

AGRICULTURAL LABOURERS AND THEIR WAGES IN ESTLAND IN 1885–1913

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Although the history of wages belongs to the oldest themes in social and economic history, it is still an exciting field of research.¹ Workers' wage rates and standards of living remain central questions in economic history. Besides measuring living standards, wage series have been used to research conditions in the labour markets. A third major field of interest centres upon the connection between wages and productivity.

Recent Estonian historical scholarship has shown little interest in the above-mentioned topics. This paper is an attempt to bridge this gap by examining agricultural workers' wage patterns in Estland during the period of "modernisation", based upon earlier research as well as my own wage and price data. The first task of this article is to produce nominal regional and national agricultural wage indices per annum from 1887 to 1913 on the basis of available published wage information, and to examine wage trends and regional differentials. Second, the article explores the extent and persistence of the urban-rural wage gap. The real urban-agriculture wage gap has traditionally been considered a crucial variable in determining whether labour markets are integrated or segmented.² In

¹ See, for instance, *Real wages in 19th and 20th century Europe: historical and comparative perspectives*, ed. by Peter Scholliers (New York, 1989); *Labour market evolution*, ed. by George Grantham and Mary MacKinnon (London, New York, 1994); *Labour's reward: real wages and economic change in 19th and 20th century Europe*, ed. by Peter Scholliers and Vera Zamagni (Aldershot, 1995); *Experiencing wages: social and cultural aspects of wage forms in Europe since 1500*, ed. by Peter Scholliers and Leonard Schwarz (New York and Oxford, 2003).

² Assessing the level of convergence/segmentation of labour markets solely by wage differentials has recently been criticized. Boyer and Hatton argue that growing labour market integration and wage convergence are not the same thing. They have pointed out that it makes little sense to describe the late nineteenth-century English and Welsh labour market(s) as either integrated or not integrated. Rather, the degree of integration, as reflected in the mobility of labour, generally was sufficient to prevent either a dramatic widening of or a dramatic convergence in wage differentials in the face of the unbalanced growth of labour demand across sectors and regions: George R. Boyer and Timothy J. Hatton, "Migration and labour market integration in late nineteenth-

order to calculate real wages, cost-of-living index(es) would be necessary. Unfortunately, there is not any accurate study of Estonian workers' consumption basket in that period. Hence, in an attempt to measure the buying power of wages we must, at the moment, rely upon very crude methods: the prices of some basic foodstuffs (rye and butter). Such an approach, acceptable for the pre-industrial age, becomes obviously utterly unsatisfactory with the emergence of industrialization and the formation of a more complex consumption pattern.³ Others maintain, however, that even when wages are being divided by the price of just one consumer item, the resulting quotient has rather narrow significance but might still be of interest.⁴ Analysis is limited to Estland *guberniya* because the southern part of Estonia was less industrially developed,⁵ and there is not sufficient data on manufacturing wages. More than 80% of all Estonian industrial workers were employed by enterprises located in North-Estonia. Much inspiration as well as comparative material has been drawn from recent research on the subject under consideration in other countries, especially in Finland.⁶ Due to the lack of sufficient research on migration, prices,⁷ consumption, and other key topics in Estonia, the results here are rather preliminary.

Historiography and sources

The first studies on the level and form of agricultural wages in the Baltic provinces were published during the second half of the nineteenth century. Baltic-German nobility exaggerated manorial workers' wages

century England and Wales", *Economic History Review*, 50, 4 (1997), 697–734 (724); see also Christer Lundh, Lennart Schön, Lars Svensson, "Regional wages in industry and labour market integration in Sweden, 1861–1913", *Scandinavian Economic History Review*, 53, 3 (2005), 71–84 (74).

³ *Labour's reward*, 10.

⁴ Peter Scholliers, "Introductory remarks: comparing real wages in the 19th and 20th centuries", *Real wages in 19th and 20th century Europe*, ed. by Peter Scholliers (New York, 1989), 16.

⁵ Moreover, South-Estonia can hardly be treated as a separate labour market, because, for example, 10 000 Estonians lived in Riga: Tiit Rosenberg, "Zum Problem der Arbeitskräfte in der Landwirtschaft Estlands 1907 bis 1914", *The Baltic countries, 1900–1914*, *Studia Baltica Stockholmiensia*, 5 (Stockholm, 1990), 275–298 (278).

⁶ Sakari Heikkinen, *Labour and the market: workers, wages and living standards in Finland, 1850–1913* (Helsinki, 1997).

⁷ The only attempt to study prices has been done on the years 1710–1819: Jaanus Soo, *Põllumajandussaaduste hinnad Eestis aastatel 1710–1819* (unpublished diploma thesis, Tartu, 1985).

(according to one such commentator, rural workers in the surroundings of towns lived in luxury!)⁸ G. Nosovitch also suggested that agricultural wages were rather high.⁹ By contrast, Arthur Agthe held that they lived on poverty wages.¹⁰ The contemporary Estonian press criticized the poor living and working conditions that forced rural people to move to towns despite high unemployment there.¹¹ Yet, scholars have not always come to such grim conclusions. Tiit Rosenberg has studied changing pay and wage forms in connection with the emergence and composition of free labour forces in agriculture.¹² In his diploma thesis on South-Estonia 1890–1905 he suggests that the wages of manors' agricultural workers (called *Deputatisten* in German, *moonakad* in Estonian) increased from the 1870s until 1905 by 10–13%, on average, and their living standard should not be considered “very low”.¹³ Latvian historian Mikhail Kozin, by contrast, has shown that agricultural wages tended towards a subsistence minimum.¹⁴ According to Rosenberg, the arguably worse living and working conditions of agricultural labourers are a topic still in need of scholarly investigation.¹⁵

This study uses manuscript and published sources to construct annual time series of average wage rates in Estland from 1885 to 1913. Agricultural wage data were obtained from the supplements to annual reports (*obzory*) of governors of Estland.¹⁶ *Obzory* have their limitations. They may not include information on all the payments made to a particular labourer (gifts, extra in-kind payments, overtime payments and the like),

⁸ See, for instance, *Materialien zur Kenntniss der livländische Agrarverhältnisse mit besonderer Berücksichtigung der Knechts- und Tagelöhner-Bevölkerung* (Riga, 1885), 17, 24.

