

Many contemporary models of political economy suggest that policy and institutional change is driven by the fear of social unrest (e.g., Boix, 2003; Acemoglu and Robinson, 2006; Gandhi and Przeworski, 2006; Dunning, 2008; Svulik, 2012). Although details differ, such models are typically characterized by a bargaining environment in which an excluded group has the ability to impose a costly settlement in the event that bargaining breaks down. Reform (that is, policy or institutional changes intended to improve the welfare of the excluded group) reduces the likelihood that this option is exercised—the only other alternative to the elite being repression, which is itself costly. As summarized by Adam Przeworski, “extensions of rights are a response of the incumbent holders of rights to revolutionary threats by the excluded” (Przeworski, 2009, p. 292).

Although intuitive that reforms intended to reduce grievances should reduce unrest, earlier important work suggests a more ambiguous relationship between reform and rebellion, especially in traditional societies. Huntington (1968), for example, suggests that reform can be either a “catalyst” or “substitute” for political instability, as reform may raise expectations among excluded groups even as it addresses long-standing grievances. Skocpol (1979) shows how reform driven by international pressures but constrained by elite interests can paradoxically create the conditions for rebellion, especially in the context of preexisting capacity for collective action among the peasantry. Scott (1976), in turn, demonstrates that modernizing reforms can undermine norms and customs that ensure subsistence lifestyles, thus fostering grievances that drive rebellion, even if such reforms increase expected income.¹

What is the impact of reform on rebellion? We provide new evidence on this question with a novel dataset of peasant disturbances in nineteenth-century Russia. Our setting takes advantage of a particular reform designed to prevent social unrest: Tsar Alexander II’s emancipation of the serfs in 1861. Long-simmering unrest among peasants bound to the nobility, punctuated by occasional spasms of intense violence, had encouraged various acts of peasant reform throughout the Russian Empire but never the emancipation of the serfs in

¹For a thorough review of this and much related work, see Goldstone (1980).

Russia proper. In the wake of the Crimean War, which led to renewed peasant disturbances as well as a perception that Russia's institutions were outdated, Alexander finally declared to the Moscow nobility in 1856 that it was better to end serfdom "from above" than to wait for it to happen "from below."

A primary goal of the Emancipation Reform of 1861 was thus precisely that posited in the various models cited above: to prevent unrest. Yet as we demonstrate with a difference-in-differences design that exploits the timing of various peasant reforms, the immediate impact of reform was opposite to what was intended. Unrest among former serfs accelerated sharply after publication of Emancipation Manifesto in 1861, with disturbances sufficiently dangerous and widespread as to provoke a large military response—that is, repression.

Why would a reform intended to prevent rebellion instead encourage it? To answer this question, we draw upon the historical record and our data on the proximate cause of disturbances. Consistent with the earlier work cited above, we argue that emancipation raised expectations among the peasantry about what could be achieved, even as the actual design and implementation of reform was captured by a nobility operating in the context of a generally weak Russian state. Grievances with the reform process triggered numerous acts of rebellion. This pattern is most pronounced in regions with fertile soil, where landowners frequently took advantage of the reform process to cut off existing peasant allotments and reallocate good land in their favor.

Our micro-level findings thus reinforce the largely qualitative work cited above that suggests that reform can provoke rather than prevent rebellion. In the concluding section, we further discuss the relationship of our analysis to earlier work on reform and revolution and provide a few examples that seem to fit the broad outline of the Russian case that we examine, with reforms in traditional societies undermined by elite divisions in the context of generally weak state capacity.

Beyond its contribution to the literature in political science on reform and rebellion, our paper adds to the historiography on an important episode in Russian history. Although

the uprising that we describe is mentioned in various important works on serfdom and the Emancipation Reform (e.g., Blum, 1961; Zaionchkovskii, 1968; Moon, 2001*a*), with a few particular disturbances examined in detail (e.g., Field, 1976*b*), the post-emancipation rebellion has not received the sustained attention that have the Revolutions of 1905 and 1917 (e.g., Jenkins, 1982).² There is, moreover, some controversy about the relative magnitude of the uprising, with Field (1976*a*, pp. 52–3), for example, expressing concern about changes in the monitoring of serf uprisings—a possibility that we address in our empirical work. Our analysis provides new insight into variation across time, space, peasant class, nature of disturbance, and underlying grievance for events during this critical period.

1 Historical background

Compared to the rest of Europe, serfdom developed relatively late in Russia. Two factors—the government’s decision to create a large class of military and civil servitors, and the land/labor ratio—led to its eventual introduction (Domar, 1970). After liberation from the centuries-long Tatar yoke, Moscow’s rulers engaged in numerous wars and territorial expansion projects. The large number of servitors needed for these activities were compensated for their services by grants of land (e.g., Kimerling Wirtschafter, 2008, p. 8). However, the peasants’ freedom of movement and the availability of yet-unsettled land put substantial economic pressure on the landed nobility. Restrictions on peasant mobility, introduced and enforced by the state, increased the attractiveness of state service. This process of gradual encroachment on peasants’ freedom culminated during the late seventeenth and eighteenth centuries in the formal introduction of serfdom, whereby peasants were completely bound to the land.

According to Russian legislation, serfs belonged to the aristocratic owners of the land on which they lived. They were required to provide certain obligations, the most important

²Our data show 1357 events from 1861 to 1863. Drawing on a similar chronicle, Dubrovskii (1956) reports 5828 events from 1905 to 1907.

of which were corvée (unpaid labor on landowner's fields, known in Russian as *barshchina*) and quitrent (payment in money or in kind, or *obrok*). Where the land was rich, such as in Ukraine's black-soil provinces, *barshchina* was the rule; in the less fertile areas of northern Russia, where in addition to tilling the land peasants were often engaged in crafts and trade, *obrok* was prevalent. The combination of both was also not uncommon. As all estate land belonged to the noble landlord, he or she enjoyed complete freedom in allocating land to or withholding it from the serfs, who were legally prohibited from owning property. While the majority of serf peasants were allotted a strip of land for cultivation, subsistence, and payment of *obrok*, the peasants were in constant danger of being stripped of this plot, resettled, or sold. Furthermore, the landowner also had policing and judicial powers over the serfs and was entitled to administer various punishments, such as flogging, imprisonment, and exile to Siberia. Although in theory there were some limitations on landowners' behavior, such as the restriction of *barshchina* to no more than three days per week, these safeguards were tenuous at best, as the law prescribed corporal punishment for complaints by serfs against their owners (Zaionchkovskii, 1968).

Not all peasants in the Russian Empire were serfs, however. The state peasantry was established in the early eighteenth century through the reforms of Peter the Great. This estate included the non-Slavic peasants of the Siberian, Volga, and Ural provinces; descendants of military settlers and veterans; and other peasants who were dependent on the state. Although initially subject to many of the same conditions as serfs, the Kiselev Reforms of 1837–41 put state peasants under the control of the Ministry of State Properties and improved their economic and social status. Overall, state peasants tended to have larger land allotments than did serfs. Most important, unlike serfs, state peasants enjoyed various legal freedoms, including the right to own property, engage in other occupations, and move to other social estates.

Finally, there were the appanage (*udel'nye*) peasants, who were owned by the royal family. Appanage peasants were concentrated in eighteen *guberniyas*, mainly in northern and central

Russia and the Volga province; about 40 percent of all appanage peasants lived in Simbirsk and Samara *guberniyas*. All appanage peasants were required to pay *obrok*, and like state peasants they had to pay taxes and fulfill several additional obligations, though their land allotments were generally smaller (Zaionchkovskii, 1968).

The original justification for serfdom was that serfs provided working hands and income for the nobles, who in turn were legally obliged to serve the Tsar and the state. However, when this obligation was removed in 1762, much of the moral justification for serfdom was lost.³ Furthermore, the often brutal and abusive treatment of serfs by the landlords or estate stewards, combined with the exploitation of peasants' labor, led to numerous instances of violence that ranged from killing or flogging landlords to massive peasant uprisings that devastated entire regions and required substantial military effort to quell. (The most notable of these, the Pugachev Rebellion during the reign of Catherine II, formed the basis of Pushkin's depiction of the "Russian revolt, senseless and merciless.")

By the early nineteenth century, serfdom was not only morally problematic, but simply too dangerous to maintain. "Serfdom is a powder magazine under the state," admitted Count Benckendorff, Chief of Gendarmes to Tsar Nicholas I (1825–55). At the same time, however, the government was afraid to institute any drastic reforms. "Doubtless serfdom as it exists at present in our country is a manifest evil; but to tamper with it now would be, of course, an even more disastrous evil," declared Nicholas in 1842 (Volin, 1943, p. 48). One of the reasons for the government's reluctance to free the serfs was the power of the serf-owning nobility—only several decades before, in 1801, Tsar Paul I was murdered in a palace coup, in part due to the "nobility's indignation at Paul's decrees establishing a legal minimal allotment of land to the serfs by the landlords" (Zenkovsky, 1961, p. 282).

Yet, some reforms did take place, mainly in the westernmost parts of the Empire. In

³Landowners continued to act as *de facto* local representatives of the state through their role in policing, tax collection, and the military draft, for which many nobles saw serfdom as recompense.

1816–9, the serfs of the Baltic *guberniyas* (contemporary Estonia and Latvia) were the first to be emancipated. However, while the peasants gained individual freedom, they received no land and therefore remained completely dependent on their former lords as hired laborers. In 1837, as discussed above, the government initiated a major reform substantially improving the status of state peasants. In the late 1840s, the “inventory reform,” regulating peasants’ land allotments and obligations, was introduced in the right-bank Ukraine (Kiev, Podolia, and Volhynia *guberniyas*), with a clear goal of limiting the powers of the largely Polish, Catholic nobility over the Orthodox peasants (Leonard, 2011, p. 28). Abuses of this process by the gentry provoked widespread peasant disturbances that prefigure the events that we describe below (Moon, 2001*b*).

The main catalyst for reform was the Crimean War (1853–6), which resulted in Russia’s humiliating defeat and clearly demonstrated the country’s backwardness (e.g., Emmons, 1968).⁴ Furthermore, the war led to numerous instances of unrest because of increased conscription of peasants to the military and attempted migration (fueled by false rumors of freedom upon joining the wartime militia) or settlement in Crimea in the aftermath of the fighting (Zaionchkovskii, 1968, pp. 64–5).⁵ While serfdom was profitable for the landowners (Domar and Machina, 1984),⁶ the central government’s increasing fear of peasant rebellion (Gerschenkron, 1965) made eventual emancipation unavoidable. It was better to emancipate the serfs “from above” than to allow this to happen “from below,” Tsar Alexander II (1855–

⁴Dennison (2011) demonstrates that Russian serfdom was far more variegated than conventionally assumed, with some estates providing a legal and administrative framework that fostered rural economic development. Nonetheless, various constraints prevented such institutions from being universally adopted.

