in hemp processing with defensive hostility. The buildings of the Wolf hemp factory were complete in 1903, whereupon a government technical commission "raised difficulties as to their suitability" and delayed the installation of machinery. So it was only able to start processing hemp in 1904, and for the first few years, at least, nearly all of its output went to the export market. As the business turned out quite successfully, Wolf was minded to expand and in 1906 the enterprise was reconcessioned for the

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1 On this establishment see C Br (S) 1889-90, p 19; C Br (S) 1893, p 25; C Be de Dudzels, "Compte rendu..." R.C.LXXV, p 18
2 C Br (S) 1902-3, p 15
3 S.C. 1905, p 370, passim
production of cloth and marine ropes. It appears that what Wolf really wanted was to go into general rope production, but the government bowed to the strident objections from the ropemaking centres of Leskovac and Vranje and specifically forbade the firm to produce goods which competed with the local industry.\(^1\) It is not clear that the privileges the Wolf firm did receive were ever taken up, and this failure probably contributed, along with xenophobic pressures,\(^2\) to his abandonment of the enterprise. But once his project had revealed the possibilities, then Leskovac capital sought to emulate it, and a year after the founding of the Vranjaka Banja factory, a concessionary factory was established in Leskovac. This time, the highly influential promoters had no trouble in getting the limitations imposed on the other factory set aside in their own case,\(^3\) and the firm set to work processing hemp on a much larger scale. Although the intention was to manufacture rope,\(^4\) they did not break any new ground immediately, for like Wolf they merely exported the raw material, but they probably found that remunerative for they subsequently bought up the Wolf factory as well.\(^5\) Only in 1911 did they install machinery to begin the manufacture of twine at the factory.\(^6\) They were certainly not contemplating exporting it, for only a year previously they had complained that the level of protection was not sufficient to justify the establishment of a hemp spinning factory in the country.\(^7\) A third hemp processing factory was established near Svilajnac around 1909, with Serbian bank capital,\(^8\) but as late as 1911, the whole

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\(^1\) N Vučo, op cit I, p 415
\(^2\) As implied by a remark in D Trajković, op cit p 21
\(^3\) N Vučo, op cit I, p 415
\(^4\) C Br (S) 1903, p 17
\(^5\) Proizvodne Spire... p 496 I; Lampe, thesis p 249
\(^6\) I K S. Izveštaji... u 1911.... p 24
\(^7\) Idem, Izveštaji... u 1910.... p 12
\(^8\) C Be 1910 R C CLI, p 462; Lampe, thesis, p 310
### TABLE VII 10

<table>
<thead>
<tr>
<th>Year</th>
<th>Hemp</th>
<th>Hemp and Rope Manufactures</th>
<th>Hemp and Rope Manufactures</th>
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<tr>
<td></td>
<td>Tonnes</td>
<td>Gross Importe</td>
<td>Net Export</td>
</tr>
<tr>
<td>1879-83</td>
<td>80</td>
<td>40</td>
<td>135</td>
</tr>
<tr>
<td>1884-88</td>
<td>150</td>
<td>220</td>
<td>73</td>
</tr>
<tr>
<td>1889-93</td>
<td>250</td>
<td>790</td>
<td>104</td>
</tr>
<tr>
<td>1894-96</td>
<td>350</td>
<td>835</td>
<td>58</td>
</tr>
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<td>155</td>
<td>1068</td>
<td>67</td>
</tr>
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<td>97</td>
</tr>
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<td>687</td>
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</tr>
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<td>1900</td>
<td>550</td>
<td>637</td>
<td>65</td>
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<td>1901</td>
<td>457</td>
<td>715</td>
<td></td>
</tr>
<tr>
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<td>266</td>
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</tr>
<tr>
<td>1903</td>
<td>151</td>
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<td></td>
</tr>
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<td>1904</td>
<td>644</td>
<td>1368</td>
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<td>1353</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>1292a</td>
<td>858</td>
<td></td>
</tr>
<tr>
<td>1909</td>
<td>1119b</td>
<td>809</td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>2010</td>
<td>778</td>
<td>2</td>
</tr>
<tr>
<td>1911</td>
<td>1542b</td>
<td>668</td>
<td></td>
</tr>
<tr>
<td>1912</td>
<td>841</td>
<td>453</td>
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</tr>
</tbody>
</table>

Sources: S. Dimitrijević Cradaska Privreda Starog Ljankova pp 72-73; N Vučo, Raspadanje Panasa u Srbiji, I, p 228; and standard sources for foreign trade statistics.

- a. excludes unscutched hemp
- b. includes flax
- c. excludes 1889

industry (i.e. three factories) commanded only a million dinars of capital, 200 employees and turned over 1-1.2 million dinars. By widening the market for raw hemp at the time the rope trade was in difficulties these factories probably stimulated production of the raw material, but, imprisoned

1 "Izvoz Kudelje i Užarije" Ekonomist I (1912) 7, p 113
within the limitations of domestic entrepreneurship, and the obstructions
created by the obsolete industry that they should have been replacing, they
failed to redirect it in the one way in which potential for expansion was
possible, the mechanization of export ropemaking. This failure resulted in
the reduction of the hemp industry to the mere supply of semi-manufactured
material for foreign industry. But table VII 10 shows only too clearly
that the essential contribution made by the hemp processing industry want to
establish an expanding market for hemp, which otherwise would have faced a
declining or stagnant commerce.

Though state fiscal policy prevented the development of the tobacco
trade, this raw material did ostensibly give rise to a processing industry
which accounted, in the hands of the state tobacco monopoly, for an apparently
huge share of gross industrial output, according to Dr Lampe's statistics,
some 43% of the total in 1893, and 10% as late as 1911. 1 This was concentrated
in one big establishment in Belgrade. Unfortunately this achievement is
partly the product of a statistical illusion. Till 1865, tobacco manufactur-
ing had been carried out on a small scale, though probably to produce a
substantial output, as the operation was engaged in Belgrade alone by more
than 100 firms. 2 That year the Länderbank of Vienna, which obtained the farm
of the newly created monopoly, hastily installed facilities for manufacturing.
As it intended to rely chiefly on tobacco supplies imported from Hungary, it
located the factory in Belgrade. Although, the following year, it moved its
equipment from temporary to permanent quarters, the plant was essentially a
proto-factory, which took over the hand operated machinery of the former

1 Lampe thesis pp 19, 22 and notes
2 E de Borchgrave, La Serbie Administrative..., p 126
producers and concentrated manufacturing under one roof.¹ The high profits which this operation made, and the policy of importing, rather than taking up domestically produced supplies, soon brought the Länderbank into conflict with the government, which nationalised the monopoly in 1888,² and, having taken over the factory, installed a certain amount of power machinery.³ However, as late as 1900, the plant, while employing 662 workers, mostly female, deployed only 0.06 h.p. per worker, (compared with the, in any case, very low average for large scale industry of 1 h.p.⁴ and so can only, by a very generous definition, be said to have constituted a "modern" industrial enterprise. Under government ownership, its costs were high as Belgrade was a most unsuitable location for processing a crop raised mainly in the south of Serbia. It had to pay wages to its female operatives which were high by Russian or Italian standards,⁵ and to carry the cost of a large security staff.⁶ (After the World War I it was shifted permanently to Niš). Given its market position it would have been hard put to it to lose money and it turned in a net revenue to the fisc which rose steadily from 7.9 million dinars in 1899 to 12.8 million in 1910, which represented a mark up of about 200% on costs. Annual value added was about 3 million dinars, if we exclude the "profit" element. This was not inconsiderable, and its employment in 1910 of 1,496 workers was larger than that of all the modern mills and breweries combined.⁷ Its development was however unassociated (positively) with any backward linkages into agriculture.

¹ Fabrika Ľuvena-KID 1865-1957. (Beograd, 1957) pp 7-8
² C Br (S) 1867-8, p 12; AAE CCB t 7 despatch of 28 11 1887
³ Fabrika Duvanei, p 8
⁴ S.Č. 1900-06, pp 458-9
⁵ H Vivian, Serbia, the Poor Man's Paradise, p 111
⁶ C Br (S) 1867-8, p 12
⁷ I E S Izveštaj...u 1910... tablica 10
Large scale industry in plum drying, which was introduced by the larger firms in the export trade after the turn of the 20th Century, was installed in order to reprocess peasant dried prunes, and therefore tended to supplement rather than displace the existing rural manufacture.

Despite their deficiencies, it was not generally practical to displace the (conservatively) estimated 21,000 mahunce by centralised drying plant, because of the transport problem, and only one establishment was set up to process raw plums on a capitalistic scale. The optimal system of the time was that which had evolved in the French départment of Lot-et-Garonne, whose prunes supplied the top end of the international market and whose success the Serbian state was desirous of emulating. Here the farmers dried the plums in simple kilns, in which however, the produce was separated from the smoke generated by the fire. They then turned over the produce to the trade for reprocessing by large scale techniques.

Redrying, as in France, was quite practical in the Balkans, even if high quality initial drying was not. French designed plant was established in Bosnia as early as 1888, under an exclusive concession to the German firm of Weiss. Although the simultaneous attempt there to combine redrying with the use of improved ovens at producer level was a predictable failure, the redrying operation was highly successful, and encouraged emulation on the expiry of its concession in 1898. The establishment of the Weiss factory was seen as a serious threat to Serbian prune exports and probably precipitated state intervention, but it evoked no response from the merchants, who continued happily to consign prunes of often dubious quality to the market.

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1 Lecture by K Glavinić, loc cit
2 MM Savić, H I Z II, pp 2-3. One of the plants listed took on a large labour force to stone the plums, an indication that they were being purchased in fresh condition
3 Lecture by K Glavinić loc cit; Ideen, "Sušenje šljiva" T G XI (1901) 190, p 1 cols 1-2; L A Janitch, op cit p 20
4 W R Hearn, Report on the preparation of French plums, loc cit pp 3-5
5 P F Sugar, Industrialization of Bosnia-Hercegovina 1878-1918 (Seattle, 1963) pp 158-9; C Br (Bos) 1887-8, p 2
6 AAE CCB t 8 despatch of 31 10 1891, fo 93
The reason for this was probably a simple one; much of the produce was redried in Austria - Hungary before reaching the consumer market, and this, no doubt, made margins unattractive to the Serbian exporter. Only two such plants were established in Serbia before the Tariff War (1906), in about 1902, one at Kragujevac, which was probably owned by Brahfeld-Kinzer and the other at Čabac, by Ilija Paranos. But the tariff war resulted in Serbian prunes being placed directly on the German market, and thereby provided an incentive for drying in Serbia. In 1906 and 1908, four new plants were established, at Obrenovac by Godjevac, at Belgrade by one Bramer-Markovic and by Izvozna Banka, and at Kragujevac by Pfefferman. Although its combined capacity could not much have exceeded 5,000 tonnes of prunes, the industry was expanding, and at least one other new plant would have been established, by Valjevska Štedionica, had war not supervened.

The concentration of prune manufacture, like that of prune production, was inhibited by the high cost of transporting the raw material. The licikas pekare factory, which was established in 1896 in a village and then moved in 1900 to Kragujevac railhead, was regarded as in many ways a model factory, and it is claimed to have done much to stimulate fruit cultivation in the Kragujevac region. But it was unable to draw supplies from a sufficiently wide area of catchment. This is reflected in violent year to year fluctuations in the factory's output, and was the most likely cause of a complaint.

1. N. M. Savić, N. I. Z. II, p 5
2. It was owned in the early 1920's by K. Kladan Lukić, heir to K. Brahfeld. Ibid, p 3
3. Trovinsko Zanatlijski Čeratinem za 1902-03, p 250
4. D. Djordjević, Carinski Rat Austro-Ugarsko i Srbije, pp 381-2
5. N. M. Savić, N. I. Z. II, pp 2-3; N. D. Popović, op cit p 296
6. I. A. V. Valjevka Štedionica, Knj. 137, Kopija Pisama, Štedionica-Luvenaux Fréres, 12 11 1920, fo 200
8. N. M. Savić, Šliiva... pp 125-6; T. G. XVI (1906) 144, 1 col 3
9. Proizvodne Smeza, p 546, col 1. This remarks that the factory was badly located for raw materials. If so, there can have been no good location anywhere.
in 1907 that Licikas was buying inferior Renke plums as well as the better Nadžarka, though he himself had declared that the former were unsuitable for rekmez.¹

Secondly, capital intensity was incompatible with the very short rekmez processing season. This forced diversification on the firm, and in 1905, it asked for a concession for the processing of meat and vegetables as well as fruit.² Finance had to be raised by bringing outside capital into the business and Licikas subsequently sold out.³

The experience of this firm probably discouraged emulation, for although one merchant sought a rekmez concession in 1906, nothing came of it.⁴ It was not till 1909, or after, by which time the railway net was beginning to creep across the Šumadija, that three new plants were set up, at Cačak, Sabac and Kragujevac.⁵

However, the modest industrial structure created by the fruit trade was growing, and in the 1920's it received renewed impetus.⁶ The increase in the volume of raw fruit exported in the 1900's indicates a slight tendency for manufacturing to be developed outside the country of origin, but only to the extent of about ten per cent of the crop. In so far as the processing industry failed to develop, it was because of the persistence of efficient small-scale processing on the part of the peasantry, and by merchants who operated the traditional production methods. These continued to underpin the trade more or less adequately.

¹ M Karkovčić, "Glasovi iz Naroda..." loc cit
² DAS KNF (T) 1906. 41 5 I Licikas i komp - H N P., 4 10 1906; I Licikas & S Stefanović - H N P 20 12 1905; N Savić, op cit p 126
³ M D Popović, op cit pp 364-5; A G B M Kostić, "Podaci" fo 296 (Svetozar Stefanović)
⁴ DAS KNF (T) 1906. 42 21 Petar Perić - H N P 20 2 1906
⁵ Trgovinsko Zanatlijski Šematsam za 1911 (Beograd, 1911), dodatak pp 25-4. These units were not recorded in the Statistical Yearbook for 1907-08
⁶ M N Savić, N I Z II, pp 1, 5
Sources and calculation for Tables VII 7 and 8

Basic data: Total plum crop (by okrug) in S.G. 1904, p. 258
Production in Belgrade town has been added into that of Beograd okrug.

Production of rakija šljivovica, prerečenica and komovica, plum use for preparing these spirits, number of producers and number of alambic stills employed, in table "Proizvodnja Rakije 1904 godine" S.G. 1904, p. 370, value of output, p. 371.

Sales of fresh plums, prunes and rakija across the opština market scales, S.G. 1904, pp. 464-5. Sales of rakija at fairs in 1904, see S.G. 1907-8, p. 561 (Plums and prunes are not listed as being sold through the fairs).

Export of prunes, and pekmez 1904 by port of exit, S.S.T. 1904, pp. 166-7, 226-7


Population census data, urban and rural populations, number of households in census summary see S.G. 1907-8, pp. 28-9

Miscellaneous data: N. Savic, Šljiva... p. 126 (split between production of prunes and pekmez in the Kumanija.)
Conversion ratios for plums to prunes and pekmez:

Unfortunately, estimates for these conversion ratios differ considerably from one another; this probably reflects year to year and inter-regional differences in the quality of the fruit. Most of the estimates available do not give any indication of the means of derivation. Of those which do, there are two sets of readings provided by tests.

<table>
<thead>
<tr>
<th>Date</th>
<th>Prunes</th>
<th>Pekmez</th>
<th>Basis</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1882</td>
<td>300</td>
<td></td>
<td>Fušnica at Arandjelovac set up by Ministry of Finance</td>
<td>1</td>
</tr>
<tr>
<td>about</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1886</td>
<td>417</td>
<td></td>
<td>Fušnica Karić's estimate</td>
<td>2</td>
</tr>
<tr>
<td>1893</td>
<td>286</td>
<td></td>
<td>Unstated</td>
<td>3</td>
</tr>
<tr>
<td>1890</td>
<td>350-400</td>
<td></td>
<td>Fušnica Bosnia</td>
<td>4</td>
</tr>
<tr>
<td>1898</td>
<td>369</td>
<td></td>
<td>Fušnica Test by state establishment at Topčider</td>
<td>5</td>
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<td></td>
<td>413</td>
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<td>Fušnica Test by state establishment at Dobrinje</td>
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</tr>
<tr>
<td></td>
<td>312-357</td>
<td></td>
<td>Kruševac pekmez trade</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>266</td>
<td>+</td>
<td>Kragujevac &quot; &quot;</td>
<td>5</td>
</tr>
<tr>
<td>1900</td>
<td>364-400</td>
<td>375</td>
<td>Unstated</td>
<td>6</td>
</tr>
<tr>
<td>1907</td>
<td>350</td>
<td></td>
<td>Unstated</td>
<td>7</td>
</tr>
</tbody>
</table>

Mean: 363 336

Sources:
1. "Nova sušnica šljiva u Arandjelovcu" 6 M.P I, 16 of 8 10 1882 p 247
2. V Karić, Šrbina... (Beograd, 1887) p 413
3. "Kako stojimo s voćarstvom?" Tekak: IXIX, 7 of 22 2 1898, p 3
4. C Br (Bos) 1890, p 3
5. K Savić, Šljiva... (Beograd, 1900) pp 66, 127
6. C Br (s) 1899/1900, p 18
7. "Izvea sirovih šljiva" T.C XVIII, 192, of 31 8 1907, p 1 col 3

For the purposes of conversion we will in each case take the mean of these readings, as there is no estimate relating directly to 1904.

The first operation was to calculate apportionment of the crop between various uses, including commercial prune production, pekmez production, distilling, sale of fresh plums, and self-consumption. The distilling figure...
was taken direct from the rakija production statistic, the the commercial prune production figure from total of turnover across the market scales. Commercial rekmez production is assumed as being equal to rekmez export, for want of a market scales figure. This is therefore likely to understate true rekmez production to the extent that internal sales are omitted, but it does not appear that much rekmez was found in internal commerce; its price in 1904 was quoted on only 14 out of 42 internal markets. We cannot take the volume of plums traded across market scales as a straight addition to commercial production for some of this appears to have been repurchased for distilling. In Krajina okruza production of plums was 2,163 tonnes, but 2,325 tonnes were distilled.

Thus:

Sales of prunes: 47,000 tonnes, plum equivalent 170,609
export of rekmez: 15,180 " " 51,005
used for rakija 156,427
residual for self consumption and sales in fresh condition 378,041

Total harvest 90,116

Assuming no production in Krajina other than of rakija and self-consumption of plums in other forms, let us call the total of self consumed plums C.

\[ C + \text{net fresh plum sales} = 90,116 \text{ tonnes} \]

\[ \text{fresh plum sales, net} = 90,116 - C \]

Let us now assume self consumption to be divided between okruzi in proportion to gross output. The output of Krajina was 2,183 tonnes, or 0.4663% of total harvest of 468,157 tonnes.

\[ ^1 \text{S. C. 1904, p 329} \]
Therefore assuming self-consumption to be proportionate to output, self-consumption of plums in Krajina = 0.004663 C

So there remain for distilling in Krajina 2,183 - 0.004663 C

But 2,325 tonnes of plums are distilled in Krajina, so this okrug purchases for distilling 2,325 - (2,183 - 0.004663 C) tonnes

= 142 + 0.004663 C

But gross sale of fresh plums = 27,850 tonnes

So net sale = 27,850 - (142 + 0.004663 C) = 27,708 - 0.004663 C

Therefore, 27,708 - 0.004663 C = 90,116 - C

Whence 0.995357 C = 90,116 - 27,708 = 62,408

C = 62,700 tonnes

Thus net sales of fresh plums are 90,116 - 62,700 = 27,416 tonnes

Gross sales of fresh plums are 27,850 tonnes.

Purchase in Krajina for distilling = 27,850 - 27,416 = 434 tonnes

Appendix table (i)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>plums</td>
<td>170,609</td>
</tr>
<tr>
<td>pekmez</td>
<td>51,005</td>
</tr>
<tr>
<td>distilling</td>
<td>156,427</td>
</tr>
<tr>
<td>sale in fresh condition (net)</td>
<td>27,416</td>
</tr>
<tr>
<td>self consumption</td>
<td>62,700</td>
</tr>
<tr>
<td></td>
<td>468,157</td>
</tr>
</tbody>
</table>

Thus self consumption was 13.393% of the harvest. This is assumed to be divided proportionately between okrusi. Assuming sales of plums across market scales in each okrug to have arisen from production in that okrug, we can now calculate the residual available for making prunes and pekmez in each okrug.
## Appendix table II

<table>
<thead>
<tr>
<th>No. Okrug</th>
<th>Harvest</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>Distilled</td>
<td>Sold</td>
<td>Residual (for Prunes and Pekrez)</td>
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<td>8,041</td>
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<td>29,808</td>
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<td>19,137</td>
<td>9,147</td>
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<td>7,779</td>
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<td>9,867</td>
<td>3,501</td>
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<td>3,534</td>
<td>12,947</td>
<td>3,962</td>
<td>4,052</td>
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<td>4,761</td>
<td>11,427</td>
<td>2,537</td>
<td>16,823</td>
</tr>
<tr>
<td><strong>1-8</strong></td>
<td>405,267</td>
<td>54,278</td>
<td>156,427</td>
<td>27,413</td>
<td>221,617</td>
</tr>
<tr>
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<td>6,475</td>
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<td>2,556</td>
<td>233</td>
<td>4,766</td>
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<td>13. Biš</td>
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<tr>
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<td>859</td>
<td>9</td>
<td>1,945</td>
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<tr>
<td>16. Vranje</td>
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<td>666</td>
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<td>65</td>
<td>3,774</td>
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<tr>
<td>17. Kragina</td>
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<td>292</td>
<td>2,325</td>
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<td><strong>Serbia</strong></td>
<td>468,157</td>
<td>62,700</td>
<td>156,427</td>
<td>27,413</td>
<td>221,617</td>
</tr>
</tbody>
</table>

The next operation is apportionment of plum production for prunes and pekrez between okruzi. We will assume that exports of pekrez through Sabac represent the pekrez production of Podrinje okrug (322 tonnes) and exports through Obrenovac represent the pekrez production of Valjevo okrug (963 tonnes). There remain 329 tonnes exported through Belgrade by water and 15,567 tonnes through Belgrade by rail.

According to N. Savić plum use was divided in the Šumadija in the ratio 3:1 between pekrez and prunes. But it is doubtful whether this ratio would apply outside Kačer okrug; prunes predominated clearly in Kacer srez (Rudnik okrug) and in Temnić srez (Korava okrug).

---

1. Equivalent to 1,002 tonnes and 3,236 tonnes of plums.
2. Šišia..., p 126
But in Kruševac okrug, the proportion of plums used for rekrez to those used for prunes was at least 1:1.

If we assume ratios of 3:1 in Kragujevac and 1:1 in Kruševac, the plum use for rekrez in these okruzi was \( \frac{3}{4} \times 17,189 = 12,892 \) tonnes and \( \frac{1}{4} \times 23,165 = 5,791 \) tonnes respectively, which would have made 3,637 tonnes and 3,447 tonnes of rekrez. So total rekrez made in these okruzi = 7,284 tonnes. Now as the total leaving Belgrade by rail was 13,567 tonnes, the balance from other okruzi would be 6,283 tonnes. Now from Belgrade there was also consigned by water 329 tonnes of rekrez and 1,641 tonnes of prunes. These would represent 1105 tonnes + 5957 tonnes = 7,062 tonnes of plums out of a total available in Beograd okrug for prunes and rekrez of 14,263 tonnes of plums, leaving 7,201 tonnes of plums to be carried by rail as prunes and rekrez.

The unapportioned 6,283 tonnes of rekrez represent 21,111 tonnes of plums, produced elsewhere than in okruzi 2, 3, 4, 6 and part of 5. The residual available for conversion into prunes or rekrez other than in okruzi 2, 3, 4, 5 and 6 is 72,930 tonnes. To this we should add 7,201 tonnes for okrug 5, giving a total of 80,131 tonnes. Out of these, 21,111 tonnes were used for rekrez, i.e. in these okruzi 26.3456% of plums were used for rekrez and 73.6544% as prunes.

Thus there were sent out from Beograd okrug by rail 26.3456% \( \times \) 7,201 tonnes = 1,897 tonnes of plums as rekrez, in addition to 1,105 sent similarly by water. Thus Beograd okrug produced 3,002 tonnes of plums for rekrez making. So the final breakdown of production of plums for prunes and rekrez by okrug will be:

---

1. Savić, op cit p 126
The production of *rakija klijovica* was now broken down between market sales and self consumption. In addition to production of *rakija klijovica* a small amount of the much stronger *rakija prenečenica* was produced, whose quantity was doubled, to treat it as *rakija klijovica*.

### Appendix table iii

<table>
<thead>
<tr>
<th>Krug</th>
<th>Brums produced for:</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
<td></td>
<td>Prunes and Pečme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>29,808 x 26.3456%</td>
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<td>60,688</td>
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<td>11,562</td>
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<tr>
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<td>5,940 x 26.3456%</td>
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<tr>
<td>9</td>
<td>6,475 x 26.3456%</td>
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<td>4,786</td>
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<td>2,751</td>
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<td>17</td>
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<tr>
<td>Serbia</td>
<td></td>
<td>51,005</td>
<td>170,612</td>
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</table>

### Production of spirit

<table>
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<tr>
<th>Krug</th>
<th>Klijovica</th>
<th>2x Prenečenica</th>
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<th>4</th>
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<td>h e c t o l i t r e s</td>
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<td></td>
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<td>1,124</td>
<td>142</td>
<td>32,152</td>
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<tr>
<td>2</td>
<td>32,550</td>
<td>2,254</td>
<td>73</td>
<td>34,805</td>
</tr>
<tr>
<td>3</td>
<td>25,547</td>
<td>1,560</td>
<td>97</td>
<td>27,224</td>
</tr>
<tr>
<td>4</td>
<td>31,820</td>
<td>40</td>
<td>931</td>
<td>32,791</td>
</tr>
<tr>
<td>5</td>
<td>18,104</td>
<td>262</td>
<td>300</td>
<td>18,666</td>
</tr>
<tr>
<td>6</td>
<td>35,244</td>
<td>1,320</td>
<td>4,071</td>
<td>40,555</td>
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<td>26,196</td>
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<td>1,560</td>
<td>28,444</td>
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<td>14,650</td>
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<td>15,300</td>
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<td>136</td>
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<td>5,566</td>
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<td>-</td>
<td>376</td>
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<tr>
<td>16</td>
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<td>-</td>
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<td>17</td>
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<td>10</td>
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<td>9,646</td>
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<tr>
<td>Serbia</td>
<td>291,534</td>
<td>8,680</td>
<td>18,269</td>
<td>318,303</td>
</tr>
</tbody>
</table>
Now the total amount of rakia marketed was
sales over market scales..... 179,129 hl
sales at fairs.... 3,646 hl
----------
182,775 hl

Therefore producers self-consumed 318,303 - 182,775 = 135,528 hl

Now as we are given the number of producers of rakia at 115,315,
it was assumed that self-consumption is apportioned in relation to the
number of producers. This would give a self consumption of 117.5 litres
per producer. However for okruzi of Pirot and Vranje with relatively small
production, this would be somewhat greater than the total amount produced.
It was therefore assumed that all the production of rakia in these two
okruzi was kept for self consumption, and that the remainder of the self-
consumed rakia was apportioned between okruzi according to the number of
producers. Pirot and Vranje produced 4,364 hl of rakia thus the self-
consumption of the remaining okruzi would be 135,528 - 4,364 = 130,894 hl,
divided between 115,315 - 5,704 109,537 producers, or 119,5041 litres
per producer.

Appendix table v

<table>
<thead>
<tr>
<th>Okruzi</th>
<th>Producers of rakia</th>
<th>Production of rakia</th>
<th>Self-consumption of rakia</th>
<th>Market surplus of rakia</th>
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<tbody>
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<td></td>
<td>(t. iv, col 4)</td>
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<td>7,000</td>
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<tr>
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<tr>
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<tr>
<td>10</td>
<td>5,222</td>
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<td>1,604</td>
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<td>16</td>
<td>3,649</td>
<td>3,050</td>
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<tr>
<td>17</td>
<td>5,217</td>
<td>6,235</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Serbia 115,315 318,303 135,528 162,775

1 i.e. total number of producers in Pirot and Vranje okruzi
It was assumed that *rakića klijevoica* and *rakića kobovica* were sold from the produce of each ekur in proportion to their production. From appendix table iv was taken production of *rakića klijevoica* aggregated with twice the production of *rakića prepećenica*, market production of *rakića klijevoica* was calculated, and subtracted from gross production to obtain a self-consumption figure. This was converted to its raw plum equivalent, and aggregated with fresh plum use for other self consumption purposes to reach a total of self consumed plums. The total of self consumed plums was then subtracted from total plum harvest, and the resultant balance of plums used for commercial purposes was expressed as a percentage of the total plum harvest. This comprises column 2 of table VII 6.

### Appendix table vi

<table>
<thead>
<tr>
<th>Grup</th>
<th>1 other than Konojice in <em>rakića klijevoica</em></th>
<th>2 Market prod'n <em>rakića klijevoica</em></th>
<th>3 Total prod'n <em>rakića klijevoica</em></th>
<th>4 Self consumption <em>rakića klijevoica</em></th>
</tr>
</thead>
<tbody>
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<td></td>
<td>hl</td>
<td>hl</td>
<td>hl</td>
<td>hl</td>
</tr>
<tr>
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<td>99.558</td>
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<td>10.301</td>
<td>34.612</td>
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<tr>
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<td>16.672</td>
<td>33.740</td>
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<td>98.395</td>
<td>11.242</td>
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<td>36.484</td>
<td>11.163</td>
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<td>7</td>
<td>94.443</td>
<td>20.716</td>
<td>26.654</td>
<td>6.130</td>
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<tr>
<td>8</td>
<td>97.677</td>
<td>11.536</td>
<td>23.298</td>
<td>11.762</td>
</tr>
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**Serbia** 174,614 300,014 125,400
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<th>6</th>
<th>Plums used for other</th>
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<th>Total plum use for self consumption</th>
<th>8</th>
<th>% harvest used for commercial purposes</th>
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</table>

| Serbia | 156,427 | 65,071 | 62,700 | 127,771 |

* Column 2 of Table VII 8

We are now in a position to make a valuation of the commercially used component of the plum crop. The calculation will be designed as a measure of receipts from the crop by producers, and therefore treats plums used for *peknice* as being sold in fresh condition, as the producer did not gain the value added by *peknice* production. For *prunce*, on the other hand he did, as he prepared them himself, and similarly with *rukije*.