⁹ *Kratkii obzor pravogo i ekonomicheskogo polozheniya batrakov Pribaltiiskih gubernii* (Riga, 1906).

¹⁰ Arthur Agthe, *Ursprung und Lage der Landarbeiter in Livland* (Tübingen, 1909).

¹¹ *Tallinna Teataja*, 8.04.1910; 22.04.1910.

¹² Tiit Rosenberg, “Sostav myznych rabochih Juzhnoi Estonii v konce XIX – nachale XX veka”, *Problemy razvitiya sotsialno-ekonomicheskikh formatsii v stranah Baltiki* (Tartu, 1978), 110–124; Tiit Rosenberg, *Formirovanie selskogo proletariata Estonii (Myznye rabochie v juzhnoi Estonii s nachala XIX do nachala XX veka)* (unpublished dissertation, Tartu, 1980); Rosenberg, “Zum Problem der Arbeitskräfte”, 275–298.

¹³ Tiit Rosenberg, *Palgatöö Lõuna-Eesti mõisates XIX sajandi lõpul-XX sajandi algul* (unpublished diploma thesis, Tartu, 1973).

¹⁴ Mihhail Kozin, “Dvizhenie zarabotnoi platy selskokozyaistvennyh rabochih v Latvii vo vtoroi polovine XIX v.”, *Ezhegodnik po agrarnoi istorii Vostochnoi Evropy 1965 g.* (Moskva, 1970), 412–423. Although Kozin is highly sceptical of the reliability of published sources, he himself has had to use them.

¹⁵ Rosenberg, “Zum Problem der Arbeitskräfte”, 277.

¹⁶ *Obzory Estlyandskoi gubernii za 1886–1913 gg.* (Revel, 1886–1914). Wage data was collected by local police and reported to the *guberniya* statistics committee.

and valuing the payments in kind might be incorrect. Besides, payments to adult males may include remuneration for work done by their wives.¹⁷ We can verify their reliability indirectly by comparing the data of similar *obzory* of Livland governors to those reported by manor owners to the Livland Economic Society. Comparison reveals that *Deputatisten* and day-labourers in South-Estonian manors actually earned slightly less (around 10 kopeks per day) than stated in annual reports.¹⁸ With regard to Estland, we can compare the wage rates derived from the *obzory* with those collected by tax inspectors. Again, there appears to be a difference, but in this case, on the contrary, a deficit of 6% is found.¹⁹ Naturally these reports do not provide information on the actual wages paid, but they seem to depict the wage trend quite well.

Data on the trends of wages in construction trades for the period 1885–1912 has been drawn from one previously neglected data source: reports on estimated wages for several occupations collected according to the specifications of the Department of Buildings and Roads.²⁰ The series on the total wages of manufacturing labourers is only available from 1900 onwards.²¹

¹⁷ Agthe, *Ursprung und Lage*, 150–151; *Kratkii obzor*, 41.

¹⁸ *Obzory Lifyandskoi gubernii za 1907-1908 gg.* (Riga, 1908-1909); Estonian Historical Archives (hereafter EAA), f. 1185, n. 2, s. 9, 10, 16, 23.

¹⁹ *Kratkii obzor*, 47.

²⁰ Data collected by town governments and reported to the Department of Buildings and Roads: EAA, f. 33, n. 3, s. 1633–1635, 1641–1642, 1655, 1658–1659, 1665, 1686–1687, 1701–1702, 1722–1723, 1726, 1734, 1736, 1860, 1862, 1872, 1873, 1907, 1909–1911, 1917, 1945–1948, 1952, 1968–1970, 1972–1973, 2006–2009, 2029–2031, 2038, 2063–2064, 2067, 2069, 2093–2094, 2096–2097, 2125–2128, 2162–2163, 2165, 2167, 2200–2201, 2205, 2207, 2255–2256, 2258, 2261, 2309, 2311–2312, 2315, 2348–2351, 2389, 2391–2392, 2396, 2430, 2433, 2436–2437, 2479, 2481–2483, 2512, 2514, 2516–2517, 2537, 2539, 2541, 2543, 2586, 2588–2590, 2648, 2650, 2655–2656, 2714, 2720, 2724, 2726, 2730, 2778–2779, 2789–2790, 2887, 2892, 2894, 2901. In order to judge their reliability we can compare their figures with those provided by Vinnaja. As we can see, there was only a slight difference (1–1.2 and 1.1–1.3 rubles in 1908, respectively): J. Vinnaja, *Palgatööline ja elu-ülespidamine* (Tallinn, 1908), 28.