⁵Although small in comparison to the disturbances following emancipation that we document below, the unrest that followed the Crimean War was to that point the most serious of the nineteenth century. See, for example, Table 5 in Litvak (1989).

⁶Though perhaps inefficient; see Markevich and Zhuravskaya (2013).

81) warned Moscow's nobility in 1856. This was more than public rhetoric: the tsar's personal reaction to reports by members of his Secret Committee on the Peasant Question indicate a fear of spontaneous peasant revolution (Zaionchkovskii, 1968, ch. 2). On December 4, 1858, Alexander publicly announced that serfdom was soon to be abolished.

As the nobility internalized the general idea of emancipation, however reluctantly, a decisive battle was waged over the reform's content. Standard historical accounts present the reform drafting process as a bitter struggle between the *krepostniki* (serfdom supporters) and the liberals.⁷ The *krepostniki*, a vast majority of the gentry owners of Russia's 111,555 estates (Pushkarev, 1968), including many influential figures in the imperial court, advocated a "Baltic model" of emancipation without (or with minimum) land. On the other side, the liberal bureaucracy (mainly from the Ministry of Internal Affairs) and the Emperor's brother, Grand Duke Konstantin, contended that landless freedom would inevitably lead to massive uprisings and even revolution.⁸ In fact, the divisions ran even deeper, as superimposed on the struggle between the *krespotniki* and the emancipators were also cleavages between Westernizers and Slavophiles. Moreover, even among reform supporters there was conflict between those who viewed the peasants through the prism of romanticism and tried to preserve the old (and binding) peasant communal institution, the *obshchina*, and those who adopted a more rationalist, individualist view of the peasant and his interests and tried to destroy that institution (Khristoforov, 2011, p. 9).

Navigating between these camps, Alexander rejected the idea of landless emancipation, but at the same time he could not order the radical reform envisaged by the liberal bureau-

⁷Although the term "liberal bureaucracy" is widely used in the literature, a more correct way to describe these individuals would be "enlightened bureaucracy," as they were influenced by Enlightenment ideas but were not necessarily liberals by Western standards of the time (Khristoforov, 2011, ch. 1).

⁸For a detailed description of the legislation-drafting process, see Field (1976a) and Zakharova (1984).

cracy. Therefore, the emancipation act of 1861, known as the February 19 Manifesto, was a complicated and convoluted compromise that fell short of each camp's desires. According to the manifesto, serfs gained immediate personal freedom. The peasants were granted the right to "redeem" (buy out) their houses and adjacent garden plots, but the fate of the much larger cultivated land plots depended on the landowners' will. The landowner and peasants had the option to agree on an immediate "grant allotment" of one-quarter of the maximum allotment, for which the peasants would not be required to pay or provide obligations. Otherwise, the landowner could either sell the land to her former serfs with the state acting as financial intermediary (redemption payments were to be made to the state over 49 years), or she could keep it in her ownership, allowing the former serfs to use the land in exchange for payment or obligations. In the former case, transactions were not between the landlord and individual peasants, but between the landlord and the entire local peasant community, the *obshchina*, which was subsequently held collectively responsible for redemption payments of its members; former serfs could not leave the *obshchina* unless they paid off their full share of the community obligation. Plans to subsidize redemption payments were shelved after the banking crisis in 1859, thus increasing the expected flow of payments by serfs who gained ownership of their land (Hoch, 1991).

This was obviously not the free transfer of land that many peasants anticipated. Peasants who nonetheless wished to retain the possibility of purchasing their full land allotment became "temporarily obligated." During this transition period, *obrok* remained largely at the pre-emancipation level, whereas *barshchina* was substantially reduced. Regulatory charters (*ustavnye gramoty*) were to be compiled by the landlord, regulating land allotments, payments, and the general framework of relations between former serfs and the landowners. Although in principle the peasants were entitled to their existing land allotments, the legislation provided ample opportunities for gerrymandering—mainly in cases where the existing allotment was below the stipulated minimum, or as was often the case, exceeded the envisaged maximum. The verification of charters and resolution of conflicts between the

landlords and the peasants was entrusted to the newly created institution of “peace arbitrators” (*mirovye posredniki*), discussed below. A landowner was given a year to draw up the charter, with or without consultation with the peasants. After that period, the arbitrator could draft the charter independently. Although initially both sides had to approve the charter terms, eventually a refusal to sign ceased to be an obstacle to implementation (Easley, 2002, pp. 721–6).

In 1863, a major uprising broke out in Poland, most of which was part of the Russian Empire at the time. The rebel government in Warsaw, seeking to win the sympathies of peasants in neighboring Lithuania, Belarus, and right-bank Ukraine, issued a manifesto promising peasants land allotments without redemption fees. Forced to react, the Tsarist government revised the emancipation terms in Vilno, Kovna, Hrodna, Minsk, Mohilev, Vitebsk, Kiev, Podolia, and Volhinya *guberniyas*. As a result, redemption of land allotments in these provinces became compulsory and redemption fees were decreased by 20 percent, while the peasants’ land allotments increased by 24 percent in Lithuania and Belarus and by 18 percent in right-bank Ukraine. Landless serfs were awarded land, and local peace arbitrators, who had been predominantly Polish and Catholic, were replaced with ethnic Russians brought from the Empire’s heartland (Zaionchkovskii, 1968, ch. 5).

Finally, in November 1866, the government approved a new law regulating the status of state peasants. The actual impact of this law was rather small, as it simply gave the peasants legal authorization to permanently use their land allotments. Although in principle peasants could buy out their land allotments, the price was so high that very few could afford it. Exceptions to this general trend were the state peasants in Lithuania, Belarus, and right-bank Ukraine, which were affected by the Polish Rebellion. Compulsory redemption for state peasants in these regions began in 1863, with redemption fees to be paid for 46 years (Zaionchkovskii, 1968, ch. 7).

2 Possible effects of reform on rebellion

What impact could the Emancipation Reform have had on unrest among Russia's landowner peasants? In this section, we outline three potential channels through which reform might affect rebellion. In the appendix, we present a simple formal model that provides a common microfoundation for these channels.

First, reform may have altered the *grievances* that drive rebellion. As discussed above, a major goal of the tsar and reformers in the government was to prevent unrest by improving peasant welfare through emancipation. To the extent that peasants were in fact made better off (and not simultaneously subjected to a loss of subsistence guarantees of the sort described by Scott, 1976), reform might have reduced the threat of rebellion. Conversely, if the reform process ultimately left some peasants materially worse off than before, then peasants might have been more likely to be rebel.

Second, the Emancipation Reform may have raised peasants' *expectations* of the benefits of successful collective action. Russian historiography emphasizes the "myth of the tsar" (Field, 1976*b*), in which peasants believed in the good intentions of the monarch even as they distrusted the nobility, the embodiment of monarchical power at the local level. Emancipation in the tsar's name may have convinced serfs that various forms of contentious action would be rewarded.

Finally, reform may have affected the *ease of rebellion*, perhaps through changes in mobilizing structures, that is, "those collective vehicles, informal as well as formal, through which people mobilize and engage in collective action" (McAdam, 1999). As we discuss below, emancipation was accompanied by various changes in local self-governance, which in principle might have altered the ability of peasants to overcome their collective-action problems.

In principle, emancipation and related reforms could thus have produced either an increase or decrease in unrest among former serfs. In the following sections we identify the effect of emancipation on rebellion and explore the underlying causes of any change through

analysis of our data on peasant disturbances, which we now proceed to describe.

3 Data

We assembled data on peasant disturbances from four volumes of *Krest'ianskoe Dvizhenie v Rossii* (*The Peasant Movement in Russia*), a chronicle of peasant actions between 1796 and 1917 that was published in the USSR during the 1950s and 1960s (Okun', 1962; Okun' and Sivkov, 1963; Ivanov, 1964; Zaionchkovskii and Paina, 1968). The events in these volumes were gathered by a team of Soviet historians, working during the Khrushchev Thaw, based on two main sources of information. The first is the archival collections of the main Soviet archives—the Central State Historical Archive of the USSR (TsGIA), the Central State Archive of the October Revolution (TsGAOR), and the Central State Military-Historical Archive (TsGVIA)—and several smaller archives. These archives house, among other materials, the documents of the Imperial Court; the State Council; the political police (Third Section); the Ministries of Internal Affairs, Justice, and State Properties; the Senate; and the highest governing body of the Russian Orthodox Church. They also include reports to central authorities by provincial governors, state officials, and police officers; final reports of various inspections; archives of large landholding families; and similar documents. The second main source used to compile the chronicle is numerous secondary historical works on peasant unrests, emancipation, and rural life in various provinces.

We coded all entries from 1851 to 1871—that is, the decade before and after emancipation. Doing so resulted in a total of 3,773 events across 55 *guberniyas*, which currently constitute the Baltic States; Belarus; Moldova; most of Ukraine, Armenia, and Georgia; and almost all of European Russia. We code events in Ufa, which was carved out of Orenburg *guberniya* in 1865, as belonging to Orenburg. Missing population data (discussed below) for six *guberniyas* in the Baltics and the Caucasus further reduce our sample to 48 provinces. In addition, we drop Kutaisi, Tiflis, and Bessarabia, three outlying *guberniyas* where emancipation was implemented later, for a final sample of 45 provinces, in which we observe 3,612 events.

The information in the chronicles is quite rich, allowing us to code events using categories similar to that in other analyses of event data (e.g., Robertson, 2011). Figure 1 depicts a typical entry. For each event, we are able to code one or more actions taken by peasants at a particular time and place. For 2,057 events, we are also able to identify the proximate cause of the event. Peasant type is given for all but 109 events. Many events also indicate some sort of response by local officials (typically the arrival of a military detachment). With the assistance of a native-Russian research assistant, we developed a coding protocol based on analysis of a subsample of events from the pre- and post-emancipation period. We then manually coded all events during the sample window. Ultimately, all events were read and coded twice: first by our research assistant, and then again by one of the authors, who is a native Russian speaker, with discrepancies resolved in favor of the latter’s judgment in consultation with the other authors. We provide the complete codebook in an online appendix.

We aggregate up from the event-level data to construct a panel dataset with event counts at the province-year level. In doing so, we face some choices about how to categorize peasant types, actions, and causes. With respect to the former, we provide separate counts for *Current and former landowner peasants* and *State and appanage peasants*. The first category includes “landowner peasants” (i.e., serfs), “former landowner peasants,” and “temporarily obligated peasants” (i.e., those still required to provide obligations to their former owners—see the discussion above). Similarly, the second category includes peasants classified as “former state” and “former appanage” peasants. We include the small number of cases with participation by both peasant types in the count for each. Further, we include the small number of events in which peasant type is unknown in the count for landowner peasants; the results reported below are very similar if we instead drop such cases from the analysis.