1 See text, p 456
Prune valuations

Based on prune prices at principal markets

<table>
<thead>
<tr>
<th>Okrug</th>
<th>quintals traded</th>
<th>principal market town</th>
<th>price per quintal</th>
<th>Volume (din)</th>
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<td>26.71</td>
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<td>Čačak/Kraljevo</td>
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<tr>
<td>other</td>
<td>14,997</td>
<td>Weighted mean</td>
<td>25.64</td>
<td>11,667,449</td>
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</table>

Total: 469,998

Prunes produced in the above listed okrug will be valued at the okrug market price. Alas prunes raised in Rudnik okrug will be valued at the U Milanovac price of 19.12 dinars and prunes raised in Morava okrug will be valued at the Jagodina price of 18.33 dinars. Although throughput on these markets was relatively small compared with the production of these okruži, there was sufficient throughput to make the price meaningful, and although, for example, Rudnik prunes would mainly have been traded through Valjevo, the price differential probably reflects little more than the haulage cost, which might or might not have been gained by the producer. For Kruševac town no price was quoted in 1904, despite a turnover of 1,786 quintals, and prunes from this okrug will be valued at the price at Kraljevo (18.27 dinars), as the nearest adjacent major market.

Prices quoted elsewhere in the areas producing few prunes were erratic, sometimes very high, probably reflecting a situation where fruit was brought into the area to supplement local production, and for all other areas the mean price obtained on the five main markets (25.64 dinars) has been taken and reduced by 10% (i.e. to 23.06 din) to take account of the small volume and irregularity of trading. The error implicit to this would be small because of the small size of the turnover.
### Appendix Table VII

<table>
<thead>
<tr>
<th>Okrug</th>
<th>Plum Output for Prunes (t. iii, col 3)</th>
<th>Prune Production (Col. 1 + 5.63)</th>
<th>Price (per tonne)</th>
<th>Value (dinars)</th>
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### Appendix Table VIII

<table>
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<th>Okrug</th>
<th>Plums Used for Prunes (t. iii, col 2)</th>
<th>Plums Sold for pcknez (t. ii, col 4)</th>
<th>Total (col 1 + 2)</th>
<th>Okrug Valuation (dinara)</th>
<th>Value (dinars)</th>
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Serbia 51,005 27,413 78,418 5,899,373
Market sales of *rakija* *žlivovica* are valued at *okrug* producer valuation prices. The total of sales of prunes, fresh plums and *rakija* *žlivovica* is then struck, and appears as Col. 3 of Table VII B.

**Appendix table IX**

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<td>Sales</td>
<td>Value</td>
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<td>(t. viii Col. 5)</td>
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</tr>
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</tr>
</tbody>
</table>

| Serbia | 174,614 | 0,282,115 | 10,916,998 | 5,893,273 | 23,092,486 |

These earnings figures were now related to the population of the areas to which they apply, and, as only a minority of households raised plums, they were also related to the number of producers. For this purpose, it must be assumed that all producers of plums produced at least some *rakija* *žlivovica*. They did not need to own their own distilling equipment - only a minority of *rakija* producers owned stills. The assumption is of course...
speculative, but it is of interest to note that in about 1900, K. M. Savić noted for Valjevo okrug that there were 5,541 producers of prunes (whereas in 1904 there were 6,612 producers of rakiju and for Podrinje okrug that there were 14,665 producers of prunes, whereas in 1904 there were 15,677 producers of rakiju). On the whole, it is likely that producers would have made rakiju, if only for self consumption, rather than prunes, most of the production of which went for sale. But to estimate the number of producers of plums, it is necessary to reduce the total number of rakiju producers to the extent that these made the grape-based rakiju korovica. The number of producers in each okrug was therefore reduced in proportion to the extent to which the okrug produced rakiju korovica. Although, it introduces a small error into the calculation by doing so, only non-town households and population were included as producers. A small error in the opposite direction will be generated by taking the 1905 population census for estimating per capita figures etc. in 1904. Per capita, and per producer earnings figures are now expressed on the basis of this data.

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1 H. Savić, Eliva..., p 135.
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| Serbia | 30.11 | 10.13 | 218.1 | 103.1 | 36.8 | 78.2 |

Col. 6 becomes Col. 8 of Table VII B
Col. 7 = Col. 9 = Col. 7
Col. 10 = Col. 5 = -
Col. 11 = Col. 6 = -
As we have shown, the two principal means by which the Serbian peasantry could expand their cash incomes other than by diverting pastoral produce from self-consumption and toward the market were through the direct or indirect sale of grain drawn from an increasing area of cultivation and through the expansion and monetization of the plum crop. Additionally there were opportunities of varying favourability of expanding cash incomes through the cultivation of hemp, sugar beet and tobacco and through the raising of silk and poultry. We have assessed the extent to which the transition to these crops, none of which provided significant incomes at the beginning of the period, permitted the attainment of stable rural economic conditions in the face of population growth. But the possibilities of stabilizing farm welfare through expansion of these sectors were unevenly spread. Little benefit would be derived by the landless peasants and those with very small holdings, nor by peasants whose holdings lay outside the plum belt and the principal river valleys. The former group were likely to be distributed throughout the country, but the latter might be found mainly in the dry and relatively infertile south east (except for the grain surplus Niš and Toplica plains and the Leskovac and Vranje hemp districts), in the moorlands of eastern Serbia (Somolje, Zvižd and the upper Timok valley) and in the south-west (Užice and most of Čačak okrug) where, although there was commercial plum cultivation it was quite insufficient in scale to offset the deficit in grain. In none of these arable - short regions was there much scope for the monetization of relatively intensive agriculture.

It was therefore likely that substantial numbers from both these groups, the poor of the more fertile regions and the mass of peasants of the less fertile uplands, would seek outlets for their labour in occupations unconnected with their holdings. To these two groups we should add
a potential third, that is to say peasants who fell into neither of these
groups but who nevertheless sought to supplement the earnings won from
the produce of their own soil, and were attracted by the rewards obtainable
from working independently of it.

There were a number of opportunities, some relatively well and some
relatively poorly remunerated, some in an expanding and some in a
contracting market. Principal among them, especially at the end of the
period, were forestry, cottage industry, haulage and cartage, wage
labouring on the land (arrakšina), and long range labour migration
(rečalba) both for land work and for the practice of other skills.

The total number of peasants who earned incomes independently of
the land they owned is impossible to estimate. In the first place there
was the rural proletariat whose numbers were estimated by Lapčević (who
claimed to be quoting from Tichovinski Glasnik) at upwards of 150,000,
"not including the great mass who have a hectare or two of land but
nevertheless live from day wages."¹ We should, however, view this
figure with great caution. According to the 1897 census, only 273,166
village households owned land out of a total of 306,120, giving a landless
rural proletariat of 34,952 or 11.3%.² But the 1905 census showed
338,469 village houses owning land, and 14,262 without.³ Mean village
household size in 1905 was 6.48, implying a rural proletariat in 1897 of
227,000 and in 1905 of 92,000. As the total number of farm properties
(including those of townspeople) expanded by an apparent 2.9% per annum
between 1897 and 1905,⁴ and as overall population growth during this
period was only 1.5-1.6% per annum,⁵ it appears either that the process

¹ D. Lapčević, Poloha radničke klase...u Srbiji, pp.267-8
² Proizvodne snage... p.119 col. 1
³ S. G 1907-8, p 41
⁴ I K S Izveštaj...u 1912 i 1913..., p 90 (1905 total of properties
modified as according to discussion on p 43 (note a) above
⁵ See Table I.2 p.16
of subdivision and new property creation was outpacing population growth, and thereby genuinely reducing the number of landless, or that the 1897 figure is wrong. It would therefore seem unwise to estimate the number of rural proletarian families at more than 14,282, and, assuming that half their membership would fall within the economically active group, the purely proletarianised rural labour force could not have been in excess of 50,000.

The number of those strictly seeking day wages would be much smaller. Of the village population in 1900, only 0.43% described themselves as day labourers, 96.7% as farmers. (Most of the rest were artisans, officials and merchants). It therefore seems likely that the greater part of the non landowning peasantry rented their land, probably in some form of share-tenancy.

The mass who have "a hectare or two", who were shown by the Avramović survey to be the only groups earning wages from labour outside their properties, amounted according to the 1905 figure to a further 99,000 families. This probably generated a labour force of about 300,000, so altogether there were probably at least 350,000 people (including share-tenants) living in the villages and looking for work for at least part of the year, that is to say about a quarter of the economically active rural population. But this again fails to include what was probably a much higher percentage of the population in the regions outside the belts of heavy grain or plum surplus.

In examining conditions for earning of incomes independently of ownership of the soil we are therefore concerned with a very substantial component of the peasant economy, whose health or otherwise could clearly have very profound effects on the aggregate of rural income, particularly

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1 S C 1900, p 42
2 M Avramović, Naše Selačko Gospodarstvo, p 35
3 I K S, Izveštaji...u 1912 i 1913... p 90
4 The composition of the properties in the Avramović survey appears to be skewed towards the northern region of the country.
In the early nineteenth century, much of Serbia, plain and upland alike, had been in appearance one vast, seemingly endless forest area interspersed with clearings for settlement and tillage. But the forests were the most rapidly wasting asset of the extensive sector of the peasant economy, and in consequence of rapid and unsystematic clearance, not infrequently by slash and burn techniques, the forest line was forced back into the uplands. The process of destruction was seemingly endless: official statistics show a halving of the forest area between 1897 and 1906 alone, and even allowing for the obvious exaggeration implied by this comparison, the potential output of this sector must have been dwindling sharply.

However, the areas in which the forests survived were those in which the land was least attractive for alternative uses, and so provided a source of income for the peasantry of regions least well provided with the means of intensifying cultivation.

The Serbian forests did not attract exploitation by foreign capital, and the sawmilling industry which emerged late in the nineteenth century was for the most part composed of very small enterprises using primitive water powered saws scattered throughout the forested regions and serving for the most part only a local market.

As late as 1910, when there were 51 sawmilling establishments, their total capital invested in fixed assets totalled only 3,260,000 dinars, or

1 See for example the descriptions offered by early 19th century travellers in Serbia, such as in A Kinglake, Eothen (Icon edn, London 1963) pp 26-8
2 W Denton, Servia and the Servians pp 144, 146
3 H Dudesco, L'Evolution Economique Contemporaine des Pays Balkaniques - Roumanie, Bulgarie et Serbie (Paris, 1915) p 70
little more than half that invested in the country's single sugar factory. Even this total was probably dominated by Prometna Banka's forestry operation on the Tara Planina connected by a cable railway to the Drina and thence to its Belgrade sawmill. The industry employed 446 workers in 1910, but on resumption of operations after the first world war, Prometna's enterprise alone employed 222 workers.¹

Employment figures, however, may be misleading, for it is not clear who was and who was not included; in 1904 a single sawmill at Brus, okrug of Kruševac, claimed that at times, during the period from April through September, when water power was available, it employed the services of up to 1,500 workers and carters, exclusively peasants of that region.² So despite their low declared employment figures the sawmills could have had a strong, effect on their regional cash economies, within the modest 800,000 dinars value added by the industry in 1910.³

Probably because of the high cost of transporting timber, peasant owners of forests, particularly in the south west of Serbia seem to have found it more attractive to exploit forest timber for tar and resin. In the 1860's the trade in resin was evidently very small. Total "output" was estimated at no more than 100 tons yearly, value about £500 sterling. None was exported.⁴ However, the very process of forest clearance itself created a growing internal market for resin - as also for tar, and thereby probably gave rise to increasing employment in its production for commercial purposes in the producing regions,⁵ particularly the Zlatibor area of Užice.

¹ I K S Izveštaj... 1910..., p 13 and Tablice 4 and 10; Lanpe, thesis, pp 301-2; J Crgašević, Industria Srbije i Crne Gore, p 260
² D A S JEP T II 66 1905. Answer to an industrial questionnaire concerning the sawmill of B C Jelisic and others at Brus, reprinted in B Peruničić, Statak i Gornji Milanovac II, (Šatak, 1969), p 628
³ I K S, op cit, Tablica 8
⁴ C Br(S) 1664 (Resin), pp 64-5
⁵ D Lapčević, op cit, p 292
okrug and Studenica area of Čačak okrug. These were areas of very heavy grain deficit.

At least for Zlatibor area, tar and resin were "the biggest product of this region directed exclusively for commerce" and their connection with grain deficiency was very strong indeed. Trojanović lists four opštine in Užice okrug, where "almost every householder travels with a cart into the interior of Serbia with a tovar of tar or resin and gives all this in exchange for grain." And if these were exceptional for the region it was only in so far as the roads were sufficiently good to take cart traffic, rather than pack horses. From Studenica area in 1901, the organized pack-caravan trade carried out 26 tonnes of tar to be sold in the towns of Eastern Serbia and to be hawked around the villages. It also carried 1,060 kg of resin to the Norava region which was to be bartered for grain. Another source, writing of the Ibar valley notes

"In the event of a peasant being short of grain or salt he buys a tovar of tar from the producer, leads it on a horse and carries it to the Ponoravšte or Dumadina so as to sell or exchange it for grain."

But it seems unlikely that forestry could long have sustained a rising commerce, for competing timber users fell into mutual conflict as the area for exploitation contracted. When the cooperers of Leskovac petitioned in 1907 against the concessioning of a barrel factory which was given privileged cutting rights in the state forests, the dispute was over supply rather than markets which were no problem for this trade.

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1 Sreta A Popović, Na Miranome Zlatiboru, (3rd ed Beograd, 1908) p 30
2 See Figure III (1) p 143
3 Ibid, p 29
4 S Trojanović, Kače Kiričkoje, (np, nd) p 44
5 S A Popović, op cit p 29
6 S Trojanović, op cit p 41
7 M Ilić, "Ibar..." NSZ III, p 566
8 N Vučo, Rašpadanje Enaata u Srbiji, I, p 418
And the following complaint by a sawmill on the Koravica was directed at the activity of tar distilling:

"....the sawmill works up exclusively pine timber. At capacity working it can manufacture more than 2,000 logs but this is an unusual situation. I procure the logs for manufacture from private woods (gabran), that being timber fallen in the forest from storms, because the proprietors of the woods will not sell while they produce torches and tar and sell these manufactures, for they have a greater profit from them.

...As to the law on the assistance of home industry, I think that the cutting of torches and the production of tar should be forbidden, especially the latter thus destroying the forest, it ruins a gigantic quantity of building material for the gain of a single trifling iovan of tar.

It is also known ... how wretched is the appearance of the pine woods from which are cut resin ... and how many of the pine trees are wrecked because of cutting for tar, and at the first windy occasion the trees fall in sheaves and only then do the proprietors of the woods seek a buyer..."

Similarly, the appearance of modern sawmilling, even though it might in the long run establish a solid basis of employment in forestry, tended to have the reverse effect in the short run. When a modern sawmill was established on Mount Kopaonik in 1903, the numerous water powered peasant sawmills along the Ibar river had to give up work.

Evidently by the beginning of the 20th Century, the diminution of the forest area, even in the upland south west, had proceeded so far that it was no longer capable of supporting a rising volume of exploitation. The forests of this food-short region provided the local peasants with commodities to barter against grain rather than with an expanding means of earning discretionary incomes.

1 D A S RNP T 66 1905, questionnaire completed by L Prokić, lessee of a water powered sawmill at Ušće, Čačak okrug printed in B Peruničić, op cit, pp 625-26

2 R M Ilić, "Ibar..." loc cit p 567
b The structure of domestic industry.

Following the lines of the Thirak thesis concerning the relationship between rural underemployment, "poor-land" and the development of cottage industry for the market we might anticipate that such cottage industries as developed for the market in nineteenth century Serbia would tend to have been located predominantly in areas associated more with forestry and pastoral activity than in the more intensive agricultural regions, on account of the relatively higher marginal productivity of labour in the latter. This expectation is broadly confirmed by the extensive list of cottage industries and their locations enumerated by Savić. The dynamic implications of the Thirak thesis, under conditions of increasing population pressure, would tend to promote the expansion of such supplementary income sources, in the same way as population pressure in more favourably located regions stimulated the expansion of relatively intensive forms of cropping and animal husbandry. However, the scale of such industries was never very substantial.

In the first half of the nineteenth century peasant cottage craft manufacturing for the market was hardly known at all. Nevertheless, the peasant household was reputedly highly self-sufficient in its provision of artefacts. In the Turkish controlled pašalik of Niš, however, as we have already observed, in connexion with the Leckovac and Vranjo rope-making trades, operation of the Ottoman administrative and agrarian systems had resulted in the survival of the relatively large kardije towns in which were to be found sizeable low wage domestic industries, perhaps the best known of which was the carpetmaking trade of Pirot. During the

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2 M M Savić, N.I.Z., 1, pp 293-5
Ottoman period neither ropemaking nor the carpet trade appear to have penetrated the villages, in which factor conditions were much the same as in Serbia. Subsequently, although the ropemaking trade moved out into the Leškovac and Vranje villages, the carpet trade does not appear to have ruralised itself.

The Pirot carpet trade was an excellent example of a sweatshop trade founded on the misery of an urban population, which would probably have dispersed back to the land had the opportunities inherent under conditions of a free land market, as in Serbia, pertained at the time Serbia acquired autonomy. Instead, the merchants of Pirot were able to exploit the labour of numerous "girls who squatting in sheds or in the alleyways are occupied with this work". Their pay in the 1840s was about (the equivalent of) five dinars a month, that is to say about the same as an agricultural labourer could earn in five days.

Pirot carpets had been sold widely throughout Ottoman Turkey where they "competed with the Persian in the apartments of the Turkish Sultans, in the mosques of European Turkey and in the houses of the aristocracy," as also in Serbia where all Serbs considered it an honour to have a Pirot carpet in their parlours. But at least after annexation in 1878, the Pirot carpet industry went into decline. Whereas in the early 1880s, according to Bianconi, the industry was engaged in 1,800 out of the town's 2,000 houses, the making of carpets and žak (cloth) occupied about 1,000 workwomen in about 1890, and the co-operative which was subsequently formed in 1900.

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1 A Boué, La Turquie d'Europe... III, pp 102-3
2 Ibid; J H Skene, Frontier Lands of the Christian and the Turk, p 406
3 V Karić, Srbija..., p 406
4 F Bianconi, Cartes Commerciales..., Royaume de Serbie, p 33 col 2
5 Ibid, p 33 col 1
6 Ministarstvo Vojno, Statistika Država Balkanskog Poluotvra, I, p 79
and probably included all the carpet workers, extended to 170 homes, of
700 women soon after World War 1.\(^1\) It therefore appears that the trade
decayed very sharply in the 1880s and subsequently failed to resume its
former importance. This is closely in line with the chronology and content
of contemporary comment on the industry.

The reasons for this decline were rather more complex than those
offered by contemporaries, and they seem to indicate that it may well
have been in progress even before the annexation. Contemporaries preferred
to emphasize the rise of intra-Balkan tariffs, between 1878 and 1885, which
progressively isolated the industry from its former markets, while
competing industries were fostered in Bulgaria and Bosnia.\(^2\) Bulgaria
set up its own carpet industry just across its frontier with Serbia,
encouraging the migration of carpet workers from Pirot,\(^3\) and the Austrian
administration in Bosnia took measures to promote the carpet making craft
and concessioned a machine carpet factory to a Turkish entrepreneur at
Sarajevo. Despite the internal problems of this enterprise, its competition,
and that of carpet manufacturers in Croatia aided by protection, is claimed
to have forced Pirot carpets out of the markets of the Habsburg dominions.\(^4\)

Yet the tariff barriers the industry had to face can hardly be
described as formidable. Bulgaria levied 6% import duty, in 1883,
equivalent to about 15% on value added by manufacturing, as about half the
value of a Pirot carpet was in its wool content.\(^5\) But the Pirot carpet is
supposed to have been a luxury type, highly differentiated good, precisely
of the kind which should have had a demand schedule which was inelastic

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\(^1\) J Crgačević, op cit p 224
\(^2\) V Karić, op cit pp 406-7; C Br (S) 1889-90, p 19; F Binnconi,
op cit p 22 col 2
\(^3\) C Br (S) 1889-90, p 19
\(^4\) P F Sugär, Industrialization of Bosnien-Herzegovina... pp 147-8;
C Be, 4 10 1889, R C LXVIII, p 280
\(^5\) E de Borchergrave, La Serbie Administrative Economique et Commerciale,
p 191
to price changes.

And Pirot carpets seem to have fallen in price in the post-annexation period to an extent which not only far exceeded tariff changes but also anticipated them:

<table>
<thead>
<tr>
<th>Price per metre² of Pirot carpet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1879: 24 - 30 din.</td>
</tr>
<tr>
<td>1882: 12.3</td>
</tr>
<tr>
<td>1886: 12.8</td>
</tr>
<tr>
<td>1888: 8 - 10</td>
</tr>
</tbody>
</table>

Sources: Calculation is made from data provided in CBr (S) 1879, p 905; CBr (S) 1882, p 506; CBr (S) 1885-86, p 9; CBr (S) 1887-88, p24

If demand had been sufficiently elastic to respond to a 16% tariff change, the industry should have expanded massively in response to a price fall of two-thirds in a decade. But it is fairly obvious that the price fall came about precisely because demand was not price elastic, and because consumers had turned from purchasing Pirot carpets for other reasons, which were likely to have been of a long-run nature, not necessarily coincident with the political changes of 1878 and the early '80's, and likely to have antedated them. Bianconi noted the increasing attractiveness to the Serbian market of "bad, ugly" and cheap Austrian factory made carpets. As we have already noted, there was no particular reason why Austrian goods should not have been penetrating Balkan markets before 1878. Frequently held to blame for the troubles of the industry, particularly by Western aesthetes, were such innovations as the use of aniline dyes in place of the old herbal dyestuffs, which, in their eyes detracted from the quality of the goods; but the more garish appearance that aniline dyeing was likely to impart may well have enhanced rather than detracted from the saleability of the good in the eyes of an unsophisticated consumer market. In any case, the industry adopted aniline dyeing well before it got into
serious difficulty. 1

Contraction of the industry came about because although prices fell heavily, costs did not fall in line. Had the carpet merchants, who controlled the trade, been able to pass back all or most of the incidence of falling prices either to the suppliers of raw material or the suppliers of labour, then the industry would not have shrunk in size.

Of the principal cost components in the 1680's, it appears that wool comprised 41 - 52% of total cost, labour 25 - 40% and dyes 18 - 23%. 2

As the largest single cost element, movements in the price of wool may have been critical in their effect. The price of wool almost certainly moved sharply upwards. During the Turkish period, there had been at Pirot a municipally owned woolcombing "factory" where "each weaver could draw wool to prepare at an insignificant price" 3 (my italics). After this period the woolcombing "factory" ceased to exist, and the inference is that the price of wool had risen from "insignificance". We do not know the Pirot wool price before 1879, but we do know that there was a general inflation in the price of all commodities between the pre-annexation period and 1683 of very substantial proportions, - of between 50% and 200% depending on the commodity - as the annexed territories price level adjusted to that pertaining in the Serbian market. 4 The price of wool became the object of complaint; the trade wanted the increasingly scarce Pirot and Krivir wools, and the competition of the emergent textile manufacture was blamed for forcing the market price of this wool up. 5

1 C Be 4 10 1689 R C LXVIII, p 279; C Br (S) 1887-88, p 24; V Karić, op cit p 407; E de Borchgrave, op cit p 190; F Bianconi, op cit p 33 X col 1. It was observed in 1683 that the dyes deteriorated after five or six years so they must have been in use at least five or six years before 1683.

2 C Br (S) 1887-88, p 24

3 V Karić, op cit p 407

4 M DJ. Hilićević, Kraljevina Srbija, p 133

5 MNP 1906 2 p 263
There were also complaints that dyestuff costs were becoming increasingly burdensome, so it is evident that raw material costs were rigid relative to product prices, and that, in a cottage industry with fixed factor proportions, the consequent squeeze must be borne either out of wages or profits, and that if the supply of labour should prove to be elastic to its price the consequence would be sharp contraction.

Initially, in consequence of the slump in the trade in the immediate postwar years, the merchants may have succeeded in cutting wages, for in 1683 they were paying their workwomen a very low 0.20 - 0.30 dinars a day which - in view of the movement of the general price level - probably represented a fall in real terms since the 1840's. It may, however, have succeeded so well in lowering wages as to have caused workwomen to move out of the trade, on such a scale that it was obliged to let them rise again, for in 1688, in-workers were earning 0.40 - 0.80 dinars and outworkers 0.40 plus some bread, and in 1903, the wage had risen to one dinar.

The nature of the cost - price squeeze the trade faced is well expressed in the comment made in 1892 that the industry was "in a very sluggish condition" and left its orders unattended for six months or more. Given an unchanged technique, the margin between the cost of wool and the price of a carpet was insufficient to attract a labour force of the former size, and therefore the trade had to contract as it lost labour.

As we observe the rising cost of labour in the Pirot carpet industry in the '60's and the simultaneous outburst of complaints about the standard of production it is not difficult to see why attempts were made to tighten labour discipline - or as contemporaries put it, to uphold standards of

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1 E de Borchgrave, op cit p 191
2 See above, p
3 C Br (S) 1867-88, p 24
4 M E Durham, Through the Lands of the Serbs, (London 1904) p 168. Lapčević, however, quotes a much lower wage rate, D Lapčević, op cit pp 114-5
5 C Br (S) 1891, p 23
workmanship — by organizing production in a manufactory. A state organized establishment of this nature did operate for a few years in the late 1860's and received the active patronage of Queen Natalija, but it collapsed in about 1890. In line with our opportunity-cost of labour argument it is significant that the British consular report which carried news of its failure also mentioned the emigration of Pirot families to participate in the protected and reputedly flourishing carpet industry across the Bulgarian frontier. And a subsequent attempt to organize the industry as a joint stock company failed; the response of subscribers was so derisory as to indicate not merely a local shortage of capital but also local pessimism as to the prospects of the venture.¹

The decline in the manufacture of Pirot carpets probably also owed something to the displacement of its labour-force into another urban domestic industry, which also owed its origins to conditions of urban distress. The smaller town of Knjaževac, (within the frontiers of Serbia before 1878 when it was called Gurguševac) appears also to have supported a much smaller urban carpet industry, which had probably shrunk by the 1860's to the extent that "carpets are worked in about ten houses which in quality are not inferior to those of Pirot."² But domestic industry in this town seems to have revived in consequence of the poverty and dislocation which attended the war of 1876-78, which affected this region seriously. According to one observer,³

¹ C Be 4 10 1889, R C LIX pp 279-80; C Br (S) 1887-88, p 24; C Br (S) 1889-90, p 19; C Br (S) 1891, p 23
² Put Liceiskih Pitomaca ... po Srbiji godine 1863, p 124
³ St. Popović, "Ekonomski izveštaj o putu u Knjaževac ... " C H P II, (1882), 38, p 605, col 1
"The only cottage industry which still advances today is that of šajak. The poverty which ruled the population of the town after the war found its great opponent in female labour power and labouring enterprise. To the Knjaževac woman belongs the distinction that the Knjaževčani today wear their šajak, which is not, in truth, so fine as the Austrian factory made broadcloth [Koha] in which they were dressed before the war, but was indeed welcome in the conditions which provoked its production."

"Andjelija, mother of Andreja Stefanović, Knjaževac townswoman, was first to make šajak on her loom for her son's clothing but almost all the women admired it and began to weave šajak to clothe their men and children... Andjelija deserves the thanks of the Ministry of Finance for enriching Knjaževac with a new industry... Today there already Knjaževac šajak for sale as well, and in Belgrade can be seen friends of this industry, wearing šajak."

In so far as the above account is realistic, it affords an interesting example, not of an established domestic manufacture overflowing into trade, but of a new cottage industry which was set up in order to meet a condition of declining prosperity by the enlargement of the area of self-consumption, and producing commercially as well, from the start. By 1691, the Knjaževac industry was reported to be producing a 'surplus' of 3,000m per annum.¹

It is important to note that the cottage šajak industry was not a declining unmechanised trade which was being displaced by factory production, but rather a new industry which sprung up (alongside the factory manufacture of šajak) because market conditions in Serbia favoured expansion in the output of this product. Thus šajak making also appeared at Pirot at least by 1890² drawing again, probably, on a labour force which had formerly engaged in the carpet industry. Handloom šajak manufacture was still in existence after World War 1 putting into commerce the equivalent of 170,000 prewar dinars of cloth compared with only 25,000 dinars of carpets.³

It was only very late that this trade began to overflow from the urban to the rural economy, and then probably only to the poorer village

¹ C Br (S) 1891, p 24
² V Karić, op cit p 772; Ministarstvo Vojno, op cit p 79
³ M M Savić, K I Z I, p 295
households in the Pirot region. As already noted the carpet trade did not spread to the villages at all. It was not for want of the necessary skills or equipment. The loom was part of the normal equipment of the peasant household: "Scarcey a peasant's dwelling can be found where there in not a loom on which the wife or daughters of the house weave material for household clothing or for sale". But the latter was on a very small scale. This may have been because the opportunity cost of female labour time in most of the villages was too high to justify working for the market for the very low returns obtainable by handworking manufactures whose production had been successfully mechanized.

Some evidence of this is offered by the Avramovic survey, in which among other things, the compiler attempted to measure the extent of rural underemployment. Whereas he estimated that 34% of the days of the male working year were spent in idleness, the equivalent for the female working year was only 6%. The same is also suggested by a remark of a Belgian visitor to the Leskovac region where he observed that "everywhere, in the fields, along the roads, one meets the women of these especially agricultural districts occupied in spinning." A small factory had been set up in the district which manufactured braid (rašten) for the peasant market. "The wool used is spun by hand by the peasant women and is purchased from them by the proprietor." But the arrangement was regarded as unsatisfactory. "The man wishes to set himself free from this administration, to transfer, and enlarge his establishment... and at the same time to install a filature."3

An instance is recorded, in the early 1880's of women from the Pirot villages going out over short distances for agricultural labour.4

1 C Br (S) 1892, pp 23-4
2 H Avramovic, Naše Seljačko Gostinство, p 29
3 C Be de Dudseele, "Compte Rendu..." R.C LXXV, pp 17, 19
4 M Dj Milidević, Kraljevina Srbija, pp 242-3
"In summer on a Sunday evening, at Pirot one can see several hundred women and girls who come down from Visok to be quartered in the town, so that early on the morrow they can find work in the Pirot fields. They stay till Saturday, when they usually return home to change their clothes, and on the Sunday again as evening draws in, they return in hundreds to the town - so long as there is work in the fields."

But, although migrant labouring from the Pirot region is discussed at length in several later sources, the migration of female labour is never mentioned. It seems more than likely that the subsequent growth in long distance male migration from this region left the female population with little redundant labour time.

On the whole it does not appear that the internal structure of the peasant household economy generated much surplus female labour time, or that it was not available at a sufficiently low price to make it competitive with factory type production, except in the larger towns. It was therefore on the employment of the male labour force in cash earning tasks independent of its own landholding that any substantial expansion of the peasant cash economy depended. This type of activity did not, however, take, except in respect of ropemaking, the form of cottage industry.

c The Carrying Trade

Depending on road conditions, carriage was undertaken by ox cart - rabadžiluk - or by pack horse caravan - kirišiluk. By the nature of this trade, rabadžiluk can scarcely be identified as a regionally specialised occupation; rather it offered earnings possibilities to the poorer peasants in general. This emerges very clearly from the following description of the carrying trade in the Tamnava region:\footnote{Lj Pavlović, "Antropogeografija Valjevake Tamnave" NSZ VIII, p 445}.