²¹ These data, derived from forms sent by factory inspectorates to the Board of Manufacturing, are the least problematic. The level of manufacturing wages was calculated as an ‘unemployment-adjusted’ annual wage (including extra payments for overtime) by dividing the overall wage sum by the number of workers. Only fines should be deducted from it but these were fairly small (annual average rate was 0.02–0.67 rubles per worker). Payments in kind were insignificant (0.1% of the wages). The data cover ca 88% of the workers: Maie Pihlmyagi, “Zarabotnaya plata rabochih fabrichno-zavodskoi promyshlennosti Estlyandskoi gubernii v nachale XX v.”, *ENSV TA Toimetised. Ühiskonnateadused*, 33 (1984), 216, 218; *Svod ochetov fabrichnyh inspektorov za 1900-1913 gg.* (Peterburg, 1903–1913; Petrograd, 1914).

It is very difficult to find proper price figures for different regions because of the fragmentary nature of sources. Butter retail prices are available on county and town level.²² For rye prices we have to rely either on retail prices in Virumaa or on Tallinn stock exchange reports²³ that do not enable us to compute regional quotients.²⁴ They only show changes in wages' purchasing power over time.

Estonian agricultural workers at that time can be divided in four main groups: *Deputatisten*, *Landknechten*, farmhands, and day-labourers. This article examines only one segment of the agricultural labour force: the *Deputatisten*.²⁵ These "permanent" male outdoor labourers formed, by far, the majority of agricultural labourers employed in the manors. *Deputatisten* were usually married and lived in special "working-class houses"; they worked according to annual contracts and received daily or piece-rate wages as well as fixed payments in kind. *Landknechten* were manorial labourers who received their wages primarily in the form of land. Since home production made up most of their income it is impossible to measure their wages. Statistical sources provide a lot of information on the wages of agricultural day-labourers, but since most of them were cottagers,²⁶ their wages do not reflect their actual earnings. Common multi-(various casual jobs in different sectors of economy) and self-employment (as artisans) makes it impossible to calculate their earnings on the basis of agricultural wage data. Due to the lack of sources on wage data pertaining to farm-hands, they are not considered at all in the present study. However, according to the estimates of contemporaries, there were no substantial differences in wage levels between the manor and the farm.²⁷

For the purposes of this study, workers are defined as mobile wage-earners, dependent almost entirely on wages for their livelihood and legally free to negotiate the terms of their employment.²⁸ Can we classify Estonian agricultural labourers in the period covered in this study as

²² *Obzory Estlyandskoi gubernii za 1886–1913 gg.* (Revel, 1886–1914).

²³ *Beiträge zur Statistik des Handels von Reval und Baltischport* (Reval, 1891–1914).

²⁴ Comparison of rye prices in Järvamaa and Virumaa for the period 1898–1909 reveals rather significant regional differences: EAA, f. 56, n. 1, s. 451–452, 455, 458, 460, 462, 465–466, 469, 471, 473, 475, 476; f. 61, n. 1, s. 500–505.

²⁵ Also Kozin has examined the wages of *Deputatisten*: Kozin, "Dvizhenie zarabotnoi platy", 413.

²⁶ *Materialien zur Kenntniss der livländische Agrarverhältnisse*, 20; Rosenberg, *Formirovanie selskogo proletariata Estonii*, 109; Agthe, *Ursprung und Lage*, 155.

²⁷ Agthe, *Ursprung und Lage*, 142.

²⁸ Madhavan K. Palat, "Casting workers as an estate in Late Imperial Russia", *Kritika*, 8 (2007), 307–348 (318).

modern or “pre-modern” wage labourers? In Rosenberg’s opinion *Deputatisten* were a “free labour force”.²⁹ The Finnish historian Sakari Heikkinen has posited traits that typify “modern workers” in order to compare an “ideal type” of worker to “real workers” in late nineteenth- and early twentieth-century Finland.³⁰ He points out three features of “modern workers”. First, workers do not own factors of production other than labour. *Deputatisten* did not own land, but they were required to have the simplest tools themselves (axe, chopper, rake and scythe).³¹ Secondly, their relationship to employers is contractual. *Deputatisten*, unlike farmhands³² had written service contracts. The Peasant Law of 1856 (§§ 431–81),³³ which remained the judicial foundation of employment relations in the countryside in Estland until 1914, placed limits on workers’ contractual freedom: e. g. a servant who broke a contract and left before the year was liable to pay a fine. Wives were required to obtain the permission of their husbands. In some cases, wives were not allowed to seek work outside their manors.³⁴ Third, the modern worker receives cash payment for his labour, and is free to use that money as he or she wishes. The freedom of consumption implies the separation of home from the workplace, and the use of money for wages rather than payment in kind. The latter criterion was hardly met since *Deputatisten* did not receive most of their remuneration in cash; instead, they got a small patch of land, foodstuffs, had the right to keep cattle, a pig, etc.³⁵ Although *Deputatisten* do not conform entirely to the ideal type of free wage-worker as defined by Heikkinen, it should be noted that he admits that the “modern” Finnish worker was really an “ideal type”, since the three features do not always correspond exactly to historical reality.³⁶

Another important element of workers’ freedom was that of movement. According to Rosenberg, unmarried farmhands often (almost every

²⁹ Rosenberg, *Formirovanie selskogo proletariata*, 97.

³⁰ Heikkinen, *Labour and the market*, 19.

³¹ *Tallinna Teataja*, 8.05.1910; EAA, f. 1185, n. 2, s.18; Rosenberg, *Formirovanie selskogo proletariata*, 100. Also the construction workers often worked with their own tools: J. Vinnaja, *Palgatööline*, 49.

³² *Kratkii obzor*, 23.

