

Micro-Perspectives on Living Standards in Nineteenth-Century Russia*

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Abstract

In recent years economic historians have turned new attention to questions about standards of living in pre-revolutionary Russia. However, most of the studies to date have focused on a narrow range of measures for predominantly urban areas. We expand on the existing literature with a micro-level analysis, which employs a broader set of measures of wellbeing for a small rural region in central Russia. Our findings suggest that living standards were improving over the nineteenth century, even in such seemingly less dynamic rural areas. Income and consumption patterns, human capital development, and the distribution of resources in the countryside were more variegated than a ‘subsistence’ approach has typically allowed. The micro-level context presented here suggests that state and local institutions should be emphasized in future analyses of rural living standards in pre-Soviet Russia.

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I. Introduction

The widely accepted view of the rural Russian in the pre-revolutionary period is that of a poor peasant scratching out a meager living in a harsh climate. The Russian peasant, in this view, lived at the very edge of subsistence, his (or her) survival always threatened by the vagaries of the weather and the ever-increasing demands of either feudal overlords or the central state. According to this view, Russian peasants were not integrated into local or regional markets; they were concerned mainly with their own subsistence and, besides, they had very little money to spend. Richard Hellie, in his study of material culture in seventeenth and eighteenth century Russia, summarizes this view, arguing that peasants “were largely excluded by the market because they raised and made most of what they had, and had few resources left after paying rent and taxes to buy anything.” Even in the period after the abolition of serfdom, Russian peasants are thought to have used money only to discharge their communal and state responsibilities and on the “traditional staple of salt and such items as tea, matches, and kerosene.” Thus, the Russian peasantry is thought to have remained largely autarkic, even after the supposedly liberalizing reforms of the 1860s.¹

The picture painted is one in which living standards – especially in the countryside – remained stagnant throughout the nineteenth century. But how accurate is this widespread view? In fact, we still know very little about the standard of living of rural inhabitants, who comprised some 85 per cent of the Russian population before the twentieth century. The existing literature has tended to treat the peasantry as monolithic across space and time, immiserated in the pre-emancipation period by the demands of feudal landlords, and in the post-emancipation period by the demands of the central state. Research on living standards has tended to focus primarily on factory workers in Moscow and St Petersburg, using a limited range of measures – mainly wages and very basic data on consumption patterns. Very little of the work devoted to living standards sheds light on the situation in the countryside,

where most Russians lived. Moreover, there is little or no sense of variation from region to region or of change over time (in particular, before and after emancipation). The few studies that consider such variation focus on particular types of data sources – such as height measures in Boris Mironov’s recent magisterial volume – and tend not to connect heterogeneity in rural living standards to its possible determinants, such as differences in local institutions or factor endowments.²

The difficulties with existing studies are probably due, at least in part, to the fact that the Russian peasant’s standard of living is difficult to ascertain. Rural wage and price data series are often incomplete – especially for the pre-emancipation period – making it difficult to compile the kinds of measures employed for other parts of Europe. Moreover, imperial Russia covered a vast amount of territory, and wages, prices, and other measures of quality of life varied significantly from place to place. Donald MacKenzie Wallace, an Englishman who spent considerable time in Russia in the late nineteenth century, summed it up very nicely when he said that:

“The rural life, and in general the economic organization, of Russia is so peculiar ... that even the fullest data regarding the quantity of land enjoyed by the peasantry, the amount of dues paid for it, the productivity of the soil, [and] the price of grain ... would convey to an Englishman’s mind no clear conception of the peasants’ actual condition.”³

But identifying such variation is complicated because the vast majority of information on rural living standards is buried in local archives or in hard-to-find publications. While we cannot claim to completely “convey ... a clear conception of the peasants’ actual condition,” in this paper, we do sketch an empirical picture of living conditions outside the capital cities across the entire nineteenth century. While this sketch remains incomplete, it nonetheless casts considerable doubt on the conventional view of an autarkic, subsistence-oriented peasantry in the period before the Stolypin reforms and, moreover, indicates a direction for future research in this area.

We make three contributions to the literature in this paper. First, we have broadened the range of measures used to evaluate living standards. We adopt a Human Development Index (HDI) approach towards multi-dimensional interpretations of living standards. In this view, income is translated into goods (including health, education, and possibly other non-market “goods”) that provide utility. This process is mediated through markets (prices); the social, political, and physical environment (“endowments” and “institutions”); and additional personal and household characteristics. We first present information on wages, salaries, and measures of agricultural production – these shed light on the income level of Russian peasants. We then turn to data and qualitative evidence on the cost of living, consumption patterns, and “material culture.” These describe what peasant incomes could purchase; thereby, giving a sense of real income levels. Echoing work by Richard Easterlin and others, we then discuss evidence on demographic outcomes and human capital investments. Finally, we characterize the legal and political rights held by the peasantry and how these evolved over time.⁴

Second, we expand the temporal dimension by exploring the question of living standards for the pre- emancipation period as well as the post-reform years. The data presented here cover a period of roughly 160 years (c. 1750-1910). Ideally, we would have constructed long-run data series for a number of variables (wages, prices, etc.) for a large number of geographic areas. But due to the constraints imposed by the sources for the pre-1861 period (discussed below), such a project remains beyond the scope of this paper. Thus, there are certain asymmetries in both the quantity and quality of the data we employ. Nonetheless, our data do shed light on new aspects of quality of life in the countryside in *both* periods, and thus allow us to make some general observations about the direction of change in living standards.

Finally, we bring a different geographic focus and new source materials to the study of Russian living standards. As mentioned earlier, much of the work on living standards has focused on Moscow and St Petersburg. The (very) few existing studies of the rural population are for areas in the grain-belt in the south (e.g. Tambov Province) or, as noted earlier, tend to rely heavily on one type of indicator (e.g. heights). In contrast, our focus is on two provinces in the Central Industrial Region: Vladimir and Iaroslavl'. To get the clearest picture possible, we take a micro-history approach, concentrating on two contiguous districts of these provinces: Iur'ev district of Vladimir and Rostov district of Iaroslavl'. These choices were motivated by the richness of the empirical source material, especially archival evidence on serf economic activity in Rostov in the pre-1861 period.⁵

Although residing in the so-called “industrial” zone of European Russian, the households in these two districts engaged in agriculture and a mix of non-agricultural activities. The rural populations of these two districts were both overwhelmingly Orthodox and were members of the peasant estate (*soslovie*). Neither of these districts were significant destinations for migration, while seasonal and permanent out-migration (especially of males) was quite prominent. Economic linkages to Moscow and St. Petersburg were prevalent, but these districts were not the most industrially developed in either province. In Table 1, we compare the two districts – we come back to some of the similarities and differences in our discussions below. On the whole, these two districts appear to have been typical for this region in terms of their mixed economies and population characteristics.

[Insert Table 1 about here]

Improved access to Russian archives and libraries has made it possible to widen the set of sources beyond those utilized by previous studies. Our paper employs a wide-range of micro- and district-level data, both published and unpublished. Much of the pre-emancipation evidence comes from estate documents generated by one of Russia's largest landholding

families, the Sheremetyevs, supplemented with published data from various sources. The post-emancipation data is drawn from the increased output of statistical and descriptive materials generated by various government bodies over the period. The wide variety of sources we draw on over the entire period for these two small districts complements the rich, albeit much more aggregate, recent study of Russian living standards by Mironov. Like his study, our evidence shows little sign of a broad or persistent crisis in rural Russian living standards over the nineteenth century. However, we identify a number of deviations from the aggregate story that make clear the importance of pursuing more micro-level analyses before drawing strong conclusions about the trajectory of living standards over the period.⁶

The structure of the paper is straightforward. The second section examines data on different dimensions of living standards for the post-reform period, for which empirical sources are most abundant. The third section pushes the analysis back a century, into the period before the emancipation of the serfs. Working backward, chronologically, will make evident to the reader the ways in which the nature of the sources creates special difficulties for long run comparisons. In the fourth and final section, we consider how our micro-level evidence compares to existing views of rural Russian living standards and suggest a program for future research on rural standards of living in pre-revolutionary Russia.

II. Russian Rural Society, 1861-1910

A long tradition in Soviet and Western scholarship views the 1861 emancipation of the serfs and accompanying land and institutional reforms as re-imposing constraints on the peasantry that amounted to a new form of serfdom. The assignment of peasants into formal land communes, collective control over property rights, and joint liability for land and tax obligations restricted factor mobility and the development of the rural economy. According to this literature, the burdens (taxes; redemption payments for their land) placed on peasant

communities remained exceptionally high and even exceeded those imposed under serfdom. As a result, rural living standards continued to stagnate into the twentieth century despite some improvements in agriculture and growth in non-agricultural sectors.⁷

This “crisis” view of rural living standards in post-emancipation Russia has been questioned from a number of different perspectives, ranging from GDP per capita calculations to anthropometric studies. Although writers in the living standards debate have drawn on a much richer vein of sources than are available for the pre-1861 period, it is still the case that many of these studies have not paid sufficient attention to regional variation or have taken a rather restrictive view of what comprises the standard of living. Moreover, surprisingly few studies have made concerted use of sources produced by the *zemstva*, which were new institutions of local self-government founded in the 1860s across much of European Russia. The *zemstva* of Vladimir and Iaroslavl’ provinces produced streams of research publications over the post-emancipation period on topics ranging from literacy rates and public health conditions, to agricultural productivity and local market turnover. In this section, we undertake a multi-dimensional analysis of living standards for our study districts by considering post-1861 evidence from a variety of *zemstvo* and non-*zemstvo* sources.⁸

Agricultural Production, Incomes, and Tax Obligations

Although the provinces of Iaroslavl’ and Vladimir lay at the heart of the Central Industrial Region, rural households in the post-1861 period did produce at least some of their own food. Rye and oat yields were slightly higher after 1861 than before (see the next section), and they continued to rise slowly over the period. However, productivity on peasant allotment land remained below the level on individual private property (mostly owned by non-peasants), which likely reflected persistent differences in land quality, production technologies, labor inputs, and levels of capital investment. Agriculture in Iur’ev appears to

have been slightly more productive than in Vladimir as a whole, while Rostov closely resembled the rest of Iaroslavl' province.⁹

In the absence of peasant farm accounts, it is difficult to compute the exact amount of income generated from agricultural activities. Using aggregate data, *zemstvo* tax valuations in the late 1890s calculated net income per *desiatina* of peasant allotment land in Rostov and Iur'ev districts at 3.55 and 3.81 rubles, respectively. In each case, holdings averaged about 2.6 *desiatina* per adult male, which implies a mean level of about 15-20 rubles per household in agricultural income.¹⁰

Beyond these rough calculations of own-farm revenues, wage (including agricultural) and salary observations are available for our study districts. Figure 1 presents two agricultural wage series for Iur'ev and compare them with existing real and nominal wage series for nearby areas.¹¹ We take nominal daily planting and harvest wage series and deflate them by a "subsistence index," which is calculated as the difference between wages paid with or without provisions provided by employers (with 1885 as the base year for this "cost-of-living" series). Unfortunately, the available wage data for Iur'ev only begin in 1883 and are spotty after 1902.¹²

[Insert Figure 1 about here]

This exercise suggests that the agricultural labor market in Iur'ev was probably well integrated with the market for low-skilled labor in central Russia, at least by the 1880s. The rise in wages from around 1885 to the mid-1890s, followed by stagnation, is apparent across all the series. The difference in planting and harvest wages in Iur'ev reflects the seasonal demands for labor in the late summer and early fall. Between 1884 and 1900, this gap (nominal harvest minus planting wages) averaged 11 kopeks for Iur'ev (63 versus 52) and 4 kopeks for Rostov (69 versus 65). By the late 1890s, a male summer agricultural worker in Iur'ev district was making approximately 60 rubles, and by 1910, about 65 rubles.¹³ In the

last decades of the 19th century, the level and trends of nominal agricultural wages paid in Iur'ev and Rostov were comparable to the rest of Vladimir and Iaroslavl' provinces. Day and summer pay in Iaroslavl' slightly exceeded the levels in Vladimir, and both provinces showed higher wages in agriculture than the European Russian average.¹⁴

Although most residents of our region continued some involvement in agricultural production (see Table 1), non-farm activities inside and outside the home continued to play a significant role in rural incomes after 1861. For many peasants assigned to villages in our study districts, this entailed seasonal or yearly migration to St. Petersburg, Moscow, or other nearby employment opportunities. Such forms of labor migration increased over time, so that by 1897, local officials were issuing roughly one work passport (required for working more than 30 kilometers from the village where one was registered) for every 5 residents of Rostov district. By 1899, over 88 percent of households in Iur'ev district had some member working in occupations other than farming their own land, and about 44 percent of all males were engaged in non-agricultural pursuits.¹⁵

Before 1861, household income from non-agricultural “trades” (*promysly*) was equivalent to approximately 40% of overall “needs” (*soderzhanie*) among the state peasantry in Rostov district.¹⁶ A typical full-time factory worker in Rostov district made somewhere between 100 and 300 rubles a year in the early 1860s (Table 2). Nominal monthly wages for spinners in factories of nearby Shu'ia district of Vladimir province (an area that likely attracted numerous migrants from our study districts) rose from 14.6 rubles in the late 1850s, to 16.3 – 18.9 rubles in the early 1880s, and then to 20.8 rubles in the mid-1890s. Therefore, if peasant net farm incomes were roughly 15-20 rubles per household by the late 1890s, and labor markets were fairly well integrated, then the evidence would suggest that only 3-20 percent of the income earned by a two-earner household came from agricultural revenues.¹⁷

[Insert Table 2 about here]

Table 2 also reports available information on the salaries of rural professionals or service-sector employees in Rostov and Iur'ev. As demand for basic education grew and teaching standards improved, rural teachers saw nominal salaries increase over time at a faster pace than factory worker pay. Teacher salaries were similar to those paid to township clerks and elders, who played a large role in local governance. These salaries paled next to those received by doctors and officials employed locally by central government ministries (tax inspectors, police chiefs, etc.), many of whom were paid more than 10 times the mean factory wage in the region. Although these indicators of income levels are somewhat limited, they do imply the existence of significant inequality in our region, a topic we return to below.

The levels of taxes, land payments, and other obligations have been the basis for much debate over post-emancipation living standards.¹⁸ However, it is worth exploring just how these obligations compared (over time) to income levels. Table 3 presents information on the external burdens faced by peasants in our districts. These included various class-based obligations, as summarized for 1877 in the first several rows, and state and *zemstvo* property taxes. According to these figures, the total of state, *zemstvo*, and township/communal burdens per tax paying unit increased in nominal terms over the period and did so at a pace that closely followed the increase in income levels. The level of accumulated tax arrears, which we present for 1895 and 1903 as a percentage of yearly assessments, suggests that peasants were actually finding it easier to pay over time. This may have been driven, in part, by the lowering of outstanding redemption obligations after 1881.¹⁹

[Insert Table 3 about here]

If we take mean land holdings just after 1881 and add the resulting redemption payments to the other tax burdens (averaging about 3.50 rubles), total direct per capita burdens on the peasantry were likely in the range of 5-6 rubles in our districts through out the period. With per capita incomes in the neighborhood of 100 rubles, total obligations

constituted no more than 10 percent, and this was likely falling as incomes rose and redemption payments declined. This trend was partially offset by rising indirect taxes over the same period, which by 1897 represented approximately another 5 rubles per capita.²⁰

Cost of Living, Consumption, and Rural Material Culture

With slowly increasing nominal wages and salaries, our understanding of the extent to which living standards were improving depends on an estimation of the purchasing power of this income growth. The real wage series of Strumilin and Mironov in Figure 1 both deflate nominal wages of construction workers in Petersburg by the price of a consumption basket. They rely on rich household budget information and a large number of price series from Petersburg to construct their cost of living index. For our study districts, the wage and price series required for such a calculation are simply not available, so we rely on a rough estimate of the cost of provisioning a daily worker to calculate the Iur'ev real wage series in Figure 1.²¹

Despite the difficulty of constructing long-run cost-of-living series for our districts, the sources at our disposal do allow us to say something about consumption patterns, the availability of goods, and relative prices at various points in time. Scholars of the Central Industrial Region have pointed to rising expenditures on all sorts of everyday goods and luxury items in the last half of the nineteenth century. This emerging “consumer culture” was evident in rural areas, especially in districts like Iur'ev and Rostov where there was a substantial amount of migratory labor to Moscow and Petersburg. According to rural worker and peasant budgets from Vladimir, Iaroslavl', and the rest of European Russia, grain and other foodstuffs took up 40-70% of household expenditures, while clothing constituted another 5-15 percent. A further 10-20 percent went towards livestock expenses, leaving 15-40 percent for housing, non-essentials and luxury goods. While we do not have direct

information on what non-essential and luxury goods were commonly available in our districts, one sign of such consumption in the provinces is the emergence of commercial advertisements in provincial newspapers that circulated in rural areas.²²

Although many households in our districts retained some connection to agricultural production, most households turned to the market to buy foodstuffs. Thus, while peasants were buying a large variety of goods, the availability and price of grain continued to be of key importance to overall welfare. In reports to the Vladimir *zemstvo* in the late 1890s, less than 15 percent of peasant households in Iur'ev were fully self-sufficient in grain.²³ Although data are not available to construct long-run cost of living indices in Iur'ev or Rostov, we do have scattered prices for grains and a number of other key food goods. Figure 2 presents oat and rye price observations for Iur'ev and Rostov (rubles per *pud*), alongside comparable series for St. Petersburg, Odessa, and Moscow. Over the entire period, the price of a *pud* of rye – the main food crop – experienced significant fluctuations, with the final level roughly 40 - 50 percent higher than in the 1860s. The grain price movements in Iur'ev and Rostov closely paralleled those in the other markets, suggesting that these key markets were relatively well integrated. The relative availability of other local price observations for processed flour, potatoes, butchered meat (beef, lamb, and other types), salt, hay, and other basic provisions in our two districts tells us that institutions and markets functioned well enough to allow substantial rural and urban trade. Despite limited information on other types of consumption, it is clear that the peasant population was not autarkic in any sense when it came to important food items. There is little evidence that that consumption worsened or that the cost of living was rising dramatically.²⁴

[Insert Figure 2 about here]

The number and type of trade and market establishments constitute another form of evidence about availability of goods in our study districts. In 1875, Iur'ev district had

approximately 184 shops (*lavki*) and stores (*magaziny*) for roughly 390 settlements, while Rostov district possessed over 1750 such establishments for approximately 800 settlements. These small shops and trade establishments mostly retailed basic foodstuffs, but weekly bazaars and large periodic markets carried a wide variety of textiles, iron products, livestock, and foreign goods. Given its share of population (6.1 percent of the province in 1897), Iur'ev possessed only 5.3 percent of taxed trade enterprises (*torgovlyia predpriiatii*) in Vladimir and few trade fairs (*iarmarki*) by the end of the 1880s. In contrast, Rostov possessed 13.9% of Iaroslavl's population, 12.3 percent of the taxed trade enterprises, and several large trade fairs and semi-annual markets.²⁵ The difference in commercialization between Rostov and the neighboring Iur'ev district suggests that heterogeneity in the level of market development may have been significant across European Russia, even late in the nineteenth century. But again, within these two districts the bulk of the evidence points towards widely available foodstuffs and relatively affordable costs of living in the latter half of the nineteenth century.²⁶

Demography and Human Capital

Evidence on the cost of living and consumption in Iur'ev and Rostov districts allows us to say something distinct about material standards of living for this small region in the post-1861 period. Even with the relative availability of data after 1861, it is not possible to construct long-run real income and consumption series comparable to those available for Moscow or St. Petersburg. Therefore, it is important to go beyond wages, incomes, and prices to consider indirect measures of living standards, such as demographic, education, and other indicators of human capital accumulation.