"Carrying is the main occupation of villages round Obrenovac. The poorer peasants, particularly never immigrants into these villages, because of the port at Zabrež, engage exclusively in the carrying of passengers, goods and luggage between Obrenovac and the port or between the port and Valjevo. Foreigners and the older families
who have acquired a certain amount of property do not engage in this
task, rather the majority are the newest immigrants from Austria-
Hungary."

Some mention of haulage work as a marginal occupation is made in
connection with studies of most areas and it would seem to have been
largely interchangeable as a supplementary occupation with agricultural
day labouring.¹

Only the kiridžije – pack caravan – trade survived to some extent
as a regionally specialised occupation, in the south west. This was a
vestige of the old Dubrovnik caravan trade, for which Užice – at the fork
of the roads Dubrovnik–Užice–Belgrade and Dubrovnik–Užice–Sofia had once
been a major transit point, and had supplied large numbers of caravanners.
By the mid-nineteenth century, the Dubrovnik trades had all but disappeared
after a prolonged decay, but, because of its very isolation from all
improved means of communication (till the opening of the railway in 1912)
the Užice region continued to depend on caravan links with the rest of the
country. The old long distance caravans numbering hundreds of horses gave
way to small units of up to fifteen. Once the Krešari – caravan leaders –
had been men of substance, "if possible from a respected family"², who would
organize their bands and negotiate terms directly with the merchants,
accepting responsibility for the care of the goods. But by the beginning
of the twentieth century, they were almost peasants, trading on a declining
market even before the opening of the railway, for as the roads improved
and the volume of traffic handled by individual merchants increased, so
the traffic increasingly went by cart, under the direct supervision of the
merchant. Nevertheless, in some villages the number of kiridžije was still
considerable; in 1901 Koravica srez counted 97 kiridžije, Studenica srez,
104, Užice srez 76, Zlatibor srez at least 200, Arilje srez, 35 and Rača

¹ Lj Jovanović “Klava...” H.S.Z II., p 297
² S Trojanović, op cit p 7
As noted above, this area of south west Serbia was heavily in grain deficit and paid for its grain imports largely by the export of tar and resin. Kiridžiluk stood in an obvious connexion with this exchange; indeed it can be regarded as little more than the transport means for it. At its simplest, we have noted the practice of peasants in more carriagable parts setting out for the direct barter of their timber products for grain.² S A Popović stated simply of kiridžiluk that the people still engaged in it because of the need to obtain grain for domestic needs.³ In this instance the kiridži showed carry his freights as a commercial proposition, rather than for the direct disposal of personal surpluses and the commodities involved would be more varied than the straight exchange of tar and resin for grain would indicate. In addition to tar and resin, the kiridži of Studenica sent out kajmak, wool, cheese, walnuts and rakija, and those of Greg Užice sent out pottery and tiles, haricot beans, dried and smoked meat. But in the former case tar and resin amounted to 90% of the freight by weight, in the latter a much smaller but indeterminate percentage.⁴ Return freights included wine, which was not grown at all in the south west, but found a market among the well - off,⁵ and goods from Belgrade.⁶ Kiridžiluk should certainly rank as an 'invisible' export of the south west; the Fre were well known as carters throughout the Balkans, sometimes engaging in multilateral trading journeys, and, it appears, were the sole carriers of goods into and out of that region.⁷ Thus although the regional grain deficit itself (combined with the diminution

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¹ Ibid, pp 39-44. This data did not come from official sources but was collected expressly for the compilation of this work.
² Ibid p43 and see above, p 525
³ S A Popović, op cit p 29
⁴ S Trojanović, op cit pp 40-1. This preponderance of tar and resin was by no means exceptional; see data on Ibid, pp 40, 42-4
⁵ S A Popović, op cit pp 27, 60; S Trojanović, op cit p 41
⁶ S Trojanović, op cit p 41
⁷ M.E.P 1906-9, p 144 Fre: people of Užice region (associated with Hercegovinan migration)
of the Serbian forests) induced peasants to extract tar and resin to provide a barter commodity, and to engage in a carrying trade to sustain it, the resulting need for seasonal carrying labour offered possibilities of earning "ready money for tax and certain of their needs" as well as for grain.¹

But if the prospects of the kiridžija's main freights, of tar and resin, looked gloomy on account of the capital exhausting character of production, those of the carrying trade itself were further worsened by its imminent replacement by the railway.² An activity whose pursuit was dependent on the survival of primitive communications was short on growth potential. The volume of traffic was in decline, the remuneration was probably not good enough to induce entry into the trade for "pull" motives.

Until the development within the Serbian economy of widespread commercial crop cultivation, there was probably little demand for casual seasonal labour within agriculture, and, equally, only a small domestic supply of such labour. But by the beginning of the twentieth century a significant number of peasants from every region were earning at least part of their living from agricultural labouring (arcaština). It was clearly the occupation of the more marginal members of the peasant community, and as this kind of work was often remunerated in grain rather than in cash, the strongest impulse was probably that of members of poor families seeking to make good the deficiencies in the supply of grain that they could procure from their own resources.

Among the peasants of Kašar ovak, Rudnik okrug, an area slightly in overall grain deficit, "the poor who are almost constantly short of harvests"

¹ S Trojanović, op cit p 39
² from Stalać junction via Kraljevo to Užice
day laboured around the villages of Valjevo okrug and the Šumadija. 1
Wage payment in kind was the normal practice in the grain-rich Nača,
where poorer peasants worked for the local razde. 2 From all the villages
in the heavily grain deficient Donje Dragacevo "the younger males from the
poorer houses" went u arsaktinu, for a few days work in the spring, and
again during the threshing season and the plum harvest, to the Šumadija
and the Danube plain. 3 From Poljanica arrez of Vranje okrug, an area about
neutral in grain supply, men went regularly out for the threshing to the
Ponoravlje, but only from the poorer villages. 4 Temnić arrez of Horava
okrug was an area of massive grain surplus, but the poorer men and
youths used to work the fields for the people of the Great Horava towns. 5
In Valjevacka Tarnava, an area of grain surplus, 6

"Around the villages all the heavier agricultural tasks are done
by gipsies and these are the only ones who engage in agricultural
labouring. The gipsies do not work for day wages but work for a
bit of arable, they do not work for cash but for food, and they do
not work singly but in groups. Where there are poorer peasants
they also work but for food not for cash."

And so on. Local gipsies also provided the labour with which richer Negotin
men had to cultivate their vineyards, 7 and it seems that this kind of work
was normally engaged close to home. Writing of the Ibar region - where
such opportunities for day labouring must surely have been limited on
account of the remoteness of grain basins - Ilić noted: 8

"They do not go on agricultural labouring (although they are very
hard working and like work) because they are not accustomed to being
far from their homes for so long at a time. But when they can find
some sort of work in the locality they go willingly. And today they
tell the tale of how they earned good money at that time when the
Ibar road was built."

1 K T Bakić, "Kaćer..." NSZ III, p 783
2 S Panić, Makvancki Pečelbari, p 11 Gzda: rich villager, kulak
3 J Erdeljanović,"Donje Dragečevo..." NSZ I, p 116
4 R T Nikolić, Poljanica i Klisura..." NSZ III, p 53
5 S M Hljatović, "Temnić..." NSZ III, p 294
6 Lj Pavlović, "Antropogeografska Valjevake Tarnave" NSZ VIII, p 447
7 D Raslovacij, "Vinogadarstvo u Negotinskoj Krajini" Nerotinska
Kratina, p 165
8 B M Ilić, "Ibar..." NSZ III, p 569
Arresting was very obviously a form of work which only attracted the marginal peasant. The reward of this kind of labour in real terms seems to have changed little over time, if anything falling. Taking the broad-wage in 1662-5 at 100, it moved in subsequent years as follows:¹

<table>
<thead>
<tr>
<th>Year</th>
<th>Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1866-70</td>
<td>115</td>
</tr>
<tr>
<td>1871-5</td>
<td>92</td>
</tr>
<tr>
<td>1876-80</td>
<td>91</td>
</tr>
<tr>
<td>1881-5</td>
<td>116</td>
</tr>
<tr>
<td>1886-90</td>
<td>99</td>
</tr>
</tbody>
</table>

The level of such wages ranged between 1.11 and 1.80 dinars a day during the period 1662/5 and 1906/8, representing between 5.6 and 8.6kg of bread. It was evidently not sufficiently attractive to draw in categories of worker other than the village poor who would travel relatively short distances for short periods and were usually prepared to accept payment in bread. However, the seasonal employment structure of Serbia was not undifferentiated and it did offer relatively attractive opportunities to longer range migrants (petelbari) with specific skills to offer.

Haymaking, for example, was regarded as a job requiring much greater physical strength than harvesting, consequently more highly remunerated,² to the extent of between 0.56 and 1.01 dinars a day during the above period.³ Thus movers from Bosnia were to be found working in the villages round Belgrade, and the "so-called Rigari who crossed [the Sava, from Srem] at harvest time with forks on their backs and worked for wages round the Sava from village to village."⁴

This aspect of physical strength and remuneration is in itself interesting for there can be little doubt that strength commanded a substantial premium. One researcher noted a complaint made by a labourer

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¹ Recalculated from tabulated data on money day wages and bread prices in D Lapčévić, op cit p 56
² B Arslitch, La Vie Economique de la Serbie du Sud... p 152
³ D Lapčévić, op cit p 56
⁴ S Fanid, op cit p 4
"when I worked on the embankment for the Podrina railway the contractor paid me, a young man of 32, a Serbian soldier, only 1,60 dinars [a day] but to a Hungarian – a tramp – of more than 50, the wage was always three dinars."

On investigation of the complaint the researcher found that

"It is mainly because the Hungarian worker is more skilled at this work and is stronger than our peasant worker...The Hungarian worker feeds himself at work on bacon, meat and fine bread, and our sad man, besides onions and cucumber eats maize meal or bread for several days on end."

Now it seems unlikely that the Hungarian peasantry as a whole enjoyed a higher dietary standard than its Serbian counterpart but the comparison being made here is between what was probably a regular tramping labourer and a peasant drawn from the least well off stratum of the Serbian villagers as described above; the wage the latter drew accords closely with the rate receivable for undifferentiated wage labour in Serbian agriculture.

Other skills in short supply within the Serbian labour market were also practiced by long range migrants. Central Europeans, though more often found in non-agricultural jobs, could also be found at field tasks, and tended the vineyards of Danubian Serbia for their owners. Bulgarians, especially of the region of Tarnovo, were celebrated as skilled gardeners, and migrated annually to raise vegetables for Belgrade market on lots on the fringes of the town, and in eastern Serbia as well. Macedonians probably constituted the principal immigrant labour force. They were to be found at work throughout the country; they might be found working at the hog stables outside Požarevac, and were frequently to be found in the villages of the Belgrade region, though not necessarily engaged in agricultural tasks:

1 S Panić, op cit pp 19-20
2 C Br (S) 1671 (1) pp 842-3
3 AAE CCB t 3 despatch of 8 7 1863, fo 69; C Br (S) 1863, p 238; N Dj Milicević, Kneževina Srbija, p 920; C Stamenkovitch, L’Emigration Yougoslave (Paris, 1929) p 81
4 M Al Purković, Požarevac (n p, n d) p 48
5 R T Nikolić, "Okolina Beograda..." NSZ II, p 924
"If you see a man in Belgrade who carries an axe upon his shoulder" wrote Đorđe Popović in the late 1870's, "Feel free to ask him from which village of Tetovo okrug he comes; and he will not deny that he is from Tetovo..."¹

Though large numbers of rečelbari - as these longer range migrants were called - entered Serbia in search of work - one source (of 1872) puts their number as high as 60,000² - relatively few seen to have entered as undifferentiated labour. This was because unskilled migrants seem to have found their services more in demand in regions of latifundial rather than smallholder agriculture, while paradoxically, the smallholder economy generated a strong demand for skilled workers.

The people of the Macedonian lands had been going out on rečalba for centuries; a traveller of 1620 remarked that³

"We encountered the great number of Albanians who went away to Anatolia to harvest and to derive profits from the pauperice and lassitude of the Turks, who were returning at the end of the season with the little that they have earned."

Arsitch, writing of the 19th century describes the gangs of child harvesters from the Macedonian hill villages who were led out for work on distant estates,⁴ and at least by mid century the practice of going out on rečalba had spread to the southern part of Serbia. This movement was described by J Petrović, from the oral evidence of elderly respondents. One example was given of a group of 500 to 1,000 men walking the road from Alekcinac to Sofia and thence vía Pazardžik to the region of Constantinople. The rečelbar group would be conducted by a draceman, the recruiter and intermediary who struck a labour contract with the landowner, and then organized the procurement and payment of the labour migrants whom he in turn hired to do the work. After a hard season in the fields, most of the gang would return home, though a few might get themselves engaged for the winter. The

¹ S L Popović, Putovanje po Novoj Srbiji, pp 556-7
² IAE CCB t 5, despatch of 30 12 1872, fo 50
³ B Arsitch, op cit p 152 quoting de Hayes (1621)
⁴ Ibid, pp 18-9
Principal region of the Serbian lands from which such migrants were drawn was that of Pirot. ¹

But although the Serbian market for agricultural labour was almost certainly expanding, this migrant stream of men who were habituated to working for long periods at a time on pačalba, did not turn to seeking agricultural work within Serbia, but diverted away from the Ottoman lands toward the Romanian estates, where more money could be earned, if not on a day rate basis, then at least in terms of continuity of work. Petrović offers the following details of estimated earnings by these pačalbari:

Average Earnings For A Summer’s Work in Agriculture (Dinare)

<table>
<thead>
<tr>
<th>Period</th>
<th>Master and 5 – 6 Juniors</th>
<th>Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1860–65</td>
<td>120 – 200 (in Stambul or Dobrudža)</td>
<td>60 – 70</td>
</tr>
<tr>
<td>1870–75</td>
<td>300 – 400 (in Wallachia or Zagorje)</td>
<td>80 – 100</td>
</tr>
<tr>
<td>1890–95</td>
<td>400 – 500</td>
<td>80 – 120</td>
</tr>
</tbody>
</table>

Source: Petrović, Pačalbari... p 18

The number of Serbian peasants so engaged seems to have risen strongly in the latter part of the nineteenth century though no consensus exists as to its magnitude. According to Lapčević, (who was inclined to exaggeration, where it suited his case) some 30 – 40,000 pačalbari were migrating annually from Serbia to Romania by the end of the period.² But Avramović estimated the figure at a much lower 15,000 for 1908 and Petrović put it, on the basis of the frontier records for 1890 – 1912 at 10 – 18,000 per annum.³ Also by the early 20th century, peasants, mainly from the north west of Serbia, whose numbers were estimated at 1,500 – 2,000 yearly migrated seasonally to the estates of Hungary for similar kinds of work.⁴

The size of the market for pačalbar labour can partially be explained

¹ J Petrović, Pačalbari Narodi iz Okoline Pirote, pp 14–15
² D Lapčević, op cit p 288
³ J Petrović, op cit p 4
⁴ S Panić, op cit p 19
by demand conditions. The principal demand for unskilled labour was generated by large scale demesne agriculture pursued principally for the purpose of raising cereal for the market. In the early days, this demand had been forthcoming from the Turkish çiftlik, particularly in the grain basins of Thrace and the Dobrudja, which enjoyed easy access to the Constantinople market. With the opening of the Danube to the grain trade, and with the ploughing up of the Hungarian plains, the estates of Hungary and Wallachia absorbed increasing supplies of migrant labour.

At first sight there is something odd about peasants migrating for the "high" wages obtainable in areas where the local rural population was sunk in poverty, apparently as a result of the operation of the latifundial system. Latifundial regions were neither self-sufficient in the manpower they disposed, nor in the work available to employ it. Estate agriculture called for huge manpower inputs to undertake the peak summer commitments of cereal monoculture but only for minimal staffing in the winter. With a large amount of the land supply — and usually the best land at that — in the hands of the latifundists, there appeared a large local pool of landless as well as of dwarf peasants. The landless would be willing to accept servant status, and from their ranks it was a simple matter for employers to engage such a number as they might need on annual contract at low wages. From the rest of the landless and dwarf peasant pool could be recruited the extra summer labour. The wage rate in the summer would be quite high, because a population otherwise condemned to a long period of unemployment would not be able to remain in situ if summer wages were low, i.e. if there were no seasonal labour shortage. Seasonal labour shortage was therefore implicit to population equilibrium in a latifundial economy selling grains thus the consequent high summer wage rate tended to attract the temporary labour of peasants from relatively distant regions.

1 who, in eastern Europe were mainly the descendants of estate servants who were not granted land at the time of the emancipations.
Such seasonal fluctuations were very much stronger than in the Serbian economy, where smallholder agriculture tended to be organized for the provision of a range of commodities, for sale and for self consumption, animal and arable, and which therefore tended to require relatively little labour hiring at any time, but a certain amount at all times. Thus between 1900 and 1906, whereas the interseasonal wage dispersion for male day labour varied between 7.0% and 16.6% in Serbia, it varied between 44% and 131% in central Hungary. (In other words, wages rose only little from their winter levels in Serbia but rose very sharply from their winter levels in Hungary.)

The same probably applied in Romania. Nonetheless, conditions in Romanian recalba were the subject of severe criticism which emerged in the early 20th Century. Lapčević quotes a gross wage to recalbari on the Romanian estates of only 24 dinars a month. Food, of a kind, would be provided additionally, and its quality was also a cause of complaint. At less than a dinar a day, even with food, this is a low wage, compensated only by continuity of work. But the most serious aspect of the complaints was not about the wage itself, but about the extortionate practices alleged to be applied against the recalbari, by their creditors, by the dracovani and by the state officials. On the basis of figures supplied by Lapčević, which he claimed to be derived from the experience of a Serbian official, the gross receipts of Serbian recalbari in Romania would be 168 dinars.

1 Interseasonal wage dispersion is defined here as maximum quarterly wage rate minus minimum quarterly wage rate, expressed as a percentage of minimum quarterly wage rate. (i.e. if summer wage is 2.50 crowns, winter wage is 1.00 crowns, and spring and autumn wages are at intermediate levels the interseasonal dispersion will be 150).
2 D Lapčević, op cit p 89
3 C Stamenkovitch, op cit p 62
4 V M Nikolić, "Iz Lužnice i Nišave" Srpski etnografski Zbornik XVI, pp 55 - 7
for a season. But the following deductions "could be taken off them generally" under various headings: 96.59 dinars for the services of the draCogal, 17.52 dinars in Romanian and Serbian state taxes, and miscellaneous travel and other expenses would cost 30.89 dinars. This would leave 21 dinars as a clear return to the worker. This — which is probably presented in an exaggerated form — was one of the roots of the "pečalbar problem", which was to receive a growing amount of public attention, inside and outside the Skupština.

Considerably better conditions pertained for pečalbari in Hungary however, where pečalbar labour was absorbed to replace the labour of departed emigrants. "Take a region which exclusively produces and exports cereals" wrote Panić, "and quickly it also begins to export men." And, he perhaps should have added, to replace their summer labour, it will begin to import pečalbari.

In the early twentieth century the demand for pečalbar labour in Hungary (compared with that in Romania) was probably also enhanced by highly protectionist agrarian policies. Whereas Hungary's farmers could treat the rest of the monarchy as a closed market, the Romanians were obliged to dispose of their output at world prices. Thus, in contrast with the Lapčević figure of 24 dinars a month (most of it allegedly reappropriated) in Romania, the going rate in central Hungary rose steadily from 2.06 crowns a day in the summer of 1901 to 3.22 crowns in the summer.

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1 D Lapčević, op cit pp 68-9
2 V K Nikolić, "Iz Lužnice i Nišave" loc cit p 30, estimated the return to these workers "after deduction of all expenses" at 50 - 160 dinars.
3 C Stamenkovitch, op cit p 60
4 J Petrović, op cit p 5
5 S Panić, op cit p 8
of 1906, at which point it began to draw in the beginnings of a steadily increasing stream of Serbian pečalbari from the Rača. Even this comparison hardly does justice to the relatively good wage level pertaining in Hungary, for these pečalbari went independently, avoiding being caught in the toils of the recruiter system. Moreover, Hungarian employers were extolled for probity in their dealings with the workmen, and the police authorities for their preparedness to respect the latter’s rights in the event of a dispute. This made a sharp contrast with the traditional IhanarIoT corruption of Romanian economic life.

The peasant migrants in the construction trades

Short range migrant farm labourers (arráñi) were, as noted, drawn from the poorer elements of village society, and earned low wages, often paid in kind. The wages of pečalbari, most of whom went to Romania, were probably no higher than in Serbia, but the possibility of continuous work, and of receipt of money payment attracted a somewhat different group, which tended to be distributed on a regional rather than a social economic basis.

So also was there a pronounced regional basis to the villages which sent migrants out into the construction and construction related trades, which permits us to speak of a pečalbar belt extending the length of Macedonia east of the Vardar-Axios river into the Kosmet plain then turning

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1 Day wages in central Hungary (left bank, Tisza) for summer quarter were - 1900: 2.08 crowns, 1901: 2.06, 1902: 2.10, 1903: 2.15, 1904: 2.27, 1905: 2.53, 1906: 3.22. During the period 1901-6, summer wages in Serbia rose from 1.25 dinars to 1.42. The crown always stood at a small fluctuating premium of about 5% on the dinar. M.E.E 1900, pp 77-8, pescan (as for note1 to p.64 above; S.G 1907-8, p 391).

2 S Panić (op cit, p 12) notes that it was the attraction of a three crown day wage which began to draw pečalbari in from Serbia in 1906.

3 Ibid pp 12, 16
eastward through Serbia to the east of the South Morava river and into western Bulgaria, and the Timok valley.¹

Dundjerlik—rough building and carpentry—was the trade most commonly developed among these migrants and the term dundjer was employed to describe this type of migrant labourer. Principal building related trades were as brickmakers, tilemakers, and makers of ceramic pipe. Other frequently mentioned pečalbari trades included those of cooperage, pottery and charcoal burning. We could really regard these trades as cottage industries for which it was more convenient for the worker to migrate to his market than to stay at home. Relatively few pečalbari practiced the manufacture of readily portable goods such as textiles. In an economy where world market pressures were coming to be felt increasingly strongly, there was an obvious logic for "cottage industry" to develop in a sector of the market which was sheltered by transport costs. No industry is so well sheltered as building.

Some of the pečalbari of Macedonia favoured commerce over itinerant crafts, particularly that group known as the Cincari, who provided 19th century Belgrade with a good proportion of its commercial elite, whose careers usually began on the road as tinkers, peddlers and vendors of a wide range of goods.² One enterprising group of Macedonians from Janjevo went "most to Bulgaria and then to Serbia distributing jewellers' goods and bartering them for old silver money and jewellery",³ but Serbian pečalbari tended to confine their activities to the heavy trades.

Equipped with building and allied skills, Serbian pečalbari were able to seek work in Serbia itself, and in Bulgaria (whose socio-economic structure was similar), rather than in Romania, which was the principal

¹ See M N Savić, Z. 1. I, pp 275-82 for location of pečalbar regions in Macedonia and Kosmet.
² The ethnographic history of the Cincar people and biographies of many of the most prominent Cincar families may be found in D J Popović, O Cincarina
³ M N Savić, Z. 1. I p 277
employment outlet for unskilled farm labourers. In terms of numbers engaged we know little, for those who travelled within Serbia needed no documentation to do so. But this group of workers probably constituted a rising percentage of the total number of Serbian pečelbari and to some extent displaced the Macedonian pečelbari from one of their principal markets. Within Serbia and Bulgaria, a high proportion of pečelbar work probably concentrated on Belgrade and Sofia, on account of their rapid rate of expansion and large absolute sizes, compared with other towns.

However, the absolute volume of pečelba was probably tending to grow rapidly up to the Balkan Wars and pečelbari were being drawn from an increasingly wide territory. As Romanian agriculture seems to have expanded its seasonal recruiting, new pečelbari, lacking building skills, migrated to work on the boyar estates.

Thus the catchment area for Romanian pečelba probably underwent a distinct shift. Before 1878, some of the Pirot pečelbari had begun to acquire skills, but many if not most, "mainly those who did not know the dundjar trade" laboured in field gangs in Romania. But by 1912 a survey of three pečelbar villages near Pirot revealed that of the 213 pečelbari resident there, not one went out for field work in Romania; most were dundjari and went to Sofia, a few finding work at Pirot town, and 27 potters found work in Serbia. Romania took only ten pečelbari from these villages, all craftsmen, seven potters, two skinners and a baker.

The evidence available indicates that the flow of unskilled to Romania shifted increasingly to the areas to the north of the traditional pečelbar regions, in particular the environs of Knjaževac (пос село Заглевацкo) Of this region it was noted in 1869 that

1 J Petrović, op cit p 17
2 J Petrović, op cit pp 21-2
3 D D Jovanović, "In Timočke Krajine" Glasnik S U D LXX, pp 156-7
"Selfom till the first war [1876] was anyone from this okrug seen to leave his home and go abroad for work for his endura. Since the first war however, they have gone out on fane each spring to Romania on pečalba, like the first people, and have remained there the whole summer working at hard field tasks for the trivial day wages of 4, 5 or 6 кроз [i.e. 0.20, 1.00 or 1.20 dinars] in order by this means to pay the tax and buy the most urgent essentials..."

Romania was to remain throughout the period the principal outlet for pečalbar labour from this region.1

But right from the start, some workers from eastern Serbia (probably the Zeglavak region) had acquired housebuilding skills which they were noted as applying, in the building of houses in stone, around the villages of Čačak okrug.2 I have no information as to whether dundierluk subsequently developed alongside agricultural pečalba in this region, but around, or after the end of the period being surveyed, the flow of workers to Romania was claimed to have been diverted to long term pečalba in the breweries and factories of Belgrade.3 Pečalba, to Romania; spread after the philexera, further north still into the Negotinska Krajina.4

As already noted, Hungary as well as Romania started to absorb agricultural pečalbari in about 1906, and this migration was not confined to the Makva villages, which were relatively close to the frontier, but very soon extended, perhaps because of the exceptionally powerful wage attraction, as far south as the okrug of Viš.5

There is a clear pattern to this. When pečalba began to be practiced in a region, it was first of all directed to agricultural labour, but after a time agricultural pečalba would be displaced in favour of dundierluk. The catchment of agricultural pečalbari would then shift to other regions

1 K N P 1906-9, 8 p.1096
2 M Đ Kilićović, Knezevina Srpska, p 691. These building masters from the eastern regions could not have come from Pirot okrug because the text predates the annexation of this territory.
3 Milan A Kostić, Knjaževac i Stari Knjaževački Okrug u Probištiti i Sadašnjosti (Beograd, 1933) p 115
4 D Naslovarić, "Vinogradarstvo u Negotinskoj Krajini" loc cit p 179
5 K N P 1906-9, 8 p 1008
where dundjer skills had yet to develop. There was a very obvious motive for the switch from agriculture to construction: the latter was much better remunerated, and it also appears that, at least within the Serbian labour market, the wage differential was tending to open in favour of the building worker, whose real wage, unlike that of the agricultural worker, was on a rising trend.

TABLE VIII.1 Day Wages Without Food Adult Male Labour, Serbia

<table>
<thead>
<tr>
<th>Year</th>
<th>Labourer</th>
<th>Builder</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862-1865</td>
<td>1.11</td>
<td>1.81</td>
</tr>
<tr>
<td>1866-1870</td>
<td>1.45</td>
<td>2.36</td>
</tr>
<tr>
<td>1871-1875</td>
<td>1.64</td>
<td>2.55</td>
</tr>
<tr>
<td>1876-1880</td>
<td>1.55</td>
<td>2.48</td>
</tr>
<tr>
<td>1881-1885</td>
<td>1.80</td>
<td>2.79</td>
</tr>
<tr>
<td>1886-1890</td>
<td>1.32</td>
<td>2.55</td>
</tr>
<tr>
<td>1891-1895</td>
<td>1.40</td>
<td>2.73</td>
</tr>
<tr>
<td>1896-1900</td>
<td>1.18</td>
<td>2.56</td>
</tr>
<tr>
<td>1901-1905</td>
<td>1.22</td>
<td>2.56</td>
</tr>
<tr>
<td>1906-1908</td>
<td>1.31</td>
<td>2.94</td>
</tr>
</tbody>
</table>

Source: adapted from D Lapčević, Polozaj Redničke Klase u Srbiji, (Beograd, 1928) p 56. Lapčević derives his figures directly from the official tables of prices.

Building wages in Sofia, the most favoured outlet for the skills of the Firot pešelbert, who were a mere day's walk away, and where work was usually quickly and easily available, seem broadly in line with those obtainable in Serbia. There a skilled man could pick up 4-6 leva a day in building, a labourer 2-3. Living in squalid conditions - five to ten in a room, on Firot street, - they kept their spending on food and lodging down to one lev a day, and therefore had little difficulty in accumulating sizeable sums to take home. Masons after a six month stay in Sofia could be expected to return home with 400 - 500 dinars, labourers 200 - 250.† These sums were no way remarkable: a good journeyman potter could make 250 - 400 dinars in a season in Serbia, slightly more if he went to Romania. This would be after eight months but it must relate to

† J Petrović, op cit p 26
an earlier year, when prices would have been lower. A master tiler, after settling the expenses of his group, could make himself 600 – 1,000 dinars in "a good year." Eight month's recalba round Serbia brought a Lužnica recalovnik 200 dinars to take home, or to a youth if working as a master's assistant 60 – 150. The gang leader could make 600. A later study of recalba from Vlasina quotes slightly higher rates: the best craftsmen brought back 600 – 600 dinars though others earned only 100 to 200.

But the best paid men seem to have been the coopers of the village of Cara, which up to about 1880 had depended on the mining trade, and had not sent out coopers. On the eve of the Balkan wars it sent out 100 coopers, who were reputed to have been so highly skilled as to have displaced the "Schwabians" from the trade. A master and assistant between them earned 20 dinars a day, probably in Romania, and by working from "spring to autumn" they would earn 1,000 dinars, and at very least 500.