³³ *Polozhenie o krestyanah Estlyandskoi gubernii 5 juliya 1856 g.*, ed. by A. P. Vasilevskii (Revel, 1891). Both judicial foundation as well as actual service (work) contracts were similar in Estland and Livland: *Kratkii obzor*, 13–20.

³⁴ Rosenberg, *Formirovanie selskogo proletariata*, 100; e. g. in Tartu county: *Kratkii obzor*, 41.

³⁵ *Kratkii obzor*; Agthe, *Ursprung und Lage*; Rosenberg, *Formirovanie selskogo proletariata*, 99–101.

³⁶ Heikkinen, *Labour and the market*, 19–31.

year) changed residence.³⁷ Agthe, on the contrary, has stressed on the basis of 1897 census the remarkable immobility of families in rural Livland.³⁸ A number of restrictions on the Estonian peasantry's freedom of movement disappeared in the course of the 1860s. In 1863 a new passport law considerably simplified the procedures for obtaining passports, and by 1868 Baltic estate owners could no longer demand that emigrating peasants provide material guarantees for their relatives who remained behind.³⁹ Labour mobility also increased due to falling transportation costs⁴⁰ and improvements in information networks.

The evolution of wages is described on the basis of male agricultural workers while the development of the living standard is almost always measured in terms of the wage of an adult male.⁴¹ As supplementary wage earners, women were dependent on men for subsistence. The basis of the agricultural wage series is the yearly wage rate,⁴² including the value of payments in kind, lodging, heating, etc (i.e. contractual payments) but excluding extra payments for harvest work, etc.⁴³ Male and female wages tended to move together but not necessarily with the same growth rate. At the *guberniya* level, the years 1893, 1896, 1899, and 1909 were exceptional

³⁷ Rosenberg, *Formirovanie selskogo proletariata*, 98.

³⁸ 81% of peasants lived in the same county where they were born: Agthe, *Ursprung und Lage*, 132–133.

³⁹ Toivo U. Raun, "Estonian emigration within the Russian Empire, 1860–1917", *Journal of Baltic Studies*, 17, 4 (1986), 350–363 (356). However, not all migration restrictions were repealed. In order to work outside the parish (*Gemeinde*) one had to apply for a certificate from the local authorities (500). Manor owner could refuse to sign the *Schein* (§ 340) (*Sbornik zakononii i rasporyazhenii o krestyianah Pribaltiiskih gubernii*, ed. by A. P. Vasilevskii (Revel, 1891), 340, 500). Livonian peasants had to overcome even more obstacles: e.g. workers could apply for a passport only when service contracts had expired or when master had freed them from contractual obligations: Agthe, *Ursprung und Lage*, 134.

⁴⁰ By the turn of the century Estonia had been covered with a railway network: Maie Pihlamägi, *Eesti industrialiseerimine 1870–1940* (Tallinn, 1999), 26.

⁴¹ Peter Scholliers, "Introductory remarks", 15.

⁴² It is quite generally accepted that common standard of wages should be the year. Furthermore, there would not be a big difference between the results, while in Livland, for instance, wages of annually hired *Deputatisten* stayed at about the same level in relation to the wages of male day-labourers in 1882–1901: Kozin, "Dvizhenie zarabotnoi platy", 419.

⁴³ With respect to the wages in the period under consideration, there is always a question about their meaning, because the proportion of non-monetary remuneration in labourers' incomes varied a lot (L. D. Schwartz, "The formation of the wage: some problems", *Real wages in 19th and 20th century Europe*, ed. by Peter Scholliers (New York, 1989), 21–39). Here such a problem is eliminated by incorporating non-monetary rewards in the wages.

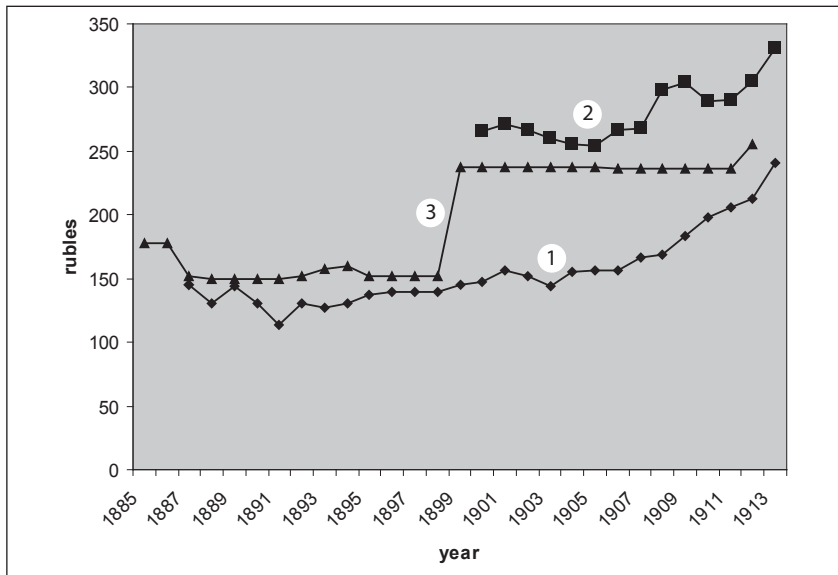


Figure 1. Nominal mean wages of agricultural (1), manufacturing workers (2) and urban unskilled (3) in Estland, 1885–1913.⁴⁶

because their wages moved in opposite directions. The difference between the minimum and maximum female/male wage ratio in agriculture for the period 1887–1913 was considerable – 58% (in 1892) and 82% (in 1908) respectively, but for the most of the time the female/male wage differential seems to have been quite stable, close to the average ratio of 64%.⁴⁴ The gender wage gap is supposed to reflect differences in productivity. Estimates of marginal productivity suggest that women were approximately one-half to two thirds as productive as men.⁴⁵