With respect to peasant actions, we derive the province-year count of events falling into each of four general categories: *Refusal*, *Theft and violence*, *Complaint*, and *Governance*. As with peasant type, we include events that fall into more than one category in the count for

each. Refusals capture those instances in which peasants refuse to accept terms of liberation, pay for land, pay *obrok* or *barshchina*, and otherwise employ what Scott (1987) refers to as “weapons of the weak.” In contrast, the second category includes events in which peasants actively engage in some act of theft or violence: seizing the landlord’s land; committing violence—murder, at times—against the landlord or management; or destroying property, including burning down the landlord’s manor house or, in a number of cases, the local pub. We include in this category events in which the chronicle records unspecified unrest, typically rendered as *volnenie*. Although the context implies that such disturbances are likely to have been violent, we report below robustness of our results to instead classifying such events as refusals.

The third category of refusals includes those instances in which peasants make a formal complaint to government officials, including the Tsar, Grand Duke, Minister of Justice, Minister of Internal Affairs, governor, and police. Governance, the fourth category, includes instances in which peasants attempt to change the estate or municipal administration, often motivated by the introduction of peasant self-administration at the village or *volost’* (an administrative unit comprising several villages) level after the publication of the Emancipation Manifesto. Figure 2 illustrates the geographic distribution of all classes of disturbances for the entire period that we examine.

As discussed above, the event description provides some indication of the proximate cause for approximately 57 percent of the cases in our sample. For these events, we divide causes into five categories and derive the province-year count of events falling into each. *Landlord/peasant relations* captures issues related to peasant obligations to the landlord, including *barshchina* and *obrok*, as well as landlord actions toward the peasants, including brutal treatment and the enlistment of serfs in the military. A second category relates to peasants’ *Serf status*, including desire to be released from such status or transferred to the state peasantry. A third cause deals specifically with *Liberation*: rumors of liberation, anticipation of a “second liberation,” dissatisfaction with the terms of emancipation, or

distribution of printed materials calling for peasants to liberate themselves. *Estate* captures instances in which peasants express dissatisfaction with estate management or municipal government. The residual category, *Other*, incorporates a small number of causes which do not fit into the previous categories: miscellaneous events related to the Crimean War, forest fire, etc.

There are natural questions about the potential for biased selection into this dataset. In March 1858, in anticipation of emancipation, the Ministry of Internal Affairs increased the frequency with which it provided reports to the tsar on peasant affairs (Okun' and Sivkov, 1963, p. 13). This continued until 1863, when weekly reports were abandoned in favor of monthly reports (Zaionchkovskii, 1958, p. 29, fn 2). Furthermore, Soviet historians, eager to present the severity of the “revolutionary situation,” may have paid more attention to the period preceding the reform. In addition, not all provinces are covered equally. Some provinces were subject to frequent inspections by high-ranking officials, whereas others received less attention. Finally, the combination of primary and secondary sources implies that data were gathered only from central state archives for some provinces but from both central and local archives for others (Zaionchkovskii 1968, p. 42). As this discussion illustrates, many obvious sources of bias are period- or province-specific. Various elements of our empirical strategy control for such systematic measurement error.

In our analysis, we exploit demographic data reported by local authorities to the Statistical Department of the Ministry of Internal Affairs just prior to emancipation, as recorded in Bushen (1863). At the guberniya level, we derive *Serf population* as the number of male and female field and household serfs, and *State and appanage population* as the number of male and female state and appanage peasants. The former variable is highly correlated with an analogous count from the 10th *reviziia*, or tax census, as reported by Troinitskii (1861).

Finally, one of the primary issues surrounding the implementation of emancipation was the distribution of land. As such, we might expect soil quality to also influence the frequency of peasant disturbances. To account for soil type, we use GIS-coded data on soil type from

the Food and Agriculture Organization (FAO),⁹ which we overlay on a map of nineteenth-century Russian administrative boundaries. The resulting dataset provides the proportion of land in each *guberniya* belonging to one of 22 soil types or to other categories such as water. Based on a classification by Brady and Weil (2002), we define *Fertile soil* as any of the following soil types observed in our data: Chernozem, Greyzem, Histosol, Kastanozem, Phaeozem, or Vertisol. Figure 3 shows the distribution of fertile soil across our sample of 46 provinces, with a belt of fertile agricultural land across Russia’s southern territory, a pattern that was well understood in the nineteenth century.

4 Empirical strategy

We employ a difference-in-differences research design that takes advantage of the fact that the Emancipation Reform of 1861 had a direct effect only on landowner peasants (i.e., serfs), not on state or appanage peasants. Our data allow us to separately estimate the rate of disturbances for these two classes of peasants at different points in time, from which we compare the change over time in the rate for each class. This empirical strategy holds constant any measurement error or economic shocks that affect each class of peasants equally.

In particular, our baseline empirical model assumes that peasant disturbances for both landowner and non-landowner peasants are generated by a Poisson process with observation-specific mean (i.e., a negative-binomial model). For each group of peasants, we assume that the expected rate of disturbances μ_{jt} in province j and year t is given by

$$E(\mu_{jt}) = \exp(\alpha + \mathbf{w}_t\beta + \ln(z_j)), \quad (1)$$

where \mathbf{w}_t is a vector of time variables; z_j is an exposure variable given by the population of landowner or non-landowner peasants in province j , as described above; and α and β are (vectors of) parameters to be estimated. We assume $\mathbf{w}_t = (x_t, y_t)$, where x_t is a dummy variable equal to one if $t = 1861$ or $t = 1862$, and zero otherwise, and y_t is a dummy variable

⁹Data available at <http://www.fao.org/nr/land/soils/harmonized-world-soil-database/download-data-only/jp/>.

equal to one if $t > 1862$, and zero otherwise. Thus, we estimate the change in the rate of peasant disturbances for the two-year transition period and the post-emancipation period, relative to the pre-emancipation baseline. Our difference-in-differences estimates come from comparing the estimates of β for landowner and non-landowner peasants, respectively.

One potential problem with the specification in Equation 1 is that the rate of peasant disturbances could be driven by time-invariant provincial characteristics other than the size of the peasant population. There is, however, no way to condition out fixed effects in a negative-binomial model, and including dummy variables for the fixed effects introduces a potential incidental-parameters bias. We therefore employ two alternative models to control for time-invariant provincial characteristics. First, we estimate a linear fixed-effects model. Second, we estimate a negative-binomial model in which the dispersion parameter is fixed for each province.

Finally, as discussed in the following section, we check the robustness of our results to alternative ways of aggregating events to the province-year level, as well as to various changes in sample that take advantage of the historical record to identify particular provinces or years that might violate the difference-in-differences assumption of common trends in the absence of treatment.

5 Estimation

Before presenting our estimation results, we illustrate the evolution of peasant disturbances graphically. Figure 4 depicts the average annual count of disturbances for each of the four categories described above for landowner and non-landowner peasants, respectively. For both landowner and non-landowner peasants, there are relatively few reported disturbances during the 1850s and mid- to late 1860s. (We address potential concerns with the data-generating process further below.) The uptick in the late 1850s seems to reflect an increase in disturbances in the wake of the Crimean War, which as discussed above was part of the context in which plans for emancipation were made. During the early 1860s, however,

there is a marked increase among landowner peasants in incidence of the two most frequent disturbances: refusals and theft/violence. Notably, there is no analogous increase among state and appanage peasants.

The following events, drawn from the chronicle used to assemble our dataset, illustrate the extent of the uprising among former serfs following publication of the Emancipation Manifesto in 1861. In Spring 1861, approximately nine thousands peasants in Saratov *guberniya* refused to cultivate their landlords' fields and began preparations for an armed uprising. Military units were called in to put down the unrest. In Hrodno (in contemporary Belarus), a thousand peasants on more than twenty estates, doubting the authenticity of the Tsar's manifesto, refused to provide obligations to their landlords. Again, troops were called in. In Penza, peasants dissatisfied with their land allotments mounted armed resistance against government troops. Similar armed resistance took place in Vitebsk *guberniya*, where peasants refused to provide obligations to their landlords. In Voronezh, ten thousand peasants called for immediate emancipation; in Ryazan they demanded to see the estate's accounting ledgers. In Chernigov, more than twenty-six thousand peasants protested against their landlords, and troops sent to put down the unrest were attacked by armed villagers. In Yekaterinoslav, 2,500 peasants simply refused to obey the orders of local authorities. More than eighty thousand peasants were involved in various disturbances in Podolia; numerous peasants were killed, and many were more wounded.

Further evidence of the uprising's magnitude can be inferred from the scale of the military response. The Russian army, not fully recovered from its humiliating defeat in the Crimean War, and fighting a major uprising in the Caucasus, had few extra troops at its disposal. Yet in addition to numerous police and internal security forces, more than eighty infantry and cavalry regiments—a formidable force, especially by the standards of a military not yet based on universal conscription—were involved in quelling peasant disturbances in various parts of the Russian Empire (Zaionchkovskii 1968, pp. 166-7).

We now more systematically analyze the data. In doing so, we restrict attention to

the two most common disturbances: refusals and theft/violence. The almost complete non-incidence of reported complaints post-emancipation implies that any difference-in-differences design would be driven mostly by differences in frequency pre-emancipation, and there are only a handful of governance-related actions in the data.

Table 1 presents results for various specifications and samples for peasant disturbances involving refusals. Column 1 is our baseline specification. We run separate negative binomial models for landowner and non-landowner peasants, estimating in each case the rate of disturbances during the pre-emancipation, transition, and post-emancipation periods. The parameter estimates indicate an enormous 719-percent increase in refusals among landowner peasants during the transition period ($\exp(2.103) - 1 \approx 7.19$), versus a much smaller, statistically insignificant decrease among non-landowner peasants. In contrast, there is a small, 20-percent decrease in refusals among landowner peasants during the post-emancipation period, relative to the pre-emancipation period, versus a sizable 81-percent increase among non-landowner peasants. The estimated dispersion parameters are quite large and significantly different from zero, supporting the negative binomial over Poisson model.

The bottom panel of Table 1 provides the change in the expected number of refusals for the transition and post-emancipation periods, relative to the pre-emancipation period, holding the exposure variable at its mean value. We generate confidence intervals for these first differences through parameter simulation via the `Clarify` package for Stata (King, Tomz and Wittenberg, 2000). Our interest is in the difference in first differences—that is, the relative change in disturbances among landowner peasants during each of the two periods—which holds constant any measurement error or economic shocks that affect landowner and non-landowner peasants equally.

As Table 1 shows, the transition period is marked by a very large relative increase in refusals among landowner peasants: over 8 events per province-year. In contrast, there is a very small decrease in disturbances among landowner peasants during the post-emancipation period (0.32 events per province-year), relative to the pre-emancipation period. Comparison

of the confidence intervals for first differences indicates that both difference-in-differences estimates are statistically significant at conventional levels.