Very often several members of a family would go out on recalba simultaneously and boys would habitually go out with their fathers as soon as they were strong enough to carry a sack on their backs. Petrović instances a household of eight persons in the Pirot village of Veliki Jovanovac. The eldest son got 230 dinars from drawlerijuk at Vidin (Bulgaria), the second, four years a potter, at Prokuplje, got 150. A third son, age 15, in his second year as a potter got 75, and the fourth, age twelve, his first time on recalba brought in 40, so that altogether they got 495 dinars. Three brothers from Šiškovića village earned between them the formidable sum

1 V M Nikolić, "Iz Lužnice i Nišave" loc cit pp 29 – 30
2 Ibid, p 30
3 Ibid, p 29
4 R T Nikolić, "Krajšte i Vlasina" NEZ VIII, pp 62 – 3
5 Ibid, p 57
6 V M Nikolić, "Iz Lužnice i Nišave" loc cit p 28
7 J Petrović, op cit p 26
of 150 napoleons (about 3,000 dinars), and three Vlasići together with children brought home from pećalba 600 dinars and about 900 litres of roštin šljivovica.1

However, the capacity to earn a good pećalba wage took some time to acquire. A potter apprentice on his first year out had to serve without pay, though if labour were short he might with luck get 30–40 dinars. In his second year, as kelfinča — (junior journeymen) he could make up to 60. It was probably several years before he could make the 250–400 quoted above.2 In pećalba trades the pay of 30–80 dinars for a mirak (an apprentice) seems to have been fairly general, and such mirak probably accounted for a sizeable part of the labour force.3

**f The push and pull of pećalba**

As forms of migration, the various types of pećalba are susceptible to the familiar push and pull analysis of the historiography of permanent emigration. The same causes as would tend to push peasants into permanent emigration would also have tended to encourage temporary migrant movements. As we have already shown, pećalba (as opposed to nprešina) was a phenomenon associated with areas in which conditions for cash cropping were unfavourable, areas of relatively poor land where, under different circumstances, the tendency noted by Thirsk, for the establishment of low wage cottage industries, might have been expected to develop. There is also in the literature a tendency to argue that the most pressing motive for pećalba was the absolute inavailability of sufficient food in the pećalba village for it to support its population.

According to most sources the typical Macedonian pećalba village was in an area of acute food deficit and the primary object of the inhabitants

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1 R T Nikolić, "Krajište i Vlasina" loc cit p 63
2 Ibid, p 30. An even longer progression is suggested in J Petrović, op cit p 22
3 R T Nikolić, "Krajište i Vlasina" loccit
in migrating was to make this deficit good. Be this as it may, (and there may well be reason for questioning whether this was the usual case in so underpopulated a territory) evidence from the areas of Serbian pećelbar points to a different conclusion. Until the 1860's population in south east Serbia was thin, and although there may have been recurrent famines due to harvest failure (for there was no system of communal granaries) the problem may well have been that common to wide areas of the Balkans - the lack of outlets, which we earlier noted as discouraging the growth of commercial cropping.

The evidence of an aged former pećelbar was recorded by Petrović to the effect that the people of his village went out on pećelba to obtain money for taxes and purchases because there were no wages to be earned in the vicinity. This should be taken to indicate that pećelba was a response to a shortage of money rather than of food. This is not to say that pećelbar incomes were never used to buy food, for the condition of individual pećelbar families could vary very widely. By 1897, many pećelbar families were obviously buying in food with their earnings. But, referring to Figure III (1), which shows the regional distribution of grain surpluses and deficits, it is apparent that although some of the main pećelbar areas tend to show grain deficits, these were not always present, and in fact tended to be slight. The eastern region of Serbia, which appears to have supplied many of the Romanian pećelbari at least in the later years, and

1 In particular, on Macedonian pećelbari, see Ruth Ertouton, Peasant Renaissance in Yugoslavia 1900-1950, who claims "They would invest part or all of their earnings in grain to supplement the insufficient produce of their fields." (p 46) However, it should be noted that Trouton's principal source, the marzhet Louis Adamic, who left an extensive description of the pećelbar village in Macedonia of Caliđnik noted of it that it was "a well-to-do village (or was until the depression smote it)" with an unusual amount of money around for luxury purchases. L Adamic, The Native's Return (London, 1934) pp 116, 123

2 J Petrović, op cit p 14
the Nišava, in the North-West, were in fact areas of substantial grain surplus. Certainly the correspondence of grain deficit with rečalba is weak; rečalba was not widespread in the bad grain deficit areas in the south-west of Serbia, or in those areas to the west of the Južna Horava river.\footnote{1}{see below pp 566-7, 570 ff}

Some rečalbar villages obviously depended on rečalbar earnings to augment their food supplies. In the big rečalbar village of Crna Trava, which began to send rečalbar to Bulgaria in 1885, only 5% of households did not buy in food.\footnote{2}{J Petrović, op cit p 23} But the opština of Trajanska, surveyed by J Petrović, revealed quite different circumstances. The only landless were three gipsy tinker households. Only 5% of households had insufficient land for food, while a further 5% had to take on land under sharecropping contracts. The opština exported a considerable amount of grain, as well as dairy produce - though insufficient to meet its commitments.\footnote{3}{Ibid, pp 35-6}

In this respect the Trajanska opština was probably representative of the villages in the Nišava region, rečalbar villages whose only cash crop was grain, which found a ready market at Pirot. But these had hitherto derived cash incomes from their wine, the loss of which was often remarked on as a cause of rečalba. Other Nišava villages generated surpluses of livestock but had to expend them partially on food, and so lacked resources to meet all of their commitments.\footnote{4}{V M Nikolić, "In Lužnice i Nišave" loc cit pp 26-7} Similarly, in Lužnica area, the village of Babušnica was held up as fairly typical of the conditions which impelled the development of rečalba: \footnote{5}{Ibid, p 26}
although they have land for cultivation, it is bad and insufficient. Although those villages have a significant amount of all kinds of livestock, it is difficult to tend them because they do not have sufficient pasture. Thus stockraising incomes are not sufficient either to meet all expenditures."

(my italics, M.R.P)

And, if grain shortage had been the pressure that drove peasants into \textit{pečalba}, the \textit{Načva}, a very fertile and extensive plain with excellent waterway connections, was the very last area from which we might expect to observe the migration of \textit{pečalbari}. Besides being a major producing area for wheat, and plums, it participated in the expanding trades in poultry and sugar beet. It was, however, the collapse of the poultry trade across the Sava to Sremska Mitrovica, in consequence of the tariff war, which, according to Panić, triggered off the flow of \textit{pečalbari} from this region.

It is also of interest that one of the reasons why contemporary commentators expressed an aversion to the institution of \textit{pečalba} was the belief that it resulted in neglect of tillage, a belief hardly compatible with treating \textit{pečalba} as a desperate expedient for peasants in grain deficient villages. Having studied \textit{pečalba} in one \textit{Načva} village, Panić reached the extraordinary conclusion that:

"The great emigration is esteemed in the village as of exceptional value, but after talking to some of them, I came to the conclusion that the specific reason for their crossing (the Sava, \textit{- i.e. into Hungary}) was based more upon their ignorance and their inborn stinginess than in their industriousness."

that he really criticised was a preference for higher paying over lower paying work, and he made it clear that there was no overall labour surplus in the \textit{Načva}. Even in the south east - where natural conditions could not compare with those pertaining in the \textit{Načva}, R T Nikolić insisted that "Only those who live in \textit{padržai} really profit" (from \textit{pečalba}). "Single proprietors usually neglect the house and land and livestock," and he felt sure that the population of the area could find themselves sufficient

\begin{itemize}
\item[1] S Panić, \textit{op cit} p 12
\item[2] Ibid, p 17
\item[3] Ibid
\end{itemize}
employment in stockraising, though, admittedly, at a smaller income.1

Even in Macedonia, Savić regarded undercultivation as the aspect he enumerated first among the 'problems' resulting from the practice of pečalba.2

"From the economic aspect it is a matter of concern that the land remains idle particularly in the regions where the pečalbari live as well as in the plains such as Kosova, Prilep, and Cvice Goljo, because in these plains there has been a shortage of labour power."

Although we lack the necessary quantitative proof, the evidence of the grain surplus and deficit map, of qualitative information on the various pečalbar regions, and of the distaste for pečalba by contemporary observers on the grounds that it discouraged tillage, lead us to conclude that in the Serbian pečalbar regions, and in some at least of those in Macedonia as well, the primary push motivation for pečalba was not the need to make good food deficits, but to acquire cash. The representative pečalbar probably achieved a net cash surplus from his holding after providing for his family's food supply, but a surplus which was inadequate to extend across the whole of his spending commitment. Pečalba was therefore to the pečalbar much as tobacco to the tobacco growing peasant or plums to the fruit growing peasant, the cash component of his economy after his arable and stockraising production had provided his subsistence.

It should also be apparent from the foregoing that pull motives could operate at least in certain sectors of the pečalbar market. Of one mid-Lakva village Panić wrote3:

"More than half of the village including many women go throughout Serbia on pečalba. Of all the Lakva villages it gives the most pečalbari in proportion to its size, not only from the ranks of the necessitous on account of the small size of their property but also of those who possess more than 20 hectares..."

Subsequently he generalises to say that "In other villages there go on pečalba not only the small men but also the large proprietors."4 Thus

1 R T Nikolić, "Krajište i Vlasina" NSZ VIII, p 63. I pdrduzi: in extended family households
2 I. I. Savić, Zl. I p 262
3 S Panić, op cit p 17
4 Ibid
if the pay was good enough, we can see how rečalba could cut clean across economic strata in the rečalbar village. In the villages of Vlasina and Crna Trava nearly all the men except for "certain richer...livestock merchants" and innkeepers went out on rečalba, and in many other villages, all were rečalbar families. It is unlikely that this was the result of an equality in poverty; so busily engaged were the Vlasinci in building work around the towns of central Serbia, that they had also to pay harvesters to come down from Masurica to get their crops in. Thus the structure of the Pirot village of Veliki Jovanovac was probably not exceptional. Veliki Jovanovac specialised in the lucrative construction trade at Sofia, and sent out 105 men and 22 boys, 20% of its male population. These included a 15-hectare family which sent out three rečalbari, another household whose starčina was "very distinguished in person, a candidate for president" which sent four, as also did a third "equally wealthy" family in village.

The pull attractions of labouring on the Romanian estates are admittedly much less obvious than those of building work or harvesting in southern Hungary, but a larger supply of labour was obtained for this work than might have been anticipated from the equilibrium of the free market, by the systematic indenturing of the smaller peasants which placed them under obligation to go. And, apart from exploiting the smaller peasants in this fashion, it is evident that the čmbo - i.e. the local "boss" - and the drvočen (the labour agent) were often the same man.

The rečalbar wages and earnings which we have quoted were not high,

1 R T Nikolić, "Krajište i Vlasina" loc cit pp 61-2
2 Ibid, p 63
3 J Petrović, op cit pp 26-7
4 V H Nikolić, "Iz Lužnice i Nišave" loc cit p 37
5 Ibid, pp 36-7
even in the construction trades, in the sense of representing a worker's wage which would have been regarded as good by contemporaneous working class standards. But, of course, they were not paid to full-time urban proletarian workers to provide the sole support of their families, but to individual peasants whose personal consumption while on recalba was minimal (and whose consequent short term savings function was phenomenally high) and who were expected to return to their villages and turn over substantially the whole of their earnings to the hands of their families. The farmstead itself provided their subsistence. Therefore so long as the recalber's wage exceeded the product of his labour time foregone, recalba was worth while. And, as the rates of pay that the dundjeri, at least, could make were at least the equivalent of an urban working class family's subsistence, the marginal product from farm work foregone could be appreciably above zero, and even equal to average product (as the example of Vlasina dundjeri paying for sveratim labour illustrates) and still leave substantial scope for full motivation. Of course, competition on the urban labour market by recalberi would naturally have a depressive influence on urban wage levels, which would cause the urban proletariat and its organized opinion makers to view the phenomenon with thinly disguised distaste. The syndicalist agitator Dragaća Lapšović called for the "regulation" of recalba "to suppress the frantic competition... not only between rural workers, but also that which is conducted between village and urban workers". Regulation really implied suppression, as is evident from the following passage:

"The flood of those proletarians, which to some extent has become redundant for agriculture by the application of long working hours in the villages, as well as for other reasons, has worsened the position of the town workers and lowered their wages. Thence in begun internecine competition; the hungry mass crowds on the factories and into other jobs in which they can work without long experience and without any specific qualification."

1 Ibid p 50
2 D Lapšović, op cit p 288
3 Ibid, pp 289-90
The "pull" attraction of dundicruluk becomes only too clear if earnings from this are compared with the cash incomes earned by peasants in the cash cropping regions of Serbia, particularly those which did not derive substantial earnings from the sale of plum products. It is of course, impossible to know what the average adult male dundicruluk brought back, but the usual range seems to have fallen between 150 and 500 dinars. The Avramović survey which showed the cash expenditures of two hectare households at 164 dinars, five hectare households at 268 dinars and ten hectare households at 429 dinars. So a season's rečalba would leave a peasant family in the south east of Serbia no worse off than the average cash cropping peasant family in the north, and probably considerably better off, if it sent out more than one of its members.

So scope for pull motives in rečalba was considerable and in regions where rečalbar trades were widely practiced a measure of prosperity could be attained. Rečalba earnings could thus be used not only to sustain a relatively high level of current consumption but also to form capital. According to Petrović, new momentum was given to rečalba in the different years of 1897 and 1898, when

"...rečalbari went out from the wealthier households from necessity, and after that they became accustomed to leaving on rečalba. Recovering, as a result of rečalba they no longer went out of necessity, but rather to enrich themselves further. Thus began a competition as to who could succeed best in enriching himself. So it came about that they acquired more money than ever, to build up distinction in their persons and in their housing, and particularly to buy land..."

At the lower end of the scale, rečalba enabled peasants to hold on to their properties; landlessness was a relatively rare phenomenon in the rečalbar areas (though as their population growth was a little lower than for the country as a whole, it may have been that the landless tended to leave the area), but in the Firot villages "offers are few and the demand

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1 M Avramović, op cit p 39
2 J Petrović, op cit p 32
for land in very large”, and Petrović thought that pečalba earnings contributed to thin pressure, particularly once pečalba embraced a broad section of the community.¹

An indicator of the property stability (or otherwise) of an area, is the case with which it discharged its tax obligations. Although the state forbore to use its powers of sequestration, which were far in excess of those which courts could award to commercial creditors, and had to defer or remit a substantial proportion of its claims, its forbearance was not unlimited. Between 1894, and 1906, it succeeded in collecting a sum varying between 61% and 63% (at year to year extremes) of its assessments.² In 1906, a good year, 16.6% of assessments were not met, but it is evident that the three principal pečalbar okruzi performed far better than the rest. Defaults amounted to 9.6% for Pirot okruž, 14.5% for Vranje, and 7.7% for Timok, but ranged between 11.6% and 30.5% among the rest.³

The acquisition and adaptation of migrant labouring skills in eastern Serbia

In order to participate in the relatively well remunerated skilled trades, the prospective pečalbar had to acquire the necessary skill. A few skills were native to the economy of the pečalbar regions and so could be transferred to sustain a migrant life without much difficulty. This would be the case with agricultural skills like vine tending. Lack of capital prevented the early restoration of the southern vineyards, and this impelled a flow of migrants from Vlasina to Smederevo, where in the hands of well capitalised proprietors, an attempt was being made to resuscitate the industry.⁴

¹ Ibid p 32
² N Vučo Popović Selaština, I, Eksproprijacija od Zemlje u XIX Veku (Beograd, 1955) table on p 5
³ E.C.1906, p 477
⁴ Smederevac Rodoljub (pseud.) “Trgovina i Radinost—Opstanak Smederevskih Vinogradi”, II T.C.XII (1911) 256, p 2 col 1, and see above, p 471
"The most active and expert workers, who will be found in all the Crnaderevo vineyards are the režalberi [sic] from the newly liberated regions. They are both advisers and performers of absolutely all tasks on the vines beginning with the preparation of the land for the vineyard to the sale of the grapes or wine, including all the intermediate stages. From these men, many proprietors have acquired such a 'knack' as they dispose..."

For non-agricultural skills, there is the possibility that režalber work in the south east may have originated out of the earlier scratch-mining industry of the Vlasina-Visarica region. R T Nikolić noted the former participation of the peasantry of this region in the extraction and smelting of iron ore from these deposits. Though this industry was carried out on entirely pre-modern lines, numerous peasants engaged in it, and derived cash incomes from mining and associated work in smelting, haulage and charcoal turning. "Almost all the inhabitants of these provinces were radendžija".

Extraction was of course linked to local smelting, and although the industry was in high decline, there still existed as late as 1682 a Turkish run iron foundry near Surdulica. One probable visitor to Vranje after the annexation even indicates the continued existence of an ironworks inside the town, but in other respects his comments are not very reliable. However, the town undoubtedly engaged in manufacturing from this metal. At one time 300 inhabitants had engaged in the making of weapons, but subsequently the metal trades seem to have concentrated on hand nailing and the production of horseshoes, which were still being manufactured in "greatly diminished quantity" in 1682.

1 R T Nikolić "Krajšće i Vlasina " NSZ VIII, pp 42-5
2 Ibid, p 43. While in this passage Nikolić was clearly referring to persons working in mining, he defines radendžija in another article as one who was liable to an annual poll tax of 30 francs (6 dinars) in exchange for exemption from work at the mines of Kratovo. Idem, "Vranjskaja Pčinja e Elivu Južne Forsave..." NSZ II, p 113
3 "Izveštaj o radu komisije za naseljenje u oslobodjenim predelima" CHP II, 6 of 82 1682, p 92
4 C Vogel, L'Europe Orientale (Paris, 1681) p 483
5 S L Popović, op cit p 527
6 "Izveštaj o radu komisije za naseljenje u oslobodjenim predelima" CHP I, 17 of 16 10 1682, p 270
Even while mining continued, (and our source dates its decline in the mid-1850’s for want of fuel), the less developed forms of rečalba were being practiced in the region, mainly in the form of agricultural labouring and kiridžiluk. Though R T Nikolić identifies the appearance of rečalbar crafts with the cessation of mining activity, it is unclear as to whether the experience of mining in itself peculiarly qualified a worker for the practice of the usual rečalba skills. But the vestigial survival of the smelting industry after 1878 is an indication that the decline of mining and the beginning of skilled rečalba were chronologically related, and that the former was not a phenomenon of the distant past. The old mining connection is clear enough from a report of 1895 that the mines of Kajdanpek were supplied with charcoal by "inhabitants of the Pirot district who do this sort of work very well." And it is interesting that Crna Trava, an enština on the ironfield, is supposed to have been the first in the area to have developed a building trade, and subsequently to have achieved the reputation of being the most highly skilled in this work. It appears that the Crna Trava villagers had extracted oro on account of the Turkish aprhina, who endeavoured to increase production by resettling other villagers at Crna Trava. It is likely that the villagers had to work the ironfields to meet the rent, and that the increased population should have had the effect of lowering the wage that needed to be paid for the work, but the result instead appears to have been that the peasants took up dundjerluk to obtain their incomes, and that in the 1870’s,

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1 R T Nikolić, "Krajište i Vlasina" loc cit p 46
2 Ibid, pp 42-3
3 Ibid, pp 54-5
4 C Br (S) 1895 (Mines) p 17
5 R T Nikolić, "Krajište i Vlasina" loc cit p 55
6 Ibid, pp 55-6
on account of rising wages, the mines ceased to be profitable for the
archi.\(^1\)

We are not however committed to seeking a unicausal explanation
for the emergence and spread of skilled istorba in south eastern Serbia.
Another approach to the problem is to examine the process whereby istorba
skills were communicated and disseminated. In the building trade these
skills were communicated through operation of the gang (tata)system, and
in other trades, through apprenticeship. Both systems provided an incentive
for dissemination rather than restriction of skills, provided the market
for them was buoyant. R T Nikolić gave examples of the well established
dundjerk of northern Vlasina recruiting men into the tata from the
villages to the south, whom they paid as day labourers.\(^2\) The apprenticeship
system would offer a similar incentive, for the apprentice would have a
long time to serve before he could call the product of his labour his own.
He related of the cooper village of Cara that the first of that craft there
(probably in the 1870's) was a man called Krata Dejanek which learned his
craft at Lekovac. With an assistant he gradually taught the craft to the
villagers so that by the early twentieth century there were 100 cooperers
among them. Here is a case of a common urban skill being diffused outward
to the villages, but this is not the whole story; Dejanek's very name
indicates that he was a first generation immigrant - probably from
Macedonia.\(^3\)

The diffusion of skills through migration into Serbia from Macedonia,
is very strongly indicated by another passage, in which it is stated that
the first istor in Crna Trava was of Macedonian origin. Crna Trava is
supposed to have been the first of the Vlasina villages to take up dundjerluk.

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1 J Petrović, op cit p 23, and note
2 R T Nikolić "Krajište i Vlasina" loc cit p 62
3 Ibid, p 57
so the statement acquires added significance, even though the event in question was dated in the 1820's.

However the statement is footnoted to the effect:

"In some of the villages of the Pomoravlje where there is a macedonian craft, it is known that this craft was brought from Macedonia. There are masters in the Pomoravlje who learned bricklaying and macedonian work from their ancestors, who worked with current large numbers of masters from southern Macedonia, who built and painted churches and other buildings. The same is virtually the case as well with the best masters of Vranjaska Pomoravlje at the village of Viševac who are by origin from Prizren and are particularly sober minded men."

The tendency for macedonian skills to have been acquired in south eastern Serbia through contact with macedonian masters in the first place, then, in the second place through the inter-village diffusion of the same skills is also attested by oral evidence collected by Velimir Vasić.

"According to the tolling of old masters who worked in Bulgaria between 1880 and 1890, the first master builders from these regions [those of Pirot, Knjaževac and elsewhere in eastern Serbia] learned the building craft from the Macedonians who also came there in large numbers on ručelba or indeed, learned from the Crna Trava and Tršćana masters who had been well known for a long time as good builders. Thus did peasants from eastern Serbia gradually learn the builder's task..."

As the same writer also notes, stonemason skills were also acquired, and subsequently applied on ručelba, by peasant workers who worked alongside skilled Italian masons during the building of the Serbian railways south of Niš, where the terrain was such as to demand a heavy input of engineering work.

By the very end of the period, large scale ručelba appears at last to have been diffused across the South Morava river, though not yet among the settled population. Skilled workers in Poljanica appear to have been settlers from Pčinja, and further north, in Jablanica and in some of the villages of the Toplica valley there grew up some flourishing

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1 Ibid, p 55 n
2 V Vasić, "Fečalbarstvo Istočne Srbije" Ph D (Univ of Beograd, 1950) p 48
3 Ibid pp 53-55
4 R T Nikolić, "Poljanica i Klisura..." KSZ III p 50
settlements of builders—peasants who had immigrated from the Vlasina region. In 1914 there appear to have been some 720 Vlacinci who had settled as builders in the Frokupanić and 1,400 in Jablanica. The most obvious motive for settlement in these areas was the availability of cheap land.

It has been questioned whether the growth of dundjerluk and other ručalba skills offered more than a short term expedient for the employment of peasant labour in a modernizing world economy. Trouton, writing primarily of the Debar ručalba, regards ručalba as having provided only a temporary solution to the problem of the passive areas, as changing urban tastes undermined the market for the traditional skills of the ručalba, consequently forcing them to accept the inferior earnings of unskilled labour. This may have been an incipient problem of the interwar era, but most of the sources on which this study has leaned relate to the eve of the Balkan wars, and these do not give any indication of impending crisis. In consequence of the war of 1913, the valuable Bulgarian labour market was closed for a time to the Serbian ručalba, but seems subsequently to have reopened. A report of 1914 shows demand conditions for ručalba to have been brisk in the Serbian market, and to have pushed wages upwards by 40-50% on levels pertaining five years previously. Some at least of these workers "have achieved such expertise in the job that it is almost impossible to imagine that they are peasants, the workers who work at Belgrade work just as well and neatly as the Germans".

And if old markets were decaying, new ones were opening up. Seasonally employing factories and mines offered pay rates markedly superior to anything

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1 K N Savić, Z. I p 332
2 R Trouton, op cit p 46
3 J Petrović, op cit p 20
4 K N Savić, Z. I pp 275-82 contains several references to ručalba migrating for work in Bulgaria in 1913-14
5 Ibid, pp 332-3
which could be earned from field labouring. The Belgrade sugar factory took on pečalbari from the first region at four dinars a day during the pulping season.¹ The Vrška čuka coal mine relied heavily on local recruitment from the surrounding villages, and although the wages – 1.60-3.00 dinars a day seemed small to Vršavlje Kostić, they were regarded as attractive in this rather poor region of Serbia. But the biggest and most successful of the Serbian mines – the copper mine of Bor, which was yet unexploited at the time of Kostić’s journey, already employing over a thousand men by 1905,³ paid wage rates, which by the claim of its management, compared very favourably with those pertaining in other Serbian mines.⁴ Although they were not high enough to buy the firm good labour relations, the employers’ claim is at least borne out by the observation of the Zaječar pečelatvo that the good earnings from labouring and haulage work for the mine had resulted in a material improvement in living conditions in the Zaječar villages.⁵ It is also claimed that this mine syphoned off much of the local labour surplus.⁶ After about 1900, moreover, another new market for pečalbar labour started to open up in the form of migration to the U.S.A. Obviously not all Serbian (and Macedonian) emigrants to the U.S. were pečalbari who went out for a short term to earn money and then return; some may have gone to stay, and others may have abandoned their intention to return, but there is little doubt that the peasant migrants to the U.S. were regarded as pečalbari in the emigrant areas and probably regarded themselves as such.

¹ J Petrović op cit p 26
² M Kostić, Pišma a Puntenpp 130-132
³ D Milić, Strend Kapital u Rudarstvu Srbije do 1918 (Beograd; 1970) p 301
⁴ Annual report for 1907-CB of Société des Mines de Bor, in ALE – Serbia, NS 18, Mines, 1
⁵ M N P 1900-9. 8 p 1096
⁶ M N Savić, M.I.Z. I p 296; A D Kikić, "Nešedin" Zemlja i Ljudi XIX (Beograd, 1969) p 123
The numbers going from Serbia were not large - Serbian emigration to America was estimated in 1912 at only about 5,000 in all, mostly to the U.S.A. and a handful to Canada. The corresponding figure for Macedonia was about 10,000. Unfortunately we know very little about the Serbian group of emigrants to America, for it was not large enough to attract attention, but their behaviour was probably similar to that of the Macedonians. M M Savić, who conducted a brief survey of Macedonian pečelba had this to say of one Macedonian district on the eve of World War I:

"From Sirinačka župa, Perdina sprež, 500 - 600 pečelberi have been going for the last 20 - 40 years to North America where they stay for between 18 months and 5 years, while a few of them stayed for 6; they earn about 2,000 dinars a year each and those that remain longer earn more. From the beginning of this emigration, to the present, about ten of them have died, and a few are raised, but for the rest, they return healthier than when they went, they bring back refinement and culture, and since they have begun to erect better buildings as well as to deposit money with the savings bank of the church of St. Uroš at Uročevac. They work in the factories. They go out from mid-February to the beginning of May, and they return from Autumn to Christmas through Le Havre and Hamburg..."

As a very strong indication of the pečelbar character of the Serbo-Macedonian migration to the U.S. we may observe that the 1921-8 return rate among the group of 7,621 emigrants from Serbia and Macedonia to the U.S. was between 45.4 and 70.0%.5

Besides this, another vast market was opening up for labour migrants in western Europe, particularly in France and Germany. On the eve of World War I, France alone counted 1.13 million foreigners, 50% of them

1 J Petrović, op cit p 6
2 W F Wilcox (ed) International Migrations I, (New York, 1939) p 270
3 J Petrović, op cit p 7
4 K M Savić, Z. I, pp 275-6
5 C Stamenkovitch, op cit p 175. The lower figure represents returnees 1924-28 as a percentage of emigrants 1921-28, and the upper, returnees 1924-28 as a percentage of emigrants 1924-28, by which time this migration was subject to American restrictions.
labourers, and numerous migrants from the Yugoslav lands were counted in this total. Though the new markets for pečelba had little use for the traditional pečelbar skills, the relatively high wage level more than compensated, and, as indicated in the above extract, the process of skill adaptation was not impossible.

h The problem of south west Serbia

South eastern Serbia, the area where dunđerluk and other pečelbar skills developed most strongly, was, as we have noted, an area in which, but for this institution, there would have been a serious deficiency of money income, because of the limited possibilities of cash cropping. It was not, however, an area of serious grain deficit; as we have noted, some pečelbar villages even exported substantial quantities of grain. But there were other areas of Serbia - in particular the south west, which were in an even less favourable situation because of heavy food deficits. Thus if need alone had been able to create the institution, surely south western Serbia would have been the most important pečelbar region of all. But it was not. It was in part this consideration which caused us to attempt to examine the positive reasons as to why pečelba developed where it did, knowing that negative reasons must afford an inadequate explanation.

South west Serbia thus seems to have been the only important area (with the exception of the thinly populated eastern moorlands) in which neither cash cropping nor pečelba developed on a substantial scale. This created very different economic circumstances from those pertaining in the rest of the country. As a result of its inaccessibility, it had always been somewhat isolated from the rest of Serbia, yet it tended early to become overpopulated as it absorbed part of the flow of immigrants into

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1 Ibid, p 90. This of course was the real long term growth market for Serbian pečelba, though its potential was subject to a prolonged hiatus from the early '50's to 1960.
Serbia who streamed through the region from Bosnia, Herzegovina and Crna Cora, particularly between 1662 and 1678.\(^1\) This was only partially offset by an outward flow from the area, for resettlement mainly in the north east, for many immigrants resisted being moved out.\(^2\) Subsequently immigrant settlement in Užice *okrug* appears to have ceased, and by 1900-05 one third of its natural increase migrated out of the *okrug*.\(^3\) As this was an area of mountain ranges intersected by gorges rather than valleys, there was little enough arable. We have already remarked that the grain deficit was largely instrumental in creating a local industry of tar and resin extraction, which, linked to cartage and pack haulage, generated an exchange good which could be bartered in the more fertile and less forested regions for cereals.\(^4\)

Overpopulation and isolation combined, even in the early years of the period under study, to render the *okrug* of Užice the poorest by most counts in Serbia.\(^5\) It contrasted very strongly with the regions to the north of it;\(^6\)

"No sir," replied one Tanasije Glicic, "It is not the *hradija* here where the householder's cellar is filled with barrels; rather a few nomad tents, encampments and thatched huts and nothing much around the house. One could move a whole village by midday. This shows how lean is property condition with these people."