Figure 1 shows the evolution of nominal wages in agriculture, construction and manufacturing in 1885–1913. Average nominal agricultural male wages in 1887–1913 rose by 66.2%. The growth was not steady: 1887–1900 saw hardly any increase, while some years saw decline. Between 1890 and 1907, after the changes in rye prices are taken into account, real wages apparently were lower than in 1889 during most of this period (except for the years 1895–97). In 1907–13 the average nominal growth was 6.5% per

⁴⁴ In Finland, female labourers' wages were two thirds of male wages: Heikkinen, *Labour and the market*, 84.

⁴⁵ Joyce Burnette, "The wages and employment of female day-labourers in English agriculture, 1740–1850", *Economic History Review*, 57, 4 (2004), 664–690 (675).

⁴⁶ Sources: see footnotes 16, 20, 21.

annum – in real terms (nominal wages divided by rye prices) the growth was even more rapid. The increase in nominal agricultural wage levels in 1900–12 (44.5%) exceeded that of consumer prices in Russia (39%).⁴⁷ The increase in wages also exceeded the rise of prices of basic foodstuffs in Estonia from 1900 to 1913,⁴⁸ but it did not match the rise in prices of essential consumer goods in 1888–1908, which according to some estimates increased twice.⁴⁹ However, one should treat these data cautiously. Data interpretation is complicated by the fact that wages of *Deputatisten* were partly paid out in cereals and other food items, and changes in wages may also reflect price fluctuations.⁵⁰ Also monetary wages, however, roughly doubled between 1900 and 1910, while payments in kind increased.⁵¹

Wages in agriculture depended heavily on available labour resources. The size of the agricultural labour force declined in 1897–1916 both in relative as well as in absolute terms in all Estonian counties, except for Virumaa and Järvamaa. Large numbers of rural people moved to urban areas and other Russian *guberniyas*.⁵² Peasant emigration from Estland to Siberia, for instance, spiked after the revolutionary years of 1905–06.⁵³

Estimates of regional wage differentials vary over the years. A survey on agricultural wages in Livland published in 1885 stressed the differences between counties and parishes;⁵⁴ another work published about 20 years later suggests that wages were rather similar.⁵⁵ Is there any evidence of a remarkable convergence within these 20 years in our wage statistics?

⁴⁷ *Päevaleht*, 19.11.1913.

⁴⁸ Nominal agricultural wage levels increased by 63.5%, whereas the prices of bread increased approximately by 20%, of milk by 22–25%, of potatoes 21–35%, of flour by 26–27%, of butter by 21–24%, and of pork by 62–79%: Pihlamyagi, “Zarabotnaya plata”, 221.

⁴⁹ *Virulane*, 24.02.1909.

⁵⁰ Day-labourers earned “pure” money wages and the average growth of their wages in 1907–13 was 4.6% per annum.

⁵¹ *Tallinna Teataja*, 8.04.1910.

⁵² Although certain aspects of the emigration movement have been studied in some detail, no systematic investigation of this question yet exists: Raun, “Estonian emigration”, 350.

⁵³ For instance, in 1896–1905 449 persons migrated from Estland to Siberia (from Livland at the same time 7588); 1906–14 the number of emigrants to Siberia rose to 8122 persons: Sirye Kivimyaie, *Stolypinskaya agrarnaya reforma v Pribaltike* (unpublished dissertation, Tallinn, 1981), 205, 207–208.

⁵⁴ *Materialien zur Kenntniss der livländischen Agrarverhältnisse*, 21.

⁵⁵ *Kratkii obzor*, 20.

Table 1. Coefficients of variation of agricultural wages in Estland, 1890–1913⁵⁶

	1890	1900	1910	1913
agricultural male labourers, annual, nominal	0.12	0.01	0.22	0.07
agricultural male labourers, annual, real*	0.07	0.13	0.29	0.09
Finnish agricultural male day-labourers, nominal	0.15	0.16	0.09	n.a.

* Nominal wages divided by the price of butter.

Table 2. Regional nominal wage disparities in agriculture by counties (Estland=100), 1893–1913⁵⁷

	Harjumaa	Virumaa	Järvamaa	Läänemaa
1893?	102.3	114.9	96.5	86.6
1900	101.8	99.7	100.1	98.6
1913	95.4	92.3	107.9	103.7

Our figures do not show any convergence at that time. In 1906 *Deputatisten* in Estland earned 145–180 rubles per annum; in Livland 163–183 rubles.⁵⁸ On the contrary, regional diversity reached its peak precisely in these years (Table 1). Most of the developments in the direction of greater convergence occurred only after 1910. In Finland, the regional dispersion of agricultural wages increased from the late 1860s to the 1890s and diminished after that.⁵⁹ A period of labour market divergence was followed by a period of convergence, with the turning point somewhere around 1890. Tables 1 and 2 indicate that the nominal wage gaps between the Estonian counties were substantial also in 1910. The difference between the highest and lowest-wage county in the *guberniya* was 72% in the case of male annual agricultural labourers, and 60% in the case of male day-labourers. Hence, in comparison with Finland, there was a “delay” of some 20 years. In order to determine regional wage gaps, differences in regional price levels have to be taken into account too, and real wage differentials measured (see Table 1). As can be seen, these figures also support our earlier claim that convergence occurred only after 1910. Table 2 indicates large shifts in the relative position of counties in that period. Wage levels particularly

⁵⁶ Estland's figures are for the years 1893/94, 1900, 1910 and 1913; row 3: Heikkinen, *Labour and the market*, 129.

