Did Ivan's Vote Matter? The Political Economy of Local Democracy in Tsarist Russia

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All comments are welcome!

Abstract

Russia's emancipation of the serfs was accompanied by numerous others measures aimed at modernizing the Tsarist economy and society. Among these "Great Reforms" was the creation of a new institution of local government - the *zemstvo* – which has received comparatively little attention from economic historians. This quasi-democratic form of local government played an important role in expanding the provision of public goods and services in the half century leading up to the Russian Revolution. The first two parts of this paper utilizes archival records and contemporary evidence to outline the *zemstvo*'s role in Russian society and to describe its political structure. The third part of the paper draws on a newly collected panel dataset that includes information on the allocation of political rights within the *zemstvo*, spending and revenue decisions by district *zemstva*, and a variety of other socio-economic indicators. With these data, I explore whether the quasi-democratic structure of the *zemstvo* allowed the newly emancipated peasantry to voice their preferences over spending levels and tax rates. I find that the district *zemstvo* with greater political representation from the peasantry shifted taxes away from communal property and spent more per capita, especially on education. Several extensions investigate the channels of causality behind these main results. This study initiates a broader research agenda into the *zemstvo*'s place in Russian economic history and contributes to the literature on the political economy of public good provision in developing societies.

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JEL codes: D7, H1, H4, H7, N4, O23

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Abstract

Russia's emancipation of the serfs was accompanied by numerous others measures aimed at modernizing the Tsarist economy and society. Among these "Great Reforms" was the creation of a new institution of local government - the *zemstvo* – which has received comparatively little attention from economic historians. This quasi-democratic form of local government played an important role in expanding the provision of public goods and services in the half century leading up to the Russian Revolution. The first two parts of this paper utilizes archival records and contemporary evidence to outline the *zemstvo*'s role in Russian society and to describe its political structure. The third part of the paper draws on a newly collected panel dataset that includes information on the allocation of political rights within the *zemstvo*, spending and revenue decisions by district *zemstva*, and a variety of other socio-economic indicators. With these data, I explore whether the quasi-democratic structure of the *zemstvo* allowed the newly emancipated peasantry to voice their preferences over spending levels and tax rates. I find that the district *zemstvo* with greater political representation from the peasantry shifted taxes away from communal property and spent more per capita, especially on education. Several extensions investigate the channels of causality behind these main results. This study initiates a broader research agenda into the *zemstvo*'s place in Russian economic history and contributes to the literature on the political economy of public good provision in developing societies.

In 1864, Tsar Alexander II issued the *Statutes on Provincial and District Zemstvo Institutions* as part of a larger effort to modernize Russia following its defeat in the Crimean War.[2] This act established a new institution of local self-government – the *zemstvo* – in 34 of the 50 provinces of European Russia. The initial act required the *zemstva* (pl.) to finance other local government bodies, to manage military provisions and grain stores, and to aid in the collection of taxes for the central government.[3] In addition to these responsibilities, the founding statutes called on the *zemstva* to undertake programs to support "the local economic and welfare needs of each province."[4] Over the following half century, this mandate led to substantial *zemstvo* involvement in the expansion of rural education and health care, in the support of local artisans and craftsmen, in encouraging credit and cooperative organizations, and in providing veterinary and agronomic services to farmers. As a form of political and fiscal decentralization, the *zemstvo* reform apparently improved the provision of publically provided good and services at the local level.[5]

But what makes the *zemstvo* an especially intriguing institution is that it was set up to include specific representation from different parts of Russian society. At both the district and provincial levels, the *zemstva* were comprised of elected legislative assemblies (*sobranie*) and executive councils (*uprava*). Under the initial law, district assemblymen were to be elected by three curiae of voters: rural property owners, urban property owners, and communal peasant villages. The statutes fixed the number

[2] See *Polnoe sobranie zakonov Rossiiskoi imperii* [PSZ] (Series II, Vol. 39, 1864, No. 40457). The *zemstvo* statute was part of a sequence of reforms that dramatically altered rural Russian society and economy. These "Great Reforms" ("*Velikie reformy*") included the emancipation of the peasantry, land reforms transferring property rights to the newly freed peasants, the founding of a new State Bank, the installation of a new judicial system in the countryside, military reforms, and other changes in the state's administrative structure.

[3] In this way, the *zemstva* were a response to what one historian has called the "problem of provincial under-institutionalization" in Tsarist Russia (Robbins, *Tsar's*, p. 16).

[4] See *PSZ* (Series II, Vol. 39, 1864, No. 40457, Clause 1).

[5] A lack of data for the pre-reform period makes an explicit test of this assertion virtually impossible. However, evidence discussed below on what the *zemstvo* actually did over the post-reform period indicates that the institution was often the only actor supporting local public services. On decentralization in developing countries, see Bird and Vaillancourt, eds., *Fiscal*.

of assembly seats from each curia in each district, and these allocations varied across European Russia.[6] Overall, the new form of local government guaranteed the recently emancipated peasantry some amount of formal representation.

