# Bargaining, Buying In, and Opting Out: New Evidence on Russian Serf Emancipation and Land Reform

Steven Nafziger, Williams College

October 2013

#### **Abstract**

The emancipation of the Russian serfs was accompanied by a complex set of land and institutional reforms that dramatically changed the organizational structure of local governance, the allocation of property rights, and the working of rural factor markets. While the main parameters of these changes are explored elsewhere (Nafziger, 2011 and 2013b), this paper highlights five relatively unexplored aspects of the reforms that likely impacted the pace of growth and structural transformation in the countryside. We summarize available data on each of these five components of the reforms, speculate as to their potential effects in subsequent decades, and propose several additional empirical and theoretical directions we intend to take in future work.

Note: This is an extremely rough "thought piece" that is meant to spark discussion and to serve as an input into my broader project on the economics of serf emancipation and institutional change in late-Imperial Russia. Some of the contextual material is left out. Helpful assistance and useful comments were provided by Quanrul Ashraf, Marika Aleksieieva, Scott Gehlbach, and archivists and librarians in Russia, Finland, and the United States.

Alexander II's manifesto of February 19, 1861 initiated emancipation of the Russian serfs and began a sequence of complimentary rural reforms. These measures not only granted new legal freedoms to the rural population, but they also transferred formal land rights to the peasantry in a mortgage-like process referred to as "redemption." In comparison to other cases of rural reform in 19th-century Europe or slave emancipation in the Americas, Russian peasants received substantial land rights, albeit generally in the form of communal allotments with associated collective liabilities for the mortgage-like payments. Rather than simply expropriating the peasants or the landlords, the state constructed the reforms to include a series of steps that slowly transferred land rights to different types of peasants while (partially) compensating the nobility for their losses. There was substantial heterogeneity built into this process, particularly as the price and amount of land allowed to each community was locally differentiated, and the reforms treated serf and non-serf peasants differently.

The heterogeneity in the subsequent size of holdings, the resulting payment levels, and the extent of communal property rights has been discussed in depth elsewhere (e.g. Nafziger, 2013b). This short paper focuses on a number of lesser-known characteristics of emancipation and redemption, all of which likely played important roles in how the reforms impacted the rural Russian economy. We consider five such elements, summarizing them in turn, and present initial empirical information on the magnitudes and geography of each. These five features are the slow pace of the transition to peasant property ownership (extending into the 1880s), the extent to which redemption deals were the result of peasant-landlord bargaining rather than dictated by the former serf owners, the possibility that former serfs could accept limited land holdings (so-called gift allotments) in exchange for no further obligations, the onset of mandated redemption and a lowering of redemption payments in the early 1880s, and, finally, the existence of surprisingly low levels of redemption payment arrears into the 20<sup>th</sup> century. Although other authors have touched upon these features (e.g. Moon, 2001; Robinson, 1972 [1932]), their quantitative dimensions have remained obscure. As such, the primary goal of this paper is descriptive, with just a touch of speculation as to some conclusions we might draw from the evidence or through further analysis. Given the early nature of this research, the empirical facts we present should be interpreted cautiously, as information is still being collected.

We begin by briefly outlining the main components of emancipation and redemption and some basic conclusions from our recent research in this area. We then move through the five features of the reforms one by one (combining the first two), connecting each to the likely role they played in rural development after 1861. The last section offers some early thoughts on future research directions, including possibilities for additional data collection

1. Serf Emancipation and Redemption: The Nuts and Bolts of Institutional Change

\_

<sup>&</sup>lt;sup>1</sup> Emancipation redefined the peasantry's legal status by allowing them to freely enter into contracts and ending the nobility's *de jure* (but, of course, not necessarily *de facto*) control over their peasants' lives and over local justice. The General Statute and four Local Statutes governed this process. The General Emancipation Statute was issued as PSZ, Ser. 2, No. 36657. The four Local Statutes were Nos. 36662-36665 (No. 36662 pertains to the Greater Russian provinces that are the focus here). The Main Redemption Statute was issued as PSZ, Ser. 2, No. 36659. Emancipation and Redemption were part of a sequence of measures known collectively as the *Velikii reformy*, or Great Reforms, which also included changes in the judicial system, the military, local administration, and the state's financial organization (Eklof et al., 1994; and Zakharova, 2005).

As a first step, the Emancipation Statutes – the Main statutes and subsequent local legislation for different regions of the Empire – called for the formulation of *ustavnye gramoty*, or regulatory charters, between the former serf communities and their previous landlords. These charters were to be completed by 1863, with hundreds of newly named *mirovye posredniki* (peace mediators) aiding in their writing and ratification (Easley, 2008; Tolstoy famously worked as a mediator). Based on rules laid out in Local Statutes, the charters translated the previous rights and obligations of the serfs into new collective land endowments and sets of labor duties or cash payments. The number of obligated souls (dushi – a tax unit roughly equivalent to one workingage male) was set on the basis of the tax census of 1857-58.<sup>2</sup> If the amount of land per soul (a soul "allotment," or *nadel*) exceeded the local maximum norm as defined in the Local Statute, the excess could be "cut-off" and retained by the landlord. If soul allotments fell below one-third of this maximum norm, land was to be added to the new endowment to top it up.<sup>3</sup> At a minimum, landlords had the right to keep at least one-third of the estate's land, and until 1870 they could reduce peasant allotments to the minimum norm at will. These rules pertained only to the arable land on the serf estate. Distinct conditions held for garden plots (passed entirely to the former serfs without charge) and for other types of land. Significantly, the former serf-owner kept all claims to forests and meadows, which were vital inputs into farming (via livestock) and other non-agricultural livelihoods. Even in the case of arable land, the landlords had the right to pick and choose the specific property they retained as long as the amount available to the peasants followed the statutes. A Soviet literature emphasized how land "cut-offs" (otrezki) from peasant holdings under the Local Statutes often reached significant levels, even on top of the already relatively small land holdings granted under serfdom. According to studies of land charters, the former serfs of Simbirsk province lost access to over 30% of the land they previously utilized (Kanatov, 1964). In Moscow province, they lost 14.2% of their land (Zaionchkovskii, 1958, p. 182). Soviet and other scholars have long emphasized that first-order effects on the economic conditions of the former serfs stemmed more from their substantially worsened property endowments after emancipation.<sup>4</sup>

For most of European Russia, the emancipation statutes framed the peasant property rights under consideration as collective, where the relevant party was a newly formalized version of the traditional peasant commune known as the *sel'skoe obshchestvo*, or rural society. Some

-

<sup>&</sup>lt;sup>2</sup> There were allowances for community members to opt out of the settlements at this point, but few appear to have done so. For those households that signed on to the initial land charters, the law stated that the resulting allotments and associated temporary obligations had to remain in place for at least nine years. Those serfs who previously served as domestic servants, rather than in the fields, were generally excluded from the settlements. For a discussion of these possibilities in black-earth Kherson province, see Leshchenko (1971).

<sup>&</sup>lt;sup>3</sup> For example, the 13 districts of Moscow province were split into three regions with maximum allotments defined as 3, 3.25, or 3.5 *desiatiny* per soul (1 *desiatina* = 2.7 acres). The 1/3 rule defining minimal allotments differed slightly in peripheral areas.

<sup>&</sup>lt;sup>4</sup> The influential Soviet scholar P. G. Ryndziunskii (1983, pp. 99-100) also emphasized the restrictive role of the commune when it came to the issuance of passports for migration outside the village.

<sup>&</sup>lt;sup>5</sup> Nafziger (2013a) describes the legal differences in the two types of allotment land. The definition of the exact "community" to act as one side in the emancipation/redemption process was a complicated issue that occupied many clauses of the General Emancipation Statutes. The new "rural societies," which came to be the central pillar peasant self-government, were meant to correspond to existing communities engaged in some joint management of land and/or resources. However, the overlap was not perfect, which created a further distinction between the institutional conditions of serfs and other peasant groups (where the newly formalized communal bodies were the same as the pre-existing structures). See Ibid. and the sources cited within.

immediate mechanisms for "individualizing" these rights were available under the statutes, and some resources (especially garden plots) were generally considered to be private (household) property, but for most communities in European Russia, the land described in the charters was legally defined to be communal allotment land (*obshchestvennaia nadel'naia zemlia*), within which the community could redistribute specific plots among member households. The property rights of individual households were heavily circumscribed on such land. However, for western and southwestern provinces, and if specifically desired by communities elsewhere, the property and associated obligations were *collectively* denoted in the charters but the rights were to be granted as *household* allotment land (*podvornnaia nadel'naia zemlia*). This specification of peasant property rights was meant to reflect conditions on the ground in those regions where the commune was absent of simply less involved in agricultural decision-making. Such household allotments were not subject to communal redistributions, although the exact legal status (for mortgaging, etc.) of plots under *podvornoe* tenure was not well defined in the law, and joint liability for payments apparently remained in practice. For both types of allotment land, statutes limited the alienability of the property until at least 1870.

By the end of 1864, almost all of the regulatory charters were certified by the state authorities and former serf communities entered into "temporary obligations." During this stage, the households assigned to a commune were collectively liable for the revised cash or labor obligations outlined by the charters (even if the allotment land was under *podvornnoe* tenure). In this stage, the maximum allotment norm corresponded to either an amount of labor (in days per year) or a fixed payment, and labor services were to be converted to cash as soon as possible. Households could only exit with the unanimous approval of the rest of the members (and, in general, not before 1870). Those wishing to leave had to give up all rights to a share of the commune's land, and the commune had to agree to take up their outstanding debts and shares of obligations.

Temporary obligations were intended to last until the financial arrangements were made to legally transfer the land to the peasant commune. This generally involved the formulation of a *vykupnaia sdelka*, or a redemption deal. These deals, which came to resemble mortgage transactions for most peasants, documented the boundaries and value of the land to be formally transferred, which could entail some adjustments from the specifications laid out in the land charters. The yearly payments, including the monetary equivalent of any labor services, to former serf-owners under temporary obligations were capitalized at a 6% interest rate to establish the aggregate redemption value of the (possibly revised) collective land allotment to be transferred. According to the Redemption Statutes, deals could be initiated through mutual agreement between the community and the former serf-owner (requiring a 2/3 vote in the communal assembly) or at the demand of the former seignior. Within many of the mutual

\_

<sup>&</sup>lt;sup>6</sup> Prior to the signing of the charters, former serfs existed under their previous seigniorial arrangements, subject to some limitations. After obtaining the approval of the local authorities, charters could be mutually agreed to (and signed by the peasants) or forced through by the seignior at a cost in terms of lost compensation – see below.