Central and provincial statistical bodies collected information on birth and death rates over the nineteenth century, although micro-level demographic sources remain scarce before

the 1897 census. To document fertility and mortality trends, Hoch is able to take advantage of Orthodox parish registers to reconstruct the population of one parish in Tambov province, but such materials are limited for most districts, including ours. Therefore, we have not attempted to match Hoch's ambitious work; rather, we continue to focus on the cruder demographic indicators that are also more available for the pre-1861 period (see below).²⁷

For the purposes of taxation, authorities kept tabs on the the number of births and deaths and the approximate size of the population under their authority, which allows us to say something about crude fertility and mortality rates at the provincial level. In Figure 3, we present such series for Vladimir and Iaroslavl', along with select data points for our study districts. Fertility in these two provinces was relatively flat at 4.5-5 per 100 resident (although Rostov exhibits a decline between the two years of data). Mortality was relatively high at 4-5 per 100 early in the period but falling 10-20 percent by 1894. Tests of causality are beyond the scope of this paper, but rising rye prices in the early 1880s and early 1890s did not correspond to upward spikes in mortality. This is consistent with food markets functioning well enough to break the link between staple prices and demographic outcomes.²⁸

[Insert Figure 3 about here]

Demographic outcomes were very different in the two provinces: Vladimir (and Iur'ev district) exhibited a more "high-pressure" system than Iaroslavl' or Rostov, with both greater mortality and higher fertility rates. This possibly stemmed from differences in the occupational structures of these provinces, as Vladimir was more industrialized than Iaroslavl' (health conditions in factories were a concern of the new factory inspectorate in Vladimir and elsewhere). Alternatively, the lower mortality and fertility rates in Iaroslavl' may have reflected the slightly higher income levels in Iaroslavl'. Thus, these demographic outcomes suggest important differences in living standards even within our relatively small region of study.²⁹

Educational outcomes are important signals of human capital and overall living standards, and the period after 1861 saw growing school enrollments and literacy rates. Table 4 shows literacy rates by gender for Iur'ev and Rostov districts in 1897, a further breakdown by township for Iur'ev district (only rural population, ages 21-30) from the 1898-1899 household survey, and information on literacy among army recruits from Iaroslavl'. These data show growing literacy over time, as well as variation across space. Females were much less likely to be literate, especially in Iur'ev.³⁰

[Insert Table 4 about here]

The growing involvement of the *zemstva* in building schools and financing the expansion of primary education in the late 19th century generated extensive data on these processes. In Table 5, we document schooling in Iur'ev district in 1899. Ministry of Education schools refers to the primary schools supported by a combination of *zemstvo* and Ministry resources. Parish schools were institutions run by the Orthodox Church. By 1899, more than 3500 students were enrolled in these schools, which generally had certified teachers and a regulated curriculum. These data suggest that somewhere between 30 and 40 percent of the school age population was enrolled. More aggregate information collected by the Ministry of Education in 1879 and 1911 implies that in the *rural* areas of our two districts, school-age enrollment rates rose from 12.3 and 5.6 to 28 and 24 percent, respectively. These rates compare favorably with the growth in enrollments across European Russia according to the same sources.³¹

[Insert Table 5 about here]

Institutions, Rights, and Inequality After 1861

The post-1861 period saw several significant reforms of Russian political and administrative institutions, particularly in rural areas. Although institutions are not usually considered in discussions of the standard of living, they worth considering to the extent that

they affected what Amartya Sen has called the “capabilities” of village inhabitants. For example, those created in the post-emancipation era did measures offered new political outlets to the rural population, but they likely did so in a very unequal way. The new institutional structures may have contributed towards social and economic inequality, because they made distinctions between the rights of the peasant majority and other social classes.³²

The assignment of peasants into the new official form of the peasant commune – the *sel'skoe obschestvo*, or rural society – as one party in the land settlement process ending serfdom formalized a system of collective property rights and joint responsibility for tax and land payments. These new institutions of peasant self-government (including higher, township level governments) provided local mechanisms for rural residents to support some limited public goods and services, while the elders (*starosty*) were incorporated into the formal administrative structure of the state. Despite these developments, the internal workings of the rural societies appears to have differed little from how the commune functioned under serfdom (see below), with a small group of male household heads determining the allocation of obligations, land, and access to other collective assets. The resulting inequality of power within the commune likely contributed towards persistent gender and wealth differences among the rural population.³³

[Insert Table 6 about here]

Table 6 reports some basic information on the nature of peasant and other local institutions in the post-1861 period. Rural societies in Iur'ev were much smaller than in Rostov, although townships were comparable in size. These institutions financed (some) schools and local courts; paid elders and other officials; managed postal horses, local military supplies, and grains stores; and, occasionally, supported public health measures, prisons, and fire services. Other social classes possessed their own political and economic institutions, including municipal authorities in the cities of Rostov and Iu'rev, corporate bodies of the

local nobility, and merchant guilds and associations. Furthermore, the goods and services provided by the peasant institutions were generally quite limited, especially when compared to the roles played by the new *zemstvo* institutions in local affairs. Although these latter institutions became less “representative” over time (Table 6), their expenditures rose in per capita terms, especially after 1890. Per capita expenditures by the district *zemstvo* in Iur’ev and Rostov rose from 0.53 and 0.35 rubles in 1877 to 1.36 and 1.04 rubles in 1906. Despite the limited voice peasants held in the *zemstvo* (relative to the gentry or urban classes), the institution increasingly supported measures aimed at improving rural living standards.³⁴

The rise in *zemstvo* expenditures was paralleled by the growing involvement of the central government in local affairs after 1890. For example, the increase in *zemstvo*-provided financing for local schooling was matched by funds provided by the Ministry of Education after 1895. In 1906, the creation of the Duma parliament allowed for some representation of local interests (albeit, non-proportionally) in central government affairs. Table 6 indicates that the peasant social estate received one-third of our districts’ seats in the provincial electoral assemblies; a share that slightly exceeded their provincial averages. But other than possibly encouraging the central government’s involvement in education, these new national assemblies did not play much of a role in rural policymaking.³⁵

For example, the Duma did not support Prime Minister Piotr Stolypin’s land reforms, which he imposed in an attempt to ease some of the communal constraints on peasant property rights. At the time, these measures were seen as crucial steps towards improving rural living standards, for as Table 1 shows, communes in our districts, and in the Central Industrial Region as a whole, overwhelmingly practiced repartitional tenure on their allotment land as late as 1905. However, between 1907 and 1912, only 2.6 and 3.9 percent of this collective property was transferred into private holdings in Vladimir and Iaroslavl’ as

part of the reforms. Therefore, the communal character of peasant property rights remained a key element of the rural institutional structure throughout the pre-Revolution period.³⁶

Indeed, the fact that collective land allotments and communal property rights were formalized in the 1860s and left essentially unchanged over the ensuing half century helps explain the existence of rural inequality. Part of this was due to the differences across communities in the amount of land per household as fixed by the settlements of the 1860s. In 1905, households in formerly serf rural societies in Rostov and Iur'ev districts had 6.4 and 8.6 *desiatina* of allotment land on average, relative to 8.4 and 11.1 in formerly state peasant communities. As a result, districts where serfs were a larger share of the population in 1860 saw a greater share of *private* property among the peasantry in 1905. These two types of property may have entailed significantly different transaction and production costs.³⁷

These differences in property holdings by type of rural communities were matched by within-community inequality. A key reason for this was the power of communal authorities to allocate allotment land and shares of collective tax and redemption obligations. We do not have individual or household level data to document such internal variation in the communities of our districts, but evidence from the 1898-1899 *zemstvo* survey of Iur'ev suggests that while peasant households had mean allotments of approximately 9.4 *desiatina*, 14.7 percent held more than 15 *desiatina*, 18 percent had 0 to 5, and 9.8 had no allotment at all. Single women or those out of favor with the rest of the community likely headed households without access to allotments. While agriculture was of secondary importance in our study region, peasant allotment land contributed to overall household incomes (see above) and functioned as a form of insurance.³⁸

Male dominance of peasant government was one component of gender inequality that characterized rural Russian society after 1861. Women were not allowed to sit in *zemstvo* assemblies or hold local central government positions. Female enrollment and literacy rates

fell well behind male rates throughout the period (Table 4). In terms of occupational mobility, working-age males were more able to take advantage of growing seasonal and factory employment opportunities in the central Russian provinces. Primarily women and non-working-age males remained in the villages to work the land and undertake handicraft production. By the end of the nineteenth century, eight percent of females and 28 percent of males from the villages of Iur'ev district worked outside their communities in some capacity. At the same time, substantial gender wage gaps existed, even for identical occupations. In our study districts, female agricultural wages remained well below those for males into the 20th century.³⁹

Although the bulk of the micro-level evidence on living standards at least hints at improving conditions in the last decades of the Tsarist era, other findings point to the persistence of inequality and low living standards in certain locations and among certain groups in the population. Crop yields on peasant land remained low in the Central Industrial Region. Infant and child mortality rates were quite high through the end of the century. Although the provision of basic schooling slowly improved, the majority of the rural population – especially girls – received almost no formal education. Finally, limitations on property, legal, and political rights continued to exist for the majority of the population who were still subject to autocratic, communal, and class restrictions, despite some efforts at institutional reform in the early twentieth century.

III: Russian Rural Society 1750-1861

It is generally assumed that any improvements in living standards that *did* occur in nineteenth-century Russia were associated with the reforms of the 1860s. The period before 1861 is not viewed as an especially dynamic one, especially since it was characterized mainly by the existence of serfdom, which is thought – justifiably – to have hindered economic

growth and development in the Russian countryside. Nonetheless, archival evidence indicates that a nascent consumer culture was emerging in this period, despite the obstacles to growth imposed by serfdom. This section uses estate-level data to challenge the long held view of a stagnating serf economy in the eighteenth and nineteenth centuries. We then return to the longer run picture in the concluding section.

Any discussion of peasants' standards of living before the abolition of serfdom is constrained by the paucity of source material for this period.⁴⁰ When one encounters information on wages, prices, or other indicators in archival documents, it is usually a single data point rather than a series. But this does not mean that we cannot talk about standards of living at all. We do have some information about the condition of the peasantry – mainly from records kept by the largest serf estate owners – and, as we shall see, these sources cast doubt on the widespread “subsistence” view of the pre-1861 period: an immiserated Russian peasantry “excluded by the market” and hovering at the edge of subsistence.

Here we draw primarily on data for one particular serf estate, Voshchazhnikovo, in Rostov district in the period 1750-1860. The estate belonged to the Sheremetyev family, one of imperial Russia's wealthiest landholding families. Home to roughly 3000 serfs, Voshchazhnikovo was neither the Sheremetyevs' largest estate nor their smallest. It was neither their richest estate nor their poorest. Voshchazhnikovo was a mixed agriculture/industry estate with no particular economic specialization. Table 7 provides a summary snapshot of the larger serf estates in Rostov and Iur'ev districts. While Voshchazhnikovo was the largest estate in these two districts, it seems to have been fairly representative of other estates in this region at this time. Most estates in these districts undertook little agricultural production of their own, allowed serfs a certain degree of freedom to pursue their economic interests on or off the estate, imposed annual quitrents (*obrok*) and a variety of other fees and obligations on serf households.

[Insert Table 7 about here]

The archival data presented here come from inventories of households, bailiffs' reports, soul revisions, probate inventories, credit contracts, passport registers and serf petitions to the landlord. To determine how representative the data for Voshchazhnikovo are, we compare them, where possible, with similar evidence from other micro-level studies. We draw on available contemporary accounts and quantitative publications to provide additional context about our districts and to fill in gaps in the Voshchazhnikovo documentary record. Finally, we consider, where we can, evidence on the non-seigniorial population. As Table 1 notes, serfs comprised 66.4 and 45.3 percent of the populations of Rostov and Iur'ev districts in 1858. Even in these districts, which were part of old Muscovy, peasants residing on state and court-owned land were quite numerous. An understanding of how the experiences of serfs differed from those of other types of peasants can help us to better comprehend the broader implications of serfdom for living standards and the Russian economy.

Agricultural Production, Rural Incomes, and Tax Obligations

The pre-emancipation peasant economy has been traditionally portrayed as one of few surpluses, with peasants balanced precariously at the edge of subsistence. According to this view, serfs and other peasants were extremely vulnerable to subsistence crises when harvests failed due to fluctuations in the weather or to the other calamities – disease, warfare – that frequently befell pre-industrial societies. And some of the data we have for Voshchazhnikovo might be viewed as consistent with this conventional view. Seed-yield ratios for the period 1841-1854 were very low, as they were for much of the Central Industrial Region (Table 3). Seed-yield ratios for rye varied from 1:2 to 1:4, as did those for oats. For barley the ratio was a consistent 1:3, while wheat varied between 1:2 and 1:3.