The thatched huts of the area — *kulača* — were houses of the most primitive sort, and their alien-ness in quality to the sturdy *hradija* cottage is colourfully illustrated in the following:\(^7\)

"During the time of the Serbo-Turkish War (1676-78) the men of Sabac who had nowhere seen such houses thought that they were merely stacked hay and began to tear them down in order to prepare themselves

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1. S Ignjić, *Užico i Okolina*, pp 53-4
2. Ibid, p 55
3. *HN P* 1900-09 8 p 1144
4. See above p 525
5. S Ignjić, op cit p 74
7. S A Popović, op cit p 57
coverings for the night. When tearful children started to appear outside these 'kulaka', the Sabac men were amazed, saying 'look, if you please, here in these haystacks lie the Ers' 

The very low yields obtainable from cultivation in Užice okrug, and the small area under crops were not even offset by a high production of livestock. In 1905, out of 17 okruzi, Užice in per capita terms, ranked 5th in the holding of cattle, and 4th in that of sheep by number of head, but in terms of the value of the livestock held in general it ranked lowest of all.¹ (It should be noted that the merchant owned cattle grazed on Zlatibor are not included in this statistic because this is an end year figure and therefore tends to represent the stock held by the settled population. In this respect it also tends to understate because of the practice of Zlatiborci of downward transhumance to the Šumadija for winter pasture.)² The reason for the low value of the livestock is partly a consequence of the high cost of transport, but it also reflects its low quality. Užice oxen were reported to be one third lighter than the average weight for Serbia.³

The area did obtain a useful source of cash income from plum growing, though the hillsides were not suitable for the požega, which was the only type suitable for drying, and the marginal nature of the region in respect of plum growing seems to have resulted in extreme fluctuations in the size of the crop. Despite transit conditions, we have seen that a good part of the crop was successfully monetised as bootleg spirit, and according to a report of the okrug authorities, economic conditions in the okrug were more sensitive to the success or failure of the plum crop than to that of the livestock business.⁴ Given the modesty of the income from plum growing, this gives some indication of the low level of agricultural production in

¹ S.G 1907-08, pp 347, 349-51
² H.M.P 1906-09 6 p 1140
³ Ibid, p 1134
⁴ Ibid, p 1144
the region. We should therefore expect to find an above average pečalbar and craft activity in this region. We do find a number of very small village industries in the area — the manufacture of monumental masonry in the Studenica region from the marble of the local quarries, of which it was noted however, that little taste or technical skill applied, is one example. The industry of the women of Zlatibor, of whom it was remarked "the spindle and distaff are almost never abandoned from the hand", which turned out woollen rugs and blankets, linen shirts and summerlands, was another, but strictly a part time occupation for the winter. But, none of this amounted to very much, and there must have been an enormous number of households in the south west which could have supplied labour for pečalba and which would have had strong push motives for so doing.

The adjacent Osata region of Bosnia had long sent out pečalbari round the western part of Serbia, building the type of wooden Bosnian house with which they were familiar, just as the Macedonian pušnici built Macedonian type houses for the richer peasants of the Korava and eastern puščadla. It was also the same people who seem to have constructed the rušnice for plum drying. As significant numbers of Osadani builders settled permanently in Serbia, and, as the Osadani of Osata continued right up to 1914 to be an active pečalbar group, the basis for skill adoption and diffusion seems to have been present. To some extent this process took place, for as we have noted, the building of rušnice seems to have domesticated itself in the hands of migrant Serbian craftsmen after the Austrians had shut off the inflow of Bosnian pečalbari. In housebuilding however the impetus was weaker. But 'sokoljani' pečalbari seem to have brought their skills to Serbia, from Bosnia

1 R M Ilić "Ibar..." KSZ III, p 567
2 S A Fopovic, op cit pp 35-6
3 V Karić, Srbija..., p 416; R Đ Milićević, op cit pp 116, 208, 566, 761, 813, 648, 920, 999, 1073
4 See above pp. 450-1
5 C Stamenkovic, op cit p 83
6 M M Savić, Z I I p 332
"Building work today is in the hands of Osačani and Ušćani from the region of Bajina Bašta and Rogačica. Each year in early spring whole companies of malištori come up and spread out round the Tamnava villages..."

These engaged in housebuilding and repairing, but as a group they cannot have been numerous, and it is significant that the same writer, dealing with another part of Valjevo okrug notes that brick and tile making in the region were in the hands of masters from south east Serbia. The failure of south western migrants to get a firm hold in the itinerant building market may have been due to their inability to provide buildings of the style in demand, in particular in brick and stone. Milićević notes a tendency for the duđari and local builders to replace the Osačani, who built Bosnian style houses in wood. Although this may only have been a reflection of the closing of the frontier, it is worth noting that at Bogatić village (in the Maćva) skilled pčalbar building gangs were formed. These displaced the Osačani, by acquiring the skill of working in stone and brick, and so "created a special type of house, the new "Bočatinka". The ability to match, or even to stimulate, demand by offering standards of work and craftsmanship superior to those achieved by local labour was an important element in the success of east Serbian migrants in securing a geographically wide market for their skills. This was because they had to sell their services, not to the mass of poorer peasants, who customarily built their homes with their own labour, or with no more than a minimum of outside assistance, but, at least in rural areas, to the wealthier peasants who wanted to employ builders who could offer them enhanced standards of

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1 Lj Pavlović "Antropogeografija Valjevške Tamnave" M S Z VIII, p 446
2 Idem, Kolubara i Podgorina, p 425
3 N Đ Đ Milićević, Kneževina Srbije, pp 116, 566
4 Lj Pavlović, op cit p 423
style and comfort. Thence the importance of stone and brick. 1

"pečelbari who built these houses in Bulgaria and Romania relate that the peasants on whose houses they worked were rich, that they had plenty of land and livestock, but that they lived very primitively. They dwelt in dugouts which could scarcely be recognized above the ground... These pečelbari tell that they in effect dug the Bulgarians and Romanians out of the ground, building them the sort of houses as the rest of the world lived in."

So the wood based building skills of the Boonians and the people of south west Serbia, which were attuned to the provision of housing of a very humble description, found only a very limited area of demand, and would not readily have been sought by more affluent peasants elsewhere. Thus their trade remained very localized in its market, (except where, like the Bogatinci, they had learned to adapt). As a form of long distance pečelba, building is unrecorded in three major contemporary studies of the region, 2 though they all record that there was a fair amount of erreština migration, of the type practiced by marginal villagers, but yielding a low and uncertain income.

Failure to adopt craft pečelba may also have been due to the differing character of the essentially pastoral Dinaric society and that of the Vardar-Macedonians, for it is notable that whereas the latter were a very important immigrant group into the south east, 3 the west of the country was almost exclusively settled from Bosnia, and other Dinaric regions. It may be noted that the economically highly active Cincar group of Macedonian immigrants settled or worked temporarily in the Pomoravlje and Podunavlje, but not in the west of Serbia, "particularly not in Užice, Loznica, Valjevo and Kraljevo". 4 The characteristic pečelbar village was, as we have noted, an agricultural village on poor land rather than a village devoted to

1 V Vasić, op cit p 47
2 R M Ilić, "Ibar..." H S Z III; S A Popović, Na Miranjome Zlatiboru
3 C Stamenković, op cit p 58
4 D J Popović, op cit p 62
sheepraising. The roots of pečalba appear to lie firmly in migrant agricultural labouring, of which a settled community would have more experience than the transhumant communities of the south west of Serbia — or of the high plains of Homolje and Zvilić. The same difference can be seen repeated in Macedonia. The Albanian population controlled the sheep pastures in the south western districts, and went little into pečalba while the slav population did. R T Nikolić commented that "The Vlasinci admit of the inhabitants of Krivi Vej that these have a better understanding of how to attend livestock but add that they are not capable of pečalba or field labour." Note the juxtaposition of the two occupations. Evidently the reorientation of stockraising peoples to other types of work was relatively difficult: from the Užice villages they sought work as "frontier and night guards, gendarmes, road maintenance men", and complaint was made of the "whole procession of young and healthy people[from Zlatibor] who would come to Užice and seek to be policemen." And the curious comment was made that:

"The Dinarci at Pećarevac selected the lighter crafts in the majority of cases. All the Užičani at Pećarevac were openčari. The Crnogorci were public writers and skinners. Some Sumadinci were tailors. There were no dinaric cartwrights, smiths or carpenters."

This particular hypothesis — that pastoral peoples, such as those who settled western Serbia would respond less easily than those with a settled tradition of cultivation to the opportunities opened by pečalba — is admittedly highly speculative, and provides no definitive answer to the perhaps irresoluble question as to why one region will respond to a particular set of opportunities better than another. But lack of a definitive

1 B Arsitich, op cit p 92
2 R T Nikolić, "Krajište i Vlasina" p 48, n and also see p 62, n
3 R H Ilić, "Ibar..." loc cit p 569
4 S Ignjić, op cit p 65
5 R Al Purković, op cit p 51
answer is surely no reason for failing to examine possible avenues of approach. In any event, south west Serbia needed badly to develop a major income source independent of the farm economy and failed to find one. It exported part of its population growth, but that solved no problems because of the dwindling prospects in so many of its major activities, kiridžiluk, forestry, and, above all, stockraising. So the people stayed poor, or became poorer. In describing the Zlatibor region Sreta Popović felt it necessary to italicise the words "the number of really poor people exceeds the number of people of medium condition", and "poverty and want increase the number of mortalities in all sicknesses." The people were badly clothed, badly housed and badly fed. Banditry was not wholly eradicated - though, it was claimed to be pursued more for vendetta than for profit motives. The nub of the matter is presumably to be found in the statement "Frugality is a way of life with these people. Except for grain and salt, there would be little that they needed to purchase in the house." In other words, the cash earning activities of the region barely sufficed to cover the import of essential foodstuffs. And, in contrast with the south east, the south western people obviously encountered extreme difficulty in meeting their tax obligations.

1 Conclusions

Supplementary activities for the acquisition of cash incomes could be found in most areas, but in the fertile zones where tillage and plum growing were capable of extension and, subsequently of intensification,

1 S A Popović, op cit pp 56, 67 This was not a judgement of marxist reflex history, rather it appears in a book intended partly to attract other Serbians to vacation in the Zlatibor region.
2 Ibid, p 66
3 Ibid, p 61
4 Ibid, p 60
5 S G 1906, p 477 and see above, p 562
they were associated with the poorer social groups. Farm labouring—
*arstina*—was the principal standby of the rural poor though other
occupations such as quarrying could serve a similar purpose. In 25 villages
in the Kragujevac region "the poor people cut stone from the quarries and
send it to the Lepenica and other valleys and there sell it." 1 Similarly
although there was no *arstina* among the inhabitants of the Belgrade villages
"many go to work in the stone quarries round Belgrade" 2 Others picked up
carting work, others again worked on the fabrication for sale of wooden
implements. 3 Analogous occupations became of very much greater importance
in the regions of poorer land, where even the relatively substantial peasant,
though he might be able to procure subsistence from the land, still needed
other means to acquire sufficient cash. Some of these occupations, such as
ropemaking in the southern Pomoravlje, and *mutavdžiluk*—the weaving of
goat hair—in the nearby Vranjaka Poljanica, 4 were typically low productivity
trades characteristic of areas where the opportunity cost of labour was low,
others such as tar and resin extraction and *kridžiluk* were poorly remunerated
for somewhat different reasons. Because of the relatively low level of
concealed unemployment among peasant women, and because their work was of
the type earliest superseded by factory production, female labour based
domestic industries were very little developed except in the towns and
therefore the main form of supplementary earnings in the poor land regions
tended to be dependent on the migration of male labour. The earliest form
this would take was the practice of agricultural *pekašar* migration to
latifundial regions which concentrated on commercial grain raising. But
it is doubtful whether this occupation was sufficiently rewarding, except

1 T Radivojević, "Lepenica..." *N S Z VII*, p 323
2 R T Nikolić, "Okolina Beograda..." *N S Z II*, p 924
3 See for example the list of "supplementary occupations" in the
Negotinska Krajina, in P Tomici, "Dopunsko privredjivanje" Negotinska
Krajina and in the Kraljevo villages, M Kalotic, (ed) *Kraljevo i
Okolina (Kraljevo, 1966)* p 291
4 R T Nikolić, "Poljanica i Kiseura..." *N S Z III*, p 49
in isolated cases, to offer a remunerative alternative to cash cropping; the key to peasant prosperity in the regions which showed a passive agricultural cash balance was in the acquisition of migrant skills, particularly in the building related trades. Such skills were only diffused widely in the south east of Serbia. They may have grown out of the mining and smelting trades of this region, and were probably taught to the settled population by immigrants from the rečalbar regions of Macedonia. They appear to have been associated also with poor villages practicing settled cultivation rather than with villages which were more orientated to stockraising. These trades were sufficiently well remunerated to attract into them a much wider cross section of peasant society than the poorly paid tasks, and seem to have conferred up on the villages that practiced them as least as high a level of wellbeing as the villages in the cash cropping areas. Their practice seems to have been the only way by which this could be achieved. Their non-diffusion into areas other than the south east which faced the same or worse fundamental problems resulted in progressive impoverishment. Fortunately, the southwest was the only area of substantial population whose economy suffered in this way, but the problem was not confined to this region. For example Milivoje Kostić noted of the rugged hill region of the monastery of Sveti Petka four hours walk east of Paraćin, "People acquainted with these parts say that the peasants of the surrounding villages are dangerous robbers. As a result of the infertility of the land, the crops grow weakly here, and drive them into unlawful ways to meet their needs..."  

The long run prosperity of the rečalbar regions turned of course on the health of the international economy, and on the readiness of other countries to admit these workers. It appears that restrictions applied

1 M K Kostić, Pisma o Putu Beograd-Paraćin-Začar, p 67
against their entry may have arisen because of a failure to comprehend the nature of nekalba, confusing it with permanent emigration. But it must be made plain that the nekalbar, secure in his landholding and moderately prosperous from his earnings was well insulated from the kind of push pressures which created the permanent rural emigrant. Stamenkowitch was, it appears, aware of the quite different implications of craft nekalba and permanent emigration when she noted "arrati often resettle permanently, particularly in free countries richer than those of their origin."

Nechalbari however, had less reason to, so long as they enjoyed freedom of movement, for there remained a home to return to.

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1 C Stamenkowitch, op cit p 84
CHAPTER IX
SUMMARY AND CONCLUSIONS

Between 1859 and 1910 Serbia's population was rising at 1.6% per annum. Before 1859 the growth rate had been higher still. The tendency to urbanize was only slight, and migration was, on balance, inward. Thus the village economy had to absorb population growth at about 1.4% per annum. The purpose of this study is to enquire as to how this was achieved, as to what were the economic consequences, and as to the role played in this process by the development of the market.

The structure of landownership, based on small-scale owner-farming was little changed throughout the period, but the output of this economy underwent radical changes. Initially, the farmer provided substantially only for self-consumption from the produce of his cultivated area, but earned a substantial money income from the sale of part of his pastoral output. The balance of land use was heavily weighted towards the pastoral sector, and the stockraising economy it supported was of a purely extensive character. Though rural population had been growing rapidly for at least 40 years prior to the beginning of our period, this had entailed few changes in the structure of the agricultural economy, and a growing population took into cultivation new land as its food needs expanded. Land being the relatively abundant factor in this economy, extensive means, not only of stockraising, but also of cultivation, predominated. So, as wealth ownership was not subject to extreme inequality, and as, therefore, the resultant product remained for the most part in the hands of the cultivator, this
primitive economic system supported a moderately high, though falling, level of crude abundance.

But although no serious shortage of potential arable was to develop during most of the period under consideration, the intake of arable could only be made at the expense of pastoral resources, and it is doubtful whether grazing ratios could be increased pari passu with population growth. The inference is that until the produce of the cultivated patch began to pass onto the market on a substantial scale, (a process which was only beginning in the 1860's) village consumption standards must have been tending downwards. The sharply rising trend in the export of animal products in the middle third of the nineteenth century must surely have been achieved, at least in part through the sacrifice of self consumption in these commodities. It is noteworthy that contemporary observers believed such a process of impoverishment to be taking place.

Restoration of dynamic equilibrium in the rural economy thus depended on cultivators being able to deliver an increasing flow of cultivated produce onto the market, which would enable them to maintain or increase their cash incomes without biting increasingly deeply into the production of the pastoral sector, which could then be held increasingly for self consumption. On the whole, this dynamic equilibrium was attained. From the beginning of our period, to the eve of the commercial war with Austria-Hungary, the export of farm produce per capita of the farm population showed a slow but distinct upward trend, at or above 1.1% per annum. Within this growth the proportion of the total represented by stockraising produce declined from 70% in 1862 to 25% or less in 1911. Urban consumption of farm produce,
though relatively small compared with the export trade (about 29% of its size in 1911) was growing 1.4 times as fast.

These observations would not enable us to say much about trends in peasant welfare unless the trend in rural tax payments were also known. Demands on the peasantry for direct taxes were virtually static in money terms, and, therefore, in an inflationary economy, their real burden was falling. The concurrent rise in indirect taxation compensated to some extent, but it tended to fall disproportionately on the urban population with the result that the peasant tax bill rose less fast than the money income from which it had to be met. Between 1863 and 1911, peasant per capita gross income in constant producer prices rose 51.6%, and peasant income net of all taxation rose 116.9%. Thus, if there were no change in the terms of trade between town and village \(^1\), per capita peasant purchase power more than doubled over the period, though the volume of goods delivered to the market rose by only half. This out-turn was in some measure a reflection of the concealed political power of the peasantry. It had to be paid for by the near bankrupting of the state treasury.

The growth and structure of exports was not wholly determined by supply conditions; it was also subjected to demand restraints. This is particularly evident from the falling away of per capita farm exports during the period of the Commercial War with Austria-Hungary, in 1906-10. But this dependence on a favourable market relationship with Austria-Hungary was of much longer standing, and had rendered Serbia vulnerable to Austro-Hungarian

\(^1\) The data necessary for the construction of such an index are probably unobtainable.
commercial pressures which had begun to be applied since 1879. These pressures - directed against the livestock trades - resulted from tensions in the European meat market. The especial object of Austro-Hungarian discrimination between 1879 and 1896 was the Serbian lean hog export. The cumulation of measures directed against this trade were to reduce this export from its 1871/5 average of 278,000 head worth 8.85 million dinars at customs valuation to zero by 1897. The impact of this discrimination was profound; in 1871/5 the lean hog trade had provided 27% of the value of total farm exports, and the greater part of the reduction of this trade had been achieved by indirect means long before its definitive termination in 1896. However, these pressures had no long run depressive effect on the Serbian export of fattened hogs.

A strong indication that contraction of the lean hog export was the result of demand rather than supply side difficulties is to be found in the strong parallel expansion in the export, mainly to the same market, of lean cattle. But this in turn became the object of discriminatory pressures after 1896, though these do not seem to have had any significant quantitative impact before the outbreak of the Commercial War.

During the Commercial War itself, the hog trades again showed themselves to be extremely vulnerable to Austro-Hungarian sanctions, which were pressed against them with vigour precisely for this reason. But the issues over which the Commercial War was waged were essentially political, neither side having an interest in a permanent breach of commercial relations, the hog question having been resolved already to the satisfaction of the Hungarians. So the losses sustained by the hog trade during
this period were transient. And because of Austro-Hungarian
willingness in normal conditions to see Serbia's nominally low
hog quota substantially exceeded, the only long term effect on
the trade was that the product had now to go out in slaughtered
condition. But as the cattle question, by contrast, had not been
resolved before 1906, the Serbian cattle export was treated
relatively badly in the final settlement. But of more signifi-
cance in the medium run was the near total destruction of this
trade that Austro-Hungarian sanctions inflicted, owing to its
failure to find alternative markets; the trade was in no condition
by 1911 to respond substantially to the modest improvement in
market conditions.

As the prolonged Austro-Serbian commercial disputes of
1879-1910 had little effect on the trades in cultivated produce,
their existence did little to impede the transition of Serbian
farming to a more intensive basis. Nonetheless, the monetization
process was probably retarded; the loss of revenue from the
livestock trades was far too large a proportion of total farm
revenue to be made good quickly, and so the observed rise in
per capita farm export volume was probably much smaller than
the rise which would have been achieved under conditions of free
sale into the international market.

The most direct way in which peasant agriculture could be
orientated towards a more intensive, commercial basis was through
raising increasing amounts of grain for the market, either for
direct sale, or by fattening hogs on maize for export. From the
export data it appears that this transition began belatedly in
the mid 1860's, speeded up in the mid 1880's, then paused for a
decade or so before reviving again in the early twentieth century.
The lateness and weakness of this trend, even by comparison with the other south east European states, suggests that it was inhibited by certain retardive supply side influences.

One of these may have been the inadequate and slow development of the railway network, a result of governmental entrepreneurial failure. But this would only be of significance if the exploitation of the country's main grain basins were railway dependent. Yet this was the case only to a very limited extent, because of the regional geography of grain agriculture.

Where communications were good, and the river basins were non-alluvial, wheat was the most profitable cash grain crop for the peasant, though maize was the more convenient crop for self consumption. The two tended to be grown in alternation. The result was that along the fertile, non-alluvial plain of the Sava and Upper Danube, where the marketing of grain became ever more important, and where waterway communications were excellent, grain surpluses tended to be biased heavily towards wheat.

But the alluvial valleys of the central rivers and their tributaries were also regions which could generate substantial surpluses of grain. Here the annual flood tended to favour the adoption of maize monoculture rather than the production of wheat. But although transport conditions here were much less favourable, this did not inhibit the raising of maize for surplus. The reason was that after establishment of the Baziaš railway terminal, it became profitable to maize fatten hogs for export, even though they had to be driven a considerable distance to the Danube ports. So large was the local demand in the Morava valley for maize for hog fattening, that whereas minor cereals were exported to the Danube region, the fattening trades
in the Danube ports were inhibited for lack of maize, and a fair proportion of the Morava valley hog trade had still to be sent out lean. Even after the railway was built it seems for a long time to have carried little maize.

So it was only in the non-alluvial grain regions which did not enjoy good waterway links that railway construction may have been anticipated to have any strong developmental impact, at least in the short term. There were only two such regions, the valleys of the Sava tributaries, and the southern Toplica-South Morava-Nišava area. In the former area, the development of grain agriculture probably was retarded, by poor communications, but to what extent we do not know, because its railways were only built after 1904 when the necessary port-of-exit data ceased to be published. The railway induced some farming for wheat surpluses in the southern basins but this probably only expanded total wheat exports to about 18% more than would have been achieved in any case. Clumsily contrived freight tariff policies probably prevented the effective utilization of the railway line for grain in the traditional exporting regions, and so had little or no developmental impact on grain raising here. The lack of communications into the maize orientated south west of Serbia was unimportant as this region lacked sufficient arable land even to feed itself.

The expansion potential of hog fattening was very restricted. The west of the country was the major area for pastoral hog raising. But as its main grain basins were non-alluvial and enjoyed good waterway communications, and therefore raised only wheat in surplus, there was no cheap maize on which to fatten up the hogs before exporting them, while the pastoral hog farms
to the south of then had no grain surplus of any kind. The handicaps imposed by Austria-Hungary on the lean hog trade merely resulted in a fall in the price of the animals, and although this seems to have prompted the emergence of a small fattening industry in the Mačva, its main effect was to drive the lean hog raiser out of the trade. In the central alluvial valleys, on the other hand, the main restraint appears to have been the availability of local pasture on which to raise the animals to maturity, for the supply of maize eventually outran the demand of the fattening trade and was sent out for export as raw material. Only by intensive sty-rearing techniques could the shortage of pasture have been overcome, but for this purpose, maize would no longer have been a suitable feed input, as it was only of value for fattening mature animals.

These are the reasons why Serbian farmers were not able to go far to meet the changing demands of the Austro-Hungarian market.

The opening of the main line railway provided a service to exporters of fattened hogs which they speedily utilized, but as it could not induce the expansion of the number of head exported, its most significant impact was not on the farmer, but on the Serbian livestock merchant, whose intermediary role between Budapest and the producer was made redundant, and this caused heavy commercial losses.

Retardation in commercial grain farming was thus not greatly influenced by transport considerations. There may, therefore, have been other more cogent reasons. The belief has frequently been expressed that the slowness of change in Serbian farming methods was a consequence of the innate
conservatism of the peasantry. Although we accept the general validity of this belief, we reject the notion that this conservatism stemmed from a purely non-economic rationality. The switch away from the sale of pastoral surplus production towards that of arable surpluses required acceptance at the margin of production, of a lower productivity-wage than for the average. The first people to be forced towards this adaptation would be the poorest and least respected members of rural society. The sale of grain, therefore, carried with it the stigma of poverty, or of a loss of self respect among those who did not consider themselves poor, while prosperity and self esteem were associated with pastoralism. This disinclined peasants to make what was nevertheless an economically necessary step. Price movements during the Great Depression tended to widen the productivity differential and further retarded the process.

Only through the adoption of capital using farm techniques could this productivity differential be closed. These could not be introduced by or through the example of large scale agriculture, as in earlier years labour market conditions, and in later years land market conditions prevented the formation of large units. But the capacity to create capital, whether or not it could be used efficiently, existed on the peasant farms, for the savings function of the peasantry was very high.

It seems, however, that these savings would only be applied to investment in farming under certain conditions. Firstly, population pressure had to drive the price of land so high that it became attractive to apply capital to existing holdings rather than to buy more land. Secondly, the price of grain needed to move back onto a rising trend, absolutely, and
relatively to the price of livestock, thereby restoring the profitability of capital using grain farming. Such conditions did begin to emerge in the beginning of the twentieth century, when output growth in cereal agriculture was resumed but on the basis of rising per hectare yields rather than rising sown area.

Stockraising remained extensive throughout the period. Intensification techniques had yet to be introduced. Though the spread of arable agriculture exerted downward pressures on production, it did not result in any absolute diminution of output. The supply of fodder was expandable; the statistical data (which must be treated with reservation) even indicate an expansion in the output of natural hay. Clover was beginning to be grown at the end of the period, but of more significance was a vastly expanded supply of arable by-products. Thus, although the cattle stock remained roughly constant throughout the period, its output probably rose substantially, though per capita self-consumption of beef fell by 80% as ox exports expanded massively. There was a modest offset from an expanded supply of meat from cows and young animals, as well as of mutton. The rising export of oxen represented more than a straight substitution of market sale for self-consumption. Exported oxen were heavier, and qualitatively better animals than those consumed domestically. This improvement was achieved by taking the animals from the plough before senescence and building them up by winter stall feeding where possible, or by commercial high-pasturing in summer where it was not. The market opportunities that these techniques created, as well as a persistently buoyant price trend (to 1905) on the export market created increasingly strong incentives to export rather than self consume, so the trend of
rising exports and falling self consumption should not necessarily be construed as an increasing forced sale by peasants who were unable to maintain their cash incomes in any other way. This era of prosperity was terminated by the Commercial War with Austria-Hungary as no satisfactory alternative outlet could be found for the ox export. Though rural income suffered seriously thereby, cattle raising did not collapse as by this time there was a developing shortage of draft power.

Output from sheep and goat raising was also more or less static, but it shifted towards the upland areas, away from the market, and towards self consumption. In the earlier part of the period the wide eastern pastures were grazed extensively by large wool flocks of Krivivirs and similar sheep, which produced heavy fleeces of good quality. These sustained a large sale of wool for export and for the carpet trade.

Pressure on pastoral resources drove sheep raising into the uplands, and displaced the wool flocks by the less valuable peasant hill sheep, which made better use of the thin grazing which remained. These flocks were not held primarily for wool, whose quality and quantity were both much inferior to that of the Krivivir, and was used for self consumption as were the milk and meat that were also yielded.

A woollen industry began to develop in the 1880's, attracted by the prospect of using cheap local wool supplies, which proved to be a misjudgement, as the Krivivir flocks were already shrinking. It therefore had to turn increasingly to the use of imported wool. An attempt was made to revive the raising of wool flocks to supply the industry, but as this was dependent on the re-extensivization of pasture use, it
held little attraction to the peasantry.

The experience of the pastoral economy in this period shows that although it was incapable of adopting intensive stock-raising techniques, it was sufficiently flexible organizationally to adapt to the diminution of pastoral resources without diminishing in output. A rising proportion of an output which was rising more slowly than population was going to market, but the special circumstances of the cattle trade prevent us from construing this trend, as forced monetization at the expense of self-consumption.

The basic agricultural trades whose problems we have so far discussed provided Serbia with what was, given its poor communications position, probably the only viable basis for industrialization. The importance for mechanized industry of a strong agricultural supply base was underlined by the experience of the woollen industry. Lacking cheap local wool supplies, it was largely confined to high cost import substitution on a narrow home market. The food industries, on the other hand, enjoyed stronger (though far from ideal) raw material bases, which excluded none of them from the possibility (not always realized) of exporting. But certain acute problems in the exploitation of this supply had to be overcome.

These industries depended above all on the importation of craft, technology, and managerial skills to manufacture products which were largely unfamiliar to domestic firms. Large scale immigrant enterprises, of the type which contributed to the establishment of prerevolutionary Russian industrial technology, were not found to have been a satisfactory vehicle in the Serbian experience, as ignorance of local supply
conditions and a lack of interest in supplying local markets resulted in extreme difficulty in matching available supply with the demand of the export market. Conversely, native enterprise, though familiar with existing conditions in local markets, operated within a perspective which was limited by the narrow confines of the Balkan trading network.

For introduction of the low-capitalized techniques which characterized most of the food industries, Serbia depended heavily on the import of artisan-capitalist entrepreneurship from central Europe. These incoming firms, normally owner-managed, proved capable of introducing the new technologies on a small scale, of organizing the collection and handling of locally purchased raw materials, of selling new and unfamiliar products into domestic consumer markets, and of using their knowledge of the external market to establish export outlets for their products. Though their enterprises became larger and of increasing technical complexity, it remained true that what they were capable of innovating, domestic capitalists were capable of emulating. Conversely technology of the sort which the immigrant entrepreneur could not bring in on a small scale, the domestic entrepreneur could not emulate.

Each of the new trades faced its own technical and commercial problems, but they conformed to a coherent pattern. Foreign capitalist enterprise in the pork packing trade had an unrelievably disastrous record, because, although supply of a kind was abundant, its quality and type meant that it could only be sold at the bottom end of the market in western Europe, although it commanded a high price locally as it was well suited to central European markets, which imported the
animals in live condition. To sell up-market in western Europe the whole structure of hog raising would have to be altered, which was likely to strain at the technical limitations of Serbian peasant stockraising, while in any case the existing profitability of the live animal trade left the stockraiser with little incentive to adapt. For the meat packer, the most consistently successful response to this problem was not to export dressed carcasses but to manufacture lard and smoked and dried specialties from them. Success in the market for these products depended less on the quality of the raw materials than on the application of high standards of manufacturing skill to them. Most of the central European firms which entered this market excelled in this respect.

Unfortunately for this industry, Serbian hog producers after 1896 enjoyed the privilege of exporting over a moderate tariff into the otherwise heavily protected, supply deficient Austro-Hungarian market. This set a price for the raw material which was out of line with that on the world market. On the other hand, penetration of imported meat manufactures into Austria-Hungary was hampered by industrial protection.

The state also became a big entrepreneur in the meat trade, motivated by political rather than commercial considerations. Despite the intention of the founders of the state-capitalist Belgrade Klačica to achieve through it commercial emancipation from Austria-Hungary, its chequered career resulted from heavy dependence on that very market. It could only compete elsewhere by forcing down the price paid to producers to an extent which sharply contracted supply. Its eventual success resulted accidentally from a switch in Austro-
Hungarian policy, which, on sanitary grounds, now required its supplies to be slaughtered before import, and accorded this firm a monopoly of the business. As the quota system within which it worked was not effectively operative, no non-quota supplies remained for the specialty meat packers, who were excluded from this trade. Through no fault of their own, this underlined the untenability of their position. Had the conditions of 1911 endured, they might soon have been forced out of the meat packing business.¹

They could, however, diversify. For example, they developed a lively trade in poultry products, particularly eggs, and established solid foundations for what was to become after 1890, Serbia's most dynamic export. By building up internal supply networks, and selling the produce in Germany, they transformed what was hitherto the casual frontier trade of petty local dealers into a rapidly growing branch of agricultural commerce; in a product which suited well the factor balance of farmers in the more progressive agricultural areas.