<sup>&</sup>lt;sup>7</sup> In Moscow province, obligations were capped at 40 days of labor or 10 rubles per soul. [Find source]

<sup>&</sup>lt;sup>8</sup> The extent of such changes between land charters and redemption deals is little known. They could arise due to individual household exits from the commune during temporary obligations.

<sup>&</sup>lt;sup>9</sup> This was the case for allotments set at the maximum norm in the Local Emancipation Statutes. For allotments smaller than the maximum, the redemption valuation fell less than proportionally, so that the first *desiatina* of allotment per soul corresponded to one half of the (maximum) yearly payment, the second to a third, and so on.

agreements, supplementary payments or contracted labor arrangements were included to provide the peasants with access to additional land or resources and the former serf owners with labor. Although almost entirely unacknowledged in the literature, such additional contracted elements of the deals possibly did much in reconstituting many elements of serfdom under something like a form of debt peonage. <sup>10</sup>

Regardless of whether redemption deals were mutually agreed upon or not, the newly reconstituted State Bank typically financed the transfer through 49-year loans made to the communes. The former serf owner's perspective, the amount they finally received depended on whether or not the deal was mutual and on the amount of existing debt owed by the estate (Gerschenkron, 1965; and Zaionchkovskii, 1960). In aggregate, the total value of redemption loans made to the former serfs amounted to over 860 million nominal rubles, which was roughly one third of best-guess estimates of Russian national income in 1861 (Lositskii, 1906, p.39). This corresponded to approximately 26.8 rubles per redeemed *desiatina* (about 10 rubles per acre) or 95 rubles per male former non-household serf, at a time when mean per capita incomes were likely less than 50 rubles. Out of this aggregate liability, at least 320 million rubles (37 percent) were deducted from what former estate owners received due to outstanding mortgage debt to various financial institutions (ibid, p. 44).

A key feature of the redemption program was that the commune was collectively responsible for making payments on the outstanding redemption debt (in practice, even under *podvornnaia* tenure it appears). To enforce household contributions under this joint liability, the communal assembly was granted legal authority over the immovable property and labor allocation decisions of those in arrears, supported if necessary by local police actions (Burds, 1998; and Nafziger, 2013a). The statutes stated that renewals of passports for work outside the village were only possible if arrears were paid off. If a commune failed to make one of the twice-yearly redemption payments, local state officials could sell assets or punish communal officers. After

\_

<sup>&</sup>lt;sup>10</sup> In Kherson, up to 70 percent of former serfs were subject to supplemental payments, while in Simbirsk, such additional obligations constituted 20-25 percent of the yearly redemption burden (ibid.; Leshchenko, 1971). Such supplementary arrangements were also present as part of temporary obligations under the original land charters. For example, in 1867 the former serfs of the village of Pleshcheevo in Iaroslavl' district agreed to purchase additional land from the previous owners (the Gagarins) for five years of payments roughly equal to 15 percent of their yearly *obrok* levels under temporary obligations ("Ustavnaia," n.d.).

<sup>&</sup>lt;sup>11</sup> In some mutual redemption agreements, state financing was foregone and a direct deal between the peasants and former owners struck, which outlined the property transferred and the means of compensation. Such deals were a minority – involving approximately 20 percent of former serfs in Simbirsk, for example (Kanatov, 1964) – and they often entailed the continuation of quit-rent payments / labor services in return for land. For *podvornnaia* communities, each allotted household technically held their own redemption obligations, but in practice the payments (and other associated tax obligations) were collectively imposed, and the rural societies were considered to be collectively liable.

<sup>&</sup>lt;sup>12</sup> If the landlord chose to force redemption, the state would only transfer 80% of the land's redemption value (75% if the redemption allotment was smaller than stated on the regulatory charters). Existing estate debt was subtracted from this percentage. In Simbirsk, approximately 48 percent redemption valuations were withheld due to mortgage debt (Kanatov, 1964). The state-financed portions of the redemption value was paid to the former serf-owners in 5% State Bank notes and "redemption certificates," which were non-circulating securities intended for eventual conversion to bank notes. Communities paid their liabilities to the State Bank in the form of yearly redemption payments equal to 6% of the loan. This included the 5% interest payments, 0.5% for a reserve fund, and 0.5% on the principle. There were numerous variations in these formulations, depending on the exact nature of the land being redeemed and conditions placed on mutual agreements.

the community began redemption, households could only legally alienate their share of communal land by paying off their portion of the loan in its entirety. These *de jure* restrictions lasted into the 20th century and have led many historians – most prominently Alexander Gerschenkron – to see the emancipation and redemption reforms as re-imposing many of the same constraints on mobility as existed under serfdom. In this interpretation, these restrictions lowered the supply of labor into industry, forced manufacturing to be overly capital-intensive, and slowed industrialization, thereby generating a "considerable obstacle" for economic growth that lasted until the Stolypin reforms of the 1900s (1965, p. 121). And because these constraints appeared to bind tighter on the former seigniorial peasants, the implication is that the adverse development effects would have been greater in areas of higher serf prevalence. What is missing from this account is a consideration of the role played by contracted obligations outside redemption and delays in exiting from temporary obligation.

Before emancipation, seigniorial obligations were not exclusively based on the productivity of the land but were extracted from the total income of serf labor in both agricultural and non-agricultural activities. As a result, post-1861 redemption payments in provinces such as Moscow, where regular and seasonal non-agricultural employment was prevalent before emancipation, probably continued to exceed the agricultural (rental) value of the land (Hourwich, 1891; and Ianson, 1881). According to some accounts, the loss in allotment land from the pre-1861 period was matched by a rise in its "price" under redemption. Considering data from 9 of the 13 districts of Moscow province, Boris Litvak found that average payments per soul decreased from 9.36 to 8.44 rubles, while the average per *desiatina* left to the former serfs increased by 8.3%. Soviet scholars went on to argue that these higher cash demands caused previously autarkic agricultural households to look off the farm for income sources to pay their obligations, thereby leading to a "proletariatization" of the countryside. 16

Peasants residing on privately owned land were not the only ones affected by reform in the 1860s. Serf emancipation was followed by similar acts for the former appanage (Romanov family-owned, i.e. court) and state peasants. Regarding the latter, the state initiated a process to fully document the holdings of the state peasants under an 1866 measure, with land allotments defined collectively at the commune-level and described in "ownership notes" (*vladennye zapiski*). These were compiled in a similar manner to the regulatory charters of the former serfs, but they were based on the officially conducted cadastres of state property in the 1840s and

-

<sup>&</sup>lt;sup>13</sup> In other work, we establish that the *de jure* communal restrictions created under the reform process often had little effect in practice (Nafziger, 2010).
<sup>14</sup> Domar himself pointed out numerous problems with these attempts to value land, but he still asserted that

Domar himself pointed out numerous problems with these attempts to value land, but he still asserted that peasants probably were overcharged for the property they received (1989, p. 437).
 These numbers are taken from Zainchkovskii's (1958, pp. 182-191) summary of Litvak's dissertation research,

<sup>&</sup>lt;sup>15</sup> These numbers are taken from Zainchkovskii's (1958, pp. 182-191) summary of Litvak's dissertation research, which was based on the regulatory charters from Moscow province. They relate to the 70% of the serf estates in Moscow province that utilized quit-rents rather than labor service. Note that the number of souls likely fell within <sup>16</sup> "The emancipation reform...strengthened outwork and forced land rentals" (Filippova, 1959, p. 390). More generally, Zakharova argues that the high obligation levels installed in the settlements "hindered the development of the peasant economy" (2005, pp. 159-160).

<sup>&</sup>lt;sup>17</sup> The primary court peasant reform was legislated in PSZ (Ser. 2, No. 39792), while the main state peasant statutes were Nos. 43888 and 44590. The court peasant reform followed a middle path between those experienced by the former serfs and state peasants. Immediately after serf emancipation, the administrations of the court and state peasants were integrated with the new system of local government based on the *sel'skie obshchestva* (PSZ, Ser. 2, No. 42899).

1850s, rather than any mediated bargaining process at the estate level. As a result, these settlements typically granted state peasant communes the land that they already held usufruct rights over. In return for this property, communities were made collectively liable for 20 years of payments (*obrochnye podati*) that corresponded to their current land rental obligations to the state. Initially, these communal endowments did not entail full ownership rights, as the property was intended for the "perpetual use" of the communities (Zaionchkovskii, 1960, p. 274). However, following legislation in 1886, these payments were converted into redemption obligations, and the former state peasant communities gained the same property rights that the former serfs held over redemption land (PSZ, Ser. 3, No. 3807).

Limited evidence on ownership notes and final land holdings does suggest that the state peasants experienced some changes in their land endowments during their reform process, likely due to statute caps on allotments per soul. State peasants in Moscow province lost some arable land and access rights to a substantial amount of forested area (Druzhinin, 1978, p. 108). In Simbirsk, state peasants lost 14.8% of their land, although this was less than half of the percentage lost by the former serfs (Kanatov, 1964). Even with these losses, the final amount of land was likely more favorable than what was received by the former serfs (Nafziger, 2013b). Rough calculations have shown that the total obligations (including various property-based state and local tax assessments) on the state peasantry were substantially lower than the payments made by the former serfs and were very close to what they paid before the reforms (Ianson, 1881; and Ivanov, 1945, pp. 112-121).