[Insert Table 8 about here]

There is no reason to think that yields at Voshchazhnikovo were low in this period because new (and worse) land had been brought under cultivation; neither the estate nor the peasants themselves specialized in agricultural production. (There was no demesne land on the estate; the seed yield ratios in Table 8 are for peasants' own allotments.) It is possible that yields may have been low due, in part, to the availability – and affordability – of grain on local markets, which might have reduced the incentive to invest in more intensive cultivation. Furthermore, income from agricultural production on one's own land only comprised part of peasant livelihoods in our study region. In addition to cultivating land allocated by the commune, most peasants worked for a wage or engaged in some form of rural industry.⁴¹

As already noted, data on wages, salaries, and the prices of locally produced goods are very difficult to come by for rural areas in the period before 1861, especially in long unbroken series.⁴² Such series do not exist for Voshchazhnikovo, though we do know there were lively labor and retail markets in this area in the eighteenth and nineteenth centuries. Instead we have a set of individual data points – wages and earnings mentioned in passing in reports on other estate issues. We know, for instance, that estate officers (who were themselves serfs) in the 1840s earned between 250 and 700 paper rubles per year. A serf hired in 1844 to serve as an estate coachman earned 350 paper rubles per year. Nikolai Chernikhin, a migrant laborer in St Petersburg, reported earnings in 1846 of 500 paper rubles per year. Among the poorest households on the estate were those headed by widowed or never married women. These, it was noted in 1796, could earn 50-90 paper rubles per year working in textiles.⁴³

These wage and salary figures are reassuringly consistent with those reported in other sources. According to valuations of state peasant economic conditions in the late 1850s, male agricultural workers typically earned 35 (silver) rubles for the summer and 40 for the year in the in Rostov district, which slightly exceeded the provincial average.⁴⁴ Rostov state peasant

households earned about 32 rubles per year from their own agricultural production (versus roughly 27 rubles across the province). Local industrial (*promysl'*) and handicraft (*kustar'*) workers (male) in the district earned approximately 44.6 rubles in a year (versus 42.5 across the province). In comparison, information collected from estates larger than 100 male serfs in the late 1850s shows that seasonal and annual male agricultural workers in Iur'ev district had average earnings of 35.5 and 52.9 silver rubles, respectively. Workers employed year-around in local industry or handicraft work made approximately 62 rubles in net income. Summing over all types of economic activities (and allowing for seasonal differences in employment), these data imply that total income per *tiaglo* in Iur'ev district was approximately 138 rubles per year by the late 1850s. While these figures come from different years and sources, they do suggest that peasants in Iur'ev were perhaps slightly better off than those in Rostov.⁴⁵

Voshchazhnikovo serfs were burdened with various state taxes *and* had a portion of their earnings siphoned off by the landlord in the form of quitrent dues. Quitrent at Voshchazhnikovo was levied on land allotments, and in the nineteenth century stood at 15 silver rubles per *tiaglo* of land (the amount that could be worked by one husband-wife work team) and was noted to be 6.4 silver rubles per male soul in the 1850s. According to additional data collected in the late 1850s in preparation for emancipation, quitrent levels in Rostov and Iur'ev districts averaged 25.5 and 21 silver rubles per *tiaglo*, respectively. This suggests that feudal burdens at Voshchazhnikovo were relatively low.⁴⁶

However, although the poorest serfs, such as unmarried women, were not allocated land, and were therefore frequently exempt from quitrent payments, numerous other estate taxes were levied on serfs regardless of income or allotment status: a tax on marriage, a tax on remaining unmarried, a tax on land transfers, a tax on mobility, a tax on non-agricultural earnings, and many more. State and court peasants, on the other hand, were only liable for a relatively small quit rent-like payment that varied somewhat across provinces. All peasants

(and other tax paying classes) were responsible for the infamous soul tax (on all males), which reached roughly 1 silver ruble by the 1850s, as well as for other “rural obligations” such as supporting the postal system, provisioning troops, and maintaining roads.⁴⁷

As noted in Table 3, one approach to peasant well being in both the pre- and post-1861 periods is to focus on arrears in feudal dues and taxes. In the Soviet literature, evidence of rising quitrent levies and the corresponding growth of arrears in quitrent payments among serfs were viewed as an indication of a feudal “crisis” and a declining standard of living in the countryside.⁴⁸ The problem with this view is that it assumes that serfs always first allocated their cash earnings to feudal rents, and only then, if anything were left over, would they purchase goods on the market. It is often assumed that if peasants were in arrears in their feudal rent payments, they must have been in dire financial straits more generally. Evidence from the Voshchazhnikovo estate, however, suggests otherwise. There were indeed some serfs on this estate who were in arrears in feudal rents; however, at least some of these appear to have purchased consumer goods for themselves *instead of* paying their feudal dues and taxes. In fact Count Sheremetyev issued a decree in 1843 to say that it had come to his attention that serfs who were in arrears in their quitrent payments also had “several changes of the best sorts of clothes.” In order to discourage such behavior, he asked his bailiff to prohibit serfs in arrears, their wives, and children from having more than two changes of clothes. If such serfs were found to have more than two changes of clothes – or any luxury items such as silk scarves – then these items were to be “confiscated and sold and the money put toward their quitrent payments”.⁴⁹

This decree suggests that figures on arrears in taxes and feudal obligations are not wholly reliable as indicators of peasants’ standards of living. While there were some households in arrears on dues (perhaps 5 to 10 households out of over 200), we cannot assume that it was because they were *unable* to pay their taxes and dues. Some evidently

chose to allocate their earnings to things other than their feudal rents, fulfilling their obligations only when forced by the landlord. Overall, despite the fiscal and seigniorial extractions imposed on the local peasantry, the income figures reported here (and decrees such as the above) indicate that peasants in this region had disposable income before 1861. But were there goods available for them to purchase?

Consumption, the Costs of Living, and Rural Material Culture

The real purchasing power of incomes was determined by the prevailing prices of important consumption goods. Grain was a key component of peasant budgets, especially for those employed in non-agricultural pursuits. The documents from Voshchazhnikovo show a very active market for both grain and a variety of other goods. Grain was sold in bulk at the Voshchazhnikovo Friday market. Wheat, oats, and rye could be bought by the *chetvert* (roughly 130 kilograms), and flour (wheat, oat or rye) by the pood (roughly 16 kilograms). In 1831 a *chetvert* of rye (approx 130 kilograms) sold for 13 paper rubles, and a *chetvert* of oats went for 6 rubles 50 kopecks.⁵⁰ Figures for the late eighteenth century indicate that average per capita grain consumption in Russia stood at approximately 1.1 *chetvert*. At Voshchazhnikovo prices, this would mean an expenditure of roughly 14.3 rubles per person per year (for rye). Thus, it seems that grain available at the local market would have been affordable to all but the poorest residents of the estate.⁵¹

Indeed, peasants at Voshchazhnikovo do not appear to have been malnourished in any way. There are no references to increased mortality, even during those years where harvests in this region were recorded as “poor”. For instance, according to statistics gathered by the Russian central government, an early frost destroyed crops in 1847, such that grain had to be imported. At Voshchazhnikovo, however, the bailiff called the 1847 harvest “good” and made no reference to grain imports.⁵² Foreign visitors to the region were often struck by the

availability and affordability of grain. The German writer and traveler August von Haxthausen remarked during his travels in Iaroslavl' Province in the 1840s that one day's wages for a weaver in rural Russia could buy 1 Scheffel (1 US bushel) of grain, where in Westphalen during the same period a weaver's wages for one day could buy only 1/10 Scheffel.⁵³

What about other indicators of consumption? It is worth referring back to the widely held view of the Russian peasant, who was self-sufficient and “raised and made everything [s/he] had”. Surprisingly, this view persists in the literature, despite all the data we have on periodic fairs and markets in the seventeenth, eighteenth, and nineteenth centuries. Tarlovskaia, in her study of trading peasants in the Volga region in the seventeenth and eighteenth centuries, presents evidence of vast networks of local markets, some of which offered up to 140 different items for sale. The Friday market at Voshchazhnikovo did not offer so many options as that, but it certainly offered peasants more than tea, matches and kerosene. Table 9 shows some of the items for sale and their prices. In addition to affordable grain, as mentioned earlier, peasants could buy needles, linen cloth, thread/yarn, tobacco, paper, quills, and ink, plus a wide variety of vegetables and fruits, mustard, yeast, milk, honey, lard, rapeseed oil, vinegar, beer, wine and spirits. Several documents – including a few surviving probate inventories – provide detailed information on household furnishings and other possessions. Only the poorest twenty-five per cent of households (45 of roughly 200) lived in traditional wooden peasant huts with thatched roofs. The better off members of this society lived in two-storey stone houses, with numerous glass windows (one was described as having 18 glass windows facing front). Many of these grander houses were described as having “merchant style” furnishings.⁵⁴

[Insert Table 9 about here]

A very small number of probate inventories (under 10) have survived for Voshchazhnikovo for the period 1800-1840, and they, too, are revealing. In addition to basic items of clothing and household furnishings (linens, etc), the items recorded in the inventories include: silk stockings, French headscarves, various kinds of jewelry (men's and women's) including pearl necklaces (2), rings, and earrings, icons, mirrors, samovars, coffee pots, a silver tea pot, and a 40-piece tea service. One is tempted to think that, given what we do know about pre-emancipation Russia, these peasants must have been exceptional. However, there has been so little empirical work done on material culture in the countryside, that there is really no sense of what "typical" consumption habits might have been. Did all Russian peasants have French neck scarves and silver tea services? Probably not. But it seems equally unlikely that these probates represent the only nine who did in Voshchazhnikovo.⁵⁵ Overall, prior to 1861 we find few signs of subsistence crises, grain and other kinds of food were available at affordable prices on local markets, and peasants consumed a wide variety of clothing and household items in Voshchazhnikov and, likely, the surrounding districts.

Demography and Human Capital

As we noted earlier, demographic variables – mortality, in particular – can shed additional light on the question of living standards in pre-industrial societies. Hoch's work on settlements in Tambov, a more agricultural province than Iaroslavl' or Vladimir, shows little connection between mortality and harvests or grain availability. He argues that this is evidence for a relatively high standard of living, although evidence does not seem sufficient to make such a claim.⁵⁶ Unfortunately the available documents for Voshchazhnikovo are not particularly illuminating on the determinants of mortality. Burial registers for the estate parishes are very fragmented, making it difficult to establish long-run patterns. Furthermore,

infants and children – the groups that are often most significantly affected – seem to have been under-registered. Finally there are no long-run data for grain yields or prices and the yields and price data we do have do not correspond temporally with the demographic data.

All that can be said for now is that there are no references in the Voshchazhnikovo documents (of which there are several thousand) to grain or seed shortages or to mortality crises. There are no special instructions to bailiffs regarding coping with grain failures. There are no petitions from serfs to either the commune or the landlord requesting famine-related relief. There is no indication that the record-keeping system broke down at any point, due to higher than usual mortality. It is entirely possible that documents referring to such things existed but were lost or destroyed over time, but this seems unlikely. So many different kinds of documents did survive, touching on so many different aspects of estate life, that one would expect to see at least a few scattered references to harvest failure or famine-related hardship or mortality, if these had existed. There are no such references.

[Insert Table 10 about here]

As with the post-1861 period, we do have access to more aggregate data that allow us to calculate crude birth and death rates for Rostov and Iur'ev districts. Table 10 presents these numbers, which are derived from population counts maintained by local authorities and parish records of births and deaths. These data suggest that despite apparently adequate consumption, these districts had high birth and death rates relative to the rest of Russia and relative to developed nations at that time.⁵⁷ Moreover, these demographic indicators hint at the relatively underdeveloped state of rural health and healthcare in the pre-1861 period. Infant and child mortality rates were quite high, despite the apparently small impact of shocks to agricultural production. Unfortunately, the documentary evidence does not provide any indication about broader health or morbidity patterns on Voshchazhnikovo, and there has

been little quantitative information unearthed (as of yet) on disease incidence or cause of death for our two districts prior to the 1860s.

Another important dimension of human capital development is education attainment. We have very little information about literacy in pre-emancipation Russia, but formal schooling was not widespread. Voshchazhnikovo did not get its first school until 1868, several years after the abolition of serfdom. In 1842, the town of Iur'ev had one school with 126 male students, while Rostov had three schools and 138 students. According to retrospective data from the 1890s, only one and three rural schools existed in Iur'ev and Rostov districts, respectively, by 1860.⁵⁸

This does not mean that no serfs or state peasants could read or write. After each Voshchazhnikovo communal meeting, all attendees were required to sign the book of minutes and, in those books that survived, roughly 50 per cent of those present signed their own names (instead of placing a cross by their name or having another peasant sign for them). The same was true for contracts and petitions. Of course, the ability to sign one's name does not necessarily imply "literacy". It seems unlikely that all those who could write their names could write more generally, since contracts and petitions were nearly always drawn up in another hand, probably that of the estate scribe. When one of the parties to the contract was female, a male relative always signed for her. There is not a single instance of a woman signing her own name.

We also have no way of knowing whether those who could write their names could also read. At least some of them probably could, since Pelageia Kokina, a 55-year old unmarried peasant woman resident on the estate, was noted in 1838 as "earning a living teaching local village children to read". That the demand for literacy was there – well before a village school appeared – suggests that serfs themselves thought reading and writing would improve their earning potential. Several accounts written by serfs or former serfs paint such a

picture.⁵⁹ But overall, quantifiable evidence on enrollment rates, educational investments, and returns to schooling are limited for the pre-emancipation era. The picture painted by the post-1861 data suggests that the supply of basic schooling only began to show steady growth late in the century.

Institutions and Inequality Under Serfdom

The fragmentary evidence presented for Voshchazhnikovo and the surrounding districts suggests that, at least in this part of central Russia, the standard of living of peasants may have been much higher prior to 1861 than historians have previously acknowledged. However, these findings for Voshchazhnikovo – and indeed for most other rural settlements across Russia – raise an important question. If living standards were relatively high, what made rural Russia appear so poor relative to the rest of Europe? As in the post-1861 context, one possible explanation concerns the nature of local institutions and how they interacted with peasant society.

A detailed discussion of the institutional framework on Voshchazhnikovo is beyond the scope of this paper, but a few points might be made. First, Russian serfs were not even considered legal persons in this period: they were the property of their landlords. They had no formal rights to property, and they were forbidden to engage in credit transactions. They were not protected by custom, so landlords could raise rents and introduce new taxes at any time. Mobility was restricted; landlords charged fees for permission to travel beyond the estate boundaries. Moreover, serfs had little recourse beyond the manor. They possessed little access to outside courts, saw little direct interaction with Tsarist officials, and had practically no voice in local government outside of the village. This put serfs in a very vulnerable position. In order to engage in market activities, they had to be prepared to pay bribes to landlords and local officials, and to have some not insignificant portion of their profits

expropriated. The better off serfs could afford to do this, but the poor usually could not. For women it was especially tricky, as they were often forbidden by landlords to travel beyond the estate for work and forbidden by local guilds to engage in trade closer to home.⁶⁰

The institutional restrictions on serf market activity and legal rights helped contribute towards significant inequality within pre-emancipation peasant society. Indeed, the documents from Voshchazhnikovo show that the gap between the wealthiest peasants and the poorest was enormous. On the same estate we find serfs who claimed capital and earnings worth over 10,000 rubles, as well as those – mainly unmarried women – who earned 40-50 rubles per year. This inequality was explicitly acknowledged by the landlord with a system of progressive taxation, according to which peasants were divided into categories: the wealthiest had capital and earnings “over 1000 rubles”, while the middling possessed between 500 and 1000 rubles. Roughly 15 per cent of households were in the first category and 60 per cent in the second (roughly 200 households). Of those households in the bottom category, 60 per cent were too poor to even take on a communal allotment. Women headed over 60 per cent (19 of 30) of these households.⁶¹

Such inequality was perpetuated by the institutional structure of rural society. Even prior to the reforms of the 1860s (that formalized the peasant commune and defined communal allotment property), land in much of Russia was held in communal tenure, and taxes and quitrent dues were levied on the commune as a lump sum, to be divided among households by communal officials. This gave officials of serf and non-serf peasant communities, who generally came from among the wealthier peasants, additional possibilities to allocate resources in their favor. The Voshchazhnikovo documents are full of petitions from poorer serfs complaining that their land had been taken away, that additional taxes had been levied on them, and that communal officials were stealing from communal funds. This

abuse of power by the wealthiest and most powerful members of the commune was not unique to Voshchazhnikovo.⁶²

Frequently, it was those whose earnings were highest – the so-called “first rank” peasants, who held communal offices, worked in estate administration, were members of guilds, and who had various other special privileges that gave them considerable power over their fellow villagers.⁶³ The poorest serfs on Voshchazhnikovo were unmarried women – either never married or widowed – many of who lived alone or with other female relatives. The opportunities of such households to improve upon their standard of living were frequently limited by the decisions of the more powerful in the village or constrained by other estate-level institutions.

However, some of the largest serf estates, such as those of the Sheremetyev family, may have possessed certain institutional advantages. The Voshchazhnikovo archive indicates that the Sheremetyev family installed an estate-level system of judicial appeal, offered contract enforcement services, and allowed considerable freedom to their serfs to engage in a variety of economic activities. Of course, the Sheremetyevs were among the largest landowners in imperial Russia, and could afford to develop such an institutional structure on their many scattered estates. Other estates – especially smaller – landowners likely exhibited less flexibility.⁶⁴

This heterogeneity across seignorial estates might be contrasted with the experience of the state and court estates, which were integrated into bureaucratic structures beyond the manor. The *udel'nyi* administration served this function for the court peasants and, after the famous Kiselev reforms, the Ministry of State Domains and newly constituted institutions of self-government (*volost'noe upravlenie*) provided administrative structure for the state peasant settlements. Following the reforms of the 1830s and 1840s, these and other institutions allowed state peasants to individually own purchased land, and many were also

granted other substantial legal, tax, and property rights above what serfs typically held.⁶⁵ A more thorough investigation of the evolution of rural Russian inequality and living standards over the course of the nineteenth century will require a deeper understanding of exactly how these and other institutions functioned in different parts of rural society, and how these interactions changed over time.

IV. Putting Our Findings in Context

In this paper, we have drawn on a wide variety of sources to address questions concerning living standards in the neighboring districts of Rostov and Iur'ev, both before and after the emancipation of the serfs. Limitations of the micro-level data, especially from the pre-1861 period, do make cross-period comparisons difficult. But our contention is that such efforts are still useful in providing context to the more macro-level studies that have dominated the literature on nineteenth-century Russian economic development.

In particular, we investigate multiple dimensions of living standards, whereas earlier studies have tended to focus on just one or two indicators.⁶⁶ And while more comprehensive works like Mironov's *Blagosostoianie* or Kirianov's *Zhiznennyi* cover numerous aspects of well-being, including income, consumption, labor mobility, education, and anthropometric indicators, they rely mostly on aggregate statistics. Finally, the majority of existing studies concentrate on the capital cities, on regions, or on provincial differences, with little attention paid to the very local variation we have highlighted here.

Given the small size and source limitations of our case study, it is worth considering how our findings compare with those in the literature. Soviet studies of serfdom generally assert that the institution was increasingly exploitative of the peasantry in the run up to 1861, with seigniorial burdens rising, agricultural productivity stagnating, and overall living standards in decline. However, our income, consumption, and demographic evidence for pre-

reform Voshchazhnikovo is more consistent with recent empirical studies that stress the dynamism of economic activity before 1861. Mironov and colleagues draw on military recruit height data to argue that the early 19th century saw a recovery in living standards after a decline in the late 18th century. In other work, Mironov, documents rising real wages in St. Petersburg in the decades leading up to 1861, arguing (without direct empirical support) that trends in the provinces were likely similar.⁶⁷ While we are not able to provide such long-run data series for our study districts, the thrust of our evidence on living standards seems to suggest a similar upward trajectory, although we also emphasize the evident inequality – even within a small locality – that the institutions of rural Russia generated prior to 1861.