One potential concern with these results is that the process by which disturbances entered the chronicles on which our data are based might have differed for landowner and non-landowner peasants, given that across all years we observe approximately 11 times as many of the former as the latter. In general, there is little reason to suspect disproportionately high reporting of disturbances involving landowner peasants: disturbances among state peasants would likely have entered the archives more easily, given reporting requirements for stewards on state lands, and Soviet historians working in a Marxist tradition would have found it natural to document emerging class consciousness among the peasantry as a whole (from an ideological perspective, the state peasants of the nineteenth century were quite different from workers on state farms in the twentieth). To the extent that disturbances are less frequent among state peasants—though they are also infrequent among landowner peasants at the beginning and end of our sample window—this may reflect the generally larger land allotments and lower dues for peasants on state lands (e.g., Hoch, 2004, p. 249). That said, it is possible that events involving former serfs would have been better documented during the transition period due to the presence of the peace arbitrators described above and below. To check for this possibility, we restrict attention to events drawn from the archive TsGAOR, which are primarily disturbances recorded by the tsarist political police, which was active throughout the period we examine. Column 2 shows that our qualitative results are very similar, with the smaller difference-in-differences estimate reflecting the smaller number of events meeting this criterion.

A related concern, as discussed above, is the increased frequency from 1858 through 1862 with which the Ministry of Internal Affairs provided reports on peasant affairs to the tsar. Documents of the Ministry of Internal Affairs were primarily culled from the archive TsGIA, so the restriction to events in TsGAOR already controls for the possibility that events entered the dataset more readily during this period. As an additional check, we restrict the sample

to the years 1858–1862 and estimate the change in number of refusals during the transition period, relative to the previous three years. Column 3 shows that the difference-in-differences estimate is about 20 percent smaller than in Column 1—that is, still very large.

In the following columns we further check the robustness of these results to changes in specification and sample. In Column 4, we model the count of disturbances as a continuous variable and estimate a linear model with province fixed effects. The difference-in-differences estimates are somewhat larger than those produced by the negative-binomial model, though the same qualitative pattern emerges. We also obtain qualitatively similar results from a “fixed effects” negative binomial model (not reported), where the dispersion parameter is fixed for each province.

In the preceding analysis, the province-year count of disturbances is based on discrete entries in the chronicles on which our data are based, regardless of the events’ magnitude. In practice, some disturbances were more serious than others. Unfortunately, we have a precise count of the number of peasants involved only for a small fraction of events in our sample, so we employ two alternative strategies to check that our results are not driven by events involving only a few peasants. First, we restrict attention to disturbances affecting more than one village or *uyezd* (an administrative unit similar to county); approximately one-quarter of refusals meet this definition. As shown in Column 5, the qualitative results for the transition period are again similar to those in the baseline model. Second, we restrict attention to events in which there was some sort of military response (not reported), on the assumption that such events were typically more serious. Again, there is a marked increase in disturbances among landowner peasants but not state or appanage peasants during the two-year transition period.

As we discuss above, there was a further reform of the state peasantry in 1866. For most *guberniyas*, the legal impact of this reform was relatively small, but mandatory redemption (i.e., purchase of land allotments) was established for state peasants in the nine western provinces affected by the Polish Rebellion that began in 1863. The same nine provinces saw

substantial changes in land allotments and redemption terms for former serfs; three of the nine provinces had also been affected by the “inventory reform” of the 1840s. To verify that these events are not driving our qualitative results, we drop all observations after 1865 in Column 6 and all observations in the nine *guberniyas* affected by the Polish Rebellion in Column 7. With respect to the first exercise, there is essentially no change in estimates for the two-year transition period when dropping observations after 1865—not surprising given that the transition period concluded in 1863—but the difference-in-differences estimate for the post-emancipation period is now positive, albeit statistically insignificant. In contrast, dropping the nine western provinces results in a somewhat smaller difference-in-differences estimate for the transition period (a relative increase of 7.29 disturbances, versus 8.38 disturbances in Column 1), but the qualitative change is similar to that with the full sample.

Finally, we check that our results are robust to a number of other changes in sample and specification. We drop all non-Russian provinces; Simbirsk and Samara, which had a heavy concentration of appanage peasants; the Don Host Lands (*Zemlya Voiska Donskogo*), which had a heavy concentration of Cossacks who combined agricultural activities with military duties; and more generally all provinces one-by-one. In all cases, there is no change to our qualitative results. In addition, we reestimate the linear fixed effects models in Column 4, including data from an unbalanced panel of provincial rye prices as a proxy for weather (Mironov and Man’kov, 1985, Tables 10 and 11), which could affect discontent and thus peasant unrest. Again, our results are nearly unchanged. Finally, we respecify the model for landowner peasants in Column 1, using number of estates rather than number of serfs as the exposure variable; this results in a similar estimate (788 percent) of the increase in disturbances during the transition period.

Table 2 presents analogous results for disturbances involving theft and violence. Although such events are less frequent than refusals, the qualitative patterns are similar to those in Table 1. The sharpest swing is in the transition period, where our baseline estimate shows a relative increase of 1.98 events among landowner peasants. As with refusals, this result is

robust to changes in specification and sample.¹⁰

The pattern that emerges is thus the following: The 1861 reform led to a sharp increase in peasant disturbances among former serfs during the transition period, when the terms of emancipation were being worked out on individual estates, followed by a decline to levels similar to those before the 1861 reform. In the following section, we analyze the historical record and our data on grievances to explore the underlying causes for this pattern.

6 Interpretation

Why would a reform developed to promote social stability instead reduce it? To answer these questions, we return to the possible effects of reform on rebellion presented in Section 2.

Least likely to have played a major role is any change in the *ease of rebellion*. Although peasants were granted legal freedom after 1861, the tsar and his bureaucrats were careful not to provide greater opportunity for social unrest. Restrictions on peasant mobility were retained after emancipation, out of fear that a more mobile population would be more volatile (Moon, 2001*a*, p. 126). In an attempt to further cement local authority, elected councils (*zemstva*) were set up after 1864, with electoral systems that privileged the gentry over the peasants (Nafziger, 2011). Even if the institution did not function as intended, the fact remains that it was not present during the period of greatest upheaval. As discussed in Section 3, peasant self-administration was established at the village or *volost'* level following emancipation, but as shown in Figure 4, there is little evidence that these institutions acted

¹⁰As discussed above, as a further robustness check we reclassify events that record “un-specified unrest” as refusals rather than theft and violence. This results in a somewhat larger estimate of the relative increase in refusals by landowner peasants during the transition period (9.68 events per province-year), and a smaller estimate of the relative increase in theft and violence (0.70 events per province-year). As before, the difference-in-differences estimate is significantly different from zero in each case.

as a locus for collective action. Finally, there was no sharp discontinuity in the state's capacity for repression. Indeed, it was military action that helped to bring the disturbances to an end.

To explore the possibility that the spike in peasant disturbances was driven instead by increased *grievances*, we can exploit the detailed event descriptions in *Krest'ianskoe Dvizhenie v Rossii*, through which we are able to identify the proximate cause of approximately 57 percent of the disturbances in our dataset. Figure 5 summarizes the incidence of disturbances among landowner peasants across the six categories discussed above for the pre-emancipation, transition, and post-emancipation periods. The largest increase during the transition period is in events concerning liberation. Of these, the overwhelming majority (349 out of 386 events) are driven by dissatisfaction with the terms of liberation. As with our event data in general, such disturbances are most likely to take the form of refusals (89 percent of all disturbances), although acts of theft and violence are also common (18 percent, allowing for double counting).

In the terminology of Zald (1991), liberation was a “hard grievance,” that is, a sudden change in circumstances that affected a large proportion of the population, thus prompting contentious action. The nature and direction of this change were precisely counter to the intent of reform. What happened? The sources of peasants' dissatisfaction were several. First, the reform design itself was not especially favorable to the serfs. As already mentioned, the *krepostniki* had succeeded in watering down the ambitious plans of liberals in the Russian bureaucracy, such that peasants were required to purchase land they considered to be theirs, and then only if the landlord initiated the process. In addition, the minimum and maximum land allotments for most regions with good soil were reduced at the drafting stage due to the nobility's opposition. No less important, reformers who viewed the peasants through the prism of romanticist ideas succeeded in designing the emancipation process so that it was extremely difficult for individual peasants to leave the commune, which they perceived as the embodiment of the nation's spirit and tradition (Khristoforov, 2011). This

policy effectively eliminated the exit option for those former serfs who were dissatisfied with the reform outcome. Disappointed with the terms of emancipation, many peasants simply refused to believe in the Manifesto's authenticity and to abide by its provisions. (In our data, we see 30 disturbances in 1861 and 1862 tied to anticipation of a "second liberation," with an additional 33 such events in 1863.)

Second, and potentially more important in terms of understanding patterns of disturbances across Russia, the implementation of the reform was captured by the nobility. Although the broad outlines of emancipation were set in St. Petersburg, preparation of the regulatory charters that specified land allotments and obligations was entrusted to the landowners themselves. Implementation by state authorities would have required a large and efficient bureaucracy that did not exist in the mid-nineteenth century, when (as later) "arbitrary authority compromised central control by rendering the bureaucracy a structure composed of insecure officials at war with one another and with the center" (Bunce, 1993, p. 134). In addition, while a series of cadastral surveys had been undertaken in the 1840s and 1850s (Evtuhov, 2011, p. 167), there was no true national land cadaster (the number of land surveyors was miniscule and of questionable professionalism; see, e.g., Khristoforov, 2011, p. 353), and central authorities would have been at a considerable disadvantage in knowing the quality and quantity of land owned by individual members of the gentry at the time of emancipation, much less its division between demesne and peasant allotments. More generally, "Imperial jurisdiction stopped just outside the doors of the noble-owned serf estates" (Skocpol, 1979, p. 89), such that state officials knew little about what was happening on particular estates.

In an environment where an agent possesses expertise that the principal does not, theory suggests that the principal should be more likely to delegate policy authority, notwithstanding any divergence in interests between the principal and agent (Epstein and O'Halloran, 1999; Huber and Shipan, 2002). This is precisely what happened in the Russian case. Entrusted with authority to draft the regulatory charters, the landowners abused their control

rights to “cut off” peasants’ existing land allotments, provide them with different allotments, resettle peasants to different land entirely, and more generally ensure that the estate’s most fertile lands would remain in the landlord’s hands.

In an attempt to limit such manipulation, the government had introduced “peace arbitrators” (*mirovye posredniki*) to verify the charters’ legality and resolve conflicts between former serfs and landowners. Although the approximately 1,700 arbitrators were selected from the local landowning (and often serf-owning) nobility, they were appointed by the governors, who had received explicit instructions to stack this new institution with reform sympathizers—men such as Leo Tolstoy, who served as a peace arbitrator in Tula *guberniya* (Easley, 2002). The reality on the ground turned out to be more complicated, however, as supporters of emancipation among the nobility were often nowhere to be found. Despite government effort, the rank of arbitrators included people of “every political stripe, with varying degrees of vulnerability to local pressures” (Easley, 2002, p. 711). Many found it difficult to remain neutral in conflicts involving neighboring landowners, and some used outright violence (e.g., flogging) to compel peasants to accept the charter terms.