Therefore, most of the land held by the peasantry was the direct result of the land reform process and was essentially fixed after redemption began. By 1905, across European Russia, allotment land amounted to approximately 124 million *desiatina*, while individual peasants, peasant partnerships, and the communes themselves owned roughly 24.6 million *desiatina* in total under private property rights (Russia, Tsentral'nyi, 1906). Within the peasantry, the analysis in Nafziger (2013b) indicates that serfs had access to less property than state (or court) peasants by the late 1850s. This is true even if only districts with both state peasants and serfs are considered. Our work also shows that the average allotment per household was considerably smaller among

-

<sup>&</sup>lt;sup>18</sup> By the end of 1868, all the state peasant villages in Moscow province received ownership notes (Zaionchkovskii, 1960, p. 278). The mandated transfer of small serf estates (less than 20 souls) from private ownership to state stewardship in the 1860s and 1870s slowed the state peasant reform process. Moreover, the ownership notes were supposed to be presented to communal assemblies so that any outstanding complaints could be registered.
<sup>19</sup> An exception was any forested land, which reverted to state control. If the borders of their community's land endowment were not well documented – often the case in peripheral areas – state peasants were to receive no more than 15 *desiatina* per male soul (8 in more populated areas). Furthermore, the Kiselev reforms in the 1840s had already formally established the communal basis for the land rights and collective obligations of state peasant villages (Adams, 1985; and Ivanov, 1945). As a result, the land settlements may have had little impact on the *de jure* and the *de facto* institutional structure of the state peasant villages, but some slight adjustments of the amount of property under a community's control may have occurred. It appears that the regional distinction in *obshchestvennaia* and *podvornaia* rights under the Local Emancipation Statutes was kept for other types of peasants.
<sup>20</sup> Hourwich notes that for Riazan province, just to the south of Moscow, the effective taxation rate from redemption and other payments was higher for former serfs than for state peasants (1892, pp. 54-55). Deal (1981) finds similar differences between state peasants and serfs in pre-reform Khar'kov province.

<sup>&</sup>lt;sup>21</sup> To compare, by 1905 the nobility owned about 53.1 million *desiatina*, while all private property amounted to 97 million *desiatina* in European Russia. The state, through various chancelleries and ministries, along with other private institutions (churches, charities, etc.) held approximately 140 million *desiatina*, most in the far north and other peripheral regions (Russia, Tsentral'nyi, 1906).

former serfs in 1905 (this holds if the same set of districts are considered for each type of peasants). The statistical evidence is consistent with the former legal status of the peasant population leading to long-run differences in land endowment *levels*, but our work also shows that inequality in land holdings was considerably higher in districts characterized by relatively more former serfs. These and other statistics on land holdings presented in Nafziger (2013b) were compiled from the full set of published returns to two official land surveys in 1877 and 1905 (Russia, Tsentral'nyi, 1880-1885 and 1906).<sup>22</sup>

Overall, serfs may have lost more land and remained responsible for greater obligations than other types of peasants as a result of the land settlement process. Other aspects of the economic and institutional conditions of the state peasants were likely better (or at least less onerous) than those of the serfs before the reforms, and these may have translated into better outcomes afterwards. Some of the differences between these two types of villages – endowments and obligation levels – are measureable, while others – e.g. the quality of self-government or the amount of communal restrictions on labor mobility – are unobservable. At the same time, state policies increasingly treated the various types of peasants in the same way. Statutes in 1886 and 1893 reinforced state and communal control over inheritance practices, land allocation, and the possibility of household exit from the burdens of redemption for both state peasants and former serfs. As a result, Gerschenkron and others argue that the two types of peasants really faced similar constraints through the communal structure of land rights and collective obligations, at least after 1866. Other reforms resulted in more equality of obligation levels within the peasantry, as discussed further below.

## 2. Five Little Known Features of the Emancipation and Redemption Reforms

In ongoing research (Nafziger, 2013), we rely on a variety of newly collected district-level data to document and explore the geographic variation in the conditions of serfdom, the amount of land transferred to the peasantry and associated redemption price, and various socio-economic outcomes. We assess the work of Gerschenkron and others by paying particular attention to the differences between former serfs and the rest of the peasantry, arguing that comparing the two provides some indirect evidence on the long-run impact of serfdom and serf emancipation. In the

\_

<sup>&</sup>lt;sup>22</sup> The 1877 and 1905 data indicate the total number of properties by amount of land, social class of owner, etc. Therefore, multiple properties owned by the same individual, commune, etc. were counted as separate holdings. There is very little information in these data on the quality or attributes of land holdings by district, except for the arable (*pakhatnaia*) acreage in 1877.

<sup>23</sup> The governor of Perm province in the 1830s, M.M. Speranskii, noted that every serf wished to become a state

<sup>&</sup>lt;sup>23</sup> The governor of Perm province in the 1830s, M.M. Speranskii, noted that every serf wished to become a state peasant (cited in Crisp, 1959, CHECK PAGE NUMBER).

<sup>24</sup> See PSZ, 3rd Ser., Nos. 5578, 9754, and 10151. The latter legislation made an individual household's redemption

<sup>&</sup>lt;sup>24</sup> See PSZ, 3rd Ser., Nos. 5578, 9754, and 10151. The latter legislation made an individual household's redemption of their portion of the outstanding loan subject to the approval of a two-thirds majority of the communal assembly. It also forbade any sales of allotment land to non-peasants.

<sup>&</sup>lt;sup>25</sup> In Gerschenkron's (1965) interpretation, communal restrictions on peasant mobility only eased after 1900. Collective responsibility for taxes and land payments was formally ended in 1903. Redemption payment arrears were forgiven after 1905. Administrative and financial measures were passed that made it easier for households to consolidate their land and exit the commune. These Stolypin reforms were intended to improve rural conditions by abrogating many aspects of the institutional regime set up in the 1860s. However, the commune survived the Bolshevik Revolution and grew in relevance with the collective seizures of land from the former nobility. Only the establishment of collective farms in the late 1920s and 1930s formally ended the institution of the land commune, although these new units did retain elements of the old regime (Allen, 2003; and Male, 1971).

context of that research, it quickly became apparent that understanding the economic implications of emancipation and redemption required a more complete empirical accounting of the various components of these reforms beyond the most well known features. It is not enough to simply compare the observable land and obligation levels between serfs and non-serfs, before and after 1861. Rather, the complexity of the end of serfdom, as manifested in a number of other lesser-known features of the accompanying reforms, generated short and medium term variation in institutional conditions across European Russia. Instead of rehashing our work on the (land) endowment effects of emancipation and redemption, we feel that it is important to unpack these other dimensions by which the reforms likely affected Russian economic development.

#### 2.1 Bargaining over the Settlements and the Pace of the Reforms

The actual emancipation decree in 1861 did not lead to an immediate change in the organization of rural life. Rather, it was the beginning of what was a fairly lengthy reform process that was only fully executed by the 1880s (even then, redemption payments for the land extended into the 20th century). Each stage – the writing of the land charters, temporary obligations, and the settling of the actual property transfer – entailed significant obstacles, especially from the bargaining processes that underlay the construction of the land charters and redemption deals. The initial determination of the land holdings that the former serfs previously had access to, and what they then could utilize under temporary obligation, often involved conflict and the direct intervention of the peace mediator. Peasant communities could refuse to sign the resulting charters, although they were to be put into effect by the end of 1863. In Column 3 of Table 1, we provide some summary evidence across provinces as to the willingness for peasants to sign land charters by the end of 1862. Not quite 50 percent of the charters proposed (by the landowner before spring 1862) were agreed to by that point. Easterly (2008, pp. 104-118) describes a large number of scenarios, including outright conflict, that resulted in delayed agreements to the charters. This fits with the findings of Finkel et al. (2013), who show that there was a surge in former serf unrest in 1861-63.

Less is known about the process of setting up the new institutions of peasant self-government: the rural society and the township (*volost'*). These institutions already existed among the state peasantry, and the organizational structure for the former serfs and other peasants closely followed the earlier model. The setting up of new institutions was supposed to be the first obligation of the peace mediator, so that a formal organization (the rural societies) would be party to the land charters. According to Easterly (2008, p. 101), the establishment of new township level institutions posed more difficulties, especially with the creation of an electoral system from scratch. However, there are considerable archival records of township and rural society activities from 1861 and 1862 (e.g. GANO: 864.1578a.1, on the fall 1861 activities of Romenovskoe township council in Nizhegorod province), suggesting that these institutions did begin functioning relatively quickly to provide basic administrative services.

The initiative to begin redemption lay in the hands of the former serf owners, who could push through an act (*akt*) or come to a mutual agreement (*dogovor*) with the peasant community. Forcing redemption required them to take haircuts (generally, 20% of the value of the land in question) in the payments they received from the state. Redemption by mutual agreement allowed for additional payments and conditions to be included in the deal outside of the norms

laid out by the law. By 1883, less than 14% of ratified deals in Moscow province had been mutually agreed upon (Zaionchkovskii, 1958, especially p. 363). However, according to Zaionchkovskii, such agreements were prominent in more agricultural areas because landlords often received contracted labor as part of supplementary parts of such settlements. For example, 2083 out of 5926 redemption deals were mutually agreed to in Smolensk province (Budaev, 1967, p. 245), and 633/1090 in Simbirsk (Kanatov, 1964). Some deals were also initiated on the insistence of the credit institutions to which estates were indebted, although precisely why such institutions waited until years after 1861/3 is unclear.

Regardless of the particular factors slowing the transition, the available quantitative evidence speaks to the drawn out formulation of redemption deals, as a substantial number of communities were still engaged in temporary obligations in the late 1870s. District-level information on land ownership, collected in 1877, helpfully divided former serfs into those still under temporary obligations and those who had entered into redemption (Russia, Tsentral'nyi, 1880-5). According to these data, roughly 80 percent of former serfs (74 percent of former serf communes) entered redemption by 1877. This "pace" of redemption varied widely across European Russia, from 100 percent completed by 1877 in many Western provinces (where an immediate transition was apparently enforced in reaction to the Polish Rebellion of 1863) to less than 55 percent in central provinces like Nizhnii Novgorod and Orel.

In preliminary regression work (in a joint project with Quamrul Ashraf) reported in Table 2, we find evidence that the pace of redemption was slower in less agricultural areas. This suggests that the potential gains from more quickly reaching a deal, especially for the former serf owners, were greater in areas of relatively higher demand for agricultural labor and land, and that the capitalization of *obrok* into the redemption property valuations led to potentially divisive results (and delays) in areas where the value of serfs to their owners came more from their off-farm employment than by working the estate land. Much more is to be done to verify these findings, but they point the way to some interesting issues with respect to the reconstitution of factor relations and structural change in the countryside in the wake of emancipation.