In this limited and local way, autocratic Russia actual did participate in the 19th century trend towards a widening of the franchise.[7] But did the particular electoral structure of the *zemstvo* have any influence on how policy was made? Under both the 1864 law and later reforms, the peasant curia was allocated a minority of assembly seats, while private landowners (predominantly the nobility) received large majorities in most districts. As a result, the nobility came to numerically dominate both the executive committees and the provincial assemblies. This led to the prevalent view among contemporaries and later scholars that the peasantry detested the *zemstvo* and saw it as simply a way for the local elite to impose their authority (and taxes). According to this interpretation, the small amount of *zemstvo* spending was primarily a bribe meant to head off social unrest at a relatively low cost and perhaps some benefit to the landed elite.[8] However, other authors have argued that the *zemstvo* served as a locus for late-Tsarist liberal opposition. In that capacity, the institution attracted participants who were particularly supportive of policies to improve conditions for the peasant majority.[9] In both of these interpretations, marginal variation in the distribution of assembly by curia should have had relatively little impact on the policies pursued by *zemstva* because private landowners – regardless of the reason

[6] These assemblymen (*glasnye*) elected the district executive boards and representatives to provincial assemblies (which then elected a provincial executive committee). As discussed further below, conservative reforms of the 1890s reduced the assembly shares of the peasant and urban curiae. However, the newly emancipated peasantry still retained seats in the *zemstvo* assemblies and the possibility of election to executive positions.

[7] The mid-19th century saw the expansion of the franchise across Europe, with associated increases in social transfers and government spending on public goods and services (Aidt et al., "Democracy"). Following a long literature in the social sciences, Acemoglu and Robinson, "Why," posit that these extensions were driven by fears of social unrest, a fear that was also alluded to in the initial discussions of the *zemstvo* reform (see below and Garmiza, *Podgotovka*). In contrast, Lizzeri and Persico, "Why," argue that Western elites extended the franchise to improve political incentives for the provision of public goods that were beneficial to non-elites *and* elites.

[8] On the *zemstvo* as a mechanism for gentry control over the peasantry, see Leroy-Bealieu, *Empire*, vol. 2. In his short story, "The Muzhiks," Anton Chekhov describes the mood of some peasants: "They accused the *Zemstvo* of everything – of [their tax] arrears, of oppression, of famines, although not one of them knew exactly what the *Zemstvo* was (p. 306)."

[9] On the *zemstvo* and Russian liberalism, especially in the 1905 Revolution and the Duma, see Emmons, *Formation*; Manning, *Crisis*; and *Zemstvo*.

for their policy preferences – typically held large majorities in the district assemblies. Therefore, did granting a small quota of seats to the peasantry possibly influence the policies pursued by the *zemstvo*?

Recently, a number of empirical studies have investigated how the outcomes of decentralizing reforms in developing economies may be affected by the structure of local political institutions. This literature finds that increasing the political voice of previously underrepresented groups (such as women, ethnic minorities, or low social classes) by changing electoral rules or installing quotas for political positions can have significant effects on the size and allocation of local public spending.[10] The impact of a decentralizing reform often depends crucially on how an increase in the nominal political voice of a group is translated into real political authority through local institutions. In the Russian case, the minority positions of the peasantry in the *zemstvo* assemblies may have created opportunities to propose policies, obtain agenda-setting executive positions, or ally with elements of the other curiae to push through spending proposals. The empirical findings in this paper are consistent with such "democratic" political channels.

Thus, studying the *zemstvo* not only sheds light on this institution's contribution to Tsarist Russia's economic development, but it offers an environment for exploring how local political structures may affect public policies. In this paper, I draw on newly collected district-level data to investigate the determinants of *zemstvo* budget patterns in the post-emancipation era. I find that relative property tax rates, total spending per capita and the allocation of funds to education, a category that was particularly important to (and demanded by) the peasant population, were positively and significantly associated with the share of legislative seats assigned to the peasant curia. To investigate whether and how these findings may be considered causal, I turn to a series of extensions: an evaluation of where the assembly seat allocations came from, tests of whether the effect is limited to "contestable" districts, a discussion

[10] Important contributions to what is a quickly growing literature include Besley et al., "Politics"; Chattopadhyay and Duflo, "Women"; and Pande, "Can Mandated," on India; Luo et al., "Elections"; and Zhang et al., "Local," on China; and Miller, "Women's," on the United States.

of the potential endogeneity of the curia seat allocations, and panel data specifications. These extensions do not overturn the general finding that the electoral structure did influence *zemstvo* policies, but they do suggest that the empirical results may be driven underlying factors that influenced the allocation of assembly seats under the initial law and later reforms.

The paper is divided into three main parts. The first provides historical background on the *zemstvo*. I describe the organizational structure of the *zemstvo* and sketch the institution's role in providing local administration and public services in late-Tsarist Russia. Following that, I utilize archival and published sources to detail the electoral structure of the *zemstvo*. The third part of the paper then studies the empirical relationship between the political structure of the *zemstvo* and budget outcomes of the institution using the new panel dataset for the period 1877-1906. A brief final section of the paper considers the implications of these findings for our understanding of Imperial Russia's economic development. I close by identifying some of the many questions about the *zemstvo* that remain to be explored.

Part 1: What was the *zemstvo*?

Before the Great Reforms, the Tsarist regime had a limited presence outside of the capital cities.[11] Only governors, small ministerial staffs, and an overstretched police force represented the state in local affairs. Little of total government revenues from head taxes (the famous soul tax), various land and property obligations (including the quit-rents paid by the state peasantry), and fees and patents on commercial and industrial activities were retained locally.[12] Substantial authority was left to the serf-

[11] For summaries of the central and provincial government structures in the pre- and post-reform period, see Hartley, "Provincial"; Shakibi, "Central"; and Starr, "Local."