⁵⁷ Sources: see Figure 1

⁵⁸ Kozin, “Dvizhenie zarabotnoi platy”, 415.

⁵⁹ Heikkinen, *Labour and the market*, 92, 136.

rose in Läänemaa, in comparison with the average *guberniya* level, while the relative position of Virumaa notably deteriorated.

Two variables could help to explain these regional wage gaps: the number of persons per sown area in manors, and the relative number of cottagers. The supply of labourers was regionally uneven. The average number of persons per 100 *desiatiny* (1 *desiatin*=1.09 ha) of sown area in manors was 71.2 in Harjumaa, 63.9 in Virumaa, 59.8 in Järvamaa and 47.9 in Läänemaa. The availability of labour was most scanty in Läänemaa, West-Harjumaa and South-Järvamaa.⁶⁰ Läänemaa, which had been a distinctly low-wage county until 1911, had the highest real wages in 1912–13, while Järvamaa held the second position among the North-Estonian counties. The relative size number of the cottagers – a substitute for wage-workers in labour supply – is probably not a relevant issue because the proportion of cottagers among rural population in agriculture did not vary considerably between counties.⁶¹

When we consider primary data on wages, we encounter a bewildering array of wage forms.⁶² Workers were paid partly in kind and partly in cash. The amount and composition of remuneration in foodstuffs varied by region (fish, milk, etc. were not necessarily included in every manor). The form of wages depended on the nature of one's work, the prices of land and agricultural products, marketing possibilities, labour supply, local tradition, etc.

In order to measure the rural-urban wage gap, the wage rates of agricultural labourers have to be compared with those of unskilled⁶³ and manufacturing workers. Although large numbers of rural people moved to jobs in industry, such migrants were probably initially more often employed in construction, transport, or other service occupations rather than in factories.⁶⁴

⁶⁰ Rosenberg, "Zum Problem der Arbeitskräfte", 279–280.

⁶¹ Paul Jordan, *Ergebnisse der baltischen Volkszählung*. Vol. II. Ergebnisse der livländischen Volkszählung. III. Band, Die Zählung auf dem flachen Lande. Lieferung I (Reval, 1884).

⁶² Pay lists of manorial workers and servants contain detailed data on paid remuneration in money and in kind, see for example: EAA, f. 1313, n. 1, s. 99 (Essu manor); f. 1313, n. 1, s. 105 (Andja manor); f. 1323, n. 1, s. 39 (Rakvere manor); f. 1326, n. 1, s. 76 (Selja manor). For South-Estonia, pay lists of 6 manors have been analysed in Rosenberg, *Palgatöö Lõuna-Eesti mõisates*.

⁶³ In 1897, in Tallinn workers in the building industry made up 47% and casual day-labourers 39% of all workers: *Pervaya vseobshchaya naseleennaya perepis Rossiiskoi imperii, 1897. Estlyandskaya guberniya* (1905).

⁶⁴ *Tallinna Teataja*, 30.04.1910.

Urban construction workers' wages were "pure" daily wages. In order to construct annual wage series, seasonal unemployment has to be taken into account. From the Finnish example, we may assume that Estonian urban outdoor workers also had to endure an unemployment period of three to four months, mostly in winter (December-March), and worked no more than 200 (in Finland, 177) days per year.⁶⁵ The average wage for the *guberniya* is calculated as the weighted average of the estimated wage for unskilled labourers in the construction industry in five towns (data on Narva are not available), according to the number of carpenters in each town recorded in the annual report of the governor. There was a sharp increase in wages in 1899 and then another smaller one in 1912, but for the most part wages among builders were rather stable. Unemployment could not have been a serious problem: during the period under study, the construction sector in Tallinn expanded tremendously, and the boom did not end until the First World War.⁶⁶ Hands were needed also in railway construction. Occupational wage differentials among outdoor workers were substantial, but diminished over the years (in the 1890s, unskilled labourers earned 65–70% of carpenters' wages in Tallinn, in 1910–12 approximately 82%).

The urban-to-rural real wage gap is measured as the difference between destination and origin real wages divided by the origin wage: (urban wages – agricultural wages)/agricultural wages (%). Origin wages are measured as annual *guberniya*-level wage rates in agriculture at the beginning of the decade. The destination wage is measured as a weighted average of the annual "unemployment-adjusted" wage rates of unskilled building labourers in towns at the beginning of the decade. According to our crude calculations, the "real" wage gap widened until the early twentieth century (in 1894 43.1%, in 1900 62.9%), and narrowed rapidly thereafter (in 1912, there was no gap). The percentage by which urban unskilled nominal wages exceeded agricultural wages was 8% in the 1880s, 29.5% in the 1890s, and 37.4% in 1900–13, but only 14.6% in 1910–13.⁶⁷

⁶⁵ Heikkinen, *Labour and the market*, 120–121.

⁶⁶ Ene Mäsak, *Elutingimustest Tallinna eeslinnades 1870–1940* (Tallinn, 1981), 16, 27.

⁶⁷ Our calculations are based on the assumption that they worked 200 days per annum; if they worked 177 days (as in Finland), then urban unskilled wages would have lagged behind agricultural wages until 1899. In Finland, the percentage by which urban unskilled real wages exceeded agricultural wages, was 11.1% in the 1870s, 19.5% in the 1880s, 8% in the 1890s and 13.2% in 1900–13: Heikkinen, *Labour and the market*, 123.