Even when the arbitrators were willing to confront the nobles, the landlords were often able to neutralize their influence with a plethora of methods that included social ostracism, complaints to the capital, demands for dismissal, or even physical assault. “They want to thrash me and bring me to court,” wrote Tolstoy about his relations with the landlords (Easley, 2009, p. 2). Tolstoy’s experience was far from unique: between 1861 and 1863, more than 25 percent of the arbitrators quit their jobs, often as a result of pressure and hostility from landowners (Easley, 2002, p. 727). With so many reform supporters sidelined, not only the writing of the charters, but also control over their legality, was nearly completely captured by a nobility interested in the preservation of their income and privileges. Assisting this development “from below” were also actions of the reform enemies “from above.” As early as 1861, the newly appointed Minister of Internal Affairs and the Minister of State Properties, both vocal opponents of the reform, issued guidelines that eased the verification

of charters by peace arbitrators and eventually culminated in a decision that charters could come into force regardless of whether peasants consented (Khristoforov, 2011, p. 191–2). The only thing the peasants could do in this situation was protest and riot.

Opposition from the nobility thus contributed to a reform design that fell short of the tsar’s original intent and a reform implementation that drained utility from the already small bucket being offered to emancipated serfs. Each of these factors contributed to the grievances expressed by rebelling peasants. At the same time, reform may have raised peasants’ *expectations* of what they could achieve through coordinated action. As discussed above, many peasants found it difficult to believe that reduced land allotments and continued obligations to estate owners could be the intent of the tsar, whom they traditionally saw (and were understood to see) as their protector against the nobility. Indeed, rumors that after the two-year transition period a new, “real” Manifesto would be issued were so widespread that Alexander himself undertook to convince the peasants that no additional reform would be forthcoming (Zaionchkovskii, 1968, p. 194). In this context, it was perhaps reasonable for former serfs to expect that they would have the support of the monarch if they took action against the landowners they blamed for the reform outcome. Although our data do not allow us to observe such expectations directly, the historiography of particular disturbances suggests that peasants were ready to invoke the name of the tsar when taking up arms or refusing to provide obligations to the landowner (e.g., Field, 1976*b*).

The result was thus to open a wedge between what peasants had and what they felt they could get, entirely counter to the intent of emancipation.¹¹ As we demonstrate formally in the appendix, this wedge may have been largest in parts of the empire with relatively

¹¹There is an obvious echo here of relative deprivation theory, though the expectations that we describe are related not (just) to the “goods and conditions of life to which people believe they are rightfully entitled” (Gurr, 1970, p. 13) but to what former serfs thought they could actually achieve through collective action. For a recent formalization of the role of normative expectations in political violence, see Passarelli and Tabellini (2013).

fertile soil—the *chernozem*, or “black soil” provinces—where the land was worth fighting for. Where the soil was poor, in contrast, peasants were often engaged in crafts and trade and cared comparatively less about the land, though the requirement that they pay for it nonetheless was likely to provoke some discontent.

This relationship between soil type and peasant discontent is evident in our data. As Figure 6 illustrates, controlling for population size, the total number of disturbances driven by liberation grievances involving landowner peasants over the transition period is larger in provinces with better soil. Table 3 reports results from the underlying linear regression and an analogous negative-binomial model.¹² For the latter model (Column 3), a one-standard deviation (0.346) increase in the proportion of fertile soil increases the predicted incidence of liberation-driven disturbances by 27 percent ($\exp(0.346 * 0.693) - 1 \approx 0.27$). The estimated relationship is even stronger if western provinces are dropped, which in part may reflect that peasants in right-bank Ukraine (Kiev, Podolia, and Volhynia) had already suffered cut-offs of land allotments during the earlier inventory reform (Zaionchkovskii, 1968, p. 131) and so perhaps had less to lose from emancipation.

This result is robust to the inclusion of various controls. It is possible, for example, that the relationship between liberation-related disturbances and soil type is driven by greater capacity for collective action in provinces with fertile soil, given the role of peasant communes in monitoring the provision of *barshchina*. Counter to this hypothesis, however, we find no relationship between soil type and peasant disturbances in the pre-emancipation period. Similarly, one might suspect that peasants in southern regions with good soil had different capacity for collective action to the extent that such regions were incorporated later into the Russian Empire. Indeed, year of incorporation of the provincial capital is positively correlated with disturbances driven by liberation grievances, but the relationship between

¹²Using either a contiguity or inverse-distance weighting matrix, we find no statistically significant spatial autocorrelation in the residuals of the linear model, and indeed our results are very similar if we estimate a model with spatial autoregressive disturbances.

disturbances and soil type is robust to conditioning on this variable. Finally, we obtain very similar results if we control for average estate size (using data from Troinitskii, 1861), which by the logic of collective action might be correlated with the propensity of peasants to rebel.

In principle, landowners in provinces with relatively fertile soil may have had greater incentive to provide concessions to prevent social unrest, relative to what they could actually get away with. In practice, landowners did not fully internalize the impact of unrest on each other or on the monarchy. (The cost of calling out military detachments, for example, was not borne exclusively by the affected landowner.) Moreover, there were various features of the reform design that provided disproportionate incentive and opportunity for the *chernozem* nobility to seize good land for themselves: using data compiled from regulatory charters, Zaionchkovskii (1968, p. 240) reports changes in average land allotments that are substantially greater (more negative) in provinces with good soil, as depicted in Figure 7.¹³ Landowners in provinces with fertile soil depended on *barshchina*, and when *barshchina* obligations were substantially reduced during the transition period, the *chernozem* gentry were driven to reduce peasants' land allotments and subsequently rent the very same land back in exchange for money or additional obligations (Zaionchkovskii, 1968, pp. 135–7). In addition, as discussed above, the nobility had succeeded in pushing down minimum land allotments for regions with good soil; it was precisely in such cases that the opportunity for gerrymandering was greatest.

A final puzzle is why the disturbances dropped off so sharply after the transition period. One possibility is that there was less to contest once the regulatory charters were drafted and approved (Chernukha, 1972, p. 8-9): with negotiations complete, the wedge between what peasants had and what they expected may have started to shrink. The more important factor, however, as with earlier rebellions, may have been the military response described above. As shown in the left panel of Figure 8, the proportion of events involving some sort of

¹³Hoch (2004) suggests that there were fewer large land allotments prior to emancipation in regions with good soil, which if true could imply larger losses for the median peasant.

military response remained high at least throughout the mid-1860s. Also informative is the proportion of disturbances affecting more than one village or *uyezd*, as depicted in the right panel. There were fewer serf uprisings after 1862, but those that did occur were typically more serious than during the 1850s.

These patterns suggest that peasant discontent posed a threat to the state well beyond the explosion of disturbances in 1861 and 1862. Indeed, some have argued that the failure of the Emancipation Reform of 1861 to definitively resolve Russia’s peasant question ultimately set the stage for the Revolutions of 1905 and 1917 (e.g., Skocpol, 1979). Although we cannot test this proposition directly with the data and research design in this paper, our results help to place subsequent events in context. The emancipation of the serfs was a catalyst for rebellion, not a substitute for political instability.

7 Conclusions

The Emancipation Reform of 1861 was an attempt at reform from above to avoid revolution from below. Although the actual revolution did not come for another half-century, the immediate impact of emancipation was precisely counter to its intent. Peasant disturbances broke out across the Russian Empire as former serfs reacted to a reform that favored the gentry in its design and was captured by the nobility in its implementation. Ultimately, the rebellion subsided with assistance from a largely intact and still-loyal Russian military (a condition that would be missing in 1917), but the point of reform was precisely to avoid the need for repression. As Field (1976*a*) notes, the “army was the apple of the tsar’s eye”; peasant disturbances were a major distraction from regular military activity (p. 52).

Our micro-level analysis echoes various macro-historical studies that trace revolution to half-hearted reforms carried out by constrained elites. Summarizing this literature, Goldstone (2001, p. 147) writes that instability is more likely when elites are divided and state actors lack the “financial and cultural resources” necessary to carry out critical tasks demanded by society. These are precisely the constraints that appear to have been crucial in

the case that we analyze. The unavoidable “cooptation” of existing stakeholders (Shleifer and Treisman, 2000)—here, the landed gentry— prevented the ambitious reform expected by Russia’s serfs, and capture of the implementation process resulted in further leakage from the already small bucket offered to the peasants. That the serfs expected “true” emancipation from the tsar only added fuel to the fire.

The general importance of these constraints in determining whether reform increases or decreases rebellion can be illustrated with a few examples that mirror the Russian case in important respects. Southern Italy was historically dominated by a system of insecure ownership of peasant plots, dependence on large landowners for rented land or seasonal labor, and limited access to common land, conditions that contributed to a series of peasant rebellions in the nineteenth century. The Allied liberation in World War II led to renewed unrest and peasant occupation of latifundia in the south, forcing the new government to pursue reforms under the Communist minister of agriculture that regulated grain prices, guaranteed access to uncultivated land by peasants who formed cooperatives, and abolished sharecropping contracts. Yet these initiatives were undermined by other members of the coalition government, who succeeded in changing the composition of the local commissions that were to implement reform so that peasant interests would be in the minority (Ginsborg, 1984). The subsequent refusal of the commissions to authorize most peasant demands led to an even larger wave of land occupations in 1949, culminating in a bloody confrontation between peasants and gendarmes near the town of Melissa (Lowe, 2012, p. 294).

A similar dynamic played out some years later in Latin America. As Albertus and Kaplan (2012) describe, Colombia’s Social Agrarian Reform Act of 1961 promised to increase peasant welfare through land redistribution, but policy was set by an Agrarian Reform Committee dominated by landed elites, with implementation farmed out to regional project zones. The resulting capture led to a halfhearted reform that emphasized titling over redistribution, and indeed, insurgency generally increased where land reform was attempted.¹⁴ And in

¹⁴For similar results from Brazil, see Alston, Libecap and Mueller (2000). Relative to

Peru, the rise of the Shining Path occurred after, not before, agrarian reform—here, too, the consequence of “ideological divisions among top officers” in the (military) government and resources that “were no longer available for political organizations, especially those in the countryside” (McClintock, 1984, p. 79).

Our work, and these examples, suggest a new way forward for research on policy and institutional reform. As emphasized by Haggard and Kaufman (2012), “the social movement and ‘contentious politics’ literature provides the starkest alternative to political-economy approaches.” This need not be the case. A complete understanding of the incentives to reform must take account of the impact that reform has on collective action. As we have demonstrated, understanding such effects requires analysis of both the political constraints that structure reform and the numerous ways in which the intended beneficiaries of reform can respond.