[12] The Charter on Local Obligations (1851) attempted to clarify the revenue system by dividing the destination of direct taxes into state, provincial, and "particular" expenses. This had little overall effect, and local finances were viewed as deteriorating by 1861. This created incentives for the establishment of the *zemstvo* as a way to improve the funding of local government. See Atkinson, "Zemstvo," pp. 96-97; and Starr, *Decentralization*, pp. 37-44.

owning landed gentry, but they funneled few resources towards education, healthcare, transportation, or other local public goods.[13] In practice, peasant (and urban) communities possessed significant *de facto* autonomy, but limited resources and substantial collective action problems precluded large investments in public goods or services.[14] By the late 1850s, relatively few Russians attended school, rural infrastructure was appalling, and health care practically non-existent.[15] It was in this context that Alexander II convened a Special Commission on Provincial Reform, which concluded that there was a need for an "all-class" institution of local government. Coming amidst the policy discussions over peasant emancipation, the hope was that such an institution would enhance the Tsarist regime's control over local affairs, improve government revenue collection, and provide a mechanism to improve local economic conditions.[16]

[13] The assemblies of the nobility were loci for gentry power in district and provincial government. Assemblies elected representatives to serve in a variety of local government institutions, including Social Welfare Boards (*Prikazy obshchestvennogo prizreniia*) that were intended to provide local public goods and welfare services. In practice, these Boards had few resources and did relatively little. See Hamburg, *Politics*, chp. 1; and Starr, *Decentralization.* In theory, serf owners were responsible for the collection or execution of a number of "natural duties," such as labor for local roadwork, and for maintaining grain stores on their estates. In rare cases, serf owners supported schools or basic health care facilities. See Brooks, "Zemstvo," pp. 245-247; and Hoch, *Serfdom*, p. 137.

[14] Peasant and urban leaders occasionally assessed community members to provide some services, such as paying a literate villager to teach in an informal school. However, historians of serfdom have found little evidence of significant welfare or public good provision by serf communes (e.g. Dennison, "Economy"; and Hoch, *Serfdom*). The Ministry of State Domains, which administered (and collected revenues from) the state peasantry, did establish a grain storage network, founded primary and secondary schools, and organized rural health networks staffed by peasant medics. These were rather limited efforts, but they did provide examples followed by other ministries and, later, by the *zemstva*. On public good provision among the state peasants, see Ivanov, "Gosudarstvennye" – especially on grain storage; Ramer, "Zemstvo," pp. 282-285 – on healthcare; and Brooks, "Zemstvo," pp. 245-247 – on education. For discussions of urban government and public service provision, see Brower, *Russian*; and Mironov, "Bureaucratic."

[15] Private charity efforts and the Orthodox Church supported some schooling, basic medical care, and other social services, but the overall supply of these and other public goods barely increased at all in the first sixty years of the 19th century. Healthcare was limited to a few provincial hospitals and the small efforts among the state peasants. According to rough official statistics from European Russia in1866, there were 585 state supported primary schools, 1070 church parish schools (secondary and primary), and 31898 "popular" (*narodnye*) schools, which were three or four-year primary schools that often only existed on paper. These schools enrolled a total of 835,202 students. The total population of the European part of the empire was slightly more than 60 million at this time. See Russia, *Statisticheskii*, Section 1, p. 31, and Section 3, p. 58.

[16] The creation of the *zemstvo* incorporated lessons from local government reforms in France, Britain, and Prussia. See Garmiza, *Podgotovka*; and Starr, *Decentralization*.

Following an initial founding period, *zemstva* existed in 34 provinces and over 350 districts between 1882 and 1911.[17] The institution was not initially established in the western (Byelorussian) provinces, in the Baltics, in the sparsely populated far north, in the Transcaucasia region, or in Siberia and Central Asia.[18] Figure 1 shows the provinces where *zemstva* existed in 1900 (note that Olonets also possessed one). *Zemstva* were established in six Byelorussian provinces in 1911 and in three southeastern provinces in 1913. Laws promulgating provincial, district, and (new) township-level *zemstva* throughout the Empire were announced in May and June of 1917, but the institution was abolished by Soviet decree in December of 1917.

[Insert Figure 1 about here]

Throughout its existence, the *zemstvo* had two components at both the district and provincial levels: assemblies that met once or twice a year and executive boards. District assemblymen were elected in a complicated voting process among the owners of different types of property (a process outlined in detail below). At their meeting, these assemblymen voted among themselves for representatives to the provincial assembly, for the district executive boards, and for various non-*zemstvo* bodies, such as representatives to the local school council.[19] The executive boards carried out the day-to-day functioning of the *zemstvo* and set the agendas for the assembly meetings.[20] These meetings – which

[17] European Russia had 50 provinces and slightly more than 500 districts. The original statutes (*PSZ*, Series II, vol. 39, 1864, no. 40457, prologue) established *zemstva* in 33 provinces and the Don Cossack region, but the institution never opened in Orenburg and was eliminated in the Don in 1882. *Zemstva* were soon established in Bessarabia (1869 – except for one district that never received one) and Ufa (1875 – carved out of Orenburg province).