The introduction of milling and brewing was again the work of immigrant entrepreneurs. Though relatively unsuccessful on external markets their achievement was to create home markets for hitherto unfamiliar goods. The simple technology and low capital cost in both industries permitted native emulation, though the oligopolistic organization of the brewing trade inhibited the participation of the native firm. It did not, however, inhibit the existing firms from expanding and modernizing vigorously.

¹Nevertheless, Serbia remained a highly competitive exporter of smoked specialities onto the Austro-Hungarian market. "Protiv Srpske Salame" T.G. XXI (1911) 149.
At the late date of its introduction into Serbia, sugar manufacturing technology was neither sufficiently simple nor sufficiently cheap to permit its application by immigrant enterprise of this type, and the big aggregates of capital needed precluded native competition. Nonetheless the implantation of this foreign owned, foreign managed industry gave rise to powerful backward linkages into Serbian agriculture, which was able to raise a large part of its raw material supply. For farmers, sugarbeet was a new high yielding cash crop and it spread about as rapidly as transport limitations would permit.

Aggregatively, the food processing industries yielded, according to Lampe's statistics, about half the total value of net industrial production. The volume of their output rose 3.7 times between 1898 (by which time all but sugar were firmly established) and 1911. Of no less significance was the supply stimulus given by them to agriculture, particularly in respect of sugarbeet, poultry products, and (in a defensive sense), hog raising.

The potentially monetizable element on the intensive side of agriculture was not confined to the basic food products. Also indigenous were a number of 'minor' products such as fruit, wine, hemp, silk and tobacco, all of which were raised to some extent for the purpose of local commerce. Yet their potential was held back for want of wider market outlets, and these, it seems, were not within the capacity of the native merchant class to open up. These crops tended to be much more intensive than wheat, besides which the international market price of some at least of them could have generated a substantial producer.
surplus if only trade links were established. Their development for the market on a large scale thus offered a developmental short-cut within agriculture which presumed neither an increase in capital intensity nor a declining marginal return to labour.

Plums, particularly, were grown on a huge scale for self consumption, raw or as rakija vijivovica. Part of this huge crop was probably wasted. Large scale commerce could be developed, for there were few consumer markets for rakija and few good transport links for the export of raw fruit. The technique employed in Bosnia of drying the fruit for export had not, by 1860, been diffused to Serbia. Similarly, wine regions competed against each other, and the less well located ones declined as competition intensified for a share of a circumscribed domestic market. Want of outlets was also an important reason why, despite efforts of the state on the supply side, silk raising remained essentially non-commercial. Hemp was worked up into rope by hand and much of the output was exported to other Balkan territories. But growing protectionist pressures prevented the expansion of these markets. Only by abandonment of the traditional means of working, and by the introduction of mechanized scutching could Serbian hemp find a wider market acceptability. Yet no local initiatives were forthcoming.

It was suggested that the passivity of local enterprise in the face of opportunities which, subsequently, were to be exploited avidly by outsiders, might be, in part, explained by the structure of Serbian trading enterprises. These were unspecialized, but orientated towards the distribution of con-
sumer goods, taking in export goods because this was the only way their clients could discharge their debts. This inhibited the emergence of a market creating function.

The problems encountered in establishing these trades were analogous to those which had to be faced by the food industries. Here again a leading role was played by external interests, and their greatest difficulties related again to matching domestic supply to world market demand. This type of commodity tended to appear in trade during periods of international supply crisis, Serbia becoming a high cost marginal supplier, likely to fade out when market conditions normalised.

The high cost structure arose for several reasons. There was the high cost to importers of establishing organizations to obtain a small supply from a large number of petty producers. Local traders usually only participated as agents or employees of foreign purchasing interests, and were not always found to be satisfactory for this purpose. When world markets returned to normal, importers usually abandoned their purchasing networks in Serbia, while the local interest was unable to establish itself independently of them. Moreover, the quality of local production rarely accorded with world market demand, its defects would only be tolerated in an uncompetitive environment, and supply elasticity tended to be low in the short run, till producers had orientated themselves to producing for surplus on a regular basis.

The experiences of the silk and wine trades exemplify these problems. Serbian silkworm eggs entered into trade during the pétrine crisis of the 1860's, as merchants from France and Italy searched for uncontaminated eggs, with which to maintain
their own cocoon production. Indiscriminate purchasing forced up supply prices rapidly, which obliged them to organize contractual supply networks. But when pébrine was overcome by Pasteurisation, the demand for silkworm eggs fell away. There remained a market for dried cocoons for reeling, but this became highly competitive, and the low quality of Serbian silkworms forced the costly introduction of improved stock. But foreign interest dwindled on a glutted market, and the Serbian trade, unequipped with modern facilities to undertake the otherwise excessively labour-intensive task of cocoon killing and drying, collapsed. Its eventual re-establishment in the 1890s depended on the building of a drying plant; this permitted an expanding volume of business, but the monopolistic nature of the trade prevented development of the further manufacturing stage of silk reeling.

Similarly Serbian wine entered the world market in consequence of the phylloxera crisis. Full-bodied Negotins suited the needs of the trade well, but their collection necessitated establishment of an expensive purchasing network. The trade boomed till Negotin was destroyed by phylloxera, in its turn, but although some prosperity was also enjoyed by other producing regions, their thinner wines did not accord well with the blending requirements of the importers. With renewed competition on the international wine market, it barely needed the spread of phylloxera to these vineyards to kill this trade as well.

By contrast, the prune trade, established by the efforts of the immigrant firm of Krsmanović-Paranos from Bosnia and its associates, enjoyed striking success. Yet it was an expensive
and difficult task to implant this trade, facing problems analogous to those faced by the German immigrants in the meat trades, and calling for exceptional entrepreneurial capacities. The Bosnian technique of drying plums in the pušnica had to be imported, and this was a device which the plum producers did not know how to construct or to operate. Krsmanović-Paranos played a large part in its introduction, as also in disseminating the techniques necessary to grow plums suitable for drying. They also took pains to see their output was properly graded and packed to international specifications. In short they had to create an entire commercial infrastructure, that also extended to building a correspondence and credit network both upwards and downwards. This heavy credit dependence led the early prune merchants into active entrepreneurship in banking.

Long after this, importer interests became active in the Serbian plum market, mainly Austro-Hungarian firms seeking supplies of pekmez (cheap jam). Though they dominated this trade from the start, domestic exporters of prunes retained a strong position on the plum market. Their main trade links appear to have been with America, and subsequently with Germany. To offset its competitive weaknesses in respect of correspondence and credit connections, the domestic trade harnessed the strength of the Serbian banks to it, and these came increasingly to channel the trade through their commission brokerage departments.

The impact on the peasant economy of these trades depended, naturally, on the volume of commerce they generated. In its negative aspect, the collapse of the wine trade brought disaster
to the traditional producer regions. For here it had rested on
the peculiarly labour intensive agriculture of small wine
peasants, working land with a low opportunity cost, and as post
phloxera vineyard restoration was intensive also of capital
they were gradually forced out of production. The re-establish-
ment of the vineyards, as far as it went, was in the hands of
an altogether wealthier group, mainly interested in self-consumption,
as well as a few large firms which integrated vineyard ownership
with the satisfaction of local commercial demand.

While the low opportunity cost of the old vineyard often
resulted in its owner being forced off the land, the numerous
plum producers of western Serbia and the Sumadija benefited from
the trade boom partly from the similar circumstance that their
land, too, had a low opportunity cost. The high value to weight
ratio of the processed plum also conferred a high degree of
independence of transport conditions. The world's largest prune
export trade was built to some extent at the expense of self
consumption, but it generated cash incomes in the hands of
producers which substantially exceeded those achieved by the
cereal growing peasants, as this trade (particularly where
drying was carried out on the spot) was more intensive both of
capital and of labour.

The interest of the state for these trades was in respect
of their fiscal and foreign trade potential, which, however,
tended to be difficult to reconcile. Fiscal needs entailed the
sacrifice of the tobacco peasants in the south as the profit-
maximizing state tobacco monopoly prevented the development
of an export trade, and discouraged the expansion of the sown
area. In respect of plums and wine, which could not similarly
be exploited, the foreign trade aspect was the state’s prime concern. Its nurseries achieved good, if limited work introducing improved strains, but its other activities were ill-conceived. The object was to improve the quality of exports. It tried to introduce unrealistically expensive drying machinery at producer level (rather than at trade level where it had a chance of success) but there were few takers. So this had to be supplemented by an expensive organization for the quality control of exports which the trade expended a good deal of effort in trying to circumvent, for the output was easily marketable as it was. Quality depended heavily on natural conditions, and in any case was not so low as the state believed.

The most satisfactory way of improving quality in the prune trade was by complementing the peasant pušnica with industrial redrying. But this made little progress until the loss of Austro-Hungarian redrying facilities during the commercial war. Tobacco, hemp, pekmez and silk also provided bases for industrialization, but the movement was much more limited than with the basic foodstuffs. Mechanical hemp scutching—essential to the expansion of hemp cultivation—was retarded by the politically powerful opposition of the declining ropemaking craft, which also prevented the establishment of an export rope industry. The tobacco monopoly established a large processing establishment, but this was little more than a protofactory, and, in any case, was very inefficiently operated. The mechanical manufacture of pekmez could not develop far till an improved transport network enabled concentrated plant to draw to itself a throughput sufficiently large to employ it efficiently.
Expansion in the production of the 'minor' crops - dominated by that of the plum - offered a real short cut in the growth and commercialization of agricultural production. Rapid expansion took place at a time when barriers on the supply side inhibited the commercialization of cereal growing, and on the demand side curtailed the traditional trade in hogs. Its impetus was maintained till the post-1900 intensification of cereal growing got under way. The plum above all, because of its high yield and transportability, enabled tens of thousands of families to keep pace with their cash needs in areas where there were often few alternatives. The significance can hardly be too highly stressed, in this field as well as in the growth of food processing, of the intervention of immigrant business interests.

Discussion of intensification and commercialization has so far been concerned only with the problems of farming and the processing of farm produce. But although rural landownership was almost universal, by no means all peasants had at their disposal sufficient good land to participate significantly in the developments which were taking place within the farm sector. Numerous poor peasants were to be found throughout the country with but 'a hectare or two' - too little to support them, while a no less numerous group held their land in regions which were suited neither to tillage nor to cash crops. This was peculiarly the case in the south of the country. For both groups the acquisition of cash incomes derived independently of the productive powers of their holdings could be the critical determinant of relative prosperity.

The former group, the village poor, drew their main external incomes from short range casual labouring, mainly in agriculture,
for which, lacking specific skills or physical strength, they were poorly remunerated. This group seems therefore to have tended to emigrate permanently.

In the cash-short regions, alternative systems developed. Cottage industry was insignificant, as also were commercial occupations using female labour, which was anyway fairly fully employed, and local forest based industries, important only in the south west, were not capable of much expansion. Nor was the obsolescent occupation of *kiridžiluk*. In the south east, where the principal deficiency was of cash rather than of grain, numerous villages turned, after a transitional period in migrant harvesting, to more lucrative employment in the building and related trades. The regional distribution of these villages appears to have been associated with Macedonian immigration, settled husbandry on indifferent land, brick and stone housing, and former scratch mining industries. The more seriously grain deficient villages of the south west, which did not develop similar trades were, in contrast, associated with Dinaric immigration, transhumant stockraising, and wooden housing, a social economy which appears to have been less adaptable towards long range migration of any kind. These villages were markedly less prosperous than the builder villages of the south east.

By and large, except in the south west, a stable dynamic equilibrium condition appears to have been achieved in the villages. The absence of reliable and comprehensive data on the subsistence sector of the farm economy precludes our making definitive conclusions on the aggregate of peasant incomes. However, it seems reasonable to conclude that the path and pace of structural change were such as to permit the reabsorption of
most of the natural increase of peasant population within the rural economy. Despite ever increasing population pressure on the land, the level of rural consumption was probably not dissimilar on the eve of the Balkan wars to that which had pertained half a century earlier, permitting the maintenance of a diet with a moderate content of meat and dairy foods, and of a substantial uncommitted money income for discretionary spending.

The development of Serbian industry lies beyond the scope of this thesis, except insofar as it was affected by the capacity of the farm economy to generate supplies of raw material for it. But certain important implications would seem to stem from this research. Dr Lampe has raised doubts as to the capacity of what was still an overwhelmingly agrarian society on the eve of the Balkan wars to provide an internal market sufficient in size to sustain for very long the policy of import substituting industrialization to which the state was committed.\footnote{J. R. Lampe, "Varieties of unsuccessful industrialization ..." J. Econ. H. (1975):1.}

Now, our calculations in preceding chapters (I and III) enable us to provide a breakdown of aggregate peasant cash income and its disposal in 1911:

<table>
<thead>
<tr>
<th>Total before tax</th>
<th>all taxes</th>
<th>savings</th>
<th>purchases at factor cost</th>
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<td>M din (per cap)</td>
<td>M din (per cap)</td>
<td>M din (per cap)</td>
<td>M din (per cap)</td>
</tr>
<tr>
<td>138.6 (53.84)</td>
<td>41.7 (16.19)</td>
<td>22.4 (8.69)</td>
<td>74.56 (28.96)</td>
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<tr>
<td>[%] 100</td>
<td>30.1</td>
<td>16.2</td>
<td>53.8</td>
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**TABLE IX.1.**

THE DISPOSAL OF AGGREGATE PEASANT CASH INCOME IN 1911.
We earlier made a crude approximation for non-farm consumption and savings of 287 million dinars, less tax of 54.6 million, or 232.4 million dinars. Dr Lampe has estimated the total savings rate of the Serbian economy at 50-100 million dinars, deducting savings of 22 million dinars for the farm sector, we are left with non-farm consumption at factor cost of 154-204 million dinars. Purchases from the farm sector, however, ran at 31.3 million dinars, which leaves the urban market for commercially supplied goods and services other than from the peasantry at 123-173 million dinars. This should be compared with the comparable figure for the peasant sector of 75 million dinars. From this we should conclude that the true purchasing power of the whole economy (other than for farm goods) was 198-248 million dinars, of which the peasant share was 30-38%. I do not know whether or not this may be held to justify Dr. Lampe's apparent belief, which was evidently inspired by Spulber, that when considering the demand basis for industrialization, the peasant market may be treated as insignificant.  

Contemporaries were evidently divided in their own opinions: in 1892, a British consul observed "... the peasants of Serbia are represented as a non-consuming element whereas in my belief they form the chief consumers of British cotton yarns which the women spend the winter weaving into cloth". One may entertain some doubts as to whether any manufacturer concerned with selling into the domestic market could afford to ignore the demand of

1Lampe, thesis, p. 49.


3PRO FO 105/96 No. 6 cons. of 10.9.1892.
about a third of it, even if this was highly dispersed. This was, moreover, a growing market, increasing at about 1.6% per capita per annum, while the number of consumers was growing at 1.1% per annum, implying a growth in total consumption by the peasant market of commercially purchased goods and services of 2.05 million dinars per annum at constant 1911 prices. A very high percentage of this demand - between 59.2% and 72.4% (excluding that of one hectare peasants) - was concentrated on clothing and footwear, so that the peasant market for these goods alone was expanding at about 1.3 million dinars per annum, affording good growth potential in the market for a large scale industry whose output in 1910 had only attained 4.9 million dinars. Thus, as large scale import substituting industry in the heavily protected textile and footwear trades had only attained this magnitude, at a time when the peasant market alone was spending about 50 million dinars on these items (and the urban market at least as much again) it was not for want of an internal market.

Prospects for large scale industry were further enhanced from 1913 by the acquisition of Old Serbia and Macedonia, a new if underdeveloped home market of about 1½ million people, with no large scale industry of its own except for a few mills and 'some very primitive' textile factories in the Bitolj region. This area was very soon after annexation importing Serbian flour, beer, cement, rope and sugar.1 Its total import capacity was at this time about 50 million dinars,2 and there was a strong complementarity between it and Serbia proper,

1IKS, Izveštaj za 1912 i 1913, pp. 85-90.
2IKS, Izveštaj za 1912 i 1913, p. 65. Though the text gives the impression that this was a very low absorption capacity, it is, in per capita terms, not much lower than that of Serbia.
with a reasonable expectation that the monetization of its economy would soon expand.

However, it may still have been the case that supply side problems would have prevented expansion of Serbian industry - other than in a very limited way - though Dr Lampe's thesis, which is concerned exclusively with supply side problems, would offer a cautiously contrary view. Analysis of the economics of commercial agriculture seems to support his original views better than his revision. In any case, it has been the purpose of this thesis to demonstrate that the dynamics of developmental change were operating within the farming sector of the economy, whether or not conditions had yet been created which would support the self-sustained growth of industrial output.
GENERAL APPENDIX

STANDARD STATISTICAL SOURCES

1. Standard sources for Serbian foreign trade statistics

1843-1861  S. Đj. Milošević, Spoljna Trgovina Srbije od 1843-1875 godine, Beograd, 1902

1862    Državopis, I

1863    Ibid, II

1864-1865  Ibid, III

1866-1870  Ibid, IV

1871-1875  Ibid, X

1879-1883  Ministarstvo Finansija, Carinsko Odeljenje, Uposredni pregled Spoljne Trgovine Kr. Srbije od 1879 do 1890 godine, Beograd, 1891

1884    Državopis, XIV

1885-1887  Ibid, XV

1888    Ministarstvo Finansija, Pregled Spoljne Trgovine Srbije za 1888 god.

1889-1890  Idem, Spoljna Trgovina Kr. Srbije u 1890 god.

1891    Ibid, u 1891 god.

1892-1895  Idem, Statistika Spoljne Trgovine Kr. Srbije za 1891-1895 godinu, Beograd, 1896

1896-1908  Idem, Statistika Spoljašnje Trgovine Kr. Srbije za 1896, passim

1909-1910  Ministarstvo Finansija, Carinska Uprava, Statistika Spoljašne Trgovine Kr. Srbije za 1909, ... za 1910

1911    Srpske Novine, 23.2.1912

1912    Ministarstvo Finansija, Statistika Spoljašne Trgovine Kr. Srbije, 1912

Summary foreign trade statistics are also to be found in Statistički Godišnjak for the year in question. The source for 1911 gives exports only. I am grateful to Dr J. R. Lampe for pointing out this source for the 1911 statistic, which does not seem to appear anywhere else.
2. Standard sources for price statistics 1890-1908

SCPP 1890-95, pp. 50-3, 108-11, 166-9; S.G. 1893, pp. 134-41;
S.G. 1894-95, pp. 212-27; SCPP 1896-1900, pp. 50-3, 108-11,
166-9, 224-7; S.G. 1900, pp. 232-9; S.G. 1901, pp. 272-9;
S.G. 1902, pp. 274-81; S.G. 1903, pp. 298-305; S.G. 1904,
pp. 322-9; S.G. 1905, pp. 312-9; S.G. 1906, pp. 316-23;
S.G. 1907-08, pp. 366-81.

3. Standard sources for rail freight statistics

These were not issued in a separate publication till 1895.
Before this they appeared from time to time in Srpske Novine.
1888 : S.N. 3.6.1889
1890 : S.N. LVIII (1891), 177, pp. 951-2
1891 : S.N. LIX (1892) 276, pp. 1,247-8
1893 : S.N. LXII (1895), 101, p. 530, incorrectly numbered 550
1894 : S.N. LXII (1895), 233, p. 1,182
1895-1911, in S.D. Yên, 1895, passim. Note. I have not been able
to find the volumes for 1897, 1906 and 1910. The rest are all
to be found at the Narodna Biblioteka S.R.Srbije, Belgrade.

4. Standard sources for crop (area, yield and value) statistics*

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<td>S.G. 1896-97, pp. 198-205</td>
<td>pp. 208-210</td>
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<td>S.G. 1900, pp. 186-192</td>
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<td>S.G. 1901, pp. 225-230</td>
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<td>1903</td>
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<td>pp. 239-241</td>
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<td>1904</td>
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<td>1905</td>
<td>S.G. 1905, pp. 243-248</td>
<td>pp. 249-251</td>
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<td>S.G. 1906, pp. 243-248</td>
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<td>1907</td>
<td>S.G. 1907-08, pp. 243-248</td>
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<td>pp. 258-260</td>
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<td>1911-12</td>
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SOURCES CONSULTED

A MANUSCRIPT SOURCES

Yugoslavia

Državni Arhiv S. R. Srbije (D. A. S.), Belgrade, Karamžijeja Ul.

-Ministarstvo Narodne Privrede (M. N. P.)
-Trgovinsko odeljenje (T) (Commercial department)
-Statističko odeljenje (S) (Statistical department)
-Ministarstvo Finansija (Min. Fin.)
-1863-4 Popisne Knjige (Census books)

Arhiv Grada Beograda, Belgrade, Vase Čarapića 20 (A. G. E.)

-Vladimir Jovanović papers, ZPO, k -XIII/II, 18

-Milivoje M. Kostić, "Podaci o životu i radu Beogradskih privrednika, trgovaca i zanatlija XIX i XX vekama" (Data on the life and work of the Belgrade businessmen, merchants and craftsmen on the 19th and 20th centuries) k-V, 2-4, Inv. Br. 296, 322, 325, 330 (M. M. Kostić, "Podaci")

-Milivoje M. Kostić, izvoznik, industrijalac, publicista i novinar (M. M. K., exporter, industrialist, publicist and journalist) "Autobiografija" (M. M. Kostić, "Autobiografija") Folio numbering of the "Autobiografija" in this thesis refers to a stenographic copy executed for me through the good offices of the director of the archive, and in my possession, as the original was in a disordered and barely legible condition.

Muzej u Smederevu, Smederevo (M. u S.)

-Arhiwa Arona Despinića (Aron Despinić archive, Correspondence of Sava Stanković. (SS). See text, p. 167

Arhiv Šapca, Šabac (A. Š.)

-Two files on Kosta Glavinić LO 127, 113
-Trgovina Braće Ilića, tefteri, knjige voresuje XXXIV

Istoriski Arhiv, Valjevo (I. A. V.)

-Valjevská štedionica, knj. 137, (kopija pisama)
-dnevnik Bakalske Radnje Markovića Bakanovića 1888-90
Belgium

Ministère des Affaires Étrangères et du Commerce Extérieur,
Bruxelles, Rue des Quatres Bras, 2 (BAE)

-Correspondence consulaire. 2911, I-VI Serbie 1875-

France

Archives du Ministère des Affaires Étrangères, Paris, Quai d’Orsay (AAE)

-Correspondence Consulaire et Commerciale, Belgrade (CCB) tomes 1-9, 1838-1901; Serbie, N.S. mines, finances.

Archives Nationales, Paris, Palais Soubise (A.N.)

-F 12 7179 Nisch, Belgrade

U.K.

Public Record Office, London (PRO)

-Foreign Office Consular and Commercial Correspondence, Servia, 1837-1914, FO 78, FO 105, FO 368

-Registry of defunct companies, Servian Bacon Curing Company Limited 1891/5033/33771; Anglo Servian Trading Company Limited, 1910/13455/112882

B PRINTED CONSULAR REPORTS

Belgian

Royaume de Belgique, Ministère des Affaires Étrangères et du Commerce Extérieur, Recueil Consulaire (R.C.) In chronological sequence.

Abbreviation

C Be

- Emile de Borchgrave, La Serbie Administrative Economique et Commerciale, (Bruxelles et Belgrade, 1883)

15.6.1887, R.C. LXI

Rapport de Paul de Groote, Belgrade, 15.6.1887

13.10.1887, R.C. LXI

Rapport sur les relations commerciales de la Serbie ... en 1886 ... (Bartholeyns de Fosse-laert)

17.5.1889, R.C. LXVII

Belgrade, 17.5.1889 (Conrad de Buisseret)
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<td>Rapport Commercial et Economique sur la Serbie, Belgrade, 4.10.1889</td>
<td>(Baron Guillaume)</td>
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<td>4.10.1889</td>
<td>Rapport Commercial et Economique sur la Serbie pendant l'annee 1889 Belgrade, 1.3.1891</td>
<td>(Comte Errembault de Dudzeele)</td>
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<td>1.3.1891</td>
<td>Rapport sur le mouvement commercial de la Serbie</td>
<td>(Comte Errembault de Dudzeele)</td>
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<td>4.10.1889</td>
<td>Compte Rendu d'un voyage d'exploration.</td>
<td>Belgrade, 29.10.1891, (Comte Errembault de Dudzeele)</td>
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<td>Belgrade, 29.10.1891, (Comte Errembault de Dudzeele)</td>
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<td>Rapport sur le mouvement commercial de la Serbie pendant l'annee 1889 Belgrade, 1.3.1891</td>
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<td>Belgrade, 29.10.1891, (Comte Errembault de Dudzeele)</td>
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**British Parliamentary Papers (P.P.)** In chronological sequence. (A.S. = Foreign Office Annual Series, M.S. = Foreign Office Miscellaneous Series)

**Abbreviation C Br (S)**

**Report**

1863 | Report of Consul-General Longworth on the trade of Servia in the year 1863, Belgrade 5.11.1864. C.3478 of 1865 P.P. 1865 LIII

1863-64 | Report by Mr. Acting Consul Blunt on the trade of Servia for the years 1863 and 1864, Belgrade 20.4.1865 C.3569 of 1865 P.P. 1865 LIV

1871 (1) Servia. Reports respecting the condition of the industrial classes and the purchase power of money in foreign countries, 1871. (Vice-Consul Watson) C.414 of 1871 P. P. 1871 LXVIII

1871 (2) Report by Acting Consul-General Watson on the trade of the principality of Servia, Belgrade, 2.3.1872 C.563 of June 1872 P. P. 1872 LVII

1872 Report by Consul-General Longworth on the trade of Servia for the year 1872, Belgrade, 26.11.1873 C.914 of 1874 P. P. 1874 LXVI

1879 Report by Vice-Consul Baker on the trade and commerce of Nisch for the year 1879. Nisch, 20.3.1880 C.2577 of 1880 P. P. 1880 LXXIV

1880 Report by Vice-Consul Baker on the trade and commerce of Servia for the year 1880. Belgrade, 3.5.1881 C.2917 of June 1881 P. P. 1881 XC

1882 Servia, Nisch. Report by Vice-Consul Baker on the trade and commerce of Servia for the year ended 29th September 1882 C.3593 of 1883 P. P. 1883 LXXII

1886 (Railways) Report by Mr. Johnstone on the railways of Servia. Belgrade, 8.1.1886 C.4651 of 1886 P. P. 1886 LXVII

1886 (Vansittart) General review of the state of the trade in Servia during the year 1886. A.S.176 C.4923-99 of 1887 P. P. 1887 LXXXVI


1895-96 R. D. G. Macdonald, Report on the trade and commerce of Servia for the years 1895-96. A.S.1845 C.8277-63 of 1897 P.P. 1897 XCIII


1898-99 Report on the trade and commerce of Servia for the years 1898 and 1899 by Mr. Consul Macdonald. A.S.2383 Cd.1-20 of 1900 P.P. 1900 XCVI

1899-1900 Report on the trade and commerce of Servia for the years 1899 and 1900 by Mr. Consul R. D. G. Macdonald. A.S.2553 Cd.429-11 of 1901 P.P. 1901 LXXXIV

1900-01 Report on the trade and commerce of Servia for the years 1900-01 by Vice-Consul the Hon. W. Thesiger. A.S.2757 Cd.786-61 of 1902 P.P. 1902 CX

1902 Report on the trade of Servia for the year 1902 by Mr. Vice-Consul Thesiger. A.S.2958 Cd. 1386-35 of 1903 P.P. 1903 LXXVIII

1902-03 Report on the trade of Servia for the year 1902 and for the first nine months of 1903 by Mr. Vice-Consul Thesiger. A.S.3139 Cd.1766-73 of 1904 P.P. 1904 Cl.Pt.1.

1903 Report on the trade of Servia for the year 1903 by Mr. Vice-Consul Thesiger. A.S.3329 Cd. 2236-73 of 1905 P.P. 1905 XCII
"Pork and Bacon Curing Industry of Belgrade"
Journal of the Board of Agriculture X, June 1903-March 1904

1904
Report on the trade of Servia for the year 1904 by Mr. Vice-Consul Thesiger. A.S.3529 Cd. 2692-54 of 1906 P.P. 1906 CXVIII

1906
Report on the trade of Servia for the year 1906 by Mr. Vice-Consul Blakeney. A.S.3962 Cd. 3727-45 of 1908 P.P. 1908 CXV

1907
Report on the trade of Servia for the year 1907 by Mr. Vice-Consul Blakeney. A.S.4131 Cd. 3727-214 of 1908 P.P. 1908 CXV

1903
Report for the year 1903 on the finances of the Kingdom of Servia, by Mr. J. B. Whitehead, H. M. Minister at Belgrade. A.S.4112 Cd. 3727-195 P.P. 1908 CXV

1912
Report on the finances of Servia for the year 1912 by Sir Ralph Paget, H. M. Minister. A.S.4945 Cd. 6005-118 P.P. 1912-13 XCIX

(on Austria-Hungary)

Abbreviation C Br (A.H.)

Report

1877 (A)

1877 (H)

1879
Report by Consul General Gosling on the commerce, industry and finances of Hungary for the year 1879. C.2556 P.P. 1880 LXXIII

1880

1886

1890 Observations on Austrian trade in 1890 and the Austrian budget and on the Austro-Hungarian tariff policy and commercial relations, Vienna 19.3.1891. A.S.852 C.6205-83 P.P. 1890-91 LXXXV

1896 (T) J. G. Haggard, Report on the trade and commerce of Trieste for the year 1896. A.S. 1875 C.8277-93 of May 1897 P.P. 1897 LXXXIX


1897 W. Beauclerk, Report on the trade and commerce of the Kingdom of Hungary for the years 1896-1897. A.S.2016 C.8643-38 of November 1897 P.P. 1898 XCIV

(on Bosnia)

<table>
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<tr>
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1858 Turkey. Bosnia. Report of Mr. Jones, British Acting Consul in Bosnia on the commerce and present condition of that province. C.2579 P.P. 1859 Sess.2 XXX


1873 Turkey. Bosna Serai. Report by Consul Holmes on the trade and commerce of Bosna Serai for the year 1873, Bosna Serai, 17.1.1874. C.992 of June 1874 P.P. 1874 LXVI

1885 Austria-Hungary. Sarajevo. Report by Consul Freeman on the trade and commerce of Bosnia and the Herzegovina for the year 1885, Sarajevo, 3.4.1886. C.4737 of May 1886 P.P. 1886 LXVI

1890 E. B. Freeman: Report on the plum trade in Bosnia for the year 1890, Sarajevo 2.2.1891. M.S.193 C.6206-13 of February 1891 P.P. 1890-91 LXXXIV


1899 Report on the trade and commerce of Bosnia and the Herzegovina for the year 1899 by Mr. Consul General Freeman. A.S.2552 Cd.429-10 of February 1901 P.P. 1901 LXXXI

1903 Report on the trade and commerce of Bosnia and the Herzegovina for the year 1903 by Mr. Consul General Freeman, Sarajevo 15.9.1904. A.S.3297 Cd.2236-41 of October 1904 P.P. 1905 LXXXVII

1908 Report on the trade and commerce of Bosnia and the Herzegovina for the year 1908 by Mr. Consul Freeman. A.S.4305 Cd.4446-129 of July 1909 P.P. 1909 XCII

(on other countries)

<table>
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<tr>
<td>(G) 1879</td>
<td>Report from H. M. Representatives in Germany on the subject of the new German tariff. C.2419 of 1879 P.P. 1878-79 LXXXIII</td>
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<td>(G) 1888</td>
<td>Reports on the German grain duties. 1888. M.S.77 C.5253-13 P.P. 1888 XCIX</td>
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<td>(G) 1895</td>
<td>Germany. Report for the year 1895 on the trade of the district of the Hamburg Consulate General. A.S.1759 C.7919-127 of July 1896 P.P. 1896 LXXXVI</td>
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<tr>
<td>(G) 1896</td>
<td>Germany. Report for the year 1896 on the trade of Hamburg. A.S.1934 C.8277-152 of 1897 P.P. 1897 XCI</td>
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<tr>
<td>(Bul) 1910</td>
<td>Report on the preparation of French plums by Mr. Walter R. Hearn, H. M. Consul at Bordeaux. M.S.546 Cd.430-1 of January 1901 P.P. 1901 LXXX</td>
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<td></td>
<td>Report on the trade of Bulgaria for the year 1910 by Mr Vice-Consul Heard A.S.4817 Cd. 5465-210 P.P. 1911 XC</td>
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</table>
French
René Millet, La Serbie Économique et Commerciale, (Paris, 1889)

Austro-Hungarian

<table>
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<th>Abbreviation</th>
<th>Report</th>
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U.S.