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these important papers, a major contribution of our work is that our data allow us to identify the grievances that prompted particular disturbances, thus helping to clarify the causal mechanism between reform and rebellion.

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Appendix: A simple model of rebellion

In this section we present a simple model to illustrate the various channels by which reform might affect rebellion. Our model takes the form of a global game, a class of models of collective action under incomplete information.¹⁵ The key assumption of such models is that there is some feature of this environment that is not common knowledge but about which actors receive correlated private signals. In our setting, we assume this to be the cost of rebelling, though we could instead assume incomplete information about some other characteristic, so long as the model continues to satisfy strategic complementarity (actors are better off taking an action if others take the same action) and two-sided limit dominance (there are some signals such that an actor would prefer to take an action even if nobody else does so and other signals such that an actor would prefer not to take that action however many others do so).

In particular, consider a continuum of peasants, indexed by i . Each peasant makes a decision ρ_i to rebel or not, where $\rho_i = 1$ indicates that the peasant rebels. Rebellion is costly, where peasant i bears a cost η_i if $\rho_i = 1$. We assume that the cost of rebellion is correlated across peasants, with $\eta_i = \eta + \epsilon_i$, where η is drawn from a uniform density on the real line and ϵ_i is drawn from a distribution with continuous density with support on the real line. (We follow Morris and Shin (2003) in assuming an “improper” prior belief about η , noting as they do that conditional probabilities are well defined.) Each peasant observes her own idiosyncratic cost but not that of any other peasant before deciding whether to rebel.

The probability of a successful rebellion depends on how many peasants choose to rebel. For simplicity, assume that the probability of a successful rebellion is qh , where h is the (endogenous) proportion of peasants who choose $\rho_i = 1$ and $q \in (0, 1)$ is a parameter of the model that captures the ease of rebellion. If a rebellion is successful, then proportion $\gamma \in (0, 1)$ of land valued at $\theta > 0$ is divided equally among all peasants who chose $\rho_i = 1$;

¹⁵For an introduction to such models, see Gehlbach (2013).

peasants who chose $\rho_i = 0$ receive a payoff of zero. In contrast, if a rebellion is unsuccessful, then any peasant who chose $\rho_i = 1$ receives a payoff of zero, whereas any peasant who chose $\rho_i = 0$ receives a payoff of $\lambda > 0$, where the parameter λ can be understood as the value to any peasant of the existing distribution of land.

This formalization follows, for example, Popkin (1979), who observes that the “political economy approach emphasizes that peasants weigh the risk of trading the status quo for a lottery between successful action and failure. Of course, *no contribution* [i.e., no participation; italics in original] is also a risky situation with lottery elements” (p. 258). In particular, the payoffs capture the idea that there is a benefit to choosing the winning side: rebelling when rebellion is successful, not rebelling when rebellion is unsuccessful. Put differently, we assume the existence of selective incentives to rebellion, as have been documented in various studies of peasant unrest (e.g., Lichbach, 1994). At the cost of additional notation, this stylized assumption can be somewhat relaxed, such that there is a collective benefit to (non)participation (e.g., Bueno de Mesquita, 2010), possibly different for successful and unsuccessful rebellions.

The payoff to any peasant i from choosing $\rho_i = 1$ is therefore

$$qh \left(\frac{\gamma\theta}{h} \right) + (1 - qh) \cdot 0 - \eta_i,$$

whereas the payoff from choosing $\rho_i = 0$ is

$$qh \cdot 0 + (1 - qh)\lambda.$$

The marginal benefit of choosing $\rho_i = 1$ is thus

$$q\gamma\theta - (1 - qh)\lambda - \eta_i.$$

As this expression satisfies assumptions A1–A5 in Morris and Shin (2003), we can use the results there to establish that there is a cutpoint equilibrium, where any peasant i rebels if $\eta_i < \eta^*$ and does not rebel if $\eta_i > \eta^*$, where

$$\eta^* \equiv q\gamma\theta - \lambda \int_0^1 (1 - qh)dh = q\gamma\theta - \lambda \left(1 - \frac{q}{2} \right). \quad (2)$$

Up to indifference at $\eta_i = \eta^*$, this is the unique strategy surviving iterated elimination of strictly dominated strategies.

Equation 2 says that peasants are more likely to rebel when the ease of rebellion q is high, the payoff from successful rebellion $\gamma\theta$ is large, and the value from the existing distribution of land λ is small. We can use this theoretical framework to think about the potential effects of reform on rebellion. First, reform may affect peasant welfare through the status quo payoff λ , which on average (e.g., across villages with possibly different costs of rebellion) would change the incidence of peasant unrest by moving the cutpoint η^* . Second, by raising expectations about what peasants could claim through collective action, reform may increase the (expected) payoff from successful rebellion $\gamma\theta$, which would have the effect of raising the cutpoint η^* . Notably, this effect would be greatest in regions where land is particularly valuable, that is, where θ is large. Finally, reform may change the ease of rebellion, expressed in the model by the parameter q .

16 октября. Пензенская губ. Наказание управляющего Унгерн-Штернберга крестьянами помещиц Леонтьевых с. Никольского (Буды) Наровчатского у. за жестокое обращение.
ЦГИА, ф. 1286, оп. 21, 1860 г., д. 636, л. 106—111; ф. 1291, оп. 123, 1860 г., д. 1, л. 192, 197 об.—198 об., 211 об.—217; ЦГАОР, ф. 109-И, 4 эксп., 1860 г., д. 230, л. 10; «Документы и материалы по истории Мордовской АССР», стр. 345—359.

Figure 1: A typical chronicle entry from *Krest'ianskoe Dvizhenie v Rossii* (*The Peasant Movement in Russia*), indicating that violent action was taken on October 16, 1860 against the management of an estate in Penza *guberniya* in response to brutal treatment. The indented text at the bottom gives the archival sources on which the entry is based.

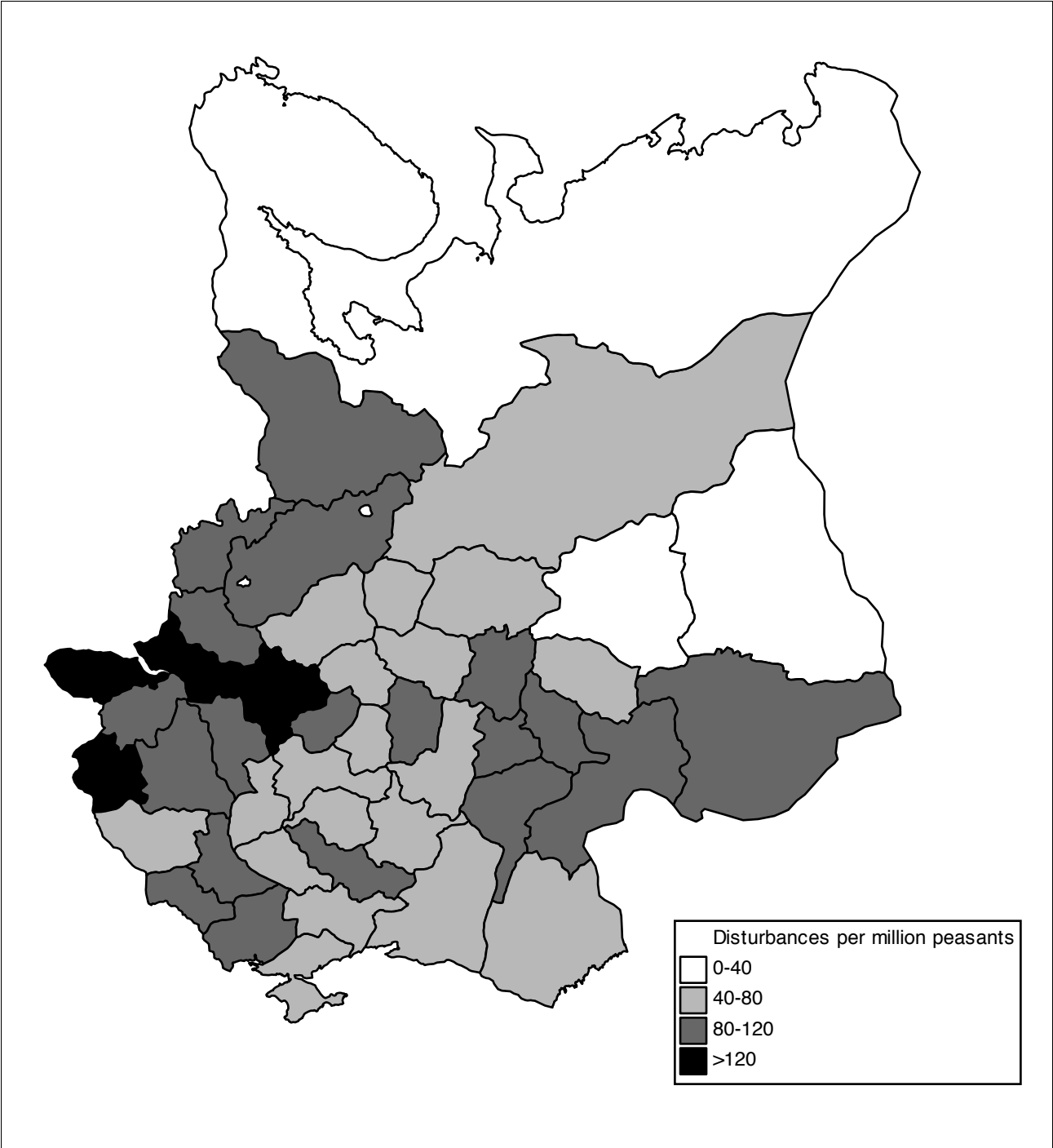


Figure 2: Peasant disturbances, 1851-1871.



Figure 3: Distribution of soil highly suitable for agriculture across provinces in sample; see text for details.