[18] These provinces did not receive *zemstva*, either because special governing bodies already existed (military authorities in the southeast), or because no amount of electoral rigging could guarantee that an Orthodox Russian elite (non-peasant) would maintain control. The power of the German gentry was feared in the Baltic provinces, while Polish landowners and the Jewish population worried authorities in the Byelorussian provinces and Right-Bank Ukraine. See McKenzie, "Zemstvo"; and Weeks, *Nation*.

[19] Representation in the provincial *zemstvo* assembly was proportional to the size of each district's assembly (*PSZ*, Series II, vol. 39, no. 40457, clause 52). Provincial assemblies elected their boards in a similar fashion. All executive positions were for three-year terms and were subject to ratification by the provincial governor or officials from the Ministry of Internal Affairs.

[20] Much of the actual work of the *zemstvo* was carried out by standing sub-committees or specially elected commissions that met outside of the general meeting. Especially important were preparatory committees, which were elected and then met concurrently with the assemblies. These committees considered details of how to execute proposals in the face of budget

lasted for up to two weeks by the 1910s – heard reports on dozens of large and small issues, granted or denied funding to ongoing or proposed projects, and approved the proposed budget for the coming year.[21] Clause 89 of the 1864 law required open, majority voting on any agenda item in the assembly meetings, with ties broken by assembly chairmen.[22] Once budgets were approved by the assemblies and certified by provincial and ministerial authorities, *zemstvo* executive boards and special commissions executed planned expenditures through contracts sold at public auctions, by commissioning specialists to manage projects, or by directly employing workers.[23]

Any assemblyman could propose new projects or amendments to existing programs, but such initiatives had to fall under the *zemstvo*'s statute responsibilities.[24] Clause 2 of the 1864 law outlined fourteen functions of the new institution, divided into two categories: obligatory and non-obligatory.[25] The former included provisioning troops and funding local courts and other administrative bodies. The

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constraints. Their recommendations were voted on by the assembly, and plans were then passed on to the executive boards or other special commissions for execution.

[21] Boards were required to produce summary reports and accounting materials for the assembly meetings. These described ongoing projects, issues carried over from previous meetings, and budget estimates for the next year. Clause 71 of the 1864 statutes mandated that each *zemstvo* elect auditing commissions to check the proposed and executed budgets. On the structure of *zemstvo* meetings and the ratification process, see *PSZ*, Series II, vol. 39, no. 40457, clauses 56, 71, and 81-87.

[22] See *PSZ*, Series II, vol. 39, no. 40457, clauses 88 and 89. Open voting did not automatically generate unanimity. For example, in balloting for the 1874 *zemstvo* executive board in Byiskii district of Kostroma province, no candidate was unanimously approved and three were voted down by the assembly (*Zhurnaly Byiskago*, p. 11). Voting was done under closed balloting when the issues involved the firing of *zemstvo* executives or the ratification of complaints against assemblymen or board members.

[23] See *PSZ*, Series II, vol. 39, no. 40457, clauses 60 and 102-107. Public procurement auctions were to be organized by the executive boards (Clause 104). Contracts for road work were frequently made with construction or maintenance crews to carry out specific projects. With school-building and upkeep, the district *zemstvo* typically allocated funds to community leaders or the local school council. Teachers, veterinarians, agronomists, and medical care provider were often directly paid salaries as formal employees of the *zemstvo*. Some provincial *zemstva* had thousands of employees by the early 20th century.

[24] In Buiskii district in 1874, the assembly heard spending proposals from peasant township administrators, individual assemblymen, representatives of the Ministry of Internal Affairs, and the preparatory commission nominated at the beginning of the year's assembly. The executive board also had to report on how each item from the previous year's agenda was executed. See *Zhurnaly Byiskago*. Although Clause 83 of the 1864 law allowed any private citizen to propose a topic for discussion at a *zemstvo* assembly meeting, a reading of various *zemstvo* meeting minutes suggests that most outsider proposals were channeled through sitting assemblymen.

[25] These fourteen objectives were: oversight of *zemstvo* property and assets, maintenance of *zemstvo* property, public food security, management of charitable and social welfare programs, administration of property insurance, the development of local trade and industry, oversight and support of public education and health (and prisons), measures against livestock disease and crop damage from insects, collection of other state taxes, setting and collecting additional taxes for local needs, transfer of information and petitions regarding local needs to higher authorities, holding elections for local government institutions and financing these bodies, and other matters imposed by future legislation (*PSZ*, Series II, vol. 39, no. 40457, clause 2). Other laws flushed out details of these duties. See Veselovskii, *Istoriia,* vol. 1.

zemstvo was also made responsible for allocating central government tax obligations among district residents and property owners, although the actual collection of revenues remained the duty of the local police. Non-obligatory functions included a variety of services, such as schooling, public health, and agronomy – anything supporting "the local economic and welfare needs of each province."[26] Reforms in the decades after 1864 shifted some obligatory responsibilities to central ministries while detailing the scope of *zemstvo* activity in the non-obligatory categories.[27]