C OTHER PRINTED GOVERNMENT AND INSTITUTIONAL DOCUMENTS

British
Correspondence respecting the Commercial Relations between Great Britain and Servia. No 2. Treaty of Commerce and Navigation between Austria-Hungary and Servia, signed May 6 1881. C.2939 of 1881 Parl. Papers. 1881 XCIX

Copy of return showing in a comparative form the rates of import duty now levied in Germany and the rates which were in existence previous to the passing of the law of the 22nd May 1885. C.309 of 31.7.1885 Parl. Papers. 1884-85 LXXI

Statistical Abstract (Foreign Countries) 1860-1875/6 Parl. Papers. 1877 LXXXV

Ibid, 1872 to 1881-82, Parl. Papers. 1883 LXXVI

Ibid, 1886 to 1895-96, London 1898

Ibid, 1900-1910-11, London, 1913

German
Statistisches Jahrbuch für das Deutsche Reich, 1907

Hungarian
Magyar Statisztikai Évkönyv I, 1893-
Austro-Hungarian

Ausweise über den Auswartigen Handel Oesterreichs, 1867-
Oesterreichische Statistik

Statistik des Auswartigen Handels des Oesterreichische
Ungarische Zollgebiets

U.S.

U.S.A., department of Commerce, Statistical Abstract of
the U.S. in 1914

Serbian

State statistical publications

Abbreviation

Državopis Državopis Srbije (State / statistical 7 Record
of Serbia) in 20 volumes, Beograd 1860-1894

S.G.,year Statistički Godišnjak Kraljevine Srbije / Statistical
Yearbook of the Kingdom of Serbia / I, 1893- XII, 1907-08. Beograd 1895-1913

Statistika Statistika Kraljevine Srbije (Statistic of the
Kingdom of Serbia) in 32 volumes 1891-

P .S.D.S. Popis stanovništva i domaće stoke u Kraljevin-
Srbiji 1895 (Census of population and domestic
livestock in the Kingdom of Serbia 1895); Ibid, 1910

S.C.P.P. Statistika cena poljoprivrednih proizvoda u Kr;
Srbije 1890-1895 (Statistic of prices of agricul-
tural produce in the Kingdom of Serbia 1890-
1895); Ibid, 1896-1900

Ministarstvo Finansija, Carinsko Odeljenje (from 1909,
Carinska Uprava):

S.S.T. 1879-90, Uporedni pregled spoljne trgovine Kr. Srbije od
passim 1879 do 1890 godine, (Comparative review of the
foreign trade of the Kingdom of Serbia from
1879 to 1890) Beograd, 1891

Pregled spoljne trgovine Kr. Srbije za 1888 god
(Review of the foreign trade of the Kingdom of
Serbia for 1888) Beograd, 1891

---------- za 1890, Beograd 1891
---------- u 1891, Beograd 1893
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<tr>
<td>Statistika Spoljne Trovine Kraljevine Srblije za 1891-1895 godinu</td>
<td>Statistic of the foreign trade of the Kingdom of Serbia for 1891-1895; Beograd, 1896</td>
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<tr>
<td>Statistika Spoljne Trovine Kr. Srblije za 1896, passim</td>
<td>Statistic of the foreign trade of the Kingdom of Serbia for 1896, passim</td>
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**Srpske Državne Železnice**

**Abbreviation**

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<td>1895-1909</td>
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<td>Statistički Pregled, Saobraćajnih Rezultata Srpskih Državnih Zeleznica u 1895 god.</td>
<td>Statististical Review of the traffic results of the Serbian State Railways in 1895; Beograd, 1896</td>
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<tr>
<td>1911</td>
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<td>Godišnji Izveštaj i Statistički Pregled Saobraćajnih Rezultata svih Srpskih Državnih Zeleznica u 1911 god.</td>
<td>Annual report and statistical review of the traffic results of all the Serbian State railways in 1911; Beograd 1912</td>
</tr>
<tr>
<td>Tarifa 1884</td>
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<td>Tarifa za Vozidbu Putnika i Robe na Prvoj Kr. Srps. Državnoj Zeleznicii. (Tariff for the carriage of passengers and goods on the first Royal Serbian State Railway.)</td>
<td>Beograd 1884</td>
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<tr>
<td>Tarifa 1885</td>
<td></td>
<td>Tarifa ... na pruzi Beograd – Niš od 1. IX. 1885 (Tariff ... on the track Beograd-Niš from 1.9.1885)</td>
<td>Beograd 1885</td>
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For railway statistics prior to 1895, see standard sources for Serbian railway statistics.

**Ministarstvo Narodne Privrede**

**Abbreviation**

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<th>MNP 1906.1</th>
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<th>Izveštaj o radu odeljenja za trogvinu, radinost i saobraćaj. (Izveštaji podneseni ministru narodne privrede o dosadašnjem radu na unapređenju domaće privrede i merama za dalji rad u tome pravcu, I)</th>
<th>Report on the work of the department for trade manufactures and traffic (Reports submitted to the Minister of the National Economy about the work to date on the advancement of the domestic economy and about measures for further work in that direction, I)</th>
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MN 1906.2 Izveštaj o radu odeljenja za poljsku privredu i veterinarstvo. (Izveštaji podneseni ministru narodne privrede ... II) / Report on the work of the department for the field economy and veterinary surgery, (Reports submitted to the minister of the national economy ... II) Beograd, 1907

MN 1907.1 "Izveštaj odeljenja za trgovinu radinost i saobraćaj" Izveštaji podneseni ministru narodne privrede o radu na unapređenju domaći privrede u 1907 ("Report of the department for trade, manufactures and traffic" Reports submitted to the minister of the national economy on the work on the advancement of the domestic economy in 1907) Beograd, 1908

MN 1907.2 "Izveštaj o radu odeljenja za poljsku privredu i poljoprivredne ustanove u 1907" Izveštaji podneseni ministru narodne privrede ... u 1907 (Report on the work of the department for field economy and agricultural institutions in 1907, Reports submitted to the minister of the national economy ... in 1907) Beograd, 1908

MN 1908-9.1 "Odeljenje za trgovinu, radinost i saobraćaj" Izveštaji podneseni ministru narodne privrede ... za 1908 i 1909 godinu. (Department for trade, manufactures and traffic" Reports submitted to the minister of the national economy ... for 1908 and 1909) Beograd, 1911

MN 1908-9.5 "Izveštaj o radu odeljenja za poljsku privredu i veterinarstvo", Izveštaji ... za 1908 i 1909 godinu (Report on the work of the department for the field economy and veterinary surgery", Reports ... for 1908 and 1909) Beograd, 1911

MN 1908-9.8 "Okružni ekonomski izveštaji" (Okruž economic reports") Izveštaji ... za 1908 i 1909 godinu, Beograd, 1911


+ one of a series of publications to support the Serbian exhibit at the various international exhibitions. They are quite informative sources, though naturally, uncritical. +

La SERBIE à l'Exposition Universelle de 1905 à Liège. Belgrade, 1905

+ of the same series. Agriculture is convenient-ly reviewed product by product. +
La SERBIE à l'Exposition Universelle de 1911 à Turin Belgrade, 1911

+ the last and most informative of this series. Includes sections on industry, mining etc. +

MINISTERE du Commerce, de l'Agriculture et de l'Industrie, Notice Sur l'Agriculture en Serbie, (Paris 1889)

+ the earliest, issued for the Paris exhibition of 1889. Very sketchy, but with interesting information on an attempt to promote sugar raising. +

SRBIJA NA BALKANSKOJ IZLOŽBI u Londonu 1907, (Serbia at the Balkan States Exhibition in London 1907) Beograd 1907

+ contains some useful material on industry. +

ZANATI I INDUSTRIJA u prisajedinjenim oblastima i zanati u starim granicama Kr. Srbie, Izvestaj Milivoja M. Savica, inspektora Ministarstva Narodne Privrede podnesen g. Ministru Narodne Privrede. (Crafts and Industry in the united territories and crafts within the old frontiers of the Kingdom of Serbia, a report of M. M. S., inspector of the Ministry of the National Economy submitted to the Minister ... )

+ includes a detailed report on pečalba in Macedonia, and on the dundjers and potter pečalbar trades in Serbia. +

Miscellaneous

INDUSTRIJSKA KOMORA KR. SRBIJE, "Izveštaj o Radu i Sтанимu industriji u 1910 godini (Report on the work and condition of industry in 1910) Beograd, 1911

+ review of business conditions for each industry, with tables of output, raw material inputs, labour force and capital stock for each industry, but with omissions representing the non-co-operation of respondents. +

Ibid., u 1911 godini; u 1912 i 1913 godini.

"IZVEŠTAJ O RADU KOMISIJE za Naseljenje u Oslobodjenim Predelima" (Report on the work of the commission for settlement in the liberated territories) Glasnik Ministarstva Finansija, (Beograd) I.17 16.10.1882

+ serves also as an economic survey of the area. Report continues in subsequent numbers. +
Vladimir JAKŠIĆ, "Stanje Zemljoradnje u Srbiji". Glasnik Srpskog Učenog Drustva, XLI, Beograd 1875.

+ summary of 1866 and 1867 land and livestock censi, with comparative figures for 1847 and estimates of yields. +

Vladimir JOVANOVIĆ, "Statistički pregled našeg privrednog i društvenog stanja" (Statistical review of our economic and social condition.) Glasnik Srpskog Učenog Drustva, L, Beograd, 1881

+ summary of 1866 and 1874 census materials used for comparative purposes. +

Kr. SRBIJA. MINISTARSTVO VOJNO, Statistika Država Balkanskog Poluostrva I. Kraljevina Srbija, (Statistic of the states of the Balkan Peninsula, I. The Kingdom of Serbia) Beograd, 1890

+ mainly concerned with mining, but includes a survey of other industries. +

SPOMENICA BEOGRADSKE TRGOVAČKE OMLADINE, 1880-1930 (Memorials of the Belgrade Junior Chamber of Commerce 1880-1930) Beograd, 1931

+ A coffee table edition for 50th anniversary self-congratulation, of pioneer institution for commercial education in Serbia. Besides a short economic history of Serbia, and details of the history of the BTO, there are short biographies of benefactors, past presidents and others connected with the institution, who were usually prominent commercial figures. +

SRPSKI CENTRALNI KOMITET: Srbi u Imovnom Pogledu pre. za Vreme i Posle Svetskog Rata, (Serbia in its property condition before, during and after the world war) Zenev, Geneva 1918

+ National Capital and National Income studies hastily compiled from inadequate data in connection with Serbia’s reparation claim. +

TRGOVAČKA KOMORA za Kraljevinu Srbiju; (Chambers of Commerce for the Kingdom of Serbia), Izveštaj za godinu 1911, a. Izveštaj o trgovini za 1911. (Report for the year 1911, a. Report on trade for 1911) Beograd, 1912

+ Review of the export trade, in particular attempts to export through Salonika. +
TRGOVAČKA KOMORA za Kraljevinu Srbiju; Izveštaj za 1912 i 1913 godinu, (Report for 1912 and 1913) Beograd, 1914

+ sketchy but contains some interesting material on 'Commercial Links with New Serbia' - i.e. with territories annexed during the Balkan Wars. +

D OTHER PRINTED DOCUMENTS


+ the brief notes of a well informed traveller. +

ODREDJENI ODBOR DA SE PROČITA ZBORU, Zašto Šabac Opada? (Committee composed to report to the meeting: Why is Sabac declining?) Sabac, 1885

+ Šabac merchants protest decline in Šabac trade following closure of Bosnian frontier and Austrian discrimination against the hog export. Improvement of communications and government intervention sought. +

Leontije PAVLOVIĆ, Arhiva Arona Despinića o Trgovini Srbije i Austrougarske od 1808-1859. (The archive of Aron Despinić on the trade of Serbia and Austria Hungary /šio7 from 1808 to 1859) Smederevo, 1968

+ the remarkable collection of business letters of a produce exporting and importing firm which did business with Serbia from its base across the Danube from Smederevo. The volume does not include most of the documents referred to in the text, which relate to affairs of the firm after the founder's death. The Despinić documents are held in the Smederevo Museum for which they were collected by Dr. Pavlović, its director. +

, Smederevo u XIX veku, (Smederevo in the nineteenth Century) Smederevo, 1969

+ an edition of the Smederevo census enumerations of 1833 and 1862/3, footnoted with massive information about the personalities who appear in the registers and their families and descendants. The work of an experienced local historian. Lack of indexing in this and the work on Despinić is a disastrous lacuna. +
Branko PERUNIČIĆ (ed), Čačak i Gornji Milanovac, (Čačak and Gornji Milanovac) in two volumes, Čačak, 1968 and 1969

+ a badly organized selection of nineteenth century documents pertaining to these towns. Volume I covers 1815-1865, but the 1863 census appears in Volume II. +

, (ed), Kruševac u jednom veku, 1815-1914, (Kruševac in one century, 1815-1914)

+ a similar and even more voluminous exploitation of documents on Kruševac. +

St. POPOVIĆ, "Ekonomni Izveštaj o putu u Knjaževac, Pirot Vranje, Leskovac i Niš, I" (The Economic report on the road to Knjaževac, Pirot, Vranje, Leskovac and Niš, I) Glasnik Ministarstva Finansija II (1882), 37 and 38

+ a semi-official report on economic conditions in the South-East of the country in the wake of the war with Turkey. Of great interest as an information source on the commerce of Knjaževac, but the sections on the other towns appear never to have been written. +

RAD PRVE KONFERENCIJE Izaslanika Trgovačkih i Trgovačko Zanatlijskih Omladina Kraljevine Srbije, (The work of the first conference of the delegates of the commercial and commercial-craft junior chambers of commerce of the Kingdom of Serbia Beograd, 1907

+ The minutes of this conference, which was called essentially to propagande the promotion of Sunday commercial schools and enforcement of the Sunday closing laws. +

SPOMENICA PEDESETOGODIŠNJEG RADA SMEDEREVSKE KREDITNE BANKE 1871-1921. (Memorials of the fifty years' work of the Smederevo Credit Bank 1871-1921) Smederevo, 1929

+ mainly financial accounts, but includes a few surviving chairman's reports on year to year business conditions. +

TRGOVINSKO-ZANATLIJSKI ŠEMATIZAM 1902-03 (Commercial-Craft directory 1902-03)

TRGOVINSKO-ZANATLIJSKI ŠEMATIZAM za 1911 (Commercial-Craft directory 1911)


+ a carefully edited selection of documents illustrating aspects of the human side of the development process in East Central and Balkan Europe. +

E LITERATURE

BOOKS FIRST PUBLISHED BEFORE 1930


Mihailo AVRAMOVIC, Naša Seljačko Gazdinstvo. (Our peasant proprietorship) Beograd, 1928

+ report of a survey carried out on the eve of the Balkan Wars of cash receipts and expenditures and of other economic measurements for 835 peasant properties of varying sizes in Serbia. Very useful if approached with caution as no similar surveys existed. +

A. Hulme BEAMAN, Twenty Years in the Near East London, 1898

F. BIANCONI, Cartes Commerciales. Nr. 4, 1ère Série. Royaume de Serbie. Paris, 1885

+ A contemporary guide to business prospects in the Serbian market. Well informed though much of the information is derived from other published sources. +

Abelardo BOKALARI, O Kvalitetu Srpskih Volova (On the quality of Serbian oxen) Beograd, 1906

+ Market report on a trial consignment of Serbian oxen to Italy. Useful data on ages, weights, etc. +

Ami BOUÉ, La Turquie d'Europe, III Paris, 1840

+ The classic contemporary travel account of the economic life of the Balkans in the 1830s. Boué was an unusually acute and painstaking economic observer. +
Recueil d’Itineraires dans la Turquie d’Europe, I and II, Vienna, 1854

+ Provides information on topography, town sizes, etc. and regional details to supplement the above. +

William E. CURTIS, The Turk and His Lost Provinces, Chicago, 1903

Edouard DAVELUY, La Serbie. Notes Historiques, Statistiques et Commerciales, Bruxelles, 1907

Rev. W. DENTON, Servia and the Servians, London, 1862

+ Though not primarily concerned with economic matters, Denton’s book is studded with fragments of great economic interest which he exasperatingly failed to enlarge on. Note particularly his connection with the British Majdanpek venture. +


+ Printed University of Paris doctoral thesis. From a narrow range of printed sources. +

M. E. DURHAM, Through the Lands of the Serb, London, 1904

G. GODCHAUX AND E. MONNOT, Notes sur la Serbie, Bruxelles, 1910

Jaša GRGASEVIĆ, Industria Srbljskog Crnogora, (The industry of Serbia and Montenegro), Zagreb, 1924

+ A fairly comprehensive compendium of details of privately owned enterprises at the date of writing, which also contains a large amount of data relevant to the pre-war period. An important work. +

Angelo de GUBERNATIS, Le Serbie et les Serbes, Florence, 1897

+ Although an eyewitness account Gubernatis was content to draw most of his economic information from other printed sources, without bothering to update it. +

Todor G. ILIĆ, Iz Privrednog Života Srbije i Statističke Beleške (From the economic life of Serbia I, Statistical notes), Beograd, 1910

+ More works on the economic life of Serbia, but primarily from printed sources. +
L-A JANITCH, *La Serbie au Point de Vue Economique, Paris*, 1910

+ Printed University of Paris Doctoral thesis. Though essentially a secondary source, this is one of the better of the French theses, and the author's personal experience of the topics concerned is apparent. +

Bogoljub JOVANOVIĆ, *Srpska Zagranična Trgovina* (Serbian International trade) Beograd, 1873

+ free trade tract. +

F. KANITZ, *Serbien. Historisch-ethnographische Reisestudien aus den Jahren 1859-1868.* (Serbia. Historic-Ethnographic travel studies from the years 1859 to 1868) Leipzig, 1868


Vladimir KARIĆ, *Srbija. Opis Zemlje, naroda i države.* (Serbia. A description of the country, the people and the state.) Beograd, 1887

+ Key contemporary work of human and economic geography. Provides a mass of material on agriculture and commerce, and is particularly useful in its details on the economic functions of the towns. +


+ A very valuable and little known work. Kostić, ordered to perform citizen draft duties in building the defences on the Bulgarian frontier, took the opportunities created by his outward and return journeys to visit and report in detail on the work of every major industrial installation on his route. It includes the only eye witness account known to me of a visit to the Velika Plana meat factory. +

KOSTIĆ, *Srpska Izvozna Trgovina od 1893-1903 godine* (The Serbian export trade from 1893 to 1903) Beograd, 1905

+ A work made more useful than most on this topic by Kostić’s close involvement in the operation and politics of the exporting business. +
Jovan KRIKNER, Industrie und Industriepolitik Serbiens (Serbian industry and industrial politics) Halle, 1913

+ doctoral thesis. From secondary sources.
  Purely descriptive. +

Dragisa LAPČEVIĆ, Položaj Radničke Klase i Sindikalni Pokret u Srbiji (The condition of the working class and the syndicalist movement in Serbia) Beograd, 1928

+ deals exclusively with Serbia before World War I. An important, if biased, source of information on labour and labour problems. Contains statistical information not elsewhere available, but the propagandist nature of the text means that the data is not always trustworthy. +

Naša Stara Trgovina, (Our old trade). Beograd, 1926

+ A cursory work, but with some fascinating insights into merchant attempts to improve livestock breeds. +

LA SERBIE et La Bulgarie en 1876, Explorées par un Officier d'Etat Major Attaché d'Ambassade. Paris, 1876

Emile de LAVELEYE, The Balkan Peninsula (Tr: Mrs Thorpe) London, 1887

E. LAZARD & J. HOGGE: La Serbie d'Aujourd'hui, II, Gembloux, 1900

+ Contains an extensive economic survey, but suffers from use of outdated sources. +

Joseph MALLAT, La Serbie Contemporaine. In two vols. Paris, 1902

+ attempts to be a comprehensive survey of economy, history, culture, etc. and although useful as a source much of the information, being drawn from earlier works was out of date at the time of writing. +


M. Dj. MILIČEVIĆ, Beležke uz Put Kroz Peti Okružja, (Notebooks along the route through five departments) Beograd, 1862

+ account of a journey through okruzi of Podrinje, Užice, Čačak, Kruševac, and Aleksinac. The comments on administrative problems are of interest. +
Kneževina Srbija (The Principality of Serbia)
Beograd, 1876

+ Standard contemporary source of geographic reference, heavily used by local historians. +


+ an extension to Kneževina Srbija to provide the corresponding details for the territories annexed in 1878. +

S. Dj. MILOŠEVIĆ, Spolja Trgovina Srbije od 1843-1875 godine, (The foreign trade of Serbia from 1843 to 1875) Beograd, 1902

+ The only printed source for pre-1862 foreign trade statistics. Some of the comments are also worth noting. +


+ contains a moderately useful economic survey, partly at first hand. Was probably written in 1912. +

Momčilo A', NINČIĆ, O Značaju i Ulozi Srpskog Trgovca (On the significance and the roles of the Serbian Merchant) Beograd, 1910

+ short tract on the development of native participation in Serbian commerce. +

Dragoljub NOVAKOVITCH, La Zadrouga (Les Communautés Familiales Chez les Serbes, Paris 1905

+ Printed doctoral thesis. A jurist's view of the zadruga. Emphasis is (misleadingly) placed on the unusual large zadruga, but the account of the economic life of several large zadruge which the author visited is of great interest. +

Slavoljub PANIĆ, Mačvanski Pečalbari (Migrant workers from the Mačva) Beograd, 1912

+ More wide ranging than its title indicates, this work constitutes a short contemporary survey of the economic life of certain Mačva villages. +

Sreten PASIĆ, Kroz Rudnički Okrug, Putniške Uspomene, (Through Rudnik Department. Travel notes.) Sremski Karlovci, 1903

+ Interesting and often amusing account of the social life of this region. Pašić was a keen observer. +
Andrew Archibald PATON, Servia, or a Residence in Belgrade
London, 1845

+ Valuable for its period rather than for its profundity. +

Researches on the Danube and the Adriatic, I.
London, 1862

Ljubomir PAVLOVIĆ, Kölbvara i Podgorina (Kolubara and Podgorina) Naša Veličina Srpskih Zemalja IV. Beograd, 1907

+ the work of a distinguished contemporary native anthropologist, it also contains a useful section on economic life. +

Jelenko PETROVIĆ, Reforma Trgovinske Statistike, (Reform of the Commercial statistics), Beograd, 1909

+ describes how the foreign trade statistics were made up and the deficiencies in the process. Shows how the changes in the basis for taxation affected the quality of the statistics. Indicates that export quantities are reasonably accurate, but that valuations were less so. Import statistics dramatically understate for propagandistic reasons. +

Pećalbari, narocito iz Okoline Pirot (The Požar, especially from Pirot region) Beograd, 1920

+ the fruit of a one man survey in about 1912 of migrant labouring and its causes in the Pirot region. With statistical data. +

D. J. POPOVIĆ, O Cincarima, (About the Cincars) Beograd, 2nd ed’n, 1937 (First published in 1927)

+ Standard source for details on the more prominent Cincar families. For a further note on this work see p. 549 +

N. POPOVIĆ AND D. MIŠIĆ, Naša Domaća Privreda, (Our domestic economy) Beograd, 1929

+ a comprehensive survey. +

Srta A. POPOVIĆ, Na Mirisnome Zlatiboru (On Scented Zlatibor) 3rd ed’n, Beograd, 1908

+ An interesting survey of economic social and cultural life of the peasants of the Zlatibor plateau. +

+ written in the form of letters and diaries of journeys round the annexed territories in 1878 and 1890. A chaotic work, voluminously footnoted with asides, but which contains certain very interesting material on the silk and hemp trades. +

PUT LICEJSKIH PITOMACA (Jestastveničkog Odeljenja) PO SRBIJI GODINE 1863 (The Journey of the lycée students ... through Serbia in the year 1863) Beograd, 1967

+ An important account of a journey through the eastern part of Serbia undertaken primarily for the purpose of economic and geographic enquiry. It contains particularly valuable information on the raising of silk and sheep and on the Kučajna mine. +

M. Milivoje M. SAVIĆ, Naša Industrija i Zanati I - III, (Our Industry and Crafts) Sarajevo, 1922

+ early issues of an eleven volume series which appeared during the 1920's. Much of the information in these volumes is retrospective to prewar Serbia. +

M. Miljetin SAVIĆ, Beleške o vinodełju Krajinskom i Smederevskom i o sortama vinovih loza u Srbiji, (Notes on viticulture in Krajina and Smederevo and on the species of vine in Serbia.) Beograd, 1874

+ extends beyond information on types and techniques to details on the trade. The report of an enquiry into the condition of the vineyards. +

Šliiva. Gajenje i upotreba sa predložima za unapređenje, (Plums. Rearing and usage with proposals for improvement) Beograd, 1900

+ useful on drying techniques and commercial problems. The best source for details on the pekmez trade. +


+ scattered observations of interest in this rather inaccurate travel account. +
Edmund SPENCER, *Travels in European Turkey in 1850*, London, 1851

+ about which, the same may be said. Contains a useful and extensive description of Niš under Ottoman rule. +

Christa STAMENKOVITCH, *L'Emigration Yougoslave*, Paris, 1929

+ printed doctoral thesis. An interesting and detailed secondary source for this subject, which also touches on pečalba. +

S. G. B. St. CLAIR, & C. A. BROPHY, *A Residence in Bulgaria or Notes on the resources and administration of Turkey*, London, 1869

Kosta STOJANOVIĆ, *Ekonomsko Stanje Srbije od Okupacije Bosne i Hercegovine do Aneksije 1878-1908*, (The economic condition of Serbia from the occupation of Bosnia and Herzegovina to the Annexation, 1878-1908) Beograd, 1909

+ A tract on Serbia's commercial problem. Useful secondary source on the livestock trades and the veterinary dispute. +

T. S. (Taso Stojanović?) *Naš Ekonomski Položaj*, (Our Economic Position), Beograd, 1891

+ Tract which argued forcefully, though using very doubtful statistics, that Serbia's economic position and prosperity had been steadily declining, even to the point where mortality age was falling, and blames all this upon the bureaucratisation of public life. +


Sima TROJANOVIC, *Naše Kiridžije*, (Our pack-caravan drivers) place and date of publication unstated

+ Product of a survey, by the author, of the dying caravan trade of south west Serbia in the early years of the twentieth century on the eye of its anticipated extinction by the Uzice extension railway. Provides statistical data on the trade. +


+ A Free Trade tract which argued for the more energetic opening up of commerce with the Turkish interior by British Interests. +
Miloche M. VICTOROVITCH, Le Mouvement Economique en Serbie avant et après la Guerre, 1878-1923, Poitiers, 1924

+ One of the less useful French doctoral theses. Dependent on a very narrow range of sources. +

Herbert VIVIAN, Servia, the Poor Man's Paradise, London, 1897

+ Propagandist though informative travel account. Advocates emigration of British labourers to Serbia. +

Charles VOGEL, L'Europe Orientale, Paris, 1881


PRINCIPAL ARTICLES FROM PERIODICAL, NEWSPAPER AND OTHER SOURCES BEFORE 1930

UNSIGNED

"Berba Šljiva - nekoliko zanimljivih podataka, Čačak, 3 Sep."
(The plum harvest - some interesting data, Čačak, 3rd Sep.) Stampa X (1911) 247, 248

+ 1. Reminiscence on early days of the trade
  2. The quality control problem. +

"Beograd 19 Januar" (Belgrade, 19th January) Jedinstvo, 20.1. 1872, p. 31

+ polemic with Vidov Dan on the likely consequences to the Serbian hog trade of a raised Austrian tariff. +

"Ekonomija i Trgovina - Austrija i Nemačka" (Economy and trade - Austria and Germany) Politika (1906) 1007, p. 1

+ hog tariffs and demand. +

"Ekonomija i Trgovina - iz šljivarske trgovine" (Economy and Commerce - from the plum trade) Politika No. 2432 of 25.10.1910, p. 1. Cols 3-5

+ problems of quality control. The merchants are quite willing to buy up goods which the commissions regard as substandard. +

"I najposle dokazaše" (And at last they have shown proof) Videlo, VI, 101., 25.5.1885, p. 1

+ on railway building costs. +
"Industrija i Tehnika" (Industry and Technology) Trgovinski Glasnik XVI, 1906, 92, p. 3
+ conflict of Austrian and Hungarian business interests over Serbian trade treaty negotiations. +

"Izveštaji komisija za pregled šljiva" (Reports of commissions for the inspection of plums) Srpske Novine L (1882) p. 224

"Izvoz kudelje i užarije" (The export of hemp and rope manufactures) Ekonomist, I, 7 of 1.8.1912, p. 113
+ statistical review of the industry and its problems. +

"Izvoz sirovih šljiva" (The export of fresh plums) Trgovinski Glasnik XVII. 192, 31.8.1907, p. 1
+ Purchasing problems of the Licikas pekmez factory in competition with Austro-Hungarian purchasers of fresh plums. +

"Izvoz stoke na Baziaš" (The export of livestock to Baziaš) Trgovinski Glasnik I (1891) 15, pp. 2-3
+ complaint about high freight costs on Baziaš railway. +

"Jedna Mana Naših Izvoza" (One shortcoming of our exporters) Trgovinski Glasnik, I, 1891, 63, p. 1
+ A consignment of infected hogs from Serbia turned back at Wiener Neustadt. +

"Kako stojimo s voćarstvom?" (How do we stand with fruit-growing?) Težak XXIX (1898) 7 and 8
+ output data. +

"Kraj Jednog Pitanjua" (The End of One Question) Politika, No. 1007 1906, p. 1

"Lujova Sušnica" (Louis' drying stove) Štampa, XI (1912), 161, p. 2, cols 1-2
+ promotional copy for Louis Hirt, prune and pekmez merchant, and for drying equipment designed by him. +
"Mere za bolju proizvodnju pekmeza" (Measures for the better production of pekmez) Trgovinski Glasnik, XVI, 144 of 4.7.1906, p. 1, cols 3-4

+ Criticises the low hygienic standards of itinerant pekmez production. +

"Migovi za Srbsku Trgovinu" (Tips (?) for Serbian trade) Trgovačke Novine, I, 42 of 22.7.1861, p. 2

+ reviews principal branches of the Serbian export trade and their shortcomings. +

"Nova Sušnica šljiva u Arandjelovcu" (The new drying stove for plums at Arandjelovac) Glasnik Ministarstva Finansije I, 16 of 8.10.1892, p. 247

+ data on performance resulting from a test of old and improved plum drying systems. +

"O rdjavom stanju naših šljivaka i sredstvima da im se pomogne" (On the bad condition of our plum orchards and on the means of succouring them) Domacin I, 1890, 16 pp. 121-24

+ recommends raising plum trees not from cuttings but from seed. +

"O unutrašnjoj trgovini Srbije za godinu 1856" (On the internal trade of Serbia during the year 1856) Srpске Novine XXIV (1857) 91, pp. 1-2

+ report on the fairs, with prices paid, some turnover figures, and information on purchasers and sellers. +


+ complaint on quality of Serbian plum exports. +

"Podižimo Klanice" (Let us erect slaughterhouses) Odjek I, 14 of 3.11.1884, p. 2

+ effect of frontier closure on the Serbian hog export business. Advocates lessening dependence on existing markets. +

"Predstavka Šabačke Trgovačke Banke Ministru Narodne Privrede" (The representation of the Šabac Commercial Bank to the Minister of the National Economy) Trgovinski Glasnik XVII (1907), 102-supplement, p. 1. Cols 1-2

+ complains against ministerial directive for the packing of prunes in boxes instead of sacks, with statistics of costs of handling and freight. +
"Privreda i Finansija: Naša Trgovina Jajima" (Business and finance: our commerce in eggs) Novo Vreme III, (1911) 211, p. 2

+ report on the German organized egg export trade from Serbia. +

"Protiv Srpske Salame" (Against Serbian salami) Tgrovinski Glasnik XXI (1911) 149, p. 5

+ Austro-Hungarian salami manufacturers ask for protection. +

"Rakijska Statistika" (The liquor statistic) Samouprava III 275 of 28.11.1905

+ expresses fear that collection of statistics on liquor production by the state presages taxation on it. +

"Šljivarska Trgovina" (The plum trade) Tgrovinski Glasnik V (1895) 219, p. 1

+ includes some comments on incentives to produce. +

"Šljivarskim Trgovcima" (To the plum merchants) Male Novine X. (1897) 185

"Srpska šljiva na Pariskoj Izložbi" (The Serbian plum at the Paris exhibition) Tgrovinski Glasnik X (1900) 210 p. 1. Cols 1-3

+ complaint that Serbian plums have to sell under the name of Bosnian. +

"Srpskim Proizvodjačima vina i vinarskim trgovcima" (To the Serbian producers of wine and the wine merchants) Novi Glasnik I, 26 of 4.8.1888

+ the Serbian state agency is deluged with foreign requests for wine samples. +

"Srpsko Meso za Franzusku" (Serbian meat for France) Trgovinske Novine, 9.1.1907

+ Bijon contract. +

"Sušenje Šljiva" (The drying of plums) in three parts Videlo IV (1883) 16, p. 3; 17, p. 3; 18, pp. 3-4

+ discusses structure and organization of the prune business, and its freighting problems. +
"Svinjarski Produkti" (Hog products) Srpska Zastava, VI, 52, of 4.5.1896, p. 1, Cols 1-2

+ expedients for disposal of hogs during 1896 frontier closure. Advocates setting up a meat processing industry.