In addition to this cross-district analysis of the 1877 data, we are beginning to work with a unique micro-level dataset that covers virtually all of the redemption settlements completed in Moscow province after emancipation. In contrast to much previous work that focuses on the land charters, which are relatively abundant in the archives, we compiled this dataset from provincial-level ledgers of the redemption administration, which are archived in the Russian State Historical Archive in St. Petersburg. The resulting data on over 2400 settlements allows us to study the pace of the redemption process, and how settlements differed across the "bargaining" process underlying the reform.

former serfs into temporarily obligated and in redemption.

\_

<sup>&</sup>lt;sup>26</sup> By 1876, over 16% of the communities in Moscow province with regulatory charters had not completed a redemption deal with their former seigniors (*Otmena*, 1950, p. 286; and Zaionchkovskii, 1958, p. 363). Budaev (1967, pp. 241-245) notes that mutual agreements tended to occur quickly after 1863, while the relatively greater number of forced redemption deals emerged later in Smolensk. Various statistical volumes published in the 1870s by the *zemstvo* – a new institution of local government formed in the wake of emancipation – continued to divide

Figure 1 depicts the speed of the transition from temporary obligations into redemption in Moscow province up to mandatory settlement in the early 1880s. Whether considered in terms of the number of male souls or the number of settlements, the mid-late 1860s saw an acceleration of the process (this is somewhat masked by the way the axis is labeled). However, there were still significant numbers of settlements occurring in the mid-1870s, which is consistent with the others evidence discussed earlier. Thus, temporary obligations tended to last for 5-10 years, meaning that the labor market involvement of many former serfs was still circumscribed into the 1870s.

Table 3 summarizes the variation across Moscow province redemption deals that were completed under different circumstances: mutual agreement between former serfs and seigniors, imposition by the former serf owners, or requested by creditors or financial guardians of the estate. The mean and median redemption loan amounts per (male) soul varied little, likely due to the conditions imposed by the statutes. The size of the communities under each type of settlement differed slightly, with larger estates entering into a mutual agreement at a marginally higher frequency. The major difference between the three types of settlements was in their timing. Mutual agreements occurred considerably earlier than imposed or creditor demanded ones. This suggests that monetary and labor incentives to maintain temporary obligations may have induced delays in reaching some agreements, while less advantageous bargaining positions among some former serf owners may have led them to make relatively quick mutual agreements. The lateness of creditor/guardian originated agreements might have reflected the time it took to sort out of estate finances. Although these data and our analyses are quite preliminary, they do suggest some tantalizing possibilities for understanding the microeconomics of the settlement process. Towards this goal, we are currently attempting to match each community / deal to additional village-level data to better understand the variation in the timing and characteristics of each agreement.

### 2.2 Opting Out: The Possibility of Gift Allotments

Within the first nine years after agreeing to the land charters but before redemption began, it was possible for villages to accept "gift allotments" (*darstvennye nadely*) of no less than one quarter of the maximum norm, free of any further payment obligations. According to the statutes (PSZ, 2<sup>nd</sup> ser., No. 36662, Article 123; on the Greater Russian provinces), these allotments were to include garden plots, the proposal was the responsibility of the former serf owner, and their acceptance freed the peasant community from obligations for the rest of the initial allotment denoted in the charters. According to one interpretation of the records of the Editorial Commission, this was a last minute addition to the emancipation statutes that was geared towards the creation of a dependent labor force (Moon, 2001, p. 76). If that was the case, such communities must have perceived the costs of retaining more land at the redemption price to exceed the potential loss in income from the extra land and, possibly, from a corresponding higher wage. If such gift allotments were widespread, the implications for the reconstitution of factor relations in the post-emancipation countryside may have been profound.

However, in terms of assessing the frequency by which these gift allotments were accepted, available data are sparse. As denoted in a *zemstvo* household survey from the late 1870s, there were very few of these villages in Moscow province (Moskovskoe, 1877-1882; a few other

surveys denote the villages that received gift allotments).<sup>27</sup> But their existence seems more widespread elsewhere. According to data collected in 1907 from a retrospective analysis of a variety of statistical evidence and reported in Table 4), *darstvenniki* settlements were found in 162 districts (collected in Burdina, 1996). Districts with the greatest number of such villages – roughly 35-40 percent of all communities in the district – were located in southern Black Sea (Ekaterinoslav' and Taurida) and southwestern (Saratov) provinces. For the 109 districts with the relevant information, the peasants lost approximately 75 percent of their existing land in agreeing to such small allotments. By 1907, on average, these communities had more than made up for this reduction by renting or purchasing land. The correlation between the share of land lost and the relative importance of purchased and rented land (compared to remaining allotment) in 1907 was high (0.34, N = 85).

The 1877 land statistics provide indirect evidence on the locations of the darstvennik communities. Comparing the distribution of rural society-level land holdings with the local maximum allotment norms at the district level, Semenov (1904) identified those communities that possessed no more than ¼ of the maximum allotment per male soul. Although this was the minimum legal size mandated for gift allotments, we only know the total with \( \frac{1}{4} \) or less. Therefore, the number of communities defined this way in the Semenov data far exceeds the number of communities identified by Burdina (1996; the correlation between the numbers of such communities in the two sources is only 0.3). The available data from Semenov are summarized in Table 5. More than 75% of all rural societies received at least 34 of the maximum allotment, suggesting that the legal norms mattered, and perhaps hinting at how the norms may have actually reflected the pre-existing allocation of land. Although the smallest category in Semenov's data is only a rough approximation for the number of actual gift allotments received, the provinces with more of such communities do match those identified by Burdina (see above). This suggests that in future work, these two sets of data may be used together to approximate for the presence of the gift allotments, which will allow for a more detailed examination of the economic implications of this aspect of the emancipation reform.<sup>28</sup>

#### 2.3 The 1883 Revision of Redemption Obligations

In a decree of 1881, the state mandated that all serfs in temporary obligations were to transition to redemption in 1883 (PSZ, Ser. 3, No. 585). This legislation came in the wake of another policy that reduced yearly redemption payment levels from January 1, 1883 onwards (PSZ, 3rd Ser., No. 577). The reduction in payments was substantial: approximately one ruble from every soul allotment, plus additional amounts for certain villages identified as suffering "devastated circumstances" (ibid., Article 5). The initial decisions on which villages were to receive special reductions were made by the local *zemstvo* assembly or administrator of peasant affairs in the

<sup>&</sup>lt;sup>27</sup> Khar'kovskaia (1907) lists all of the *darstvennik* villages in Khar'kov province, along with their allotment land holdings. This same source also lists the allotment land of all other peasant communities by former status.
<sup>28</sup> A similar exploration could be made of the distribution of "household" serfs at the time of Emancipation (see Nafziger, 2013b). These serfs, in contrast to "peasant" serfs who worked the land, served in the manor house or as craftsmen for the estate. According to the reform statutes, they were explicitly prohibited from receiving a share of the communal land endowment after 1861. As the share of such serfs approached 1/3 of the total serf population in some agricultural districts, the labor market implications of their freedom without land may have been significant. To our knowledge, there is little research on the post-Emancipation status of these former serfs.

<sup>&</sup>lt;sup>29</sup> All former serf-owners that were forced to enter redemption at this time received 88% of the property's valuation.

Ministry of Internal Affairs. The decisions were then reported to the Central Statistical Committee, which tallied the results and passed them on the Ministries of Internal Affair, Finance, and the State Council for final ratification. According to the law, such additional reductions were explicitly not to lower the payments below the amount paid per unit of land by the local state peasantry. The supplementary reductions were to occur in those villages where the level of redemption payments vastly exceeded the underlying value of the land. The total amount of the reduction was not to exceed 12 million rubles per year, and the law notes how this was to be financed within the state budget (Article 2). The little discussion of this change that exists in the literature suggests that it arose from a growing perception that tax and land payment arrears were increasing (Zaionchkovskii, 1960, p. 318).

As calculated from village-level data on reductions made in Petersburg province (RGIA: 577.50.1071.2), the total reduction constituted roughly 13% of redemption payments. However, statistical information published by the Central Statistical Committee to summarize this policy change suggests that the deduction was even greater than that (Table 6, Panel A) – approximately 27% on average. The geography of the total reduction (in percentage terms) of redemption payments can be seen in Figure 2. The greatest percentage reductions were to take place in the northwest. Note that the law was only supposed to apply to 39/50 European provinces, with supplementary measures taken in villages of the Byelorussian and right-bank Ukrainian provinces. Data on those measures are unavailable. Out of the 12 million rubles allocated for this yearly reduction, 4 million were to come from the supplemental lowering beyond the one ruble per soul.

Concerns about redemption and tax arrears were commonplace among policymakers and later scholars of Tsarist Russia (Ianson, 1881; Robinson, [1932] 1972). It appears that the revision of the redemption payments in 1883 was an attempt to address this problem, but perhaps the relatively low level of arrears by the 1890s has something to do with this earlier reduction. As noted in the top of Table 6, the reduction did shift former serf payments per unit of land to be more into line with the obligations of the former state peasantry. Therefore, the amount of special lowering may potentially be used as a proxy measure of the geographic variation in the disconnection between redemption and land values, or for the local state of the peasant economy more broadly.

## 2.4 Redemption Payments and Arrears

For several generations of scholars, it was self-evident that the redemption process overcharged peasants for their land, which led to economic crisis in the countryside and rising redemption and tax arrears. However, with the work of Domar (1989), Simms (1977), and other scholars, the notion that the level and trend in arrears represented declining rural living standards has increasingly been questioned. While aggregate information has been studied in considering the relative burden of redemption and tax payments on the peasant population, rich cross-sectional and time series data are available (and have been little explored) that allow for a much more nuanced consideration of the role that these obligations played in the rural economy.

Figure 3 presents the aggregate picture over time. A number of things stand out. Total redemption payments rose and then plateaued at approximately 43 million rubles a year. The

reduction of payments in 1883 is apparent in the yearly assessments, in the cumulative arrears, and in the yearly arrears series. Critically, while considerable attention has been paid to the rise of aggregate arrears over time, yearly arrears as a share of yearly assessments showed little trend. The reduction in yearly payments in 1883 generated an overpayment (as several other years showed), while the Volga famine of 1891-2 led to a small surge in arrears. However, the picture that these data depict, in sum, is that arrears were not escalating over time as a share of current assessments.