A long scholarly tradition argues that the emancipation – by reducing land holdings, raising obligation levels, and solidifying institutional constraints – laid the groundwork for an emerging agrarian crisis in the later part of the nineteenth century. In contrast, our evidence supports the conclusions of more recent studies by Hoch, Simms, and others that overall obligation levels did not increase after 1861, that the rate of arrears on tax and land payments was remarkably low, and that rural living standards were unlikely to have been worsened by the reforms of the 1860s. Hoch goes so far as to assert that Emancipation and the process of transferring land to the peasantry actually *lowered* overall obligation levels and allowed rural households the freedom to make significant welfare-enhancing economic decisions.⁶⁸

In contrast to the an older literature that saw a worsening crisis in the rural economy after 1861, other recent works have identified a decade or so of stagnation after 1861, followed by steady, albeit punctuated, improvements in living standards up to World War I.⁶⁹ Mironov's *Blagosostoianie* presents this latter interpretation based on his anthropometric evidence and select other indicators of living standards (often aggregate or centered on St. Petersburg). In Figure 4, we present his main findings from height data for the period under question, with a comparison between the national series and the provincial ones for Iaroslavl'

and Vladimir. This figure does not capture the upward trajectory of heights Mironov that finds for the early nineteenth century, but it does show how stagnation among recruits born up to 1870 was followed by a steady rise to the end of the century (in the series corrected for sample selection). Significantly, the provinces of Iaroslavl' and Vladimir experience greater growth in heights over the period than the Empire did as a whole, suggesting the importance of taking sub-national variation into account in any analysis of Russian living standards.⁷⁰

Demographic research into rural Russian living standards – especially over the period 1861-1905 – has resulted in somewhat contradictory conclusions. Evidence before 1861 is very limited, but it does point to a relatively high-pressure demographic system, one that then persisted into the latter half of the century. As a result, historians have long viewed rural European Russia, especially in the central provinces, as overpopulated after 1861. However, the main (and, in our view, weak) evidence for this argument was a perceived decline in land area per capita among the peasantry (although studies tend to focus on allotment land and fail to consider land rented in or purchased by peasants), coupled with discussions of famine and subsistence crises.⁷¹ In contrast, and more consistent with our findings, Hoch notes that population growth increased after Emancipation – due to an excess of births over deaths – but the rising population *did not* press against resources in any Malthusian sense. He does go on to argue that a key piece of evidence for improving living standards was the rarity of mortality crises after 1861, a point also emphasized by Wheatcroft. Amidst high fertility rates, *constant or falling* mortality suggests that in demographic terms, living standards were improving after 1861. While our evidence for Iur'ev and Rostov is not as detailed as that considered in these studies, our rough sketch is nevertheless consistent with the recent findings presented by Hoch and others.⁷²

Although scholars have long recognized the persistently low level of grain yields (and low overall agricultural productivity) in Russia when compared to the rest of Europe, recent

works have tended to emphasize the adequacy of aggregate food production. Wheatcroft utilizes yearly data reported by provincial governors and finds fewer grain “crisis” years over the period, along with divergent regional trends. The southern provinces saw rising yields, while stagnation occurred in the center (including the Central Industrial Region of Iaroslavl’ and Vladimir) and the north. These regional differences have led to scholars to disparate conclusions regarding trends in agricultural production, although we would emphasize the role that trade and regional specialization played in improving overall food availability, even for our increasingly non-agricultural study districts.⁷³ To date, little empirical work has been done on indicators of consumption beyond simple foodstuffs, although our reading of the limited evidence suggests that before, and especially after, 1861, rural residents could purchase a wide variety of non-essential goods from a growing number of outlets, especially in the Central Industrial Region.

Data on the availability of foodstuffs, anthropometrics, and demographics are all consistent with the limited evidence that we and others have compiled for rural and urban real wages – after the 1860s, rural Russia saw improvements in living standards. But the long run real wage series that provide proof for this conclusion are almost entirely limited to the capital cities of St. Petersburg and Moscow. Thus, our preliminary evidence for Iur’ev and Rostov districts might be seen as a first step towards understanding geographic variation in rural incomes.⁷⁴ Such geographic variation is just one source of inequality that we identify for both the pre- and post-1861 periods. While Soviet and many Western scholars saw growing social differentiation in the countryside, their interpretations were generally based on agricultural asset ownership rather than broader measures of household income.⁷⁵ In contrast, our consideration of inequality focuses not just on income differentials (by household or gender) but also on overall living standards. And we further argue that much of this inequality was driven by the institutional structure of the countryside: serfdom, the

peasant commune, the *zemstvo*, and other local bodies. Informal and formal political mechanisms and unequal social relations within these institutions limited the provision of public goods such as schooling and generated persistent differences in living standards between provinces, districts, communities, and even households.

In shifting the focus toward a more comprehensive analysis of living standards over time in a very small region of Russia, our goal has not been to overturn existing conclusions so much as provide examples of alternative source materials, emphasize the varied dimensions of living standards, and indicate new directions for research in this area. At this point, given the geographic focus and the differences in sources before and after 1861, our conclusions regarding general trends in rural living standards can only be suggestive. But by placing our micro-level findings in the context of existing debates on rural living standards, we do advance the current discussion of nineteenth century Russian economic development in important ways. Our evidence makes clear that we must move beyond the idea of a “subsistence” economy in Russia before the late-nineteenth century. Moreover, future research on rural living standards must consider the importance of institutions and institutional change, for these factors are critical to our understanding of both the level and the distribution of resources in the Tsarist economy.

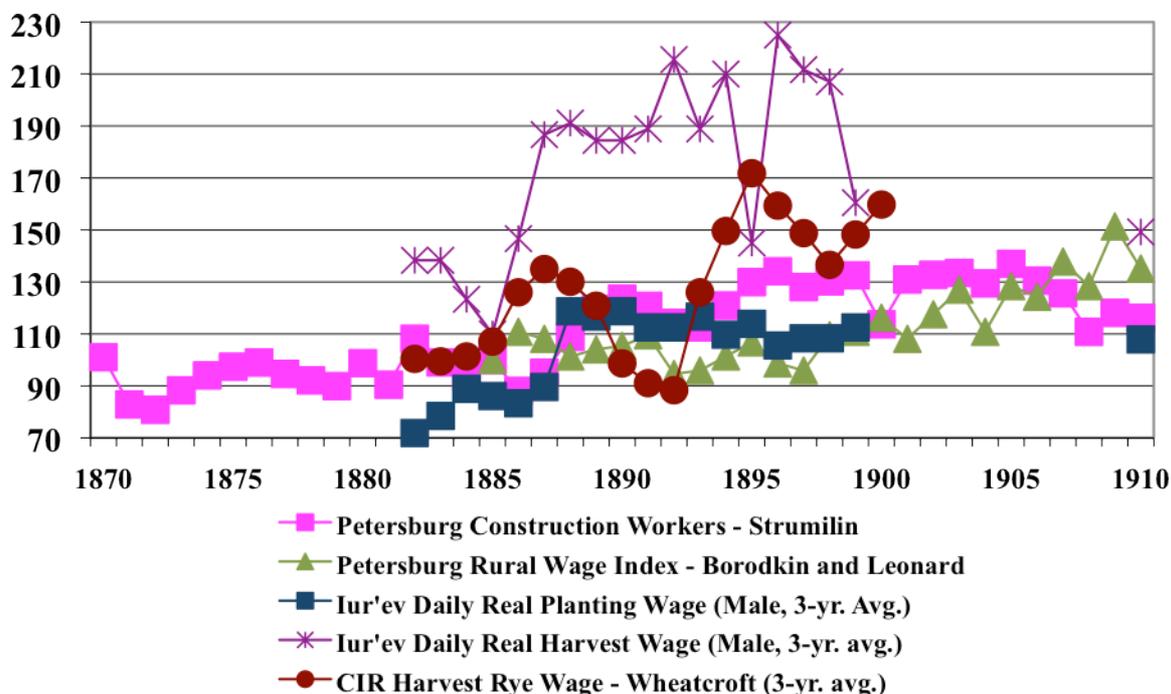
In short, the preliminary findings presented here paint a more complex and variegated picture of Russian rural life than is usually found in the historical literature, and one that is consistent with other micro-level studies. We acknowledge, however, that these findings raise at least as many questions as they answer. How representative of the Russian countryside were Rostov and Iur’ev districts? What other measures of well-being might be considered? How do findings for Russia compare with other parts of the world in this period? There is still much to be done before these questions can be addressed.

Table 1: Characteristics of Study Districts: Iur'ev (Vladimir) and Rostov (Iaroslavl')

	<i>Iur'ev</i>	<i>Rostov</i>
Area in Square <i>Versti</i> (1 <i>Verst'</i> = 1.07 Kms)	2745.6	3440
Approximate % Serfs (of Total Population, c. 1858)	66.4	45.3
Total Population in 1858	82921	138717
% Population Male in 1858	48.5	46.8
Total Population in 1897	92629	148970
% Population Male in 1897	44.5	43.8
% Population Born in District, 1897	92.6	92.6
% of all land held in peasant communal ownership, 1877	55	66
% of communal land in "repartitional" tenure, 1905	98.5	100
% of all land owned by the nobility, 1877	11.5	19.7
% of all land owned by the nobility, 1905	17.4	7.4
% Working-Age Males in Agriculture (Main Occupation), 1897	69.3	76.9
% Working-Age Females in Agriculture (Main Occupation), 1897	47.2	73.9

Note: The land area, 1858 populations, and the approximate percentage of former serfs were derived from information in Bushen, A., ed. *Nalichnoe naselenie imperii za 1858 god*, vol. 2 of *Statisticheskiiia tablitsy Rossiiskoi Imperii* (St. Petersburg, Russia, 1863); N. A. Troinitskii, *The Serf Population in Russia According to the 10th National Census*, trns. Elaine Herman, (Newtonville, MA, 1982). The land shares come from Russia, Ministerstvo vnutrennykh del, Tsentral'nyi statisticheskii komitet,, *Statistika zemliavladeniia 1905 g.*, (St. Petersburg, Russia, 1906). The other data are from Troinitskii, ed. *Pervaia vseobshchaia perepis' naseleniia Rossiiskoi Imperii, 1897 g.* (St. Petersburg, Russia, 1905), vols. 4 and 50.

Figure 1: Male Daily Wage Series, 1885 = 100



Note: Sources and methods for calculating these series are provided in the text. See Footnotes 12-13.

Table 2: Non-Agricultural Wages and Salaries, Post-1861 Period (current rubles)

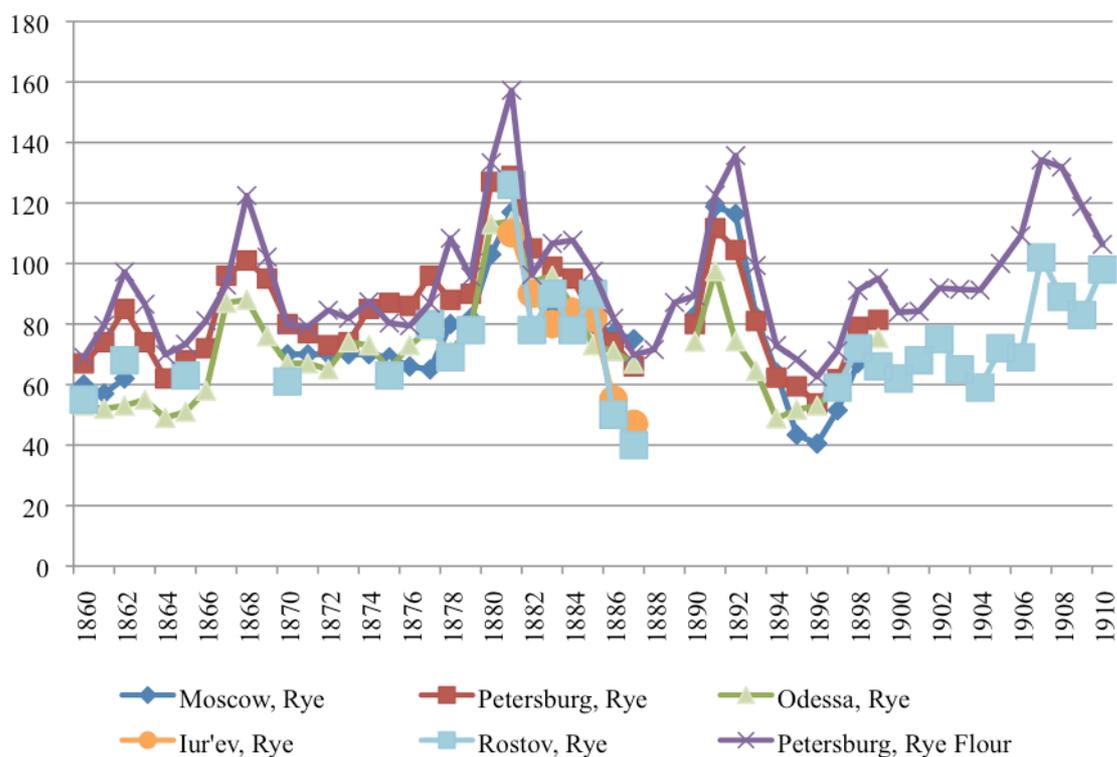
<i>Profession</i>	<i>Year</i>	<i>Time Period</i>	<i>Rostov</i>	<i>Iur'ev</i>
<i>Industrial Workers / Artisans</i>				
Unskilled laborers (silk spinning factory)	~1861	Monthly	4-9	--
Carpenters / blacksmiths (silk factory)	~1861	Monthly	10-17	--
Spinner (silk spinning factory)	~1861	Monthly	15-19	--
Weavers / spinner (home production)	1875	Year, part time	17	--
Weavers (home production)	1881	Year	--	30-50
Factory employment (provincial mean)	~1900	Year	131	138
<i>Teachers (Primary)</i>				
Private school in village	1862	Year	150	--
Employed in a rural school, all types	1879	Year	195	273
Employed in a rural <i>zemstvo</i> school	1897	Year	--	240
Employed in a rural school, any type	1910	Year	371	310
Employed in an urban school, any type	1910	Year	432	378
<i>Other Professionals</i>				
<i>Zemstvo</i> veterinary doctor	1884	Year	--	600
Medical doctor (employed by <i>zemstvo</i>)	1908	Year	920	--
<i>Government Employees (Peasant and Local)</i>				
Village elder (<i>starosta</i>)	1879	Year, part time	52	--
Township clerk	1879	Year	256	--
Township elder	1879	Year	272	--
Commune (<i>sel'skoe obschestvo</i>) elder	1881	Year, part time	54	25
Township elder	1881	Year	277	249
Township elder	1893	Year	302	273
Township elder	1908	Year	100-550	--
District police chief	1908	Year	2375	--
District tax inspector	1908	Year	1800	--

Note: Data from 1861 come from one factory as reported in Iaroslavskii gubernskii statisticheskii komitet, *Pamiatnaia knizhka Iaroslavskoi gubernii na 1862 god* (Iaroslavl', Russia, 1863). The data on craft production in 1875 come from Russia, Komissiiia dliia peresmotra sistemy podatei I sborov, *Priamye nalogi*, vol. 2, part 3 of *Trudy komisii vysochaishe uchrezhdennoi dlia peresmotra sistemy podatei i sborov* (St. Petersburg, Russia, 1879). For 1881, they come from V. S. Prugavin, *Sel'skaia obshchina, kustarnye promysly i zemledel'cheskoe khoziaistvo Iur'evskago uezda, Vladimirskoi gubernii* (Moscow, 1884), chp. II. The provincial data on factory wages c. 1900 come from Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*. Data on teacher salaries in 1862 may be found in Russia, Ministerstvo narodnogo prosveshcheniia, *Sbornik spravochnykh svedenii po ministerstvu narodnogo prosveshcheniia za 1862 i chast'iu, za 1863 i 1864 gody* (St. Petersburg, Russia, 1864). Teacher salaries in 1879 exclude payments to part-time religion teachers, and the data come from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Sel'skiiia uchilishcha v Evropeiskoi Rossii i privisljanskikh guberniiaakh*, series III, vol. 1 of *Statisticheskii vremennik Rossiiskoi Imperii*. St. Petersburg, Russia, 1884). 1897 teacher salaries are provided in Vladimirskaia gubernskaia zemskaia uprava, *Sbornik statisticheskikh i spravochnykh svedenii po narodnomu obrazovaniiu vo Vladimirskoi gubernii*, 6 vols., (Vladimir na Kliaz'me, Russia, 1899-1902), vol. 2. Teacher salaries in 1910 are weighted averages of male and female salaries – see V. I. Pokrovskii, ed., *Odnodnevaia perepis' nachal'nykh shkol Rossiiskoi imperii proizvedennaia 18 ianvaria 1911 goda*, 16 vols., (St. Petersburg, Russia, 1916). The 1884 data on *zemstvo* employees come from Vladimirskaia gubernskaia, *Otchety i smety Vladimirskoi gubernskoi zemskoi upravy ocherednomy gubernskomu zemskomu sobraniiu, XIX - I sessii* ((Vladimir na Kliaz'me, Russia, 1884); while all the 1908 observations come from A. P. Morozov, ed., *Spravochnaia kniga Iaroslavskoi gubernii na 1908 god* (Iaroslavl', Russia, 1908). The 1879 information on peasant officials comes from Rossiiskii Gosudarstvennyi Istoricheskii Arkhiv (RGIA), f. 1316, op. 1, d. 111 (“Statistical information on ... police in 1879 in Iaroslavl' province”). The 1881 information is calculated from district totals in Russia. Ministerstvo vnutrennykh, Tsentral'nyi, *Mirskie rashody krest'ian za 1881 god*, Series III, vol. 13 of *Statisticheskii vremennik Rossiiskoi Imperii* (St. Petersburg, Russia, 1886); while the 1893 observation is from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Soderzhanie volost'nykh dolzhnostykhLLits v 47-mi guberniiaakh Evropeiskoi Rossii v 1890-1893 g. g.*, vol. 36 of *Vremennik tsentral'nago statisticheskago komiteta* (St. Petersburg, Russia, 1894).