Despite the broad mandate, various measures were put in place that restricted the autonomy of the *zemstvo*. All budgets and programs approved by both provincial and district assemblies had to be forwarded to the governor (or sometimes the Ministry of Internal Affairs) for final ratification. The governor was endowed with veto rights, which he could employ if *zemstvo* plans violated the law, if they were financially unsound, or if they impinged upon another government agency. Under the 1890 reform (discussed more below), the external veto rights were strengthened further, and additional oversight was imposed on *zemstvo* decisions.[28] While responsibilities and revenues were divided between the province and district *zemstva* (often to take spillovers into account), provincial assemblies could disallow district-level initiatives that impinged on provincial or state interests.[29] Finally,

[26] See *PSZ*, Series II, vol. 39, no. 40457, clause 1.
[27] For example, an 1895 road law freed district *zemstvo* from obligatory expenditures on road upkeep, and the military reform of 1874 ended *zemstvo* responsibilities for quartering troops (although not for providing provisions). These were two types of *zemstvo* obligations descended from a set of pre-reform *zemskie povinnosti*, or rural obligations, which had long been imposed on the rural population.
[28] The 1864 law set up a system of appeal in the event that the provincial governor vetoed some budgetary item or planned program that the *zemstvo* thought particularly worth keeping. See *PSZ*, Series II, vol. 39, no. 40457, clauses 90-91 and 94-98. Clause 87 of the 1890 reform law strengthened the governor's position by allowing him to veto *zemstvo* activities if he found them not "useful" or against the interests of the local population. The 1890 law allowed the *zemstvo* to appeal decisions by the governor to the Senate, but it also gave private citizens the right to file suit against *zemstvo* actions. The reform also established Provincial Offices on *Zemstvo* Affairs under the Ministry of the Interior in order to monitor *zemstvo* activities. For additional discussion of these issues, see Fallows, "Zemstvo"; McKenzie, "Zemstvo"; Pearson, *Russian*; and Zakharova, *Zemskaia*.
[29] The division of labor between district and provincial *zemstva* was spelled out in Clauses 62 and 64. Provincial hospitals, agronomy training, highway maintenance, and trade fairs impacted multiple districts and so fell under the supervision of the provincial *zemstvo*. The district *zemstva* were responsible for all explicitly local affairs, especially in the allocation of funds to primary schooling and rural health providers. Clause 66 gave the provincial assembly the right to issue directives to the districts. For more on the breakdown of provincial and district *zemstvo* activities, see McKenzie, "Zemstvo"; and Veselovskii, *Istoriia*.

legislation throughout the period strictly limited *zemstvo* cooperation across provinces due to Tsarist fears of coordinated political opposition.[30]

[Insert Table 1 about here]

Despite these limitations, the creation of the *zemstvo* was a considerable decentralization of Tsarist policy making that provided a mechanism for funding public goods and services.[31] Table 1 summarizes expenditures (provincial and district) for all *zemstva* in benchmark years (revenues are discussed below).[32] Over the period, total real per capita *zemstvo* expenditures levels increased by approximately 500% from 0.5 to 2.8 rubles.[33] Expenditures per capita showed considerable geographical variation, ranging from less than 18 kopeks per capita in Tul'a to over 2.3 rubles per capita in St. Petersburg province in 1877. In 1903, the range was 1 ruble (Penza) to over 4.3 rubles per capita (Olonets). Some of the high-expenditure provinces such as Olonets were economic backwaters, while a number of richer provinces like Voronezh had *zemstva* that spent relatively little.[34]

[Insert Figure 2 about here]

Figure 2 decomposes budgeted district and provincial *zemstvo* expenditures for 1903. Besides administrative expenses, the *zemstva* supported road construction and maintenance, grain storage,

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[30] It was only with the onset of World War I that serious discussion of a Russia-wide *zemstvo* system began. Such a structure was implemented in a limited way (including the creation of a new township-level *zemstvo*) in 1917.

[31] Various measures (including the 1890 reform) slowly expanded the *zemstvo*'s right to make its programs and policy decisions binding for the local population (subject to approval by the governor's office), although police powers were never granted to enforce this authority.

[32] In compiling Table 1, I drew on a number of sources on *zemstvo* expenditures and revenues. In a pioneering work of history, Veselovskii, *Istoriia*, provides several cross-sections of budget information and measures of the impact of *zemstvo* spending. For 1903, Veselovskii relied on a comprehensive compilation of *zemstvo* budget data. This source – Russia, *Dokhody i Raskhody* – offers detailed information on revenues and expenditures from all *zemstvo* in 1903, 1906, 1910, 1911, and 1913. These and other sources usually (but not always) distinguish between planned budgets (*smety*) and actually collected revenues (*postuplenie sbory*) or completed expenditures (*raskhody*). Whenever possible in the analysis below, I note the type of budget data under consideration.

[33] For this calculation, see the note accompanying Table 1. Over time, there was some increase in provincial expenditures as a share of overall expenditures. In 1903, provincial *zemstva* spent an average of 57 kopeks (100 to a ruble) per person, versus a mean of 1.19 rubles by the districts. The corresponding averages (unweighted by population) were 16 and 62 kopeks in 1877. Thus, provincial *zemstvo* spent 20.9% of total expenditures in 1877 and 32.3% in 1903 (this latter number differs slightly from Veselovskii's – see *Istoriia,* vol. 1, p. 27). The correlation coefficient between provincial and (total) district spending in 1903 was 0.64.