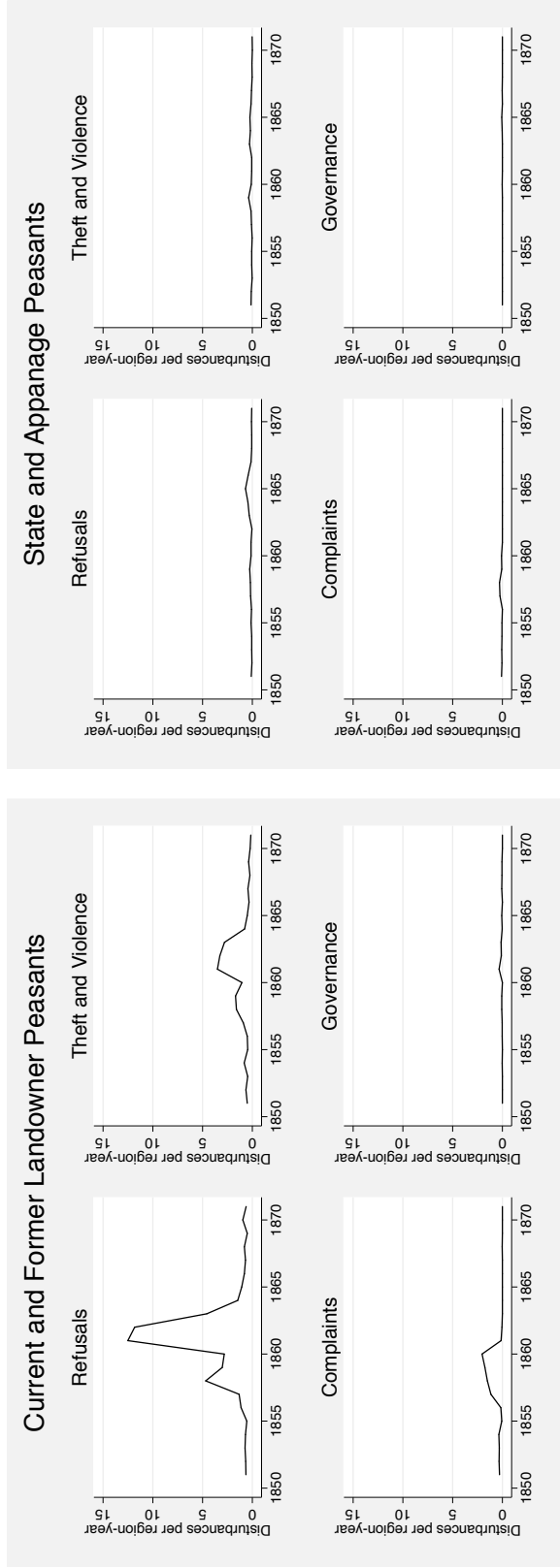


Figure 4: Dynamics of reported disturbances, landowner vs. non-landowner peasants.

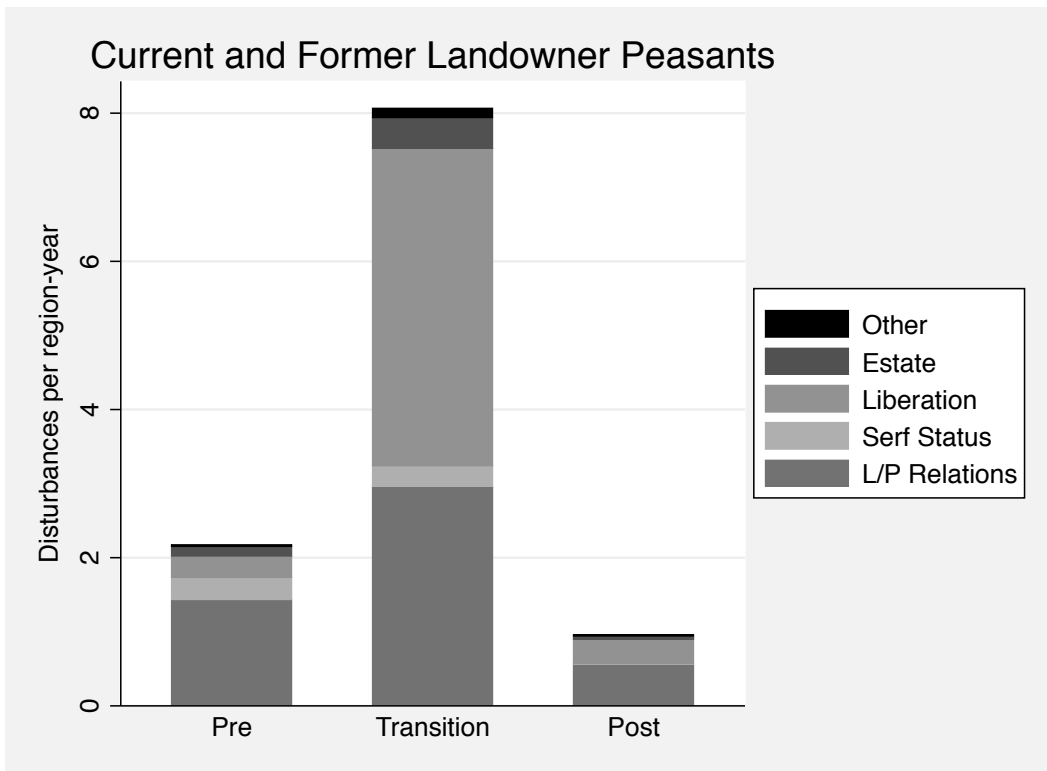


Figure 5: Proximate cause of reported disturbances, landowner peasants.

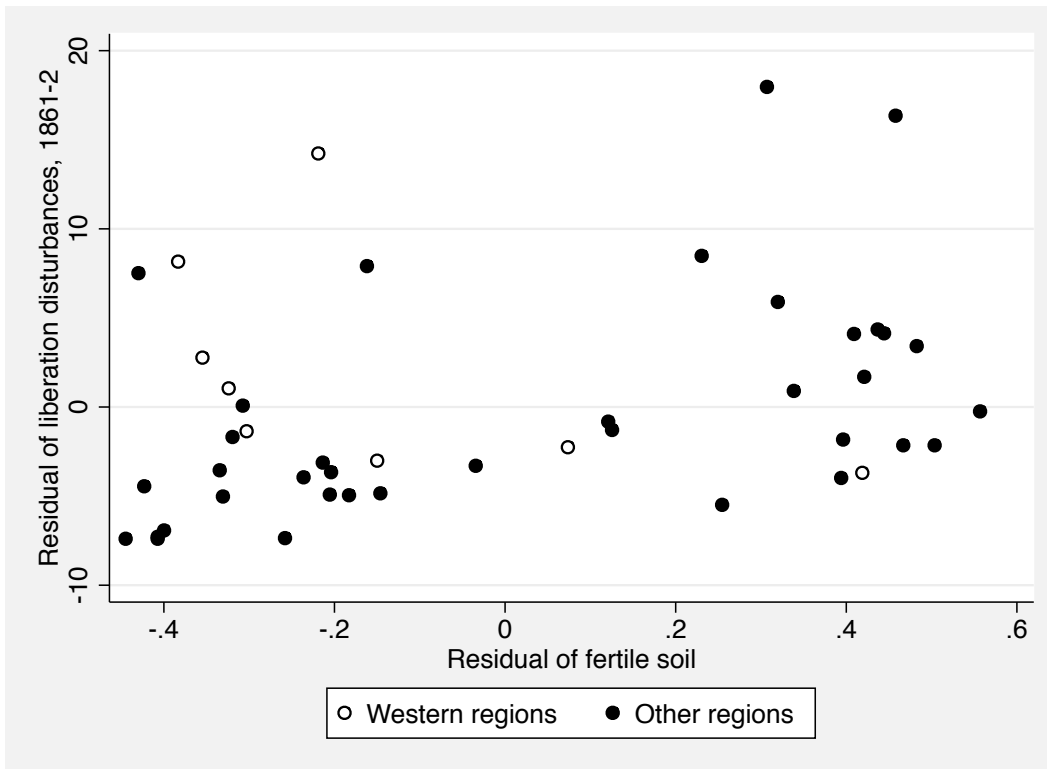


Figure 6: Partial residual plot illustrating relationship between soil type and disturbances driven by liberation grievances. The linear model on which the plot is based controls for serf population.

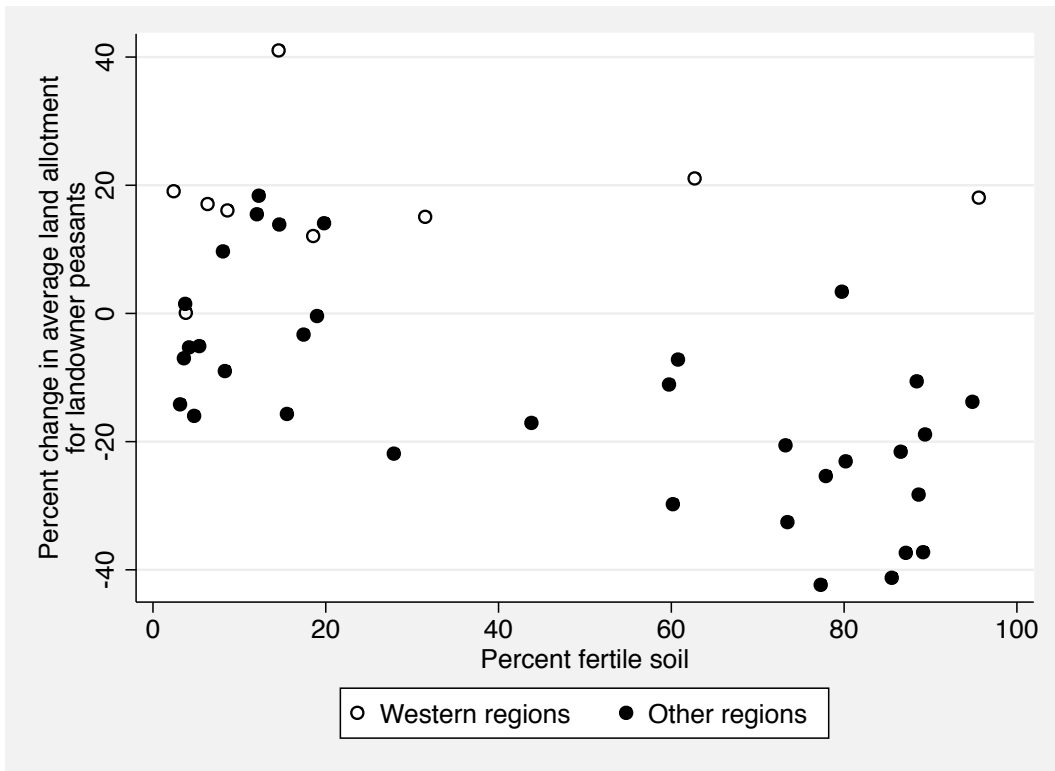


Figure 7: Relationship between soil type and change following emancipation in average land allotment for landowner peasants.