By 1900 three quarters of all Estonian factory workers had flocked to towns. In 1913 the respective index was 80%.⁶⁸ Their average nominal wages rose in 1900–13 by 24.4% (see Figure 1). The gender and skill composition of the labour force affected average figures. The highest wages were paid in metalworking industries (369 rubles in 1900 and 450 rubles in 1913). This branch primarily employed skilled male labourers. Lower than average wages were paid in the textile industry (214 rubles in 1900 and 270 rubles in 1913, respectively) where mostly women and children were employed. Skilled factory workers earned on average 1–1.5 rubles daily, unskilled 0.5–1 rubles.⁶⁹ Between 1913 and 1915, the minimum daily wages of unskilled manufacturing workers were set at 1 ruble for men and 0.7 rubles for women. Although the proportion of female workers fluctuated over the years, it may be said that about every third manufacturing worker was a woman. Wages varied also with age and job tenure. The more quickly manufacturing employment grew, the higher the proportion of young, inexperienced and relatively low paid workers rose, and the lower the average wage fell.⁷⁰ The number of Estonian factory workers climbed from 24,700 in 1900 to 37,500 in 1913. The increase in market prices exceeded that of nominal wages in industry. According to a household budget survey carried out by Tallinn labour unions, the minimum household annual income should have been 600 rubles to make ends meet.⁷¹ Male workers involved in any industry might not have not reached the annual wage of 600 rubles, therefore wives often worked as domestic servants. Also overtime work enabled many workers to cope with rising cost of living and housing.⁷² In 1913 almost 80% of manufacturing labourers worked overtime hours.⁷³

The real wage gap between manufacturing and agricultural sectors fell from about 80% at the turn of the century to 17.8% in 1912. This is quite a modest figure compared with the average nominal gap of 43.2% in 1912. A sound comparison can be made between wages in manufacturing and

⁶⁸ Maie Pihlamägi, "On the conditions of the Estonian working class at the beginning of the 20th century", *The Baltic countries*, Studia Baltica Stockholmiensia, 5 (1990), 301–302.

⁶⁹ Otto Karma, *Tööstuslikult revolutsioonilt sotsialistlikule revolutsioonile Eestis: tööstuse arenemine 1917. aastani* (Tallinn, 1963), 349–350.

⁷⁰ Heikkinen, *Labour and the market*, 109.

⁷¹ Vinnaja, *Palgatööline*, 32.

⁷² Karma, *Tööstuslikult revolutsioonilt*, 347.

⁷³ Maie Pihlamägi, "Tööpäeva pikkus Eesti vabrikutööstuses 19. ja 20. sajandi vahetusel ning tööliste võitlus selle lühendamise eest", *ENSV TA Toimetised, Ühiskonnateadused*, 34 (1985), 254–255.

agriculture, since the number of work days per annum was roughly the same – wage series are annual averages, so seasonal differences do not distort the calculations. The substantial decrease in the wage gap implies that the rural and urban labour markets were no longer worlds apart. One link between them was increasing migration. However, the large and persistent urban-rural wage gap until about 1910 indicates that migration was not strong enough to prevent its notable widening.

Why did low-paid Estonian agricultural labourers not seek jobs in industry?⁷⁴ Rural workers complained about excessively long workdays, meagre wages, miserable apartments, bad food, the lack of social and legal security,⁷⁵ and poor treatment in the workplace.⁷⁶ First, it was common for rural migrants to start with a job in service or building sector and, as we have seen above, wages in the latter sector were not high enough to attract people to towns. Second, industry might have lacked sufficient capital to expand. If industrialization was too slow to attract large numbers of agricultural workers, the wage gap should have been small and stable.⁷⁷ But our data do not seem to confirm such a hypothesis. Third, the wage gap was not the only variable relevant to the migration decision. Boyer and Hatton have listed other important factors: the probability of gaining employment in the individual's occupation or in some other occupation, environmental considerations (poor working conditions, unsanitary housing conditions, or high mortality rates in the destination region), the presence of previous migrants from the origin region in the destination region — “the friends and relatives effect”.⁷⁸ Rural-urban migration did not occur until the urban labour market offered the same degree of income and social security that membership in a rural community, for all its inequalities, still afforded.⁷⁹ Due to cyclical unemployment manufacturing workers' living standards were unstable (e. g. there was high employment in 1900–

⁷⁴ At the turn of the century factory workers were often recruited outside Estonia: Karma, *Tööstuslikult revolutsioonilt*, 253; Heino Linnuse, *Balti manufaktuur 1898–1963* (Tallinn, 1965), 13. Pihlamägi, however, maintains that majority of manufacturing labourers were rural migrants. Serious labour shortage occurred only in the years prior to the First World War, when shipyards recruited labourers outside the *guberniya*: Pihlamägi, *Eesti industrialiseerimine*, 32.

⁷⁵ Rosenberg, “Zum Problem der Arbeitskräfte”, 275.

⁷⁶ *Tallinna Teataja*, 8.04.1910.

⁷⁷ Pierre Sicsic, “City-farm wage gaps in late nineteenth-century France”, *The Journal of Economic History*, 52, 3 (1992), 675–695 (677).

⁷⁸ Boyer and Hatton, “Migration and labour market integration”, 699.

⁷⁹ George Grantham, “Economic history and the history of labour markets”, *Labour market evolution*, ed. by George Grantham and Mary MacKinnon (London, New York, 1994), 21.