Table 3: Tracking Tax Obligations in Iur'ev and Rostov					
Year		Iur'ev	Vladimir	Rostov	Iaroslavl'
State, <i>zemstvo</i> , and "class" (peasant or <i>meshchane</i>) obligations per "soul" (taxed population)					
1877	Former serfs	2.71	2.58	2.59	2.59
	Former state peasants	3.10	3.01	2.96	2.96
	Townsmen (<i>meshchane</i>)	0.49	0.60	0.58	0.58
Yearly direct tax assessments per capita (rural population) + cumulative arrears (% of current year's assessment)					
1895	Amount of assessed land (<i>desiatina</i>)	141647	--	196055	--
	Total (state, <i>zemstvo</i> , communal, and fire insurance) obligations	3.80	--	2.99	--
	Cumulative % arrears on obligations	49.5%	--	4.7%	--
1903	Amount of assessed land (<i>desiatina</i>)	141600	--	196900	--
	Total (state, <i>zemstvo</i> , communal, and fire insurance) obligations	4.34	--	4.13	--
	Cumulative % arrears on obligations	24.7%	--	1.6%	--
Redemption Obligations per <i>Desiatina</i> , Former Serfs					
	Prior to 1881	1.85	1.83	2.27	1.95
	After 1881 lowering	1.58	1.45	1.85	1.58
	<i>Desiatina</i> per male "soul", 1881	3.5	3.9	3.2	3.8

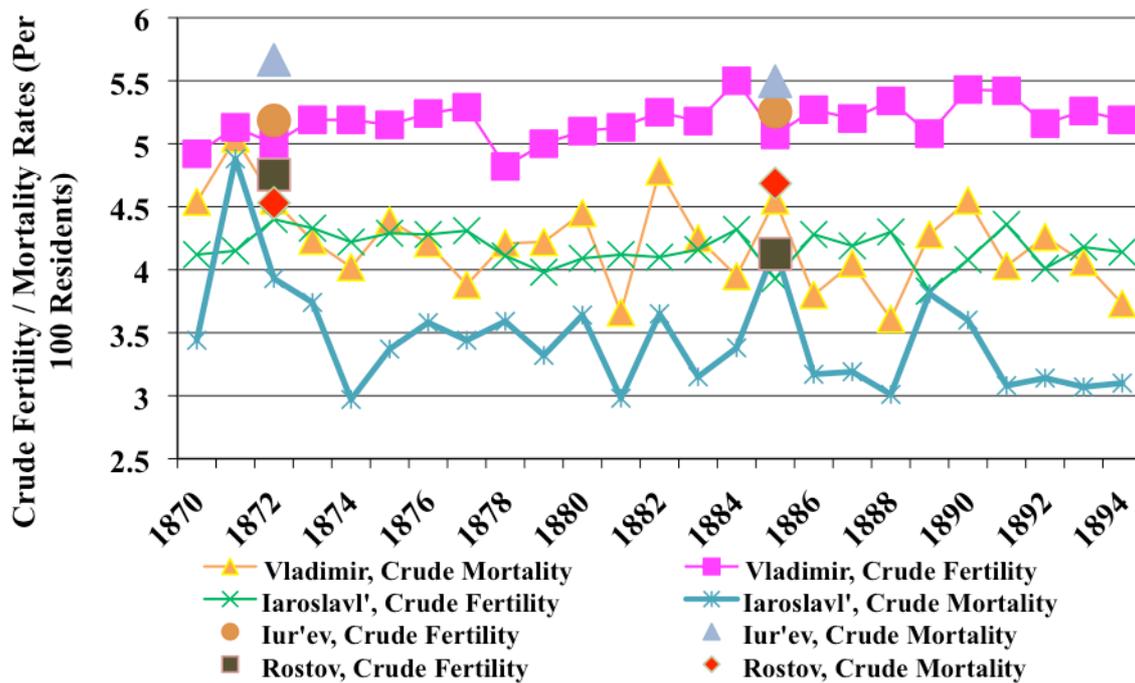
Note: All monetary amounts are in nominal rubles. *Meshchane* were the class designation for townspeople. The 1877 numbers are from Russia, Komissia, *Priami*. The 1895 and 1903 data are from Russia, Ministerstvo finansov, Departament okladnykh, *Svod svedenii o postupleniia i vziatii kazennykh, zemskikh i obshchestvennykh okladnykh sborov za 1895-99 g. g.*, and ... *za 1901-1903 g. g.* (St. Petersburg, Russia, 1902 and 1909). The information on redemption obligations before and after 1881 is taken from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Mirskie*; G. Ershov, ed., *Ponizhenie vykupnago platezha po ukazu 28-ogo dekabria 1881 goda*, Series III, vol. V of *Statisticheskii vremennik Rossiiskoi Imperii* (St. Petersburg, Russia, 1885).

Figure 2: Rye Grain and Flour Prices, 1860 - 1910



Note: All prices are kopeks per pud. The Moscow, Petersburg, and Odessa “Rye” data for 1860-1887 are from Russia, Tsentral’nyi, *Sbornik svedenii po Rossii, 1890*, vol. 10 of *Statistika Rossiiskoi imperii* (St. Petersburg, Russia, 1890). For 1890-1899, similar data are from Russia, Ministerstvo finansov, Departament trgovli i manufaktur, *Svod tovarnykh tsen na glavnykh russkikh i inostrannykh rynkakh za 1890-1899 gody*, in *Materialy dlia torgovo-promyshlennoi statistiki* (St. Petersburg, Russia, 1900). The Petersburg “Rye Flour” data are from A. M. Rykachev, *Tseny na khleb i na trud v S.-Peterburg za 58 let* (St. Petersburg, Russia, 1911). The Iur’ev and Rostov data for 1881-1887 come from Russia, Ministerstvo vnutrennykh, Tsentral’nyi, *Tseny na pshenitsu, rozh, oves' i iachmen v Evropeiskoi Rossii v 1881-1887 godakh, po mestnym svedeniiam*, vol. 3 of *Vremennik tsentral'nago statisticheskago komiteta ministerstva vnutrennikh del* (St. Petersburg, Russia, 1888). The rest of the data for Rostov come from Iaroslavskoe gubernskoe zemstvo, Statisticheskii otdel, *Otsenka pashni Rostovskago uezda* (Iaroslavl', Russia, 1913); A. A. Titov, A. A. “Statistiko-ekonomicheskoe opisanie Rostovskago uezda Iaroslavskoi gubernii,” in V. P. Bezobrazov, *Narodoe khoziaistvo Rossii, chast' II: Moskovskaia (tsentral'naia) promyshlennaia oblast'* (St. Petersburg, Russia, 1885).

Figure 3: Demographic Series, Study Region, 1870 - 1894



Note: Each data point is defined as total births / deaths per 100 residents in the province or district. The provincial series are from Pokrovskii, "Vliianie;" The 1872 data points are from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, [no title] Series II, vols. 10 and 18 of *Statisticheskii vremennik Rossiiskoi Imperii* (St. Petersburg, Russia, 1875 and 1882). The 1885 points are from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Sbornik svedenii po Rossii, 1890*, vol. X of *Statistika Rossiiskoi Imperii* (St. Petersburg, Russia, 1890); S. A. Korolenko, ed., *Vol'nonaemnyi trud v khoziaistvakh vladel'cheskikh i peredvizhenie rabochikh*, vol. V of *Sel'skokhoziaistvennyiia i statisticheskiia svedeniia po materialam, poluchennym ot khoziaev* (St. Petersburg, Russia, 1892), for total population. Note that the data on total population for 1885 appear to refer to the rural population only and may be overstated as a result. The 1872 total population numbers are projected from 1870 (adjusted for births and deaths).

Table 4: Literacy Rates after 1861

New Army Recruits (Males, Early 20s),		
	Rostov	Iaroslavl' (All districts)
1874	67.9	60.1
1881	68.1	65.3
1890	86.8	74.1
1898	91.1	86.6

1881 Survey of Iur'ev District, Adult Literacy (Literates / # Adult "Workers")		
	Percent Males	Percent Females
Il'inskaia township	50.9	4.3

1899 Literacy Rates, Ages 21-30, in 1899, Iur'ev District (Rural population)		
	Percent of Males	Percent of Females
Il'inskaia township	63.2	5.1
Total (14 townships)	70.2	10.9

1897 National Census Data, Ages 20-29		
	Percent of Males	Percent of Females
Iur'ev	61.5	15.0
Rostov	59.0	33.9

Note: Recruit data from Iaroslavl' province is provided in Iaroslavskoe, *Istoriko-statisticheskaia tablitsy po Iaroslavskoi gubernii za 1862-1898 g.g.*, vol. 8, of *Statisticheskii sbornik po Iaroslavskoi gubernii* (Iaroslavl', Russia, 1901). The 1881 survey data for part of Iur'ev province come from Prugavin, *Sel'skaia*. The 1899 data come Vladimirskaia, *Otsenochno-ekonomicheskoe, Iur'evskii*. Finally, the 1897 census data may be found in Troinitskii, ed., *Pervaia*, vols. 4 and 50.

Table 5: Primary Schooling in Iur'ev District, 1898 School-Year

	Ministry of Education	
	Schools	Parish Schools
Number of Schools	48	41
Males Only	4	0
Females Only	2	2
Mixed Sex	42	39
Average Number of Enrolled Students	39	37.7
Average Years of Experience Per Teacher	8.2	5.1
Average Number of School Days	148.3	141.7
Average Hours Instruction per Day	5.7	6.1

Note: Informal "literacy" schools are not included in these totals. Data are from Vladimirskaia, *Sbornik...po narodnomu obrazovaniiu*, vol. 2.

Table 6: Local Government in Post-1861 Iur'ev and Rostov Districts

	Iur'ev	Rostov
Rural Societies in 1881 [rural population per rural society] ¹	233 [369]	174 [778]
Townships in 1881 [rural population per township] ¹	14 [6146]	22 [6151]
District <i>zemstvo</i> assembly seats, 1864 Law ²	30	47
% of seats allocated to the peasant <i>soslovie</i> ²	40%	38.3%
District <i>zemstvo</i> assembly seats, 1890 Law ³	30	25
% of seats allocated to the peasant <i>soslovie</i> ³	30%	28%
Constable stations in 1879 [in province] ⁴	6 [110]	12 [100]
Justices of the Peace (<i>mirovaia sud'ia</i>), 1879 [in province] ⁴	4 [46]	3 [26]
Circuit courts in 1879 [in province] ⁴	1 [23]	2 [17]
Number of Land Captains, 1889 law [in province] ⁵	3 [52]	5 [42]
Voters in 1906 Duma electoral assembly [total in province] ⁶	6 [92]	9 [60]
% of electoral votes allocated to peasantry [in province] ⁶	33.3% [28]	33.3% [27]

Notes: (1) From Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Mirskie*; numbers in brackets are district means; the corresponding national means for 47 provinces are 230 [SD = 124.8] rural societies of an average of 666.4 [SD=422] people and 20 [SD=9.2] townships of 6405 [SD=2650] people each. (2) and (3) are from *Pol'noe sobranie zakonov Rossiiskoi Imperii* Series II, vol. 39, issue 3 [appendices] and Series III, vol. 10; the peasant shares of assembly seats from all 34 provinces with *zemstva* were 40.9% (1864) and 32.7% (1890). Both the district and provincial (in brackets) totals for (4) are taken from RGIA: f. 1316, op. 1, d. 70 (“Statistical information on...police in 1879 in Vladimir province”) and d. 111 (“... in Iaroslavl' province”). Both the district and provincial (in brackets) totals for (5) are taken from Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Uchastki zemkhikh nachal'nikov v 32-kh guberniakh za 1893 g.*, vol. 29 of *Vremennik tsentral'nago statisticheskago komiteta* (St. Petersburg, Russia, 1893). (6) is derived from information in *Vestnik partii narodnoi svobody* (St Petersburg, Russia, 1906), no. 6.

Table 7: Serfdom in Iur'ev and Rostov Districts, c. 1858

	Iur'ev District	Rostov District	Voshchazhnikovo
Total Serfs:	55027	62945	--
Males	26758	29307	--
Females	28269	33638	--
% Household (<i>dvorovye</i>) Serfs	5.6	3.5	--
% Male Agricultural Serfs On Quit Rent Estates	32	92.1	--
Large Estates (>100 souls)			
Number	39	49	--
Male Serfs (“Souls”)	12824	21039	1598
Male Souls / Estate	329	429	1598
% “Household” Serfs (males)	4.6	2.3	0.7
% Tiagla (Labor Units) In:			
Quit Rent	51.9	76.3	100
Labor Services	15.7	3.2	0
Mixed Obligations	32.4	20.4	0

Note: The data on the total serf population are from Troinitskii, *Serf*, except for the portion of male agricultural serfs on quit-rent estates, which is derived from Aleksandr Skrebitskii, ed. *Krest'ianskoe delo v tsarstvovanie Aleksandra II*, in *Materialy dlia istorii osvobodzheniia krest'ian* (Bonn, Germany, 1968), vols. 3-4. The data on large estates come from *Svedeniia o pomeshchich'ikh imeniakh*, in *Prilozheniia k trudam redaktsionnykh komissii, dlia sostavleniia polozhenii o krest'ianakh vykhodiashchikh iz krepostnoi zavisimosti* (St. Petersburg, Russia, 1860), vols. 1 and 4. *Tiagla* were typically husband and wife labor teams.

Table 8: Seed yield ratios for major cereal crops in Central Russia, Pre-1861

Grain	Central Russia (average)			Voshchazhnikovo		
	1750s	1770s	1790s	1841-2	1844-5	1853-4
Rye	1:3.7	1:4.2	1:3.1	1:4	1:2	1:2
Wheat	1:3.3	1:4.3	1:3	1:2	1:2	1:3
Oats	1:3.5	1:4.8	1:3.6	1:4	1:1.6	1:2
Barley	1:4.3	1:4.2	1:3.1	1:3	1:2	1:3

Note: The averages for Central Russia are reported in Kahan, *The Plow, the Hammer, and the Knout: An Economic History of Eighteenth Century Russia* (Chicago, IL, 1985), 49. The data for Voshchazhnikovo are from *Rossisskii Gosudarstvennyi Arkhiv Drevnikh Aktov* (RGADA), f. 1287, op. 3, ed. khr. 1568 ("Reports on grain harvests").

Table 9: Goods for Sale at the Voshchazhnikovo Market c. 1831

'Everyday Supplies' Sold Locally	Average Price
beef, per pood*	5.50
salt, per pood	2.30
green onions, per chetverik*	0.60
oat flour, per pood	1.20
hops, per pood	11.00
butter, per pood	15.00
eggs, per 100	1.80
white sugar, per funt*	1.00
hemp straw, per chetverik	2.50
rye flour, per pood	1.30
candles, per pood	12.50
hemp oil, per pood	9.50
hay, per pood	0.80

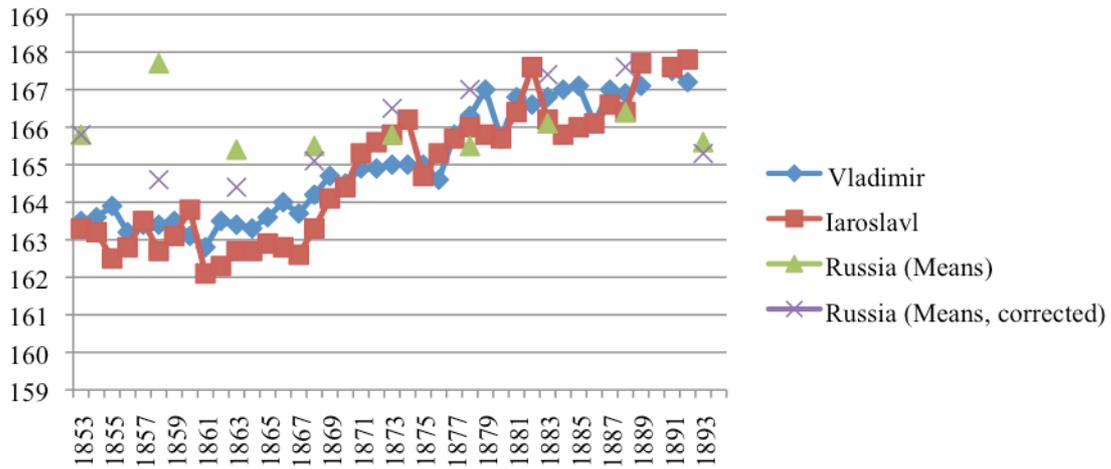
Note: * 1 pood = 16.38 kg; 1 chetvert = 8 poods (roughly 130 kg); 1 funt = 1/40 pood (400g). Prices are all in nominal paper rubles. All information comes from RGADA, f. 1287, op. 3, ed. khr. 1070, ll. 57-8 ('Instructions and decrees from the Rostov administration, 1831').