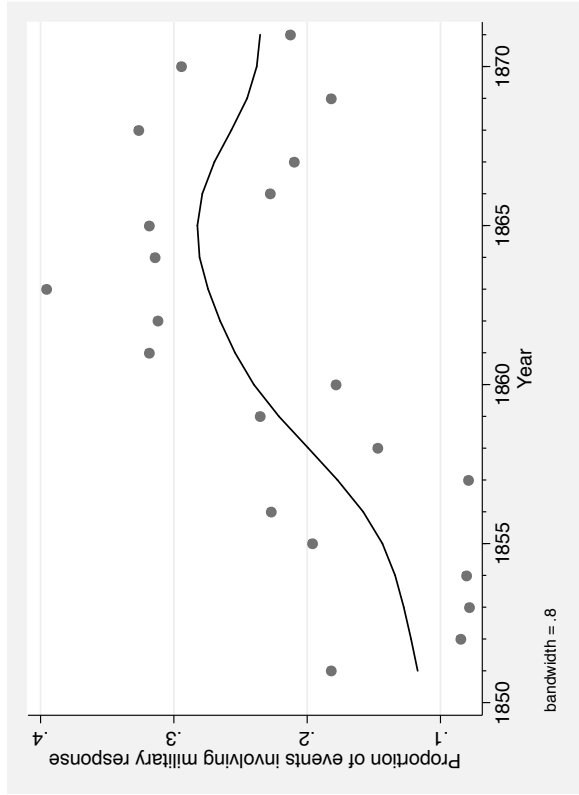
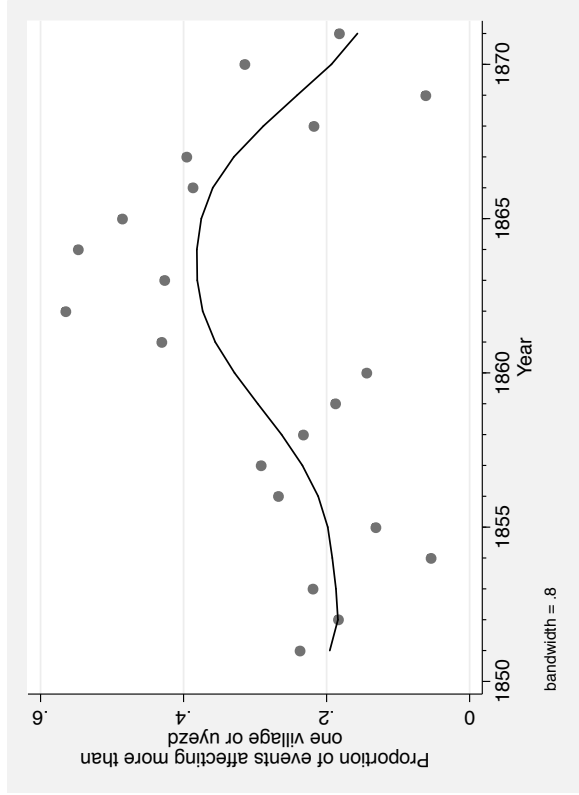


Figure 8: Dynamics of disturbances among current and former landowner peasants involving a military response (left panel) and affecting more than one village or *uyezd* (right panel). The nonparametric fits are derived from locally weighted regressions (lowess smoothers).

Table 1: Disturbances Among Landowner and Non-Landowner Peasants: Refusals

	Baseline (1)	TsGAOR only (2)	1858–60 vs. 1861–2 (3)	Linear fixed effects (4)	Large events (5)	Drop after 1865 (6)	Drop western regions (7)
PARAMETER ESTIMATES							
Landowner peasants							
Transition period	2.103 (0.140)	2.584 (0.156)	1.298 (0.123)	10.538 (0.411)	2.603 (0.170)	2.103 (0.135)	2.006 (0.156)
Post-emancipation period	-0.229 (0.099)	0.140 (0.131)		-0.352 (0.244)	0.290 (0.142)	0.438 (0.130)	-0.362 (0.111)
Constant	-12.558 (0.067)	-14.021 (0.092)	-11.786 (0.084)		-14.261 (0.102)	-12.562 (0.065)	-12.445 (0.073)
Dispersion parameter	1.150 (0.096)	1.064 (0.152)	0.563 (0.077)		1.221 (0.194)	1.056 (0.098)	1.104 (0.105)
Non-landowner peasants							
Transition period	-0.492 (0.446)	-1.085 (1.100)	-0.827 (0.414)	-0.040 (0.079)	-1.774 (1.079)	-0.476 (0.434)	-0.433 (0.451)
Post-emancipation period	0.594 (0.213)	1.142 (0.376)		0.125 (0.047)	0.601 (0.319)	1.259 (0.249)	0.509 (0.222)
Constant	-15.055 (0.162)	-16.487 (0.307)	-14.688 (0.202)		-15.833 (0.245)	-15.066 (0.157)	-14.997 (0.167)
Dispersion parameter	2.933 (0.650)	7.103 (2.594)	0.300 (0.673)		6.281 (2.054)	2.339 (0.618)	2.600 (0.612)
CHANGE IN EXPECTED DISTURBANCES							
Transition period							
Landowner peasants	8.34 (6.24, 10.81)	3.28 (2.52, 4.23)	6.67 (5.18, 8.68)	10.54 (9.73, 11.34)	2.64 (1.94, 3.46)	8.34 (6.35, 10.73)	7.24 (5.14, 9.74)
Non-landowner peasants	-0.04 (-0.10, 0.05)	-0.01 (-0.04, 0.04)	-0.09 (-0.18, 0.00)	-0.04 (-0.20, 0.12)	-0.04 (-0.07, 0.01)	-0.04 (-0.10, 0.04)	-0.05 (-0.13, 0.07)
Difference in differences	8.38	3.29	6.76	10.58	2.68	8.38	7.29
Post-emancipation period							
Landowner peasants	-0.23 (-0.44, -0.03)	0.04 (-0.04, 0.12)		-0.35 (-0.83, 0.13)	0.07 (0.00, 0.14)	0.65 (0.26, 1.10)	-0.33 (-0.55, -0.12)
Non-landowner peasants	0.09 (0.02, 0.15)	0.06 (0.02, 0.10)		0.13 (0.03, 0.22)	0.04 (0.00, 0.09)	0.29 (0.15, 0.47)	0.10 (0.02, 0.19)
Difference in differences	-0.32	-0.02		-0.48	0.03	0.36	-0.43

Notes: Negative-binomial models but for Model 4, which is a linear fixed-effects model. Model 2 restricts the analysis to events drawn from the archive TsGAOR, whereas Model 3 restricts the sample to the years 1858–1862. Model 5 considers only disturbances involving more than one village or *uyezd*. Model 6 drops observations for years after 1865, and Model 7 drops regions affected by the Polish rebellion. Sample is annual data from 1851–1871 (but for Models 3 and 6) for 45 regions (but for Model 7). In parentheses, standard errors for parameter estimates, 95-percent confidence intervals for first differences. Changes in expected disturbances for both transition and post-emancipation periods are relative to pre-emancipation period.

Table 2: Disturbances Among Landowner and Non-Landowner Peasants: Theft and Violence

	Baseline (1)	TsGAOR only (2)	1858–60 vs. 1861–2 (3)	Linear fixed effects (4)	Large events (5)	Drop after 1865 (6)	Drop western regions (7)
PARAMETER ESTIMATES							
Landowner peasants							
Transition period	1.420 (0.159)	1.598 (0.232)	0.855 (0.157)	2.522 (0.192)	2.250 (0.258)	1.415 (0.147)	1.267 (0.160)
Post-emancipation period	-0.322 (0.116)	-0.120 (0.185)		-0.215 (0.114)	0.568 (0.209)	0.452 (0.141)	-0.836 (0.131)
Constant	-13.198 (0.077)	-14.527 (0.125)	-12.666 (0.109)		-15.243 (0.159)	-13.207 (0.073)	-13.062 (0.077)
Dispersion parameter	1.214 (0.136)	2.202 (0.414)	0.717 (0.132)		2.263 (0.483)	0.988 (0.123)	0.868 (0.132)
Non-landowner peasants							
Transition period	-0.587 (0.499)	-1.023 (1.138)	-1.155 (0.524)	-0.047 (0.046)	-1.102 (1.142)	-0.583 (0.492)	-0.434 (0.503)
Post-emancipation period	0.017 (0.250)	0.593 (0.438)		0.003 (0.027)	0.088 (0.467)	0.856 (0.296)	-0.063 (0.265)
Constant	-15.206 (0.173)	-16.501 (0.325)	-14.638 (0.252)		-16.418 (0.322)	-15.210 (0.170)	-15.245 (0.181)
Dispersion parameter	3.316 (1.047)	11.929 (5.331)	2.821 (1.471)		12.752 (6.597)	2.959 (0.983)	2.875 (1.006)
CHANGE IN EXPECTED DISTURBANCES							
Transition period							
Landowner peasants	1.94 (1.34, 2.68)	0.65 (0.38, 0.98)	1.40 (0.87, 2.05)	2.52 (2.15, 2.90)	0.68 (0.42, 1.03)	1.88 (1.31, 2.52)	1.52 (0.96, 2.15)
Non-landowner peasants	-0.04 (-0.09, 0.03)	-0.01 (-0.04, 0.05)	-0.12 (-0.24, -0.02)	-0.05 (-0.14, 0.04)	-0.01 (-0.04, 0.05)	-0.04 (-0.09, 0.04)	-0.03 (-0.10, 0.06)
Difference in differences	1.98	0.66	1.52	2.57	0.69	1.92	1.55
Post-emancipation period							
Landowner peasants	-0.16 (-0.28, -0.04)	-0.02 (-0.07, 0.04)		-0.21 (-0.44, 0.01)	0.06 (0.02, 0.11)	0.35 (0.12, 0.62)	-0.34 (-0.45, -0.24)
Non-landowner peasants	0.00 (-0.05, 0.05)	0.02 (-0.01, 0.06)		0.00 (-0.05, 0.06)	0.00 (-0.03, 0.04)	0.14 (0.04, 0.27)	-0.01 (-0.07, 0.05)
Difference in differences	-0.16	-0.04		-0.21	0.06	0.21	-0.33

Notes: Negative-binomial models but for Model 4, which is a linear fixed-effects model. Model 2 restricts the analysis to events drawn from the archive TsGAOR, whereas Model 3 restricts the sample to the years 1858–1862. Model 5 considers only disturbances involving more than one village or *uyezd*. Model 6 drops observations for years after 1865, and Model 7 drops regions affected by the Polish rebellion. Sample is annual data from 1851–1871 (but for Models 3 and 6) for 45 regions (but for Model 7). In parentheses, standard errors for parameter estimates, 95-percent confidence intervals for first differences. Changes in expected disturbances for both transition and post-emancipation periods are relative to pre-emancipation period.

Table 3: Disturbances Involving Liberation Grievances Among Landowner Peasants

	Ordinary Least Squares		Negative Binomial	
	Drop western regions		Drop western regions	
	(1)	(2)	(3)	(4)
Fertile soil	5.725 (2.631)	8.554 (2.667)	0.693 (0.336)	1.238 (0.355)
Serf population (100,000s)	0.629 (0.341)	0.958 (0.360)		
Constant	2.989 (2.094)	-0.349 (2.204)	0.358 (0.191)	-0.008 (0.220)
Dispersion parameter			0.418 (0.113)	0.311 (0.106)
Observations	45	36	45	36

Notes: Negative binomial models assume exposure equal to serf population. Dependent variable is sum of disturbances involving liberation grievances among landowner peasants over transition period (1861–2). Models (2) and (4) drop regions affected by the Polish Rebellion; see text for details. Standard errors in parentheses.