[34] In 1900, per capita income was roughly 100 rubles. See Gregory, *Before Command*, chp. 2.

agronomy/veterinary extension, and a variety of other economic measures.[35] The *zemstva* spent more on healthcare than any other category – 32% of district and 28% of provincial expenditures – with much of the latter concentrated in urban areas. This spending included preventative measures, like vaccinations and the monitoring of diseases, and curative efforts, such as hospitals, traveling doctors, and rural *feldshers,* or trained medics.[36] Primary education was the other large recipient of district *zemstvo* spending, while significant provincial *zemstvo* funds went towards teacher training and secondary schools. Although the management of schools was typically left to school district officials, the *zemstvo* supported school construction, paid for books and supplies, and (especially) provided teacher salaries.[37] Between 1877 and 1898, the total population served by a *zemstvo*-funded school fell by approximately 15%, from 5346 to 4660 people per school in the provinces where the institution existed.[38] Overall, the share of *zemstvo* expenditures going towards education and healthcare rose from about 18% in 1871 to

[35] Administrative costs were significant for both levels of the *zemstvo* in 1903, but this category was declining as a share of all expenditures over time. District *zemstva* could borrow from the state treasury, private individuals, capital reserves, or even the provincial *zemstva*. Payments on all types of debt obligations averaged below 10% of all expenditures in 1903 but remained 7.2% of the 286 million rubles total (district + provincial) expenditures in 1913. Education (30.7%), healthcare (24.6%), *zemstvo* administrative costs (7.8%), and various economic development initiatives (7.4%) were the other large expenditure categories in 1913. See the 1915 volume of Russia, *Dokhody*. While the breakdown of spending for 1903 is presented in Figure 2, and broader trends are indicated in Table 1, detailed data for other years are available upon request.

[36] The resulting expansion of healthcare in the provinces with *zemstvo* was significant, although the overall level of services remained low. Growing district *zemstvo* medical employment helped improved coverage in the 34 provinces from 95,000 people per doctor in 1870 to 28,000 per doctor in 1910. These numbers are taken from Ramer, "Zemstvo," Table 8.1, which cites research by Z.G. Frenkel; and Frieden, "Politics." Although fees were accepted for treatments and hospital stays in some districts, most healthcare was provided for free. This was deemed necessary given rural poverty and the need to assuage fears regarding modern medicine. The growing role of the *zemstva* in the provision of health care was reinforced by laws of 1879 and 1890, which gave *zemstva* the power to pass sanitation laws and inspect health conditions in factories and urban areas. Overall, according to historians of 19th-century Russian medicine, the reputation of *zemstvo* healthcare was very high by the end of the period. See Frieden, "Physicians"; Krug, "Debate"; and Veselovskii, *Istoriia*, vol. 1, pp. 267-446.

[37] Primary school legislation in May, 1874 revised the system of rural education to increase direct *zemstvo* involvement in the district school councils and to allow *zemstvo* funds to be used to finance existing schools or build new ones (Brooks, "Zemstvo," pp. 250-255). For more on the *zemstvo*'s role in rural primary education, see Nafziger, "Financing."

[38] These numbers are derived from Veselovskii, *Istoriia*, vol. 1, Appendix, and various population sources (see the Appendix Table). According to Eklof (*Peasant*, Table 13), primary schooling in the empire improved from 1 per 7762 people in 1856 to 1 per 1499 people in 1911. Enrollment statistics were also better in *zemstvo* provinces: by 1911, 53% of 8 to 11 year-olds were enrolled in the thirty-four *zemstvo* provinces, as opposed to 44.2% over the entire empire (ibid., Table 12). Although Eklof asserts that the *zemstvo* played a relatively "meager" role in the expansion of rural education before the 1890s (and argues that the expansion was mostly a formalization of peasant-initiated schools), his argument ignores the institution's role in solving local collective action problems in order to mobilize resources for schools of all types. See Nafziger, "Financing."

over 63% in 1913.[39] At the same time, although central government spending far exceeded what can be attributed to the *zemstva*, basic public services other than defense received relatively little from the ministries before the 1900s.[40] Thus, the new institutions of local government played a key role in the provision of local public services in the late 19th century.

[Insert Table 2 about here]

In terms of revenues, *zemstva* collected payments for trade and commercial rights, for renting out *zemstvo*-owned property, for issuing passports, and for various goods and services, such as seed grain.[41] But as Table 1 indicates, the majority of *zemstvo* revenues were generated by property taxes imposed on land, urban structures, and various forms of "immovable" capital.[42] Tax rates were supposed to be functions of yearly property income but *not* who owned the property (Clause 92). Provincial and district assemblies had the right to set their own rates, and these rates could be adjusted to reflect changes in assessment rules or in the value of taxable property.[43] Table 2 provides evidence that peasant communal

[39] Healthcare and education were 8.6 and 4.9% of *zemstvo* expenditures in 1868, before many obligatory responsibilities were shifted to the central government. See Karavaev, "Zemskiia," pp. 167-170.

[40] In 1903, approximately 1.5% of central government expenditures (39.4 million of roughly 2 billion rubles) went to the Ministry of Education, but only a small percentage of this – perhaps 20% at most – was allocated to primary schooling. Practically nothing was formally budgeted for healthcare. Between 1903 and 1913, central government spending on education and healthcare rose to more than 4% of the state's budget, as the regime became increasingly active in the promotion of education. See the data and discussions in Eklof, *Russian*; Gregory, *Russian*; Lokot, *Biudzhetnaia*; and Russia, *Sbornik*, 1887 and 1890. The state was also financially involved in railways and communication infrastructure, but little of this went towards local networks. Municipalities and charities did provide some funding for schools and hospitals throughout the period. After 1870, urban governments possessed similar rights to tax property in order to fund municipal services.