"Svinjarska Trgovina u Prošloj Godini" (The hog trade in the last year) Videlo IV. (1883) 19, pp. 3-4 and 21, p. 3

+ a review of the European hog market with particular reference to growing protectionism.

SIGNED

A. ALEKSIC, "Mačva. Sa naročitim pogledom na poplavne prilike" (The Mačva. With particular examination of flood conditions) Glasnik Srpskog Učenog Društva, 72, Beograd, 1891

+ contains interesting remarks on farming conditions in the Mačva.

_____________________________________________________

"Morava. Njeno sadanje stanje i mogućnost plovidbe" (The Morava /river/. Its present condition and the possibility of navigation) Glasnik Srpskog Učenog Društva 20, Odeljenje Knj. XI. Beograd, 1879

+ reviews former attempts to utilize the Morava for goods transportation, and provides estimates of the traffic crossing its toll bridges to demonstrate potential profitability of a navigation project.

Matija BAN, "Život Majora Miša Anastasijevića" (The life of Major Miša Anastasijević) Glasnik Srpskog Učenog Društva, 71, Beograd, 1890

+ anecdotal biography of the rags-to-riches career of merchant, salt monopolist, latifundist (in Romania) and philanthropist Anastasijević, in his day the richest man in Serbia, by a personal acquaintance.

BOSANAC EMIGRANT (pseud.) "Šljiva i njen promet" (The plum and its trade) Zastava (Novi Sad) X (1875) 69, p. 2

+ complaint about foreign entrepreneurial domination of the Bosnian plum trade.

A. CELBA, "Značaj Voćarstva i na koji se način može uvećati proizvodnja voća kod nas" (On the significance of fruit-growing and by what means may the production of fruit in our country be increased) Težak XXV (1894) 38-39, pp. 327-28

+ estimates capital cost of fruitgrowing.
Jevto DEDIJER, "La transhumance dans les pays dinariques"
Annales de Geographie XXV, 1916
+ outlines the principal migratory systems. +

Mr. DYMOND, "Hungarian Agriculture" Journal of the Farmers Club February, 1903
+ report on a visit to Hungary, and an evaluation of agricultural advance there. +

+ one of a series of works on regional ethnic geography, in most of which there was a section on the occupations of the people, which was often of considerable interest from the economic aspect. +

+ compares French and Serbian prune industries. +

M. G. Izvoznik (M. G. Exporter), "O našim suvim šljivama" (Concerning our dried plums) Trgovinski Glasnik X, 214 of 4.10.1900, p. 1, Cols 3-5
+ blames the inefficiency of the authorities for the quality control problem. +

Radomir MILIC, "Ibar. Antropogeografski Ispitivanja" (The Ibar. river An anthropological-geographic examination) Naselja Srpskih Zemalja (The settlements of the Serbian lands) III, Beograd, 1905
+ contains some useful information on the kiridzija trade of the region. And see Erdeljanovic, above. +

A. P. IVANOVIC, "Opisanije Okruzija Krainskog" (A description of Krajina okrug) Glasnik' Društva Srpske Slovesnosti Sv. V, Beograd, 1853
+ includes an unusually detailed economic survey, particularly of viticulture, for the period. +

"Dim. JOS." (pseud.), "O pregledu suvih šljiva" (on the inspection of dried plums) Odjek IV (1905) 182, pp. 2-3
+ blames low quality of prune exports on bad warehousing by the merchants. +
Dragoljub JOVANOVIĆ, "U Carstvu šljiva i raki" (In the empire of plums and /"plum/ spirit) Privredni Pregled III, (1925) 46. p. 3

+ an important article, on the developmental impact of the extension railways in western Serbia. +

Dragoljub K. JOVANOVIĆ, "Iz Timočke Krajine. Knjaževački Okrug" (From the Timočka Krajina / region 7. Okrug of Knjaževac.) Glasnik Srpskog Učenog Društva LXX, Beograd, 1889

+ the impoverishment of the region has led to the departure of the people on masse on pečalba to Romania. +

Aleks S. JOVANOVIĆ, "Zadruga po propisima našeg gradjanskog zakonika" (The zadruga according to the prescriptions of our civil code) Glasnik Srpskog Učenog Društva XXXVI, Beograd, 1872

+ on the fragmentation of the zadruga. An account by a jurist and former zadruga. A zadruga must be rich - ie to be well provided with land - to be stable. +


+ some notes of value on the salač system of transhumance. Also, see Erdeljanović, above. +

Dragiša LARČEVIĆ, "Zabranujte livada!" (Enclose the meadows!) Težak, XXIV, 3 of 17.1.1893, p. 1

+ draws attention to the low grass yield due to animals trampling the meadows in the rainy season. +

Ant. LAŽIĆ, "Ekonomski Centri Homolja i Zvižda" (The economic centres of Homolje and Zvižd /"regions 7) Glasnik Geografskog Društva XIV, Beograd, 1928"

+ stresses isolation and dependence on stock-raising of this region. +

Sofronije R. LAŽIĆ, trgovac, (S. R. L., merchant), "O sušenju šljiva" (On the drying of plums) Težak XXX (1899) 31, p. 242

+ questions the necessity for sophisticated equipment to achieve high quality plum drying. +
Stevan MAČAJ, "Crnoredski Okrug" (The okrug of Crna Reka) Glasnik Srpskog Ucenog Drustva LXXIII, Beograd, 1892


+ Magarašević's journey from Šabac to Kragujevac and Valjevo and back to Šabac.

Milan MARKOVIĆ, "Glasovi iz naroda - Kragujevac. Naš pekmez i njegova proizvodnja i potrošnja" (Voices from the nation - Kragujevac. Our pekmez and its production and consumption) Traovinski Glasnik, XVII (1907) 216, p. 2. Cols 2-4


+ see Erdeljanović, above.

Rene MILLET, "De Salonique a Belgrade II. La Macedoine et la Serbie" Revue de Deux Mondes 3-ième periode, LVIII année (1888) Tome LXXXV, 15.1.1888

Rista T. NIKOLIĆ, "Krajište i Vlasina" (The Krajište and Vlasina / regions/) Naselja Srpskih Zemalja VIII, Beograd, 1912

+ this regional study contains one of our most detailed sources on Serbian pećalba, and its early connection with the activity of scratch mining. Also see Erdeljanović, above.

"Okolina Beograda. Antropogeografska Ispitivanja" (The environs of Belgrade. An anthropological-geographic examination) Naselja Srpskih Zemalja II, Beograd, 1903

+ notes inter alia the extreme displacement of grazing by arable in this region. Also see Erdeljanović, above.

"Poljanica i Klisura. Antropogeografska proučavanja" (Poljanica i Klisura /regions/) Naselja Srpskih Zemalja III, Beograd, 1905

+ interesting on local crafts. Also see Erdeljanović, above.

+ informative on former land relations under the Ottomans. Also see Erdeljanović, above. +

Vladimir M. NIKOLIĆ, "Iz Lužnice i Nišave" (From Lužnica and Nišava regions Srpski Etnografski Zbornik XVI, Beograd, 1910

+ an important source on pečalba and on the system of bačija. +

Ljubomir PAVLOVIĆ, "Antropogeografija Valjevske Tamnave" (The Anthropology and Geography of Valjevskva Tamnava) Naselja Srpskih Zemalja VIII, Beograd, 1912

+ contains a short review of economic conditions in the region. Also see Erdeljanović, above. +

"Istoriija i duhovne osobine važnjih porodica - Godjevci" (The history and spiritual foundations of the more important families - the Godjevci) Glasnik Geografskog Društva IV. Sv. 5 November 1920, Beograd, 1921

+ the Godjevac family were highly active in the plum trade. +


+ contains some interesting notes on the commerce in plums, of which the Lepenica was a major producing region. Also see Erdeljanovic, above. +

M. RADOŠAVLJEVIĆ, "Zeleniutvo i Nate Sold' (Usury and our village) in M. Stojadinović, ed, Naše Selo, Beograd, 1929


+ See Erdeljanović, above. +

Dr M. I. S., "Neke primedbe o mom putovanju iz Beograda preko Kragujevca u srez Levački" (Some remarks on my journey from Belgrade through Kragujevac to Levač srez) in Petar Ž. Petrović, ed. Putovanja po Južnoslovenskim Zemljama u XIX Veku, Beograd, 1934

+ first published in Srpske Novine for 1844. This work has been quoted extensively in the text of this thesis, as illustrating the influence of labour shortage on agricultural practice. +
V. G. SIMKHEVITCH, "Hay and History" Political Science Quarterly, 1913

+ on the fodder base of the peasant economy. +

"SMEĐEREVAC—RODOLJUB" (pseud.) "Trgovina i Radinost-Opstanak Smederevskih Vinograd" (Commerce and Crafts - the survival of the Smederevo Vineyards) Trgovinski Glasnik XXI, (1911) 255, p. 2 Cols 2-3; 256, p. 2 Cols 1-2; 257, p. 2, col 2

+ the conditions and costs of viticulture at Smederevo since the adoption of the grafted vinestock. +

Milovan SPASIĆ, "Podaci o agrarnim odnosima Hrišćana u oslobodjenim krajevima, okruga Topličkog i Vranjskog za vreme Turske vladavine" (Data on the agrarian relations of the Christians in the liberated territories, of Toplica and Vranje okruge during the time of Turkish rule) Glasnik Srpskog Učenog društva, 71, Beograd, 1890

+ contains some interesting remarks on the economic basis of Serb-Arnaout tensions. +

M. TODOROVIĆ, "Jedna privredna pogreška" (One economic mistake) Trgovinski Glasnik XXI, 272 of 16.12.1911

Dj. R. VASIĆ, "Radi Obavestanja" (For explanation) Male Novine VIII (1895), 345, prilog.

+ on Krajujevčka Kompanija. +

Mihailo VUJIĆ, "Najnovi obrt u Trgovinskoj Politici" (The latest turn in commercial politics) Glas Srpske Kraljevske Akademije, 2-i razred, LXVI, Beograd, 1903

+ analyses the European tariff problem particularly in respect of Austro-Serbian relations and argues that Serbia must be prepared to face a customs war to achieve full independence. +

Lj. V/ulović, "Jedna Misao - kako da se pomognemo?" (A thought - how are we to help ourselves?) Podrinske Novine (Šabac) I, 4, of 26.2.1906, pp. 107-30

+ homespun wisdom on changing economic conditions in Podrinje and advocacy of establishment of food processing plant in the region to improve the marketability of produce. +
Newspapers and Weeklies referred to other than for listed articles

Carinik
Čiša Srpskih List' za Srbske Zemljedelce
Economist (London)
Glasnik Ministarstva Finansiia
Jedinstvo
Srpske Novine
Trgovinske Novine
Trgovinski Glasnik

BOOKS, THESSES, PAPERS AND ARTICLES PUBLISHED SINCE 1930


+ used for its observations on pecalba. +


+ consulted on Japan's experience during the silk boom. +

Sevdelkin ANDREJIVIĆ, Ekonomski Razvoj Niša od 1830 do 1946 godine (The economic growth of Niš from 1830 to 1946) Niš, 1970

+ a limited and unimaginative treatment of the subject from an excessively narrow range of materials. +


+ a useful guide to the politics of building railways, but it provides little data on their economic impact either as construction projects or as transport means. +

Berrissav ARSITCH, La Vie Economique de la Serbie du Sud au XIXe Siècle, Paris, 1936

+ doctoral thesis. On the economic and agrarian institutions of Yugoslav Macedonia under Ottoman rule. +

I. T. BEREND and Gy, RANKI, Economic Development in East Central Europe in the Nineteenth and Twentieth Centuries, New York, 1974

+ an attempt at establishing a standard work on the subject, in anticipation of sufficient research being undertaken. +

HUNGARY, A Century of Economic Development, Newton Abbot, 1974

J. BOUVIER, Le Krach de L'Union Generale, Paris, 1960

+ The Union Generale failed while undertaking the building of the Serbian main line railway. Bouvier shows that the causes of the collapse were internal to the bank rather than the result of its rivals' political manoeuvring. +

D. BUZGANOVIC, Valiki Strajk na Cukarici kod Beograda 1907 (The Great Strike at Cukarica, Belgrade, 1907) Beograd, 1948

Georges CASTELLAN, La Vie Quotidienne en Serbie au Seuil de l'Indépendance 1815-1839, Paris, 1967

+ a popular work, written from printed sources which nevertheless provides a reasonably well appraised descriptive account. +


Sergei DIMITRIJEVIC, Gradiska Privreda Starog Leskovca (The town economy of old Leskovac) Leskovac, 1952

+ an unimaginative but well researched local history of Serbia's first industrial town. +


+ Primarily a work of diplomatic history, but with a strong coverage of economic aspects of the dispute. A work of major importance. +

N. R. DJORDJEVIC, "Rista Paranos. Uspomene iz Pricanja Pokojne Ristine Žene Vasilije, Rodjene Krsmanović" (Rista Paranos. Memories from the telling of the late Rista's wife, Vasilija, nee Krsmanović) Trgovinski Glasnik XLIII, 112 of 30.4.1933

+ an interesting though uncheckable information source on Paranos. +
Mladen S. DJURIČIĆ, šabac kao kulturna žiža Srbije XIX i XX veka (Šabac as a cultural focus of Serbia in the 19th and 20th centuries) Šabac, 1937

+ contains a few useful fragments on prominent businessmen. +

Mirceta DJUROVIĆ, Trgovacki Kapital u Crnoj Gori u Drugoj Polovini XIX i Početkom XX Vijeća (Commercial capital in Montenegro in the second half of the 19th and the beginning of the twentieth centuries) Cetinje, 1958

+ the standard text for the economic history of Montenegro in the stated period. +

Rad. M. DRAŠKOVIC, Iz Starog Valjeva (From old Valjevo) Valjevo, 1970

+ a pamphlet on the emergence of local administration in Valjevo. Contains interesting information on the "Table of 12" informal chamber of commerce. +

Scott M. EDDIB, "Agricultural production and output per worker in Hungary 1870-1913" Journal of Economic History, 1968

P. O. RIDFLBERG, The Great Rumanian Peasant Revolt of 1907, Leiden, 1974

+ painstaking and scholarly analysis of agrarian problems of Rumania. +

EKONOMSKI INSTITUT N. R. SRBIJE, Proizvodne Snage N. R. Srbije (The productive forces of the Peoples Republic of Serbia) Beograd, 1953

+ the fairly extensive historical introduction in this volume, particularly on industry, cannot be said to have been displaced in Yugoslav historiography as the best synoptic contribution to the economic history of Serbia. However, the competition is less than impressive. +

FABRIKA DUVANA - NIŠ, 1885-1957 (The tobacco factory - Niš, 1885-1957) Beograd, 1957

+ a hack corporate history. Very low grade. +

Alexander GERSCHENKRON, Bread and Democracy in Germany, New York, 1966

+ the now classic work on German agrarianism and protection, was consulted for background on German agrarian tariff policy. +

+ a work that has had a strong influence on the western approach to East European economic history, but which probably overplays the negative aspects of agricultural development. +


+ a neglected article of high quality on the European hog crisis. +


Stevan IGNJIĆ, Užice i Okolina (Užice and Environs) Titovo Užice, 1967

+ doctoral thesis. A wide ranging work which covers all aspects of the town's development in the pre-1914 period. Uncovers much interesting material on its economic development, but is highly orientated to discussion of institutions, and offers little in the way of interpretation. One of the better local histories. +


+ a review of recent studies in quantification of Balkan economic development. +


+ consulted on Danish problems and reactions to German hog trade policy. +


Milan J. KOMADINIC, Problem Seljačkih Dugova (The problem of peasant debt) Beograd, 1934
Milan A. KOSTIĆ, Knjaževac i Stari Knjaževacki Okrug u Prošlosti i Sadašnjosti, (Knjaževac and old Knjaževacki okrug in the past and present) Beograd, 1933

+ contains a perfunctory chapter on economic matters. +

Mary J. KUJOVIĆI, "The refrigerator car and the growth of the American dressed beef industry" Business History Review, Winter 1970


+ a case study which provides fodder for the banking/industrialization school. It also serves in some measure as a study of the development of the Serbian economy. It is concerned particularly with the contribution made to its development by the banking system and its role in the support of Serbian political independence during the Tariff War with Austria-Hungary. Conclusions are unemphatic and somewhat ambiguous; this, I think may have been due to the weakness of the background material on the economic structure of the non-modern sector of the economy. Nevertheless an indispensable work. See also my comments on this thesis on pp. 2-4 of the text. +


"Varieties of Unsuccessful Industrialization: the Balkan States before 1914" Journal of Economic History XXXV (1975), 1

+ emphasis now swings away from supply side influences and toward internal demand conditions as related to the strategy of import substituting industrialization. A partial retraction of the author's earlier views. +

and M. R. JACKSON, "An appraisal of Recent Balkan Economic Historiography" East European Quarterly IX (1975), 2


+ Franco-Belgian capital and the development of heavy industry in Poland and the Ukraine. Attitudes toward the role of foreign entrepreneurship offer opportunities for analogous treatment of the opening up of the Serbian economy. +

Mihailo MALBTIĆ, (ed) *Kraljevo i Okolina* (Kraljevo and Environs) Kraljevo, 1966

+ a collection of hastily written essays on the town's economy at different periods. A shoddy work. +

Dusan MASLOVARIĆ, "Viticulture in the Negotinska Krajina" (Viticulture in the Negotinska Krajina: Glasnik Btnografskog Muzeja 1968-69, Beograd, 1969

+ a sketchy, but useful survey of the pre-phylloxera Negotin wine trade. +

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+ a thoughtful work which has withstood the test of time surprisingly well. +


+ The now standard economic history of the period. By opening up the documents it enables us to put the commerce of Serbia under Miloš into a partially quantitative perspective. The materials are supported by a wealth of valuable qualification, explanation and comment. +

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"Nemački Kapital u Srbiji do 1918" (German capital in Serbia up to 1918) Istorijski Časopis XII-XIII (1961-62)

+ consulted for material on the Belgrade sugar mill. +
another offering, of minute and laborious scholarship, this will probably long remain the standard work on this subject. Would have been enhanced as a reference source by a more comprehensive index. +

"Uticaj Josifa Pančića na razvoj svilarstva u Srbiji" (The influence of Josif Pančić on the development of silk raising in Serbia) Istorijeski Časopis XX, (1973)

covers the "three waves" of interest in silk raising in Serbia, and discusses particularly promotional activity by the state, especially on the recommendation of J. Pančić. Focus on the role of the state magnifies its contribution beyond objectivity. +


consulted on emigration, and on the Scandinavian hog problem. The forthcoming second volume of this work will contain a chapter on "The Economic Development of South-Eastern Europe" which the authors have been kind enough to permit me to read in draft form. +


David MITRANY, Marx against the Peasant, A Study in Social Dogmatism, London, 1951

The now classic work on the politics of East European agrarian strife. +
M. MORINEAU, "Was there an agricultural revolution in 18th Century France?" in Rondo B. Cameron (ed) Essays in French Economic History Homewood, Ill., 1970

+ cautions against reliance on literary evidence for agricultural improvement. +

Vidosava NIKOLIĆ, "Arhivski prilozi za izučavanje etničkih socijalnih i ekonomskih promena u Prokuplju 1877-1878" (Archival contributions to the study of ethnic, social and economic changes in Prokuplje 1877-1878) Arhivski Almanah, Beograd, 1962


+ a meagre work which has been largely superceded since S. Andrejević raided it for what was worth keeping (with acknowledgement) and added a little of his own work. +

Dušan PANTHILIĆ, Beogradski Pašaluk pred Prvi Srpski Ustanak, (The pashalik of Belgrade on the eve of the first Serbian uprising) Beograd, 1949

+ meticulous political history covering the suppression of the janissaries and events leading up to the Karadjordj rebellion. +

Leo PASVOLSKY, Bulgaria's Economic Position, Washington, D. C., 1930

Miroslav D. POPOVIĆ, Kragujevac i Njegovo Privredno Područje, (Kragujevac and its economic hinterland) Beograd, 1956

+ includes what must rank by Yugoslav standards as a high quality economic historical coverage, which renders it a useful piece of local history. +

---------- Trstenik i Njegova Okolina (Trstenik, and its environs) Trstenik, 1968

+ Trstenik receives the same treatment, but less successfully. But perhaps this is because it is not a very interesting town. +

Živorad POPOVIĆ, Kosta D. Glavinić, (in Serbian), Šabac, 1939

+ short biography of an engineer-administrator. Reduces an interesting personality to a stuff shirted nonentity. +
Miodrag Al. PURKOVIĆ, Požarevac (in Serbian) n. p., n. d.
+ short history of the town published in the early 1930's. Execrable. +

Andrija RADENIĆ, "Izveštaji Madjarskih Privrednih Izaslanika o Prilikama u Srbiji 1901-1914" (The reports of the Hungarian Commercial Emissaries on conditions in Serbia 1901-1914) *Istorijcki Časopis* XIV-XV (1963-65)
+ makes a convincing case for the high quality of Hungarian economic reporting, while dropping a few crumbs of information culled from these reports. +

"RAZVOJ PARAČINA I NJEGOVOE FABRIKE STAKLA" (The growth of Paradin and its glass factory) *Komuna* (Beograd) XIII (1966). 3

+ a contribution to the theory of factor supply in estate and smallholder agriculture. +

+ deals briefly with Czech bank investments in Serbia, from the point of view of the Czech economy. +

Olga SAVIĆ, *Kruševac i Njeogova Uticajna Sfera* (Kruševac and its Sphere of Influence) Beograd, 1969
+ the local economic history section of this book is pervaded with that *esprit de routine* which is so characteristic of this kind of work. It is rendered useful, however, by the inclusion of information obtained from an elderly respondent, the former merchant S. Vuković Tica. +

V. SEKULOVIĆ et al., *Kruševački Kraj Juče i Danaa* (Kruševac region yesterday and today) Kruševac, 1961
+ well down to the normative standard of Serbian local historiography. +

+ a stimulating, if controversial review of socio-economic writings on peasant life and agriculture. +

+ used in support of argument relating to factor endowments in silk processing. +

L. L. Snydber, "The American-German hog dispute 1879-1891" *Journal of Modern History* XVII. 1. (March, 1945)


+ a collection of three essays. Of greatest interest is the third, comparing the developmental role and socio-economic impact of foreign capital in Romania and Indonesia. The other two are rather orthodox statements of capital formation theory. +


+ contains contributions by several authors on different aspects of the town's development. +


+ biography. +


+ Austro-Hungarian administrative policy in Bosnia-Hercegovina in respect of fiscal and economic problems. An important work, but state-centred. +

S. Šumarbić, "Uz starog Beograda - prve fabrike" (From old Belgrade - the first factories) *Politika*, 29.5.1966, p. 12

Angelo Tamborra, "The Rise of Italian Industry and the Balkans 1900-1914" *Journal of European Economic History* III, 1, (Spring, 1974)

+ on Italian economic penetration. +


+ one of the earlier works which began to explore the connexion of cottage industry with poor land. +
Sarah R. TIRRELL, *German Agrarian Politics after Bismarck's Fall*, New York, 1951

+ provides background on German tariff policy. +

N. Todorov, "The genesis of capitalism in the Balkan provinces of the Ottoman Empire in the 19th Century"
*Explorations in Economic History VII*, 1969-70, 2

+ argues that the mainspring of capitalist development in the Balkans is to be found in the pre-industrial *čaršija* town, and not as contended, by other Marxist historians, in the stratification of village society. +


+ a serious study unifying the agrarian and agricultural experience of interwar Yugoslavia. Pre-1914 material is only included as an introduction, and is of a lower quality than the brilliant analysis of interwar problems. +

Persida Tomić, "Stočarstvo" (Stockraising) *Negotinska Krajina...*, Beograd, 1969

--------------- "Dopunsko privredjivanje" (Supplementary economic activity) in the above publication.


+ a useful and imaginative supplement to the study by S. Dimitrijević on Leskovac, which contains some particularly interesting material on the problem of technological borrowing in establishing the woollen industry. +

Ljubica Trajković, ed. *Valjevo i Ckolina* (Valjevo and Environs) Beograd, 1956

+ contains a surprisingly good survey of local economic history, with interesting information on the plum trade. Unfortunately the work is not annotated. +


+ a social history, used for its discussion of *pečalba*. Now rather dated in its approach. +
K. V., "Iz Istorije Trgovine. Zemljoradnici i Trgovci" (From the history of commerce. Agriculturalists and merchants) Nova Trgovina (Beograd) April, 1952

Velimir VASIĆ, "Pećalbarstvo Istočne Srbije" (Migrant labouring of Eastern Serbia) Ph. D., Beograd, 1950, [Svetozar Marković library RD. 98]

from interviews and secondary sources.

Milan Z. VLAJINAC, Zag ili Kulucanje van Mesta Stanovanja od Srednjega Veka do Naših Dana (The "Zgon" or forced labour outside the place of residence from the middle ages to our days) Beograd, 1932

on the corvée system which still had some residual importance in the nineteenth century though by then it was mainly confined to the upkeep of roads. Unfortunately this work fails to deal with the labour draft into the opening of the Majdanpek mine.


Austro-Serbian relations and Serbian internal politics, up to the Bosnian annexation crisis. Largely superceded by D. Djordjević's work.

Nikola VUČO, Privredna Istorija Naroda FNRJ do prvog svetskog rata, (The economic history of the peoples of the FNR Yugoslavia up to the first World War) Beograd, 1948

For the nineteenth century, the work is of extremely meagre value. Although this was a semi-official work, Vučo was, regrettably, no Lyashchenko.

Privredna Istorija Srbije, (The Economic History of Serbia), Beograd, 1955

this is not a work on account of which Dr Vučo's reputation was built.


But this is. Painstaking and lengthy Marxist treatment of the Serbian guild institutions, and of the competitive pressures which brought about the decline of guild power in an increasingly capitalistic economy. Well indexed.
Položaj Seljačtva, Kni. I. Eksproprijacija od Zemljiv XIX veku (The position of the peasantry. Book I. Expropriation from the land in the nineteenth century)

+ evidence in support of the thesis that the process of expropriation came about obliquely through reduction of cultivators to effective debt slavery. +

Doreen WARRINER, The Economics of Peasant Farming (2nd Ed.) London, 1964

+ a brilliant piece of interwar journalism, which unfortunately confused on-the-spot observations for eternal truths. Naturally things looked pretty hopeless during the pit of the depression, in the peasant countries, but they were not notably better elsewhere. +

J. A. S. WATSON and J. A. MORE, Agriculture, (8th Ed.) Edinburgh, 1945

Rebecca WEST, Black Lamb and Grey Falcon I, London, 1942

+ high quality, though strongly opinionated travel account. +

Aleksandar D. ŽIKIĆ, "Negotin" Zemlja i Ljudi (Beograd) XIX (1969)
This thesis has been composed by me and the work is my own

[Signature]

University of Edinburgh

18.12.1975