Despite the higher level of land obligations per acre (Nafziger, 2013b), accumulated redemption payment arrears were actually lower as a share of yearly assessments in districts where serfdom was more prevalent (Table 6; this remains true when evaluated econometrically). This may have simply reflected better economic or agricultural opportunities in those districts, rather than anything particular to serfdom. When we consider the geography of accumulated arrears (relatively to the year's assessment) in 1895 in Figure 4, the lingering impact of the Volga famine is evident in the shaded areas in the eastern half of the map. Generally, arrears were greater in the less agricultural north and northeast when compared to the south and southwest. This finding for one year, which is consistent with the overvaluation of land in the redemption settlements of the non-agricultural region (see Section 1 above), deserves further study, particularly because of the dynamic nature of the redemption accounting. Were districts able to recover from poor payment performance? What were the characteristics of districts that consistently fulfilled their obligations, or that fell further and further behind?

The redemption settlements not only fixed land payments, but they indirectly set various state and local property taxes. By allocating specific types of property in quasi-fixed ways, the reforms largely determined the assessment base for peasant and non-peasant landowners in each district. While the taxation rates could be determined locally, at least in part (Nafziger, 2011), Panel B of Table 6 indicates that the total tax assessments from state, peasant government, and district (zemstvo) authorities in 1895 and 1903 were somewhat higher in those districts where serfdom had been more prevalent. However, accumulated tax arrears were significantly lower, on average, in those same districts. These findings are consistent with the endogenous location of serfdom itself if the institution emerged where it was particularly in the interest for the Muscovite nobility to accumulate land and consolidate control over a mobile labor force -i.e.where land was more productive (and therefore could be "taxed" at a higher rate). Needless to say, this is just a hypothesis – not only is much more empirical work required, but this possibility would seem to contradict the origins of the Muscovite state in the relatively non-agricultural region around Moscow. The full fiscal implications of emancipation and redemption, both in terms of payments for the land and with respect to various property taxes (some imposed by new institutions such as the rural societies and the zemstvo), remain to be uncovered.

# 3 Concluding Thoughts

Although this research program is still in its earliest days, the focus on these complementary and little studied features of emancipation and redemption suggests two broad conclusions. First, the reforms were much more drawn out than is generally noted. Chartering, temporary obligations, and the transition to redemption took time, which meant that a number of the factor relations embedded in serfdom continued into the 1870s and even 1880s. Second, the interaction between

former serfs, their former owners, and the state was considerably more complex than most accounts acknowledge. This complexity was manifest in the bargaining and "opting out" that seems to have frequently characterized the formulation of the land charters and redemption deals, in the unrest and resistance (potentially non-payment of obligations) that the former serfs exhibited towards the settlements, in the reactions of the state to redemption and tax arrears, and in numerous other ways. Complexity and slow reforms may not seem like much in the way of conclusions, but the literature has tended to view 1861 as a clean break with the past that immediately impacted the rural Russian economy. Rather, although we view 1861 as an important date, that year was just the beginning of a process of (slow) institutional change that took decades and additional complementary reforms to even partially enact. Moreover, and at a fundamental level, the various components of this set of institutional changes and reforms varied widely across European Russia, both due to local socio-economic conditions before and after 1861, and due to the specifics of the legal statutes that ended serfdom. The empirical work discussed in this paper and related work tries to grapple with that geographic heterogeneity, but much remains to be done.

In our view, a natural and necessary next step to better understand how emancipation and redemption occurred and impacted rural development would be to model the implicit bargaining process. While the former serf owners retained considerable power within the reform process, the statutes themselves, the existence of gift allotments, the possibility of peasant unrest, and political agitation through the *zemstvo* and other bodies helped carve out some autonomy for the peasantry. Thus, the two main parties (potentially with the state explicitly included to represent other interests) could be interpreted as bargaining over the allocation of a resource, with each facing specific constraints and holding different (and possibly geographically varied) outside options. Such a model may apply tools from the literatures on Nash bargaining, global games, or political economy. Moreover, the availability of various data on these topics will allow for some intriguing tests of such a model. For instance, by mapping the data on peasant unrest explored by Finkel et al. (2013) to the structure of landholdings before and after 1861 may help shed light on whether

Although this paper and related studies (Nafziger, 2011 and 2013b) have emphasized the availability of district-level data from multiple years, we perceive several directions where further empirical research is particularly necessary. First, numerous years of redemption and tax payment and arrears data are available and deserving of digitization. These data are often available at even the village level, which would allow for important linkages to particulars of emancipation and various other socio-economic conditions. Second, to better understand the financing of the redemption operation and the role that the netting out of mortgage debt played in the final settlements, it is imperative to compile a complete record of the mortgage markets before and after 1861, and to document the amount and prices or the redemption bonds and notes issued to the former serf owners. This latter possibility is particularly significant, as the prices and holdings of these securities may provide indirect information on the perceived and actual success of the reforms. The tapping of these and other new empirical sources will help illuminate the ways that emancipation, redemption, and other institutional reforms affected the subsequent record of Russian economic growth and development.

#### Works Cited

Adams, Bruce F. "The Reforms of P. D. Kiselev and the History of N.M. Druzhinin." *Canadian-American Slavic Studies* 19.1 (1985): 28-43.

Allen, Robert C. Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution. Princeton, NJ: Princeton University Press, 2003.

Budaev, D.I. *Krest'ianskaia reforma 1861 goda v Smoleskoi gubernii*. Smolensk, Russia: Smolensk State Pedagogical Institute, 1967.

Burdina, O.N. Krest'iane-darstvenniki v Rossii: 1861-1907 gg. Moscow: Institut Rossiiskoi istorii (RAN), 1996.

Burds, Jeffrey. *Peasant Dreams & Market Politics: Labor Migration and the Russian Village,* 1861-1905. Pittsburgh, PA: University of Pittsburgh Press, 1998.

Bushen, A., ed. *Nalichnoe naselenie imperii za 1858 god*. Vol. 2, *Statisticheskiia tablitsy Rossiiskoi imperii*. St. Petersburg, Russia, 1863.

Crisp, Olga. "The State Peasants under Nicholas I." *The Slavonic and East European Review* 37, no. 89 (1959): 387-412.

Deal, Zack. Serf and State Peasant Agriculture: Khar'kov Province, 1842-1861. New York: Arno Press, 1981.

Domar, Evsey. "Were Russian Serfs Overcharged for Their Land by the 1861 Emancipation? The History of One Historical Table." *Research in Economic History* Supplement 5b (1989): 429-439.

Druzhinin, N. M. Russkaia derevnia na perelome 1861-1880 gg. Moscow: Nauka, 1978.

Easley, Roxanne. The Emancipation of the Serfs in Russia: Peace Arbitrators and the Development of Civil Society. London: Routledge, 2008.

Eklof, Benjamin, John Bushnell, and Larissa Zakharova, eds. *Russia's Great Reforms*, 1855-1881. Bloomington, IN: Indiana University Press, 1994.

Filippova, S.S. "Provedenie reformy 1861 goda v Moskovskoi gubernii." *Materialy po istoriia sel'kogo khoziaistva i krest'ianstva SSSR*. Collection III. Moscow: Publisher of the Academy of Science of the USSR, 1959. 368-191.

Finkel, Evgeny, Scott Gehlbach, and Tricia Olsen. "Does Reform Prevent Rebellion? Evidence from Russia's Emancipation of the Serfs." Working paper, 2013.

Gerschenkron, Alexander. "Agrarian Policies and Industrialization, Russia 1861-1917." In *The Cambridge Economic History of Europe (Vi). The Industrial Revolutions and After: Incomes, Population and Technological Changes* (2), edited by H.J. Habakkuk and M. Postan, 706-800. Cambridge: Cambridge University Press, 1965.

Hourwich, Isaac A. *The Economics of the Russian Village*. Vol. 2, no. 1, *Studies in History, Economics, and Public Law*. New York: Columbia College, 1892.

Ianson, Iu. *Opyt statisticheskago izsledovaniia o krest'ianskikh nadelakh i platezhakh*. St. Petersburg: M. Stasiulevich, 1881.

Ivanov, L.M. "Gosudarstvennye krest'iane Moskovskoi gub. i reforma Kiseleva." *Istoricheskie zapiski* 17 (1945): 76-129.

Kanatov, V.I. "Svoeobrazie preovedeniia reformy 1861 goda v srednem polvolzh'e (po materialam Simbirskoi gubernii." *Vestnik Moskovskogo Universiteta, Seriia 9: Istoriia* 19.5 (1964): 37-54.

Khar'kovskaia gubernskaia zemskaia uprava. *Zemel'nye nadely krest'ian Khar'kovskoe gubernii*. Khar'kov, Russia, 1907.

Khodskii, L. V. Zemlia i zemledelets. 2 vols. St. Petersburg, Russia, 1891.

Leshchenko, N. N. "Reforma 1861 goda v Khersonskoi gubernii po ustavnym gramotam." In *Ezhegodnik po agrarnoi istorii vostochnoi Evropy 1966 god.* 424-34. Tallin, Estonia, 1971.

Lositskii, Al. Vykupnaia operatsiia. St. Petersburg, Russia, 1906.

Male, Donald J. Russian Peasant Organization before Collectivisation: A Study of Commune and Gathering, 1925-1930. Cambridge: Cambridge University Press, 1971.

Moon, David. *The Abolition of Serfdom in Russia*, 1762-1907. Harlow, England: Longman, 2001.

Moskovskoe gubernskoe zemstvo, Otdel khoziaistvennoi statistiki. *Sbornik Statisticheskikh Svedenii Po Moskovskoi Gubernii*. multiple vols. Moscow, Russia,1877-1882.

Nafziger, Steven. "Communal Property Rights and Land Redistributions in Late-Tsarist Russia." Working paper, Department of Economics, Williams College, 2013a.

- ----. "Did Ivan's Vote Matter? The Political Economy of Local Democracy in Tsarist Russia." *European Review of Economic History* 15 (2011): 393-441.
- ----. "Peasant Communes and Factor Markets in Late Nineteenth Century Russia," *Explorations in Economic History* 27.4 (2010): 381-402.
- ----. "Russian Serfdom, Emancipation, and Land Inequality: New Evidence." Working paper, Department of Economics, Williams College, 2013b.