Table 10: Basic Demographic Indicators, Pre-1861

	Iur'ev District	Rostov District	Russian Empire
1846			
Crude Birth Rate	4.95	5.51	4.45
Crude Death Rate	4.50	5.07	3.40
1856			
Crude Birth Rate	5.15	4.45	4.33
Crude Death Rate	4.56	3.58	3.49
1860			
Crude Infant Mortality Rates (< 1 year)	--	33.6	--
Crude Child Mortality Rates (1-5 years)	--	4.80	--

Note: The crude birth and death rates are defined as the number of births or deaths per 100 people. The 1846 data come from tax rolls and events reported in A. K., ed., *Vedomost' o narodonaselenii Rossii po uezdnam, gubernii, i oblastei* (St. Petersburg, Russia, 1850). The similar 1856 data are provided in Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Statisticheskii tablitsy Rossiiskoi imperii za 1858 god* (St. Petersburg, Russia, 1858). The 1860 crude infant and child mortality rates are calculated as the number of deaths per 100 infants or children who were alive at any time in 1860. These data were compiled from parish records by the Iaroslavl' bishopric. See Apollinariii Krylov, ed., *Istoriko-statisticheskii obzor Rostovsko-Iaroslavskoe eparkhii* (Iaroslavl', Russia, 1861).

Figure 4: Military Recruit Heights from Mironov Sample



Note: These heights (in cms.) come from the military recruitment samples reported in Mironov, *Blagosostoianie*. Russia here refers to European Russia. The provincial and “means” series are simple arithmetic mean of all observations, while the “corrected” series provides predictions from a maximum likelihood model that corrects for the positive selection of recruits by height. Thus, the provincial means may actually understate the growth in heights over the period.

¹ Richard Hellie, *The Economy and Material Culture of Russia, 1600-1725* (Chicago, IL, 1999), 645; Christine D. Worobec, *Peasant Russia: Family and Community in the Post-Emancipation Period* (DeKalb, IL, 1995), 34.

² Mironov, *Blagosostoianie naselenia i revoliutsii v imperskoi Rossii* (Moscow, 2010). Mironov discusses several measures of living standards but focuses on anthropometric data, because he views other sources as inadequate for long-run analysis. While we agree that time series data are hard to come by in the Russian case, we argue that taking a wider view and considering a number of indicators does paint a very telling picture of the trend and variation in living standards. For works that emphasize the stagnation of living standard over the long nineteenth century, see the citations in Footnote 7.

³ Donald Mackenzie, *Russia*, 3 vols., (Leipzig, 1878), vol. 2, 345.

⁴ Richard A. Easterlin, "The Worldwide Standard of Living since 1800," *The Journal of Economic Perspectives* 14, no. 1 (2000), 7-26. For examples of multi-dimensional approaches to living standards in economic history, see Robert C. Allen et al., eds., *Living Standards in the Past: New Perspectives on Well-Being in Asia and Europe* (Oxford, 2005).

⁵ Regarding existing studies of living standards, we mention works in English here, but the pattern is the same for Russian-language research. For Moscow, see Robert E. Johnson, *Peasant and Proletarian: The Working Class of Moscow in the Late Nineteenth Century* (New Brunswick, NJ, 1979); Joseph Bradley, *Muzhik and Muscovite: Urbanization in Late Imperial Russia* (Berkeley, CA, 1985). On Petersburg, see Boris Mironov, "Wages and Prices in Imperial Russia, 1703-1913" *The Russian Review* 69 (2010), 47-72; Evel G. Economakis, *From Peasant to Petersburger* (New York, 1998). On Tambov, see Steven L Hoch, "Famine, Disease, and Mortality Patterns in the Parish of Borshevka, Russia, 1830-1912," *Population Studies* 52 (1998), 357-168; "On Good Numbers and Bad: Malthus, Population Trends and Peasant Standard of Living in Late Imperial Russia," *Slavic Review* 53, no. 1 (1994), 41-75; *Serfdom and Social Control in Russia: Petrovskoe, a Village in Tambov* (Chicago, 1986); ". For studies that utilize height data, see Mironov, *Blagosostoianie*; "New Approaches to Old Problems: The Well-Being of the Population of Russia from 1821 to 1910 as Measured by Physical Stature," *Slavic Review* 58, no. 1 (1999), 1-26; Boris Mironov and Brian A'Hearn, "Russian Living Standards under the Tsars: Anthropometric Evidence from the Volga," *The Journal of Economic History* 68, no. 3 (2008), 900-929. We discuss the sources for our study region in detail below.

⁶ Mironov, *Blagosostoianie*.

⁷ This interpretation, which emerged even in the 19th century in official publications – and often associated with Soviet writers such as Vladimir Lenin, N. M. Druzhinin, and Petr Liashchenko and Western scholars like Alexander Gerschenkron and Geroid Robinson – also viewed the high level of tax and land obligations as squeezing resources from the countryside to fund state-led industrial development. Whether such a dependency was qualitatively or quantitatively important has long been debated (see below). On the official view, see the *Doklad komissii dlia issledovaniia nyn'shnego polozheniia sel'skogo khoziastva i sel'skoi proizvoditel'nosti* (St. Petersburg, Russia, 1873); Vysochaishe uchrezhdennoe Osoboe Soveshchanie o nuzhdakh sel'skokhoziaistvennoi promyshlennosti, *Svod trudov mestnykh komitetov v 49 guberniiam Evropeiskoi Rossii* (St. Petersburg, Russia, 1904), multiple vols.; Russia, Ministerstvo finansov, Departament okladnykh sborov, *Materialy vysochaishe uchrezhdennoi 16 noiabria 1901 g. komissii po issledovaniuu voprosa o dvizhenii s*

1861 g. po 1900 g. blagosostoianii sel'skago naseleniia srednezemledel'cheskikh gubernii, *srovnitel'no s drugimi mestnostiami Evropeiskoi Rossii* (St. Petersburg, Russia, 1903), especially vol. 1. Also see Lenin, *The Development of Capitalism in Russia* (Moscow, 1974), 2nd rev. ed.; Druzhinin, *Russkaia derevnia na perelome 1861-1880 gg.* (Moscow, 1978); Liashchenko, *The History of the National Economy of Russia to the 1917 Revolution* (New York, 1949), trns. L. M. Herman; Gerschenkron, "Agrarian Policies and Industrialization, Russia 1861-1917," in H. J. Habakkuk and M. Postan, eds., *The Cambridge Economic History of Europe (VI). The Industrial Revolutions and After: Incomes, Population and Technological Changes (2)* (Cambridge, 1965), 706-800; Robinson, *Rural Russia under the Old Regime* (Berkeley, CA, 1972). On the debate over peasant burdens and industrialization, see Paul R. Gregory, *Before Command: An Economic History of Russia from Emancipation to the First Five-Year Plan* (Princeton, NJ, 1994); Arcadius Kahan, "Government Policies and the Industrialization of Russia," *The Journal of Economic History* 27, no. 4 (1967), 460-477.

⁸ On the debate over the crisis in rural living standards, see Simms ("Crisis"); Hoch "On Good Numbers"; Steven L. Hoch, "Did Russia's Emancipated Serfs Really Pay Too Much for Too Little Land? Statistical Anomalies and Long-Tailed Distributions," *Slavic Review* 63, no. 2 (2004): 247-274. Of particular note among *zemstvo* statistical works are household and village surveys of the rural populations of these provinces, many of which were initiated under a law of 1893 that required *zemstva* to revise the bases for various property taxes. The provincial *zemstva* of Vladimir and Iaroslavl' both undertook such surveys in 1898, with village-level data published in multi-volume series. These surveys offer very detailed information on demographic characteristics, economic activities, and market involvement of the rural populations. See Iaroslavskoe gubernskoe zemstvo, Statisticheskoe biuro, *Statisticheskoe opisanie Iaroslavskoi gubernii* (Iaroslavl', Russia, 1904), multiple vols.; Vladimirskaia gubernskaia zemskaia uprava, Otsenochno-ekonomicheskoe otdelenie, *Materialy dlia otsenki zemel' Vladimirskoi gubernii* (Vladimir na Kliaz'me, Russia, 1898-1910), 13 vols.

⁹ From 1861 to 1900, seed ratios on peasant land in Iaroslavl' province rose from 3 to 4.7 for rye and 2.8 to 3.4 for oats. In Vladimir, the increase was 3 to 3.6 and 2.7 to 2.9. On privately owned land, the increases were 5.3 to 6.1 for rye and 2.9 to 4 for oats in Iaroslavl' (2.9 to 4.3 and 2.7 to 3.2 in Vladimir). See Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*, vol. 1; Russia, Ministerstvo zemel' i gosudarstvennogo imushchestva, Otdel sel'skoi ekonomii i sel'skokhoziaistvennoi statistiki. *Svod statisticheskikh svedenii po sel'skomu khoziaistvu Rossii k kontsu XIX veka* (St. Petersburg, Russia, 1900-1902), 2 vols. For comparative data on Iur'ev and Rostov districts, see Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Urozhai 1888 goda, Urozhai 1891 goda, and Urozhai 1908 goda*, all from *Statistika Rossiskoi imperii* (St. Petersburg, Russia, 1889, 1892, and 1908), vols. VI, XIX, and LXIX. Peasant allotment land remained a relatively constant share of total land in our two districts between 1877 and 1905. In both districts, almost all the communal land was held in "repartitional" tenure with occasional re-allotments of plots among households. While Rostov saw a declining share of land owned by the nobility, Iur'ev actually saw relatively more land in noble hands by 1905. Across European Russia, less than 10% of districts experienced greater noble land ownership over time. See Table 1 and the sources cited there.

¹⁰ Total obligations per *desiatina* were 2.2-2.4 rubles according to the same source, which left little more than 1.25 rubles per *desiatina* in income net of taxes. These numbers are quite comparable with the information on peasant obligations that we provide below. The underlying land valuations were conducted sometime between

1896 and 1901. See Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*, vol. 1. Research efforts on the state peasantry from the 1850s focused on documenting income from agricultural production along with other activities (see below). There are several sources from the latter half of the 19th century that report accounts for larger estates across European Russia. For example, the Valuev Commission collected data from over 200 estates in the late 1860s, and the Department of Agriculture of the Ministry of the Interior collected information on large farms in from the late 1890s onwards. Neither of these or other available published works report information from our study districts, and they generally neglect small-scale peasant production. For the Valuev and Department of Agriculture efforts, see *Doklad*; Russia, Ministerstvo vnutrennykh del, Glavnoe upravlenie zemleustroistva i zemledeliia, Departament zemledeliia, *Nechernozemnaia polosna Evropeiskoi Rossii*, vol. 1 of *Krestian'skoe khoziaistvo v Rossii* (Petrograd, Russia, 1915).

¹¹ Mironov has introduced a long-run series for St. Petersburg construction wages that stretches back to 1700. This series updates and improves upon Sergei Strumilin's work by making better use of price data to control for changes in the cost of living. For rural wages, Leonid Borodkin and colleagues have uncovered nominal wage data from Petersburg provincial *zemstvo* reports, and Stephen Wheatcroft has contributed real (rye equivalent) wage series for different agricultural tasks. See Mironov, "Wages"; Strumilin, "Oplata truda v Rossii," *Planovoe khoziaistvo* 7-8 (1930): 135-161; Borodkin, et al., "The Rural/Urban Wage Gap in the Industrialisation of Russia, 1884-1910," *European Review of Economic History* 12 (2008): 67-95; Wheatcroft, "Crises and the Condition of the Peasantry in Late Imperial Russia," in Esther Kingston-Mann and Timothy Mixer, eds., *Peasant Economy, Culture, and Politics of European Russia, 1800-1921* (Princeton, NJ, 1991), 128-172.

¹² The Iur'ev series are calculated from data reported by rural correspondents of the *zemstvo*. There were significant short-run fluctuations in the Iur'ev wage series, and so we present a three-year moving average. These data are taken from Vladimirskoe gubernskoe zemstvo, *Obzor Vladimirskoi gubernii v sel'sko-khoziaistvennom otnoshenii* (Vladimir na Kliaz'me, Russia, 1897-1913), multiple vols; Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Tseny na rabochiia ruki v sel'skikh khoziaistvakh chastnykh vladel'tsev v Evropeiskoi i Aziatskoi Rossii v 1910 godu*, vol. LXXX of *Statistika Rossiiskoi Imperii* (St. Petersburg, Russia, 1913). The four non-Iur'ev series are each derived in a different way, especially with regards to how they are deflated by cost-of-living indices (excepting the Borodkin et al. nominal wage series). The Mironov series is interpolated between decades, while the Wheatcroft series represents a 3-year average. This latter series is in kilograms of rye equivalent units, while the other series all represent ruble amounts.

¹³ Across European Russia, the seasonal wage is gap averaged approximately 20 kopeks. These data come from the same type of correspondent reports underlying the Iur'ev series in Figure 1 but were collected by the statistical office of the Ministry of State Property and summarized over the entire 1884-1900 period. See Russia, Ministerstvo zemel, *Svod*, vol. 1. The late 1890s data on summer agricultural pay were reported alongside the daily wages cited in Figure 1. See Vladimirskoe, *Obzor*. In 1910, the equivalent summer salary in Rostov was also roughly 65 rubles. These 1910 figures assume 4 months of work and are derived from the monthly salaries reported in Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Tseny*.

¹⁴ Average male daily wages in the two provinces rose from roughly 62 kopeks to slightly over 70 between 1870s and 1890s, compared to an increase of only 57 kopeks to 60 kopeks for all of European Russia. Summer

laborer salaries were roughly 5-10 percent higher in Iaroslavl' than Vladimir. See Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*, vol. 1.

¹⁵ Vladimirskaia, Otsenochno-ekonomicheskoe, *Iur'evskii uезд: svedeniia o krest'ianskom khoziaistve*, vol. IX, no. II of *Materialy* (Vladimir na Kliaz'me, Russia, 1904). According to the 1898-1899 *zemstvo* survey, there were 23078 males of working age in Iur'ev district, and 16983 (73.6 percent) had some non-agricultural employment (ibid.). Compare this to Table 1, where about 30% of adult males had main occupations outside of agriculture. On Rostov work passports, see Iaroslavskoe, *Otkhozhie promysly krest'ianskago naseleniia Iaroslavskoi gubernii (po dannym o pasportakh za 1896-1902 g.g.)*, vol. 19 of *Statisticheskii sbornik po Iaroslavskoi gubernii* (Iaroslavl', Russia, 1907). In 1901, 23166 work passports were issued to males in Rostov province, and 15253 of the recipients did not spend any time on agriculture over the year (ibid.). Also see the provincial trends in the numbers of worker passports issued, as documented in Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*, vol. 1.

¹⁶ Russia, Ministerstvo gosudarstvennogo imushchestva, *Materialy dliia statistika Rossii*, 6 vols., (St. Petersburg, Russia, 1858-1871), vol. 2.

¹⁷ This calculation draws on the numbers presented in the text and Table 2. Complex households were not as prevalent in this part of European Russia, and, moreover, they would have derived a similar share of total income from own-farm production (since land allotments would have been correspondingly higher). This range is a rough "guesstimate" based on an average household with two working-age individuals each making 50-240 rubles per year + own farm production (of crops only). On wages in Shuia district, see M. I. Tugan-Baranovsky, *The Russian Factory in the 19th Century*, trns. Arthur Levin and Claora Levin, (Homewood, IL, 1970, 3rd ed.), 343-362.

¹⁸ While we provide such information here, we critique the use of tax payments statistics as a measure of living standards below. After Emancipation, the basis of central government taxation shifted from adult male tax units (i.e. souls) to property and, especially, to indirect sources (primarily consumption taxes). The newly created *zemstvo* collected its revenue primarily from property taxes, while peasant institutions of self-government assessed member households according to land, household size, or wealth. By "land payments," we refer to several forms of mortgage-like payments made by the peasantry after 1861 to the state or the former serf-owning class in return for the transfer of property rights.

¹⁹ On measures that lowered redemption payments and other tax obligations, see Robinson, *Rural*. It is worth noting that a considerable share of the arrears in 1903 arose from required property insurance payments. For evidence that local officials used a variety of mechanisms to ensure tax payments in central Russia, see Jeffrey Burds, *Peasant Dreams & Market Politics: Labor Migration and the Russian Village, 1861-1905* (Pittsburgh, PA, 1998), ch. 2.

²⁰ Repeated *zemstvo* surveys of households in one township (Il'inskaia) of Iur'ev district, one in 1881 and one in 1899, support a range of burdens of 5-6 rubles. In 1881, total per capita obligations (including redemption payments) were around 6.13 rubles. This had fallen to 5.07 by 1899. See Prugavin, *Sel'skaia*; Vladimirskaia, Otsenochno-ekonomicheskoe, *Iur'evskii*. According to the aggregate data summarized by Wheatcroft, yearly indirect taxes were approximately 672.5 million rubles between 1895 and 1900. The population of the Empire according to was 126.4 million. See Wheatcroft, "Crises," 160-162; Troinitskii, ed., *Pervaia*.