1903 and in 1909–1910⁸⁰). The housing conditions of urban and agricultural labourers were rather similar. Both lived in one-room apartments.⁸¹ Agricultural workers were legally and socially less secure than manufacturing labourers. The law of 3 June 1886 regulated the contracts of manufacturing workers by requiring: ledgers for workers stipulating all of the terms of their contracts; two weeks severance pay; wage payments every month without deductions for any reason; payment only in cash, not in kind of any sort; and guarantees that no changes would be made to the terms of the contract during its term.⁸² On the basis of the insurance law against accidents of 2 June 1903 and the insurance law against accidents and illnesses of 23 June 1912 factory workers received free medical aid, including medicines.⁸³ Social and cultural barriers likely played an important role in Estonia: agricultural labourers preferred to become tenants or farm owners rather than seeking (decent) factory jobs.

Conclusions

I would like again to stress the preliminary character of the findings here. This article aims to provide a stimulus for further research into wages and prices. Very basic research needs be done in order to establish composite cost-of-living indices and in order to investigate changes in real wage levels in Estonia during the period of “modernisation”.

Annually hired *Deputatisten* made up the majority of manorial labourers, although the proportion of day-labourers grew over time. Both customary and market forces played a role in determining the wages of agricultural labourers. Cash and in-kind payments were often combined. Average nominal wages of *Deputatisten* rose in 1887–1913 by 66.2%. The growth was not steady: the years 1887–1900 saw hardly any increase and there was even decline in some years. From 1906 wages increased substantially, with the greatest acceleration in the last years before the First World War. The demand for labour was high in the face of increasing emigration and rapid industrial growth. Agricultural labourers in particular profited from the economic upswing. Also the revolution of 1905 may have contributed to this sudden rise in wages. Workers’ power in bargaining with manor owners considerably increased. Nominal as well as real wages

⁸⁰ Georgi Lukin, *Töölisliikumine Eestis Stolõpini reaktsiooni ja uue revolutsioonilise tõusu aastail (1907–1914)* (Tallinn, 1960), 23–24.

⁸¹ Mäsak, *Elutingimustest Tallinna eeslinnades*, 33–34.

⁸² Palat, “Casting workers”, 317.

⁸³ Pihlamägi, “On the conditions”, 304.

between the four north-Estonian counties were substantial for most of the period under study and these differences levelled only after 1910.

According to our preliminary figures, the urban-to-agriculture wage gap rose from the 1890s until the early twentieth century, and the turning point came around 1910. There was a twenty-year delay in comparison with Finland. The drop in the wage gap after 1910 may have been caused by the rapidly growing demand for unskilled workers. The trend in agricultural versus urban wages illustrates labour market convergence. The gap widening in favour of urban workers in Estland until about 1910 does not reveal any considerable market convergence. But does this wage gap suggest that rural labourers were necessarily worse off than their urban counterparts? As an indicator of living standards the wage rate of male labourers is in many respects deficient: the worker household rather than the individual male worker is a more appropriate unit for the examination of living standards.⁸⁴ Male wages were a central component of household income but they were not the only component.

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KOKKUVÕTE: *Maatöölised ja nende palgad Eestimaal 1885–1913*

Artikkel vaatleb Eesti maatöölise palka ja selles “moderniseerumise” ajal toimunud muutusi Põhja-Eesti mõisatöölise näitel, toetudes nii varasemale sellekohasele uurimistöole kui ka uutele, seni käibesse toomata arvandmetele moonakate palkade ja põllusaaduste hindade kohta. Töölise elatustaset mõõdetakse tavaliselt reaalpalga abil. Kahjuks ei võimalda praegune uurimisseis palkade ja hindade vallas arvutada välja Eestimaa töölise reaalpalka ega selles toimunud muutusi meid huvitaval perioodil. Nihkeid (maa)töölise palkade ostujõus on püütud hinnata rukki ja või hindade alusel konstrueeritud indeksi abil.

Enamiku mõisate palgalisest tööjõust moodustanud moonakate nominaalne aastapalk kasvas 1887–1913 kubermangus keskmiselt 66,2%. Kasv ei olnud ei piirkonniti ega ajaliselt ühtlane. 1887–1900 oli kasv minimaal-

⁸⁴ Heikkinen, *Labour and the market*, 159–160.

Ine ja mõni aasta palgad langesid; märkimisväärselt hakkasid maatöölise sissetulekud tõusma pärast 1905. aasta revolutsiooni. 1907–13 kasvas nominaalpalk keskmiselt 6,5% aastas; reaalpalk ilmselt veelgi rohkem. Nii nominaal- kui reaalpalk erinesid Põhja-Eesti neljas maakonnas oluliselt. Vahed tasandusid alles pärast 1910. aastat.

Linna ja maa palga erinevuste põhjal saab hinnata tööjõuturu ühtlustumise/segmenteerumise astet. Linnatöölise palkade arvutamisel kasutatakse andmeid ehitus- ja tööstustöölise kohta. Selgub, et erinevus linna ja maa vahel suurenes 1890. aastate algusest kuni 20. sajandi esimese kümnendi lõpuni. Nii mõisatöölise suured palgavahed maakonniti kui ka kasvanud erinevused linna ja maa vahel näitavad, et Eesti tööjõuturg oli sel ajal üsna segmenteerunud. Konvergens ilmneb alles Esimese maailmasõja eelseil aastail, kui majandustõusust võitsid suhteliselt kõige enam maatöölised.