*Obshchii balans vykupnoi operatsii*. St. Petersburg, Russia, 1902 (?). [likely published by Ministry of Finance]

Otmena krepostnogo prava: Doklady ministrov vnutrennikh del o provedenii krest'ianskoi reformy 1861-1862. Leningrad: Izdatel'stvo akademii nauk SSSR, 1950.

*Polnoe sobranie zakonov Rossiskoi imperii*. (PSZ) Online edition available at <a href="http://www.nlr.ru/e-res/law\_r/content.html">http://www.nlr.ru/e-res/law\_r/content.html</a>

Robinson, Geroid. *Rural Russia under the Old Regime*. 1932. 3<sup>rd</sup> ed. Berkeley, CA: University of California Press, 1972.

Russia. Departament okladnykh sborov, Ministervo Finansov. *Otchet po vykupnoi operatsii za 1895 god. Itogo vykupnoi operatsii.* St. Petersburg, Russia, 1897.

- ----. Svod dannykh o postuplenii kazennykh okladnykh sborov po imperii za desiatiletie 1888-1897 gg. St. Petersburg, Russia, 1902.
- ----. Svod svedenii o postuplenii i vzimanii kazennykh, zemskikh i obshchestvennykh okladnykh sborov za 1901-1903 gg. St. Petersburg, Russia, 1909.

Russia. Tsentral'nyi statisticheskii komitet, Ministerstvo vnutrennykh del. *Materialy tsentral'nago statisticheskago komiteta ministerstva vnutrennykh del po spetsial'nomu* 

ponizheniiu vykupnykh platezhei. Vol. 11, Statisticheskii vremennik Rossiiskoi imperii (Series III). St. Petersburg, Russia, 1886a.

- ----. Ponizhenie vykupnago platezha po ukazu 18-go dekabria 1881 goda. Vol. 5, Statisticheskii vremennik Rossiiskoi imperii (Series III). St. Petersburg, Russia, 1885.
- ----. Statisticheskii vremennik Rossiiskoi imperii. Vol. 1. St. Petersburg, Russia, 1866.
- ----. *Statistika pozemel'noi sobstvennosti i naselennykh mest Evropeiskoi Rossii*. 8 vols. St. Petersburg, Russia, 1880-1885.
- ----. Statistika zemliavladeniia 1905 g. Multiple vols. St. Petersburg, Russia, 1906.

Russian State Historical Archive (RGIA)

Ryndziunskii, P.G. Krest'iane i gorod v kapitalisticheskoi Rossii vtoroi poloviny XIX veka. Moscow: Nauka, 1983.

Semenov, D. P. *Statisticheskii ocherk krest'ianskogo zemlevladeniia i zemlepol'zovaniia v Evropeiskoi Rossii*. St. Petersburg, Russia: Ministerstvo vnutrennykh del, 1904.

Skrebitskii, Aleksandr, ed. Krest'ianskoe delo v Tsarstvovanie Aleksandra II. Materialy dlia istorii osvobozhdeniia krest'ian. Multiple vols. Bonn, Germany, 1864-1866.

State Archive of Nizhegorod Oblast' (GANO)

Troinitskii, N.A. *The Serf Population in Russia According to the 10th National Census*. Translated by Elaine Herman. Newtonville, MA: Oriental Research Partners, 1982.

Troinitskii, N. A., ed. *Pervaia vseobshchaia perepis' naseleniia Rossiiskoi Imperii, 1897 g.* Multiple vols. St. Petersburg, Russia, 1905.

"Ustavnaia gramota. Iaroslavskoi gubernii, Iaroslavskago uezda, sela Pleshcheeva i dereven'." Russian National Library, Call No. 18.126.1.291, n.d.

Vil'son, I. Vykupnye za zemli platezhi krest'ian-sobstvennikov byvshikh pomeshchich'ikh, 1862-1876. St. Petersburg, Russia, 1878.

Zaionchkovskii, P.A. *Otmena krepostnogo prava v Rossii*. Moscow: Gosudarstvennoe uchebnopedagogicheskoe izdatel'stvo, 1960.

----. Provedenie v zhizn' krest'ianskoi reformy 1861 g. Moscow, 1958.

Zakharova, Larissa. "Velikie reformy 1860-1870-kh godov: povorotnyi punkt Rossiiskoi istoriia." *Otechestvennaia istoriia* 4 (2005): 151-167.

Table 1: Provincial Indicators of Serfdom, Emancipation, and Redemption in European Russia