²¹ According to 1897 constant ruble index (see gpih.ucdavis.edu), a paper ruble in the late 1850s represented 40-50% more silver or gold equivalent than a ruble under the gold standard initiated in 1897 (the paper ruble was re-valued in 1840, with the new ruble approximately four times the value of the old one). To make the currencies comparable, paper income figures from the 1840s (see the next section) must be transformed to current silver rubles (divided by 3.5) and then to late 19th century equivalents (multiply by 1.5). Of course, this transformation does not take changes in the purchasing power of the currency into account.

²² Such advertisements covered the back pages of most official provincial newspapers (the *gubernskie vedomosti*) and papers based in smaller cities like Rostov. For the data underlying these household budget figures, which derive on a small sample of budgets from the 1880s and 1890s, see Russia, Ministerstvo finansov, Departament okladnykh, *Materialy*, vol. 1; F. A. Shcherbina, “Krest’ianskie biudzhety i zavisimost’ ikh ot urozhaev i tsen na khleba,” in A. I. Chuprov and A. S. Posnikov, eds., *Vliianie urozhaev i khlebnykh tsen na nekotoryia storony Russkago narodnago khoziaistva* (St. Petersburg, Russia, 1897), 43. In nearby Kostroma, Petersburg, Moscow, and (more distant) Kiev provinces in the early 20th century, industrial workers spent approximately 50 percent of their income on food and 5-10 percent on tobacco and alcohol. 10-25 percent (25 among workers in Kostroma) was spent on clothing and shoes. See N. K. Druzhinina, ed. *Usloviia byta rabochikh v dorevoliutsionnoi Rossii* (Moscow, 1958). For similar evidence from Moscow province, see Iu. I. Kir’ianov, *Zhiznennyi uroven’ rabochikh Rossii (konets XIX - nachalo XX v.)* (Moscow, 1979). On the evolution of diets in the post-Emancipation era, see R. E. F. Smith and David Christian, *Bread & Salt: A Social and Economic History of Food and Drink in Russia* (Cambridge, 1984), ch. 7. On the emerging culture of consumption – including advertising, changes in fashion, and expenditures on housing, consumer durables, and various forms of storing wealth – in urban and rural settlements of the Central Industrial Region, see Burds, *Peasant*, ch. 6; Marjorie Louise Hilton, “Commercial Cultures: Modernity in Russia and the Soviet Union, 1880-1930,” Ph. D. Dissertation, University of Illinois, 2003.

²³ Vladimirskoe, *Obzor*, vol. 3, 310; covering the 1898 agricultural year. The post-1861 period also saw the expansion of a locally administered system of grain reserves that enabled some risk-sharing within and across communities in our districts. See Kimitaka Matsuzato, “Sel’skaia khlebozapasnaia v Rossii, 1864-1917 gody,” *Otechestvennaia istoriia* 3 (1995), 185-197.

²⁴ From the post-1861 period, a variety – often yearly or monthly – of market and reported price observations from Iur’ev and Rostov districts are available in Titov, “Statistiko-ekonomicheskoe”; I. Kaufman, I., ed., *Tseny po proviant i furazh po svedeniiam intendantskago vedomstva*, vol. 4, of *Vremennik tsentral’nago statisticheskago komiteta Ministerstva vnytrennykh del* (St. Petersburg, Russia, 1889); Vladimirskoe, *Obzor*; Vladimirskaia, *Sbornik statisticheskikh i spravochnykh svedenii po Vladimirskoi gubernii* (Vladimir na Kliaz’me, Russia, 1900), multiple vols.; Iaroslavskoe, *Otsenka*. A widely used price index for St. Petersburg exhibits a 48-50 percent increase between 1861 and 1910. See Strumilin, “Oplata.” If per capita consumption of rye remained 1.1 *chetvert* in the late 1890s, this amount would have cost approximately 6 rubles in Iur’ev or Rostiv districts. Comparing this with the 14.3 ruble price in Voshchazhnikovo estate in Rostov district in 1831 (see below), when the paper ruble was approximately 40% of the value of the late 1890s ruble, suggests that the real price of grain changed little over the intervening sixty years, and that most peasants could afford to buy sufficient food through out the period.

²⁵ On *lavki* and *magaziny* in 1875, see Titov, “Statistiko-ekonomicheskoe;” Vladimirskii gubernskii statisticheskii komitet, *Ezhegodnik* (Vladimir na Kliaz'me, Russia, 1880), vol. 3. Rostov market was one of the largest yearly trade fairs in Russia, but the district was also relatively well served by other periodic markets and weekly bazaars. While Iur'ev had no substantial periodic markets in 1867 and only 4 by the 1880s, Rostov district already had 8 such trade fairs by the late 1860s. Iur'ev district only contained four markets out of the 281 recorded in the province for 1895-96. These numbers only include trade fairs, which occurred on specific days in a year, and not bazaars (*bazary*), which occurred at regular (weekly, monthly) intervals. The three village markets that took place in Iu'rev district hosted trade in manufactured goods, foodstuffs, and rough textiles. On trade enterprises, markets, and fairs, see Vladimirskaia, *Sbornik*, vol. 2, 178-179; N. S. Petlin, *Opyt opisaniia gubernii i oblastei Rossii v statisticheskom i ekonomicheskom otnosheniiakh v sviazi s deiatel'nost'iu v nikh gosudarstvennogo banka i chastnykh kreditnykh uchrezhdenii* (St. Petersburg, Russia, 1893), 2 vols.; Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Iarmaki v Evropeiskoi Rossii*, Series II, vol. 5 of *Statisticheskii vremennik Rossiiskoi imperii* (St. Petersburg, Russia, 1872).

²⁶ Other indicators of wealth and durable consumption are also available. In 1876, only 264 out of 13,360 private homes in Iur'ev district were built from stone. But according to the 1898-1899 Vladimir *zemstvo* survey, the portion of resident households without any sort of housing of their own varied from 1.3% in Il'inskaia township to only 4.8% in Parshinskaia (*Materialy dlia otsenki*, vol. 9). See Vladimirskii, *Ezhegodnik*, vol. 3; Vladimirskaia, *Otsenochno-ekonomicheskoe, Iur'evskii*.

²⁷ Hoch, “Famine.”

²⁸ V. I. Pokrovskii does find some evidence of a negative correlation between grain prices and fertility rates and a positive correlation between grain prices and mortality rates. However, he only calculates rough correlations without any controls for age structure or other socio-economic conditions. See “Vliianie kolobanii urozhaiia i khlebnykh tsen na estestvennoe dvizhenie naseleniia,” in A.I. Chuprov and A.S. Posnikov, eds., *Vliianie urozhav i khlebnykh tsen na nekotoryia storony russkago narodnago khoziaistva* (St. Petersburg, Russia, 1897), 237-238. “Mortality” here is simply defined as the number of deaths divided by the total population, multiplied by 100. “Fertility” is defined similarly. Crude fertility rates were well below 4 per 100 in the U.K., France, and Sweden by 1850 according to the data reported in B. R. Mitchell, *Europe, 1750-1993*, vol. 4 of *International Historical Statistics* (London, 1998).

²⁹ The number of deaths of children younger than 5 averaged 27.1 percent of all births in European Russia between 1867 and 1881, compared to 14.8 and 21 percent in the UK and Italy, respectively (*ibid.*). Both Vladimir (38.8) and Iaroslavl' (34.9) exhibited higher child mortality rates, with Vladimir's especially high rate contributing to the mortality gap between the provinces. See Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Smertnost' mladentsev v Evropeiskoi Rossii v 1867-188 gg.*, vol. 6 of *Vremennik tsentral'nago statisticheskago komiteta ministerstva vnutrennykh del* (St. Petersburg, Russia, 1889). We have not yet undertaken significant research into health and health care in our districts, but such information is readily available in the archives and in published contemporary sources. See P. A. Kurkin, *Materialy po bolezennosti i dvizheniiu naseleniia Moskovskoi gubernii v 1895 i 1896 gg.*, vol. 5, no. 2 of *Sbornik statisticheskikh svedenii po Moskovskoi gubernii*. (Moscow, 1899), on morbidity and mortality conditions in nearby rural Moscow province; T. I. Volkova, *Iaroslavskoe zemstvo i razvitie narodnogo zdravookhraneniia i obrazovaniia v gubernii (1865-1918 g.*

g.) (Iaroslavl', Russia, 1998), on the expansion of *zemstvo* health care in Iaroslavl' province. Information on health conditions in pre-1861 rural Russia is almost entirely lacking.

³⁰ To compare, Mironov utilizes the 1897 census and other sources to calculate literacy rates for different age cohorts over the 19th century. He estimates that the literacy rate for males over 9 years of age rose from 19.1% in 1857 to 45.2% in 1907. For females, the increase was from 9.5% to 17% - female literacy lagged well behind male education and was low in comparison with other European countries in the late 19th century. Differences between Mironov's estimates and the apparent level of male literacy in rural pre-emancipation Rostov district (around 50% - see below) may derive from the methodology Mironov uses to back-project from the 1897 census. See "The Development of Literacy in Russia and the Ussr from the Tenth to the Twentieth Centuries." *History of Education Quarterly* 31, no. 2 (1991): 229-252.

³¹ These enrollment rates assume that the school-age population was 20 percent of the total population, but the upward trends are comparable if reported denominators are utilized. See Pokrovskii, ed., *Odnodnevnaia*, 1910-1911 data; Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Sel'skiia*, 1879-1880 data. Volkova notes that from 1876 to 1906, the number of *zemstvo* schools in Rostov district increased from 14 to 80. See *Iaroslavskoe*, p. 51.

³² "Capabilities" are not always directly measurable and may include things like individual liberty and other aspects of one's "psychic state." See the discussion of Sen's work in Allen, et al., "Introduction," in *Living Standards*, 7-8.

³³ On such inequality, see Steven Nafziger, "Peasant Communes and Factor Endowments in Late Nineteenth-Century Russia," *Explorations in Economic History* 47 (2010), 381-402. The township governments nested a number of rural societies, and both of these institutions were explicitly *peasant* institutions of local government. The society elders continued to be paid out of communal or township funds, but they were made personally liable for collecting tax obligations. They also took on additional roles in the new rural courts and the *zemstva* electoral structure. In terms of expenditures, the township and rural society governments of Iur'ev and Rostov districts spent 1.3 and 0.9 rubles per capita, respectively, in 1881 (the national mean was only 0.6 rubles per capita). See Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Mirskie*.

³⁴ According to 1881 data on communal and township-level expenditures, 40 percent of township expenditures in both Rostov and Iur'ev went to township elder and clerk salaries (compared to 38.2 percent across European Russia), while only 14.3 and 15.2 went towards rural society elder salaries (versus 51.5 percent across Russia), respectively. At the same time, the shares of township expenditures going to towards education (healthcare) in Rostov and Iur'ev were only 2.8 and 2.3 (0.2 and 0.2) percent, respectively, as compared to 5.4 (2.2) percent across European Russia. See Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Mirskie*. In contrast, district *zemstvo* expenditures on education (healthcare) in Rostov and Iur'ev comprised 15.9 and 10.3 (29 and 12.3) percent of total expenditures in 1877, and these shares rose steadily over time. Across European Russia, district *zemstvo* spending per capita went from 0.53 rubles in 1877 to 1.06 rubles in 1906. See Nafziger, "Did Ivan's Vote Matter? The Political Economy of Local Democracy in Tsarist Russia," *European Review of Economic History* (forthcoming, 2011); Boris Veselovskii, *Istoriia zemstva za sorok let*, 4 vols., (St. Petersburg, 1909-1911), vol. 1. The combination of peasant, *zemstvo*, and state funding, all of which was based primarily on property taxes, supported a variety of other institutions of local government, including police, courts, and judicial officials. Table 6 provides some evidence on how prevalent these institutional actors were in our

districts, relative to the corresponding provincial totals. By 1881, Rostov and Iur'ev districts had 14 and 7.6 percent of the total populations of the provinces. Overall, our two districts had somewhat fewer constables, circuit courts and justices of the peace (except for Rostov) than their populations warranted.

³⁵ For a more detailed account of the interaction of central and local authorities with respect to education, see Nafziger, "Financing Primary Schools in Late-Tsarist Russia," Working paper, Williams College, 2011. The trend towards greater central involvement in local governance also explains the 1889 creation of the new position of the land captain (*zemskii nachal'nik*) to manage local peasant affairs for the Ministry of the Interior. As noted in Table 6, Rostov and Iur'ev had 5 and 3 land captains, respectively.

³⁶ P. N. Pershin, *Uchastkovoe zemlepol'zovanie v Rossii* (Moscow, 1922).

³⁷ The correlation between the population share of serfs in 1860 and the share of peasant land that was *not* collective allotment (*nadel'naia*) land in 1905 was 0.39. However, the share of non-allotment land in Rostov district in 1905 (17.4 percent) was higher than in Iur'ev (14.0), despite serfdom being relatively more prevalent in Iur'ev (Table 1). The 1905 land data all is derived from volumes of Russia, Ministerstvo vnutrennykh, Tsentral'nyi, *Statistika*. Across European Russia, the differences between mean land holdings among different types of peasants were even more stark – 7.5 *desiatina* per household in former serf villages and 11.2 for former state peasant villages (ibid.).

³⁸ See Vladimirskaiia, *Otsenochno-ekonomicheskoe, Iur'evskii*.

³⁹ Between 1896 and 1902, male daily agricultural wages were roughly 30 to 90 percent higher than female, and male seasonal and yearly salaries in the sector were approximately double that of females in Iur'ev. See Vladimirskoe, *Obzor*, various. For similar gender differences in provincial level mean wages, see Russia, Ministerstvo finansov, Departament, *Materialy*, vol. 1. For data on peasant labor mobility, see Vladimirskaiia, *Otsenochno-ekonomicheskoe, Iur'evskii*; Iaroslavskoe, *Otkhozhie*. The gender imbalance of labor mobility in the Central Industrial Region is also discussed by Burds, *Peasant*; Barbara A. Engel, *Between the Fields & the City: Women, Work, & Family in Russia, 1861-1914* (Cambridge, 1996).

⁴⁰ As a result, and as the size of our footnotes in this section might suggest, there is also many fewer contemporary publications and less secondary literature dealing with Russian living standards before 1861.

⁴¹ Rostov district was also well known for commercial vegetable production in the pre-emancipation era. See V. A. Fedorov, "Ogorodniki-predprinimateli Rostovskogo uezda Iaroslavskoi gubernii (Pervaia polovina XIX veka)," in *Zazhitochnoe krest'ianstvo Rossii v istoricheskoi petrospektive* (Moscow, 2000), 58-60.

⁴² This is not to say that they don't exist anywhere. But it is highly unlikely that such data could be found to cover a fairly broad geographical area over a reasonably long period of time. And if such data do exist they are probably only for the estates of the largest landholders, who were most likely to keep such records in this period. There are some urban data for the period before 1861, such as the series compiled for St Petersburg. See Mironov, "Wages."

⁴³ The value of the paper ruble (*assignaty*), and the conversion rate between silver rubles and paper rubles, changed over our period of study; in the 1840s one silver ruble was worth approximately 3.5 paper rubles. For additional discussion of ruble comparisons over time, see Mironov, "Wages;" Thomas C. Owen, "A Standard Ruble of Account for Russian Business History, 1769-1914: A Note," *The Journal of Economic History* 49, no. 3 (1989), 699-706. Data on wages and salaries on Voshchazhnikovo may be found in RGADA, f. 1287, op. 3,

ed. khr 1635 (“Communal resolutions 1844”), ll. 4-6, estate officers; *ibid.*, 1-3, coachman; RGADA, f. 1287, op. 3, ed. khr. 1713 (“Communal resolutions”), l. 43, Nikolai Cherninkin; RGADA, f. 1287, op. 3, ed. khr. 555 (“Instructions, 1796/1800”), female textile workers.

⁴⁴ The averages across Iaroslavl’ were 27.80 and 36.80, respectively. Female workers made considerably less. For these and the following data on the economic conditions of state peasants in Rostov and Iaroslavl’, see Russia, Ministry gosudarstvennogo, *Materialy*, vol. 2.

⁴⁵ For the Iur’ev observations, see A. P. Smirnov, “Svedeniia o polozhenii dvorianskikh imenii Vladimirskoi gubernii v 1858 i 1859 godakh,” *Vladimirskii zemskii sbornik*, 2 (1883), 249-403. These detailed data from the descriptions of noble estates in the 1850s were only published for Vladimir province. Also note that Voshchazhnikovo serfs, like others belonging to the Sheremetyevs, appear to have been relatively well off, even by regional standards. A more detailed discussion of this phenomenon is presented in Tracy K. Dennison, *The Institutional Framework of Russian Serfdom* (Cambridge, 2011).

⁴⁶ RGADA, f. 1287, op. 3, ed. khr. 555 (“Instructions”). For the district-level data on quitrents, see Skrebitskii, ed., *Krest’ianskoe*, vol. 3.

⁴⁷ Such obligations became the responsibilities of the *zemstvo* and the peasant institutions of self-government after 1861. On the various estate levies on Voshchazhnikovo, see Dennison, “Did Serfdom Matter? Russian Rural Society, 1750-1860,” *Historical Research* 79, no. 203 (2006), 74-89. Also see the discussion of taxes and seigniorial obligations in Mironov, *Blagosostoianie*, pp. 297-315.