[41] Revenues were also generated from renting *zemstvo* property and from interest payments on various assets and accounts (for example, *zemstvo* bank accounts, funds held as "road capital", and funds held as part of the food security system). The 1864 law had transferred a number of existing *zemskie sbory* (rural collections, which included military provisions in kind, payments to grain stores, and labor services for local infrastructure repair) to the new institution. As noted above, these were meant to fund obligatory responsibilities.

[42] The 1864 law made the district *zemstva* responsible for distributing all central and provincial government obligations to different groups in their jurisdictions (Clause 64). Revenue collection was undertaken by the local police and peasant officials, although the Senate forbade *zemstva* from awarding police for their efforts. Collected fees and taxes were to be submitted to district treasuries, which forwarded on the revenues claimed by the central government and held onto to *zemstvo* funds until a ratified budget authorized their expenditure. Under an 1867 law, the *zemstvo* was only guaranteed 12% of local tax collections unless all other claimants were satisfied. This 12% approximated the *zemstvo*'s share of all receipts at that time, but the *zemstvo*'s needs outgrew this percentage over time. In 1903, the *zemstvo* was made the first claimant on all direct taxes. See Veselovskii, *Istoriia*, vol. 1, pp. 190-193. *Zemstva* assemblies could impose fines for non-payment of taxes and fees, but collecting these was costly.

[43] See *PSZ*, Series II, vol. 39, no. 40457, clauses 68, 70, and 90-92. Overall, the 1864 law imposed few rules on *zemstvo* property taxes, but supplementary rules issued at the time did specify several particulars (such as the rule that land taxes

land – the land received in the emancipation settlements – was taxed at a higher rate than privately owned land throughout the period. Across districts in 1890, peasants paid about 4 kopeks more per *desiatina* (2.7 acres) than did private landowners. Despite the fact that former serfs often received the worst of estate land in the emancipation settlements, this gap persisted through 1913.[44] Finally, although year-to-year arrears in local revenue collection were often substantial, intra-governmental transfers and borrowing apparently kept most *zemstva* solvent.[45]

Part 2: The Political Economy of the *Zemstvo*

In reviewing *zemstvo* activities over the previous twenty-five years, the law department of the Russian state council argued in 1889 that, "there can be little doubt that the calling of local elected people to lead local matters has significantly improved provincial life and led to the wide satisfaction of the demands of the local population."[46] While the *zemstvo* apparently was a significant source of funding and organization for the provision of rural public services, did this have anything to do with the way the institution "called" on the local population, especially the majority who were peasants?[47] The *zemstvo* constituted a form of political and fiscal decentralization. Such a reform may improve the provision of public goods and services because local politicians have better information regarding local

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could only be levied on *udobnaya*, or utilizable, land). These supplementary tax rules (*PSZ*, Series II, vol. 39, no. 40458) were meant to be temporary, but most remained in effect into the twentieth century (Atkinson, 1982, p. 97). A few rulings from the central government tinkered did tinker with the *zemstvo*'s fiscal authority. For example, a law of November 1866 prohibited the *zemstvo* from directly taxing industrial production or "turnover. See Atkinson, "Zemstvo," pp. 99-101; and Fallows, "Zemstvo," p. 206). In 1900, *zemstva* were limited to annual increases in property taxes of at most 3% (McKenzie, "Zemstvo," p. 46). Throughout the period, *zemstva* engaged in research programs to assess local property values.

[44] Atkinson notes that peasant land was typically classified as higher quality, while she and Fallows both describe examples of peasant protests over *zemstvo* taxes. Overall, land tax rates ranged from 2 to 29% of the value of yearly output across districts at the turn of the century (Atkinson, "Zemstvo," p. 103).

[45] On financial constraints facing *zemstva*, see Veselovskii, *Istoriia*, vol. 1. Assembly meeting minutes contain numerous debates over outstanding or potential loans from financial institutions, other *zemstvo*, and private citizens. For some examples of these, see the collected accounts of Elisavetgradskii district *zemstvo* in Kherson province, which borrowed hundreds of thousands of rubles in the 1880s and 1890s (Borisov, ed., *Sistematicheskii*, pp. 172-174). The Ministry of the Interior had final approval of loans for more than two years of tax revenues (*PSZ*, Series II, vol. 39, no. 40457, clause 92).

[46] Cited in Zakharova, *Zemskaia*, p. 142).

[47] Atkinson, "Zemstvo," p. 115, asserts that, "on the whole the role of the peasants in the *zemstvos* appears to have been quite limited." This is also the conclusion of Eklof, *Russian*; and many contemporary writers.

population preferences and can use this to improve targeting or elicit greater contributions.[48] However, such benefits will only matter if local political institutions make politicians *accountable* for their decisions. If local authorities are simply appointed or face no mechanisms holding them responsible for their policies, then decentralization could result in corruption or a takeover of the local public sector by an elite minority. This implies that the characteristics of local elections and legislative bodies matter crucially for whether decentralizing reforms avoid "capture."[49] This section outlines the electoral system of the *zemstvo* and describes how the political structure may have influenced revenue and expenditure policies.