Provinces	Table 1: Provincial Indicators of Serfdom, Emancipation, and Redemption in European Russia								
Provinces		Total	Serfs as Share	Share of Land	Share of Redemption	Share of Former			
Arkhangel'sk 284082 0.01  Arkhangel'sk 284082 0.01  Astrakhan 264374 4.71 35.7 75 43.3  Bessarabia 957133 1.04 84 100  Chernigov 1471866 37.61 26.0 21 88.3  Ekaterinoslav' 934139 33.09 76.0 9 9.54.  Estiland 303478 0  Grodano 881881 40.05 9.2 100  Iaroslavl' 976866 56.45 68.2 89 65.7  Kaluzha 1007471 57.14 57.7 56 75.7  Kazan 1543344 13.79 34.9 27 90.4  Khar'kov 1583571 29.75 57.1 5 96.2  Kherson 1114248 28.83 58.9 11 94.5  Kiev 1944334 57.66 59.7 7 79.0  Kostroma 1076988 57.31 60.6 93 69.3  Kovno 988557 36.89 11.4 100  Kurisk 1812055 38.67 18.1 35 73.2  Lifliand 897603 0  Moscow 1599808 38.42 56.2 86 80.8  Nizhegorod 1259606 57.38 27.0 72 56.4  Novgorod 1134078 43.05 59.0 84 82.2  Olonets 287354 3.92 34.5 88.5 9.4  Orel 1532034 46.87 51.3 34 62.6  Orenburg 914308 43.05 59.0 84 82.2  Orenburg 914308 43.05 59.0 84 82.2  Orenburg 914308 45.9 59.0 84 82.2  Orenburg 914308 45.9 59.0 84 82.2  Orenburg 914308 45.9 59.0 84 82.2  Orenburg 1914308 5.6 6.1 3.7 60 95.0  Perza 1188528 45.92 54.3 42 88.9 66.9  Perza 1188528 45.92 54.3 42 84.5  Perm 2046481 18.00 33.8 77 78.6 96.0  Perza 1188528 45.92 54.3 42 84.5  Perm 2046481 18.00 0.95.0  Perna 118908 15.25 65.0 86 90.0  Pertary 101044 65 69.6  Pertary 101054 18.0 10.0 10.0  Poltava 1819110 37.47 76.8 96 96 75.6  Perza 1188528 45.92 54.3 42 84.5  Perm 2046481 18.00 10.0  Poltava 1819110 37.47 76.8 96 96 75.6  Parana 1530039 15.25 65.0 86 90.0  Samara 1530039 15.25 65.0 86 90.0  Frem 2046481 39.00 34.3 40 76.8  Frem 2046481 39.00 34.3 30.9 31 89.7  Frem 2046481 39.00 34.3 30.9 31 89.7  Frem 2046481 39.00 34.3 30.9 30.9 31 89.7  Frem 2046481 39.00 34.3 30.9 30.9 30.9 30.9 30.9 30.9 30.9 30	Drovingos		of Total	Charters Signed by		Serfs (Souls) in			
Arkhangel'sk	FIOVINCES		Population, c.	the Peasants, Jan. 1,	Former Serf Owners,	Redemption by			
Astrakhan   264374		c. 1860	1860	1863	c. 1877	1877			
Astrakhan   264374   4.71   35.7   75   43.3   Bessarabia   957133   1.04   84   100   Chernigov   1471866   37.61   26.0   21   88.3   Ekaterinoslav   934139   33.09   76.0   9   95.4   Estiliand   303478   0   Grodnno   881881   40.05   9.2   100   Iaroslav'   976866   56.45   68.2   89   65.7   Kaluzha   1007471   57.14   57.7   56   75.7   Kauzan   1543344   13.79   34.9   27   90.4   Kharkov   1583571   29.75   57.1   5   96.2   Kherson   1114248   28.83   58.9   11   94.5   Kiev   1944334   57.66   59.7   79.0   Kostroma   1076988   57.31   60.6   93   69.3   Kovno   988557   36.89   11.4   100   Kuriland   754725   0   Kuriland   897603   0   Minsk   897603   0   Minsk   897471   60.55   1.9   100   Mogelev   884640   64.63   33.5   18.1   35   73.2   Liffland   897603   0   Mogerod   129606   57.58   27.0   72   56.4   Novgorod   1134078   43.05   59.0   84   82.2   Olonets   287354   39.2   34.5   88   59.4   Orel   1532034   46.87   51.3   34   62.6   Orenburg   914308   2.66   13.7   60   95.0   Penra   1188528   45.92   54.3   42   84.5   Perm   2046481   18.64   10.4   65   69.6   Petersburg   1053975   24.23   50.4   Petersburg   1053975   24.33   34.4   Petersburg   1053975   24.23   50.4   Petersburg   1053975   25.45   32.7   Petersburg   10639757	Arkhangel'sk	284082	0.01						
Chemigov   1471866   37.61   26.0   21   88.3		264374	4.71	35.7	75	43.3			
Chemigov   1471866   37.61   26.0   21   88.3	Bessarabia								
Ekaterinoslav'   9341   33.09   76.0   9   95.4				26.0					
Estliand   303478   0   100									
Grodnno         881811         40.05         9.2         100           Iaroslavl'         97686         56.45         68.2         89         65.7           Kaluzha         1007471         57.14         57.7         56         75.7           Kazan         1543344         13.79         34.9         27         90.4           Khar'kov         1583571         29.75         57.1         5         96.2           Kherson         1114248         28.83         58.9         11         94.5           Kiev         1944334         57.66         59.7         79.0           Kostroma         1076988         57.31         60.6         93         69.3           Kovno         988557         36.89         11.4         100           Kurliand         754725         0         11.4         100           Kurliand         797603         0         0           Minsk         1812035         38.67         18.1         35         73.2           Lifliand         897603         0         0         0           Minsk         987471         60.55         1.9         100           Moscow         1599808									
Baroslav				9.2		100			
Kaluzha         1007471         57.14         57.7         56         75.7           Kazan         1543344         13.79         34.9         27         90.4           Kharkov         1583571         29.75         57.1         5         96.2           Kherson         1114248         28.83         58.9         11         94.5           Kiev         194334         57.66         59.7         79.0           Kostroma         1076988         57.31         60.6         93         69.3           Kovno         988557         36.89         11.4         100           Kurliand         754725         0         100           Kursk         1812035         38.67         18.1         35         73.2           Minsk         987471         60.55         1.9         100         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Orel         1532034         46.87         51.3         34<					89				
Kazan									
Kharkov									
Rherson									
Kiev         1944344         57,66         59,7         79,0           Kostroma         1076988         57,31         60.6         93         69,3           Kovno         988557         36.89         11.4         100           Kurland         754725         0         11.4         100           Kursk         1812035         38.67         18.1         35         73.2           Lifliand         897603         0         100         11         100									
Kostroma         1076988         57.31         60.6         93         69.3           Kovno         988557         36.89         11.4         100           Kurliand         754725         0         73.2           Kursk         1812035         38.67         18.1         35         73.2           Lifliand         897603         0         100         100           Minsk         987471         60.55         1.9         100           Mogilev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5									
Kovno         988557         36.89         11.4         100           Kurlaind         754725         0         0           Kursk         1812035         38.67         18.1         35         73.2           Lifliand         897603         0         0         0           Minsk         987471         60.55         1.9         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9					93				
Kurliand         754725         0           Kursk         1812035         38.67         18.1         35         73.2           Lifliand         897603         0         0           Minsk         987471         60.55         1.9         100           Moglev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         17484					73				
Kursk         1812035         38.67         18.1         35         73.2           Liffland         897603         0         100           Minsk         997471         60.55         1.9         100           Mogilev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Perma         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96 <t< td=""><td></td><td></td><td></td><td>11.4</td><td></td><td>100</td></t<>				11.4		100			
Liffland         897603         0           Minsk         987471         60.55         1.9         100           Mogilev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         11188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         <				18.1	35	73.2			
Minsk Mogilev         987471 884640         60.55 64.63         1.9         100           Mogilev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         18         100           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         7064				10.1	33	13.2			
Mogilev         884640         64.63         33.5         100           Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462 <t< td=""><td></td><td></td><td>-</td><td>1.0</td><td></td><td>100</td></t<>			-	1.0		100			
Moscow         1599808         38.42         56.2         86         80.8           Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Polava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Rizaran         1427299         55.45         32.7         36         68.4           Samara									
Nizhegorod         1259606         57.58         27.0         72         56.4           Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samatov         1636135         40.19         53.9         31         89.7           Simbirsk         <					96				
Novgorod         1134078         43.05         59.0         84         82.2           Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1									
Olonets         287354         3.92         34.5         88         59.4           Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samatov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1									
Orel         1532034         46.87         51.3         34         62.6           Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov									
Orenburg         914308         2.66         13.7         60         95.0           Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         <									
Penza         1188528         45.92         54.3         42         84.5           Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a									
Perm         2046481         18.64         10.4         65         69.6           Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1	_								
Petersburg         1053975         24.23         50.4         81.9           Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         15									
Podol'sk         1748466         59.49         85.4         18         100           Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934 </td <td></td> <td></td> <td></td> <td></td> <td>65</td> <td></td>					65				
Poltava         1819110         37.47         76.8         96         75.6           Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116					10				
Pskov         706462         53.81         25.2         55         73.6           Riazan         1427299         55.45         32.7         36         68.4           Samara         1530039         15.25         65.0         86         90.0           Saratov         1636135         40.19         53.9         31         89.7           Simbirsk         1140973         38.78         39.5         26         88.3           Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100           Viebsk         635021         57.06									
Riazan       1427299       55.45       32.7       36       68.4         Samara       1530039       15.25       65.0       86       90.0         Saratov       1636135       40.19       53.9       31       89.7         Simbirsk       1140973       38.78       39.5       26       88.3         Smolensk       1102176       68.82       59.0       57       85.9         Tambov       1910454       39.00       34.3       40       76.8         Taurida       687343       5.97       65.3       43       87.7         Tul'a       1172249       68.53       39.4       52       60.6         Tver       1491427       50.63       59.9       89       75.3         Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Viebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Volyna       1528328       56.53       45.7									
Samara       1530039       15.25       65.0       86       90.0         Saratov       1636135       40.19       53.9       31       89.7         Simbirsk       1140973       38.78       39.5       26       88.3         Smolensk       1102176       68.82       59.0       57       85.9         Tambov       1910454       39.00       34.3       40       76.8         Taurida       687343       5.97       65.3       43       87.7         Tul'a       1172249       68.53       39.4       52       60.6         Tver       1491427       50.63       59.9       89       75.3         Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Vitebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Volgoda       960593       22.40       69.7       91       58.2         Volyna       1528328       56.53       45.7									
Saratov       1636135       40.19       53.9       31       89.7         Simbirsk       1140973       38.78       39.5       26       88.3         Smolensk       1102176       68.82       59.0       57       85.9         Tambov       1910454       39.00       34.3       40       76.8         Taurida       687343       5.97       65.3       43       87.7         Tul'a       1172249       68.53       39.4       52       60.6         Tver       1491427       50.63       59.9       89       75.3         Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Vitebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Vologoda       960593       22.40       69.7       91       58.2         Volyna       1528328       56.53       45.7       100         Voronezh       1930859       26.79       21.3       34 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Simbirsk       1140973       38.78       39.5       26       88.3         Smolensk       1102176       68.82       59.0       57       85.9         Tambov       1910454       39.00       34.3       40       76.8         Taurida       687343       5.97       65.3       43       87.7         Tul'a       1172249       68.53       39.4       52       60.6         Tver       1491427       50.63       59.9       89       75.3         Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Vitebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Vologoda       960593       22.40       69.7       91       58.2         Volyna       1528328       56.53       45.7       100         Voronezh       1930859       26.79       21.3       34       84.3         Don Cossack Land       945576       21.50       45.4       <									
Smolensk         1102176         68.82         59.0         57         85.9           Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100         100           Vitebsk         635021         57.06         32.2         100         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         <									
Tambov         1910454         39.00         34.3         40         76.8           Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100           Vitebsk         635021         57.06         32.2         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Taurida         687343         5.97         65.3         43         87.7           Tul'a         1172249         68.53         39.4         52         60.6           Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100         100           Vitebsk         635021         57.06         32.2         100         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Tul'a       1172249       68.53       39.4       52       60.6         Tver       1491427       50.63       59.9       89       75.3         Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Vitebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Vologoda       960593       22.40       69.7       91       58.2         Volyna       1528328       56.53       45.7       100         Voronezh       1930859       26.79       21.3       34       84.3         Don Cossack Land       945576       21.50       45.4       44									
Tver         1491427         50.63         59.9         89         75.3           Ufa         1597577         7.03         51         86.9           Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100           Vitebsk         635021         57.06         32.2         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Ufa       1597577       7.03       51       86.9         Viatka       2123934       1.74       34.4       90       87.4         Vilno       876116       45.60       11.0       100         Vitebsk       635021       57.06       32.2       100         Vladimir       1207908       56.99       44.5       88       67.8         Vologoda       960593       22.40       69.7       91       58.2         Volyna       1528328       56.53       45.7       100         Voronezh       1930859       26.79       21.3       34       84.3         Don Cossack Land       945576       21.50       45.4       44									
Viatka         2123934         1.74         34.4         90         87.4           Vilno         876116         45.60         11.0         100           Vitebsk         635021         57.06         32.2         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44				59.9					
Vilno         876116         45.60         11.0         100           Vitebsk         635021         57.06         32.2         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Vitebsk         635021         57.06         32.2         100           Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44				34.4	90				
Vladimir         1207908         56.99         44.5         88         67.8           Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Vologoda         960593         22.40         69.7         91         58.2           Volyna         1528328         56.53         45.7         100           Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44									
Volyna     1528328     56.53     45.7     100       Voronezh     1930859     26.79     21.3     34     84.3       Don Cossack Land     945576     21.50     45.4     44		1207908	56.99	44.5					
Voronezh         1930859         26.79         21.3         34         84.3           Don Cossack Land         945576         21.50         45.4         44		960593	22.40	69.7	91				
Don Cossack Land 945576 21.50 45.4 44	Volyna	1528328	56.53	45.7		100			
					34	84.3			
Totals / Means 59863023 36.39 49.8	Don Cossack Land	945576	21.50	45.4	44				
	Totals / Means	59863023	36.39	49.8	<u> </u>				

Note: The data are from Bushen (1863), *Otmena* (1950), Russia, Tsentral'nyi (1880-1885), Russia, Tsentral'nyi (1866), Skrebitskii, ed. (1865/6), Vil'son (1878), and Troinitskii, ed. (1982). Blank entries – Missing data or not applicable.

Dependent Variable = % of Former Serfs (Souls) in Full Redemption by 1877

Regressions employ population share of serfs as weights.

Table 2: Regression Evidence on the Pace of the Take-Up of Redemption

Factory turnover p.c. 1868	-0.0385***	-0.0396***	-0.0386***	-0.0388***	-0.0322**
	(0.0117)	(0.0124)	(0.0112)	(0.0113)	(0.0120)
Total land area, 1877		-2.45e-06***	-2.75e-06***	-2.80e-06***	-2.85e-06***
		(5.88e-07)	(4.72e-07)	(4.14e-07)	(4.07e-07)
Male literacy rate, 1897			-0.127*	-0.135*	-0.130*
			(0.0741)	(0.0759)	(0.0772)
Total rural schools, 1880				0.0125	0.0142
				(0.0330)	(0.0339)
Urban population %, 1883					-0.0694
					(0.0546)
Observations	438	438	438	438	438
R-squared	0.006	0.020	0.029	0.030	0.034
Provincial Fixed Effects	45	45	45	45	45

Note: The dependent variable is defined in percentage points from the data in Russia, Tsentral'nyi (1880-1885). Total land area comes from the same source. The sources of the other four variables are available upon request. The low (within)  $R^2$  values reflect the relatively poor explanatory power of these regressions, although a considerable amount of the variation is soaked up by the fixed effects. Factory turnover is a measure of gross profits and is defined here in per capita terms, with a mean of 4.75 (SD = 20.03) rubles. Note that the dependent variable is equal to 100 for all districts in nine provinces – see Table 1.