⁴⁸ See, for instance, E. I. Indova, *Krepostnoe khoziaistvo v nachale XIX veka po materialam votchinnogo arkhiva Vorontsovykh* (Moscow, 1955); I. D. Koval’chenko, *Russkoe krepostnoe krest’ianstvo v pervoi polovine XIX veka* (Moscow, 1967).

⁴⁹ RGADA, f. 1287, op. 3, ed. khr. 1615 (“Decree prohibiting serfs in arrears from having the best sorts of clothing, 1843”)

⁵⁰ RGADA, f. 1287, op. 3, ed. khr. 1568 (“Reports on grain harvests 1842-54”). Data collected by the Ministry of Finance in 1859 puts the Rostov (town) market prices of a *chetvert’* of rye at 4.15 silver rubles and a *chetvert’* of oats at 2.72 in January of 1857. The mean prices in the provincial capital of Iaroslavl’ were very similar. See RGIA, f. 18, op. 4, d. 826 (“Reports on market grain prices 1857-1863”).

⁵¹ On grain consumption in the eighteenth century, see Ian Blanchard, *Russia’s ‘Age of Silver’: Precious Metal Production and Economic Growth in the Eighteenth Century* (London, 1989), 239. In the memoirs of Savva Purlevskii, a serf from the village of Velikoe in Rostov district, he notes that his relatively well-off family ate a variety of meats, vegetables, and grains in the early 19th century. He mentions purchasing bread from bakers in Tambov province (hundreds of miles away) and grain prices that resemble those from Voshchazhnikovo. See Boris Gorshkov, ed. and trns., *A Life under Russian Serfdom: The Memoirs of Savva Smitrievich Purlevskii, 1800-1868* (Budapest, Hungary, 2005), 59-60.

⁵² See Kahan, *Plow*; RGADA, f. 1287, op. 3, ed. khr. 1568. Similarly a cold rainy spring in 1852 is thought to have resulted in lower yields across Russia. But the Voshchazhnikovo harvest was called “adequate” and no references to subsistence crises or grain imports are noted. As after 1861, one reason for disconnect between harvests and grain availability may have been the system of grain stores demanded by the Ministries of State Property and the Interior. According to records maintained by the Iaroslavl’ governor’s office, 187 grain stores

in Rostov district contained over 1.8 *chetverti* of grain for all of the male serfs and state peasants in the district in 1858. See RGIA, f. 1281, opis' 6, delo 33 ("Po Otchetu Nachal'nika Iaroslavskoi Gubernii Za 1858 God")

⁵³ August Freiherr von Haxthausen, *Studien über die inneren Zustände, das Volksleben und insbesondere die ländlichen Einrichtungen Russlands*, 3 vols., (Hannover, Germany, 1847-1852), vol. 1, 119.

⁵⁴ V. R. Tarlovskaiia, *Torgovlia Rossii v period pozdnego feodalizma: torgovye krest'iane v vtoroi polovine XVII –nachele XVIII v.* (Moscow, 1988), especially chp. 4. All information on dwellings in Vozhazhnikovo comes from RGADA, f. 1287, op. 3, ed. khr. 1598 ("Descriptions of stone and wooden dwellings")

⁵⁵ Inventory data come from RGADA, f. 1287, op. 3, ed. khr. 1325; 1143; 766. There are only three documents that are actually called probate inventories in the archival record, but another handful of inventories exist that had been drawn up in the context of a dispute over a parent's or spouse's estate. The serfs who left these behind were described as middling, and the inventories seem to have survived by accident. There is no *a priori* reason to think they were exceptional. Inventories of these sorts do exist for at least some estates in the nineteenth century. A more systematic analysis of them could shed much-needed light on an important – but so far neglected – aspect of rural living standards, both before and after 1861.

⁵⁶ See Hoch, *Serfdom*, 51-52; "Famine." Hoch's analysis of the estate of Petrovskoe is based on estate reports regarding poor harvests and census-like documents that reveal changes in the age structure. In "Famine", he studies the nearby Borshevka settlement, which had multiple owners. In this second study, Hoch compares a grain price data series with mortality data from parish burial registers. Overall, Hoch argues that disease environment mattered more for mortality than grain availability, which does not seem to justify his conclusion about living standards.

⁵⁷ Compare these crude birth and death rates to those reported for other European countries in the mid-19th century in Mitchell, *Europe*.

⁵⁸ On the first school in Voshchazhnikovo, see Titov, *Rostovskii uezd Iaroslavskoi gubernii: istoriko-arkheologicheskoe i statisticheskoe opisanie s risunkami i kartoiu uezda* (Moscow, 1885), Titov, *Rostovskii uezd*, p. 515. For 1842, see Russia, Statisticheskoe otdelenie soveta Ministerstva vnutrennikh del, *Statisticheskiia tablitsy o sostoianii gorodov Rossiiskoi imperii, velikago kniazhestva finliandskago i tsarstva pol'skago* (St. Petersburg, Russia, 1842). For 1860, see G. Fal'bork and V. Charnoluskii, eds., *Nachal'noe narodnoe obrazovanie v Rossii*, 4 vols., (St. Petersburg, Russia, 1900-1905), vol. 1. The serf Sasha Puvlevskii, from the nearby village of Velikoe, faced such poor instruction under the local priest that his father pulled him out of school to study at home and in the family trading business. See Gorshkov, ed. and trns., *A Life*.

⁵⁹ See, for example, the account provided in *ibid.* On Pelageia Kokina, see RGADA, f. 1287, op. 3, ed. khr. 1143, l. 46 ("Pelageia pri dome zanimaet'sa obucheniem detei gramote"). Mironov utilizes the 1897 Russian National Census to estimate literacy rates for cohorts born in the decades before 1861. This technique results in rural literacy rates of less than 15 percent among the population over nine years old prior to 1861. See "Development."

⁶⁰ There was no equivalent in Russia to the King's Courts, where serfs brought suits against their lords in medieval England. On these and related issues of peasant and serf civil and political rights before 1861, see Dennison, "Did serfdom matter?"

⁶¹ Calculated from data in inventories of households (*podvornye opisi*): RGADA, f. 1287, op. 3, ed. khr. 1143. “Capital” is never defined in the documents, but it seems likely that it included cash savings and earnings as well as trade inventory (many of the wealthy serfs engaged in trade of some sort) and other assets (mainly land and buildings). A more detailed discussion of inequality at Voshchazhnikovo can be found in Dennison, *Institutional*. Other estate studies have reported similar levels of inequality. See, for instance, Rodney Bohac, “Family, Property, and Socioeconomic Mobility: Russian Peasants on Manuilovskoe Estate, 1810-1861,” Unpublished Ph. D. Dissertation. University of Illinois at Urbana-Champaign, 1982; Edgar Melton, “Household Economies and Communal Conflicts on a Russian Serf Estate 1800-1817,” *Journal of Social History* 26 (1993), 559-85; L. S. Prokof'eva, *Krest'ianskaia obshchina v Rossii vo vtoroi polovine XVIII-pervoi polovine XIX v.* (Leningrad, 1981); K. N. Shchepetov, *Krepostnoe pravo v votchinakh Sheremetevykh* (Moscow, 1947).

⁶² Edgar Melton's study of the Baki commune in nearby Kostroma province paints a similar picture of serf estate life. At Baki, the poorer members of the society were prevented from improving their situation by both a rent-seeking landlord and powerful (similarly rent-seeking) communal elite. See Melton, “Household.” Specific examples of petitions by the poor on Voshchazhnikovo can be found in Dennison and Ogilvie, “Serfdom and Social Capital in Bohemia and Russia,” *The Economic History Review* 60, no. 3 (2007), 513-44. Our interpretation of the inequality of wealth and political power within many pre-1861 peasant communities is broadly consistent with Hoch's description of the communal institutions of the estate of Petrovskoe in Tambov province. See *Serfdom*, especially chp. 4. On the institutions of self-government among the state peasants prior to 1861, see Druzhinin, *Gosudarstvennye krest'iane i reforma P. D. Kiseleva*, 2 vols., (Moscow, 1946 and 1958), vol. 2, 113-128.

⁶³ Our information on the local presence of guilds is quite limited. In 1851, approximately 3500 and 5800 males were members of either the 1st, 2nd, or 3rd guilds in Iaroslavl' and Vladimir provinces. See Petr Keppen, *Deviataia reviziia* (St. Petersburg, 1857). Although guilds were formally granted many trade rights and various production patents, we find substantial evidence in and around Voshchazhnikovo that peasants engaged in many such activities. See also, Dennison, *Institutional*.

⁶⁴ Compare Voshchazhnikovo's administrative system and institutions with those of the estate of Baki, to another Sheremetev estate in Tver province, or to the organizational structure of the Vorontsov family holdings. See Melton, “Household;” Bohac, “Family;” Indova, *Krepostnoe*; Dennison, *Institutional*.

⁶⁵ These distinctions among peasants included differences in property and civil rights, and in access to various industrial patents and guild privileges See Russia, Ministerstvo gosudarstvennykh imushchestva, *Istoricheskoe obozrenie piatdesiatiletnei deiatel'nosti ministerstva gosudarstvennykh imushchestv 1837-1887, chast' II: popechitel'stvo. pozemel'noe ustroistvo* (St. Petersburg, Russia, 1888). Quantitative information on the organizational structure of the state peasantry is available. For example, there were nine police stations on state property in Rostov district (out of 47 in the province) in 1861. By the late 1860s, there were roughly a dozen. The state peasantry of Rostov district were integrated into four townships (*volosti*) that included 344 settlements by the end of the 1850s. See Iaroslavskii, *Pamiatnaia*, 57-58; Russia, Ministerstvo gosudarstvennogo, *Materialy*, vol. 2. On differences between state peasant and serf agriculture in distant Kharkov province, see Zack Deal, *Serf and State Peasant Agriculture: Khar'kov Province, 1842-1861* (New York, 1981). It should be noted, however, that we still have very little information about how state peasant communities actually

functioned on the ground. For legal and administrative conditions among the court peasants, see Russia, Glavnoe upravlenie udelov, *Istoriia udelov za stoletie ikh sushchestvovaniia 1797-1897*, 3 vols., (St. Petersburg, Russia, 1902). Possible institutional and factor endowment differences (on the latter, see Section II) among the peasantry conceivably had persistent effects on living standards after 1861. See Nafziger, “Serfdom, Emancipation, and Economic Development in Tsarist Russia,” Working paper, Williams College, 2011.

⁶⁶ Examples of such studies include Wheatcroft, “Crises;” Hoch, “On Good Numbers;” Gregory, “Grain Marketings and Peasant Consumption, Russia, 1885-1913,” *Explorations in Economic History* 17, no. 2 (1980), 135-164.

⁶⁷ See Mironov and A’Hearn, “Standard;” Mironov, *Blagosostoianie*; Mironov, “New Approaches.” Also worth noting is Hoch’s finding that mortality in nineteenth-century Tambov Province did not peak during agricultural crises, indicating that peasants under serfdom – his investigation covers the period 1830-1912 – were not especially vulnerable to food shortages. See Hoch, “Famine.” In other works, Hoch documents relatively high consumption levels among serfs in the black-earth province of Tambov. See *Serfdom*; “Serf Diet in Nineteenth-Century Russia,” *Agricultural History* 56, no. 2 (1982), 391-414. Important Soviet studies of pre-1861 living standards among the serf population include Koval’chenko, *Russkoe*; Indova, *Krepostnoe*.

⁶⁸ See Hoch, “Did Russia’s;” “On Good Numbers;” Simms, “Crisis,” and subsequent articles that debated his assertions. Hoch’s conclusions are based on an analysis of pre- and post-1861 land holdings and obligation levels from the emancipation settlements of Tambov and several northern provinces. Also see Sergei G. Kashchenko, *Otmena krepostnogo prava v stolichnoi gubernii* (St. Petersburg, Russia, 2002). It may very well have been the case that the emancipation settlements in Rostov or Iur’ev districts forced serfs to pay well beyond the value of their land; our evidence does not support this, but we do not analyze a sample of land settlements as Hoch does. A key source for the less optimistic conclusions of Gerschenkron, Robinson, and other older studies mentioned in Section II was the work of Iu. Ianson, *Opyt statisticheskagoi izsledovaniia o krest’ianskikh nadelakh i platezhakh* (St. Petersburg, 1881).

⁶⁹ Soviet scholarship emphasized a growing agrarian crisis as a precursor to the Revolution of 1917. In addition to the works cited in Sections I and II, see A. M. Anfimov, *Ekonomicheskoe polozenie i klassovaia bor’ba krest’ian Evropeiskoi Rossii v 1881–1904 gg.* (Moscow, 1984); P. G. Ryndziunskii, *Krest’iane i gorod v kapitalisticheskoi Rossii vtoroi poloviny XIX veka* (Moscow, 1983). Part of this interpretation was the Marxist view that the Russian peasantry experienced “differentiation” and “proletariatization” in this “capitalist” era

⁷⁰ In Figure 4, the drop in mean heights across European Russia for recruits born in the early 1890s likely reflects the harvest failures and famines in 1891 and 1892, as nutrition during childhood is a key determinant of final height. For information on how these data were compiled, see Mironov, *Blagosostoianie*. We have not done any new anthropometric research for our study districts, mostly because we feel that there are numerous *direct* measures of consumption and living standards that deserve further exploration.

⁷¹ See, especially, Robinson, *Rural*. The overpopulation hypothesis has never adequately dealt with issues of economic specialization, rising agricultural productivity in certain areas, or exactly why demographic behavior should be treated as exogenous to resource pressures.

⁷² See Hoch, “Famine;” “On Good Numbers;” Wheatcroft, “Crises.” Utilizing aggregate data, Adamets finds that life expectancy at birth was flat at slightly below 30 years for both men and women between the 1860s and

the 1890s, but with higher quality micro-data from Borzenskii uezd (Chernigov province) between 1887/9 and 1897, Hoch concludes that life expectancies rose dramatically over this relatively short period. Urbanization and disease epidemics may also help explain Adamets's findings. See Sergei Adamets, "Famine in Nineteenth- and Twentieth-Century Russia: Mortality by Age, Cause, and Gender," in Tim Dyson and Cormac O Grada, eds., *Famine Demography: Perspectives from the Past and Present* (Oxford, 2002), 158-180; Hoch, "Did Russia's." On fertility, Hoch and others have cited factors such as communal land tenure, childcare practices, and marriage customs for keeping rates high in rural areas, but none of these lines of causality have been adequately tested. The Princeton Fertility project did produce a volume on Russia. See Ansley J. Coale, at al., *Human Fertility in Russia since the Nineteenth Century* (Princeton, NJ, 1979). Along with the difficulties inherent in the demographic data, their findings (little correlation between various fertility measures and socio-economic conditions) also suffer statistical shortcomings, as recently noted by John C. Brown and Timothy Guinnane, "Regions and Time in the European Fertility Transition: Problems in the Princeton Project's Statistical Methodology," *Economic History Review* 60, no. 3 (2007), 574-595.

⁷³ See Wheatcroft, "Crises;" Gregory, "Grain." Wheatcroft utilizes data on total grain production by province and also reports per capita livestock series broken down by region that shows similar patterns as the grain yields. Substantial information on other types of agricultural production is also available. For example, many *zemstvo* surveys collected data on the distribution of livestock holdings, size of landholdings, and even the prevalence of different types of agricultural machinery. In a pioneering piece of scholarship, Elvira Wilbur utilizes *zemstvo* household data from Voronezh province to study the distribution of agricultural resources among the rural population. Compare her positive conclusions regarding Voronezh to those of David Kerans, who argues for declining post-1861 agricultural productivity in nearby Tambov province. See Elvira Wilbur, "Was Russian Peasant Agriculture Really That Impoverished? New Evidence from a Case Study from the 'Impoverished Center' at the End of the Nineteenth Century," *The Journal of Economic History* 43, no. 1 (1983), 137-144; Kerans, *Mind and Labor on the Farm in Black-Earth Russia, 1861-1914* (Budapest, 2001). For earlier works that emphasize persistently low grain yields, see A. S. Nifontov, *Zernovoe proizvodstvo Rossii vo vtoroi polovine XIX veka* (Moscow, 1974); George Pavlovsky, *Agricultural Russia on the Eve of the Revolution*, 2nd ed., (New York, 1968). Of course, yields can be a problematic indicator in a society with an abundance of land.

⁷⁴ See Mironov, "Wages;" *Blagosostoiania*; Strumilin, "Oplata." Both of these authors discuss wage and salary evidence from other locations but provide no systematic discussion of geographic variation. Many other authors offer observations on wages, salaries, and even entire family budgets for specific occupations or smaller geographic units. For example, see Tugan-Baranovsky, *Russian*.

⁷⁵ This was the argument of Lenin, *Development*; who paved the way for subsequent Soviet scholarship. But Lenin's work had antecedents in the research of *zemstvo* statisticians. Recent studies by Daniel Field and Robert Johnson utilize livestock holdings and quasi-Marxist language in describing inequality in the countryside. Johnson does study household income inequality, but does not consider possible institutional sources. See Daniel Field, "The Polarization of Peasant Households in Prerevolutionary Russia: *Zemstvo* Censuses and Problem of Measurement," *Research in Economic History* Supplement 5 (1989), 477-505; Robert E. Johnson, "Family Life-Cycles and Economic Stratification: A Case-Study in Rural Russia," *Journal of Social History* 30, no. 3 (1997), 705-731.