Table 3: Differences among Types of Redemption Settlements in Moscow Province, 1861-1897

	Type of Redemption Settlement					
	Mutually	Forced by Former	Requested by			
	Agreed To	Serf Owner	Creditor / Guardian			
Number	319	1732	195			
Year of Settlement						
Mean (SD)	1866.9 (6.17)	1870.1 (5.5)	1873.1 (4.2)			
Median	1865	1869	1873			
Male Souls Involved						
Mean (SD)	109.2 (149.3)	101 (151.3)	82.6 (77.6)			
Median	65	60	63			
Loan Amount per Soul						
Mean (SD)	127 (33.7)	124.7 (35.7)	123.2 (24)			
Median	133.3	133.3	133.3			

Note: These data are derived from archival records of the redemption operation in Moscow province. These ledgers are held in the Russian State Historical Archive (RGIA). See RGIA: 577.50.1331-2 and 2725 and the comments under Figure 1.

Table 4: Districts with Villages that Accepted Gift Allotments (*Darstvennik*)

	N	Mean	SD	Min	Max
Number of former <i>darstvenikk</i> settlements		18.7	19.2	1	109
Share of all settlements in those districts	162	6.5	7.4	0.2	40.4
Percentage decline in allotment land, pre to post 1861		75.0	5.5	-736.4	86.1
In darstvennik villages					
Rented + purchased land relative to post-1861 allotments	141	341.8	167.8	0	1811
Percentage; In darstvennik villages					

Note: The source of these data is the work by Burdina (1996). As Burdina notes, the underlying sources likely to do provide a complete picture of gift allotments across European Russia.

Table 5: Allotment Land Holdings of Former Serfs, c. 1877

·	Rural Societies With:			
	Communal (Obshchinnoe)	Household (Podvornoe)		
	Allotment Land (% of all)	Allotment Land (% of all)		
Less than 1/4 Maximum Allotment	3172 (3.1)	1268 (10.9)		
% of Allotted Households	3.5	6.6		
1/4 to 1/2 of Maximum Allotment	5064 (4.9)	1287 (11.1)		
% of Allotted Households	4.8	9.3		
1/2 to 3/4 of Maximum Allotment	11604 (11.2)	1501 (13.0)		
% of Allotted Households	8.8	11.8		
From 3/4 to 1 and 1/4 Maximum Allotment	64331 (62.2)	4362 (37.7)		
% of Allotted Households	46.3	42.3		
Greater than 1 and 1/4 Maximum Allotment	19113 (18.5)	3163 (27.3)		
% of Allotted Households	36.6	30		
Totals	103284 (100)	11581 (100)		
% of Allotted Households	100	100		

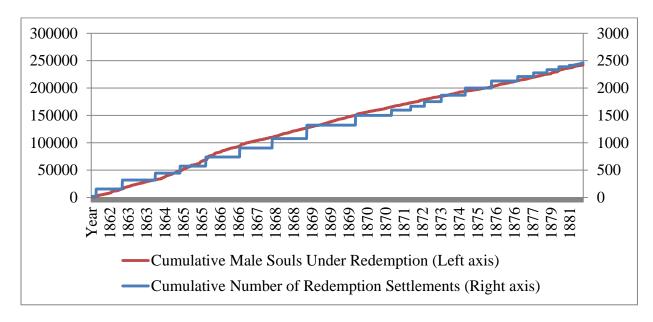
Note: The number in parentheses specifies the share of communes with mean allotment (defined per male soul) of the indicated size and property type. The % of allotted households and the underlying land data likely reference the late 1870s (from the 1877 land statistics), although the source is not precise about the dating. There were about four million households in the communal category and one million in the household category. Maximum allotments (per male soul) were the upper limit on what landlords were to allocate to their former serfs in the emancipation settlements. They were defined for each district in the local Emancipation Statutes (*PSZ*, Series II, vol. 36 (1861), acts 36662-36665). Source: Semenov, D. P. *Statisticheskii*.

Table 6: Redemption Payments and Property Taxes – The "Price" of Endowments

Variables	Mean	SD	Min	Max	N
A. Land Redemption Payments					
Yearly redemption assessment per desiatina, 1883	1.79	0.50	0.51	2.92	367
Former serfs only, pre-lowering					
Yearly redemption assessment per desiatina, 1886	1.31	0.48	0	2.40	368
Former serfs only, post-lowering					
Yearly redemption assessment per desiatina, 1886	0.86	0.44	0.04	4.05	395
Former state peasants only					
Accumulated redemption payment arrears by 1895	71.96	121.52	0	946.2	450
In districts where % serfs in $1850s > \%50$	64.85*	107.04	0	514.6	200
All types of peasants, $100 \times \%$ of yearly assessment					
B. Tax Obligations (Without Redemption Payments)					
Total tax assessment per desiatina, 1895, all types of peasants		0.81	0.03	7.74	498
In districts where % serfs in $1850s > \%50$	1.81*	0.69	0.63	3.46	200
Accumulated tax arrears by 1895, all types of peasants		100.03	0.18	607.7	498
In districts where % serfs in $1850s > \%50$		72.87	0.18	346.5	200
100 x % of yearly assessment					
Total tax assessment per desiatina, 1903, all types of peasants		0.94	0.05	26.78	498
In districts where % serfs in $1850s > \%50$		1.09	0.12	13.72	200
Accumulated tax arrears by 1903, all types of peasants		14.91	0.08	120.5	498
In districts where % serfs in $1850s > \%50$		12.89	0.09	114.7	200
100 x % of yearly assessment					

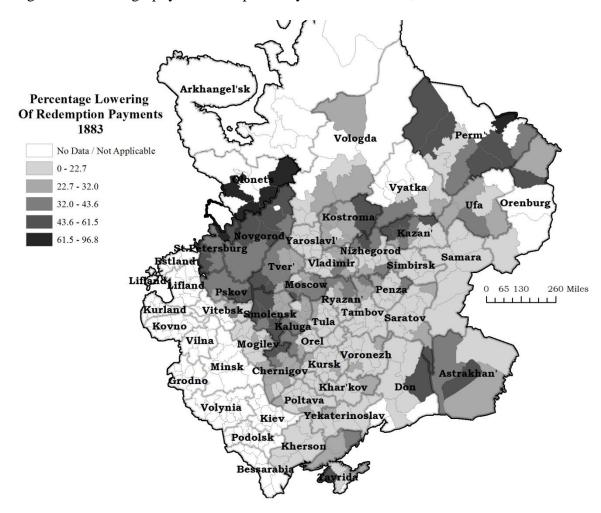
Note: These data are observed at the district level. The tax assessments are defined as rubles per *desiatina* of peasant allotment land. The data from before and after 1883 are from Russia, Tsentral'nyi (1885 and 1886a). The 1886 data were compiled from Khodskii (1891, vol. 2). The data on redemption arrears from 1895 are drawn from Russia, Departament (1897), while the tax data from that year come from Russia, Departament (1902). The 1903 tax data are from Russia, Departament (1909).

Figure 1: The Pace of Redemption in Moscow Province



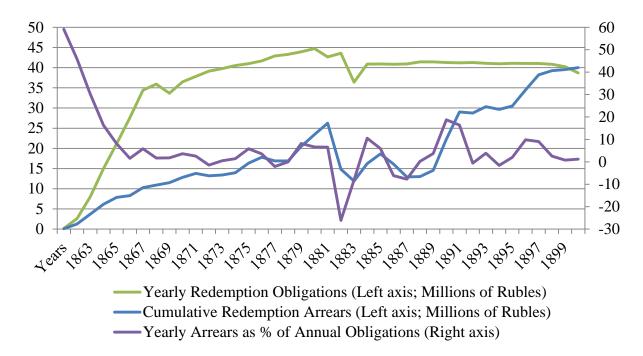
Note: The underlying source of these data is RGIA: 577.50.1331-2 and 2725. These are ledgers that recorded redemption deals from Moscow province. The dating of each deal is according to the ledgers, which may or may not have reflected the actual dates when the deals were submitted and approved by the relevant Ministries. The total number of redemption deals (N = 2458) likely exceeds the number of charters (see *Otmena*, 1950), due to separate redemption deals for individual settlements within rural societies.

Figure 2: The Geography of Redemption Payment Reductions, 1883



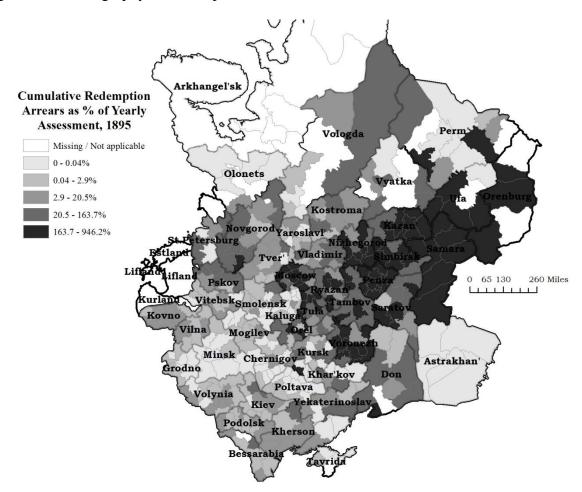
Note: The underlying source of the data is the same as in Table 3, comparing pre- and post-lowering. Data are unavailable for the Byelorussian and right-bank Ukrainian provinces, where the lowering of payments in 1883 apparently did not take place. Other "blank" spots had no, or practially no, serfs in 1883.

Figure 3: Total Redemption Obligations and Arrears, 1862-1901



Note: The source of these data is *Obshchii* (likely 1902). Yearly Redemption Obligations include the deductions from pre-payments and the reduction of 1883. The accumulated and yearly arrears series DO include delayed payments and debt forgiveness as allowed by the government. If we utilize arrears series without these deductions, the increase from 1894 onwards is actually a sharp reduction in aggregate and yearly (%) arrears.

Figure 4: The Geography of Redemption Arrears, 1895



Note: The source of these data is Russia, Departament (1897). These arrear totals include amounts eventually forgiven by the state in the wake of the 1891-2 Volga region famine.