According to the 1864 statutes, each district assembly was to include between 10 and 100 representatives elected by three electoral curiae for three-year terms. The first curia was comprised of rural property owners with at least a minimum amount of private property (either land or other forms of "immovable property").[50] The second curia included district residents holding urban property of at least a minimum size or value.[51] Eligible voters in the first two curiae directed elected representatives to the district assemblies at primary meetings, where potential assemblymen were nominated by those in attendance.[52] The third curia was made of representatives from the peasant communities of the district.

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[48] For example, see Alderman, "Local"; and Faguet, "Does Decentralization." There are other reasons decentralization may improve public sector efficiency, such as the creation of more homogenous constituencies that can more easily coalesce around a particular policy.

[49] On the local capture of public projects by elites, see Bardhan and Mookerjee, "Decentralisation."

[50] The minimum land holdings ranged from 200 to 800 *desiatina* (1 *desiatina* = 2.7 acres), depending on the district. Rural industrial property (worth at least 15,000 rubles or with 6,000 rubles of yearly production) could be substituted for land in determining eligibility to vote.

[51] This minimum value was 500 to 6000 rubles, depending on the location and type of property. For the breakdown of required property holdings by district for the first two curiae, see *PSZ*, Series II, vol. 39, no. 40457, Appendix. District *zemstvo* executive boards finalized the lists of eligible voters in the first two curiae by early spring of an election year. The law restricted eligibility for voting (and for election) in all curiae primaries to males older than 25, although women and younger property holders could name proxies to vote in their place.

[52] In each of the first two curiae, property holders with less than the full requirement could pool together to elect representatives to attend the primary elections. In all three curia primaries, the assembly representatives were chosen by closed balloting. After the curia primaries, the final lists of representatives were sent to the sitting *zemstvo* boards for verification and on to the provincial governors for ratification. The *zemstvo* electoral procedures are outlined in the original statute and in *PSZ*, Series II, vol. 39, no. 40934, with additional commentary and refinements collected in Obchinnikov, *Zakony*. Engelgardt, *Letters*, pp. 49-50, provides a fascinating description of a 1st curia primary in Smolensk province, where the main activity was apparently eating and drinking.

Each community sent members (representing roughly 10 households each) to township meetings that chose electors for district primaries.[53] The date and location of all primary meetings were announced in provincial newspapers and communicated to peasant community leaders, although there is little evidence of active campaigning or election platforms.[54]

While the 1st and 2nd curiae could only elect representatives who were eligible to vote in their respective primaries, the 3rd curia could (and did) elect assemblymen from the other curiae.[55] Moreover, representatives from the 3rd curia were always subject to central government approval. With relatively high travel and communication costs, the final 3rd curia representatives were possibly quite distant – physically and politically – from their peasant constituents. This may have limited political accountability and allowed local elites to co-opt the peasant electoral process for their own purposes.[56] If the 3rd curia's assemblymen were unwilling or unable to represent the preferences of their

[53] In the reforms of the 1860s, most Russian peasants received property rights and associated obligations as members of *sel'skie obshchestva*, or rural societies, which were newly created administrative communes. The councils, or *skhody*, of these communes elected representatives to attend the township sub-primaries (townships were a level of government lying between the village and the district). Archival evidence on the 3rd curia elections in 1886 from Semenov district of Nizhnii Novgorod province describes how these township meetings elected a set number of voters (vyborshchiki) for three primary meetings located in separate parts of the district. These meetings each chose part (5, 3, and 4) of the statute number of 3rd curia assemblymen (12 in this case). See *Central Archive of Nizhegorodskii Oblast'* (TsANO), *fond* 51, *opis'* 251, *delo* 240, *listi* 113-125.

[54] Party platforms and contested elections are requirements of most models of electoral competition (see Persson and Tabellini, *Political*). While the archival records of the district *zemstva* and other local authorities in Nizhnii Novgorod province contain many communications about the management of elections, I have not found any mention of campaigning. Despite absenteeism among all curiae during assembly meetings, Fallows, "Zemstvo," p. 201, does assert that, "electoral disputes demonstrate that *zemstvo* elections could still be hotly contested."

[55] See *PSZ*, Series II, vol. 39, no. 40457, clause 35. According to Mamulova, "Sotsial'nyi," the percentage of peasant private landowners elected by the 1st curia increased from 5.6% to 7.2% between 1865 and 1886 in the 24 provinces for which comparable data are available.

[56] As assemblymen were not paid salaries, it was likely the case that only better-off peasants could afford to participate. Throughout the existence of the *zemstvo*, the issue of funding attendance at the yearly meetings was constantly debated. At the initial meeting of the Semenov district meeting in 1865, the suggestion was made to provide 200 rubles for supporting attendance (TsANO, 42.240.728.7). In 1907, an article in the *Nizhegorodskaia zemskaia gazeta*, the newspaper of the Nizhnii Novgorod *zemstvo*, noted that peasant township authorities should provide resources to enable assembly attendance. See "*Zemskie*," p. 480. The *zemstvo* laws did require the publication of meeting minutes, yearly budgets, and other reports. Provincial and *zemstvo* newspapers actively covered the institution's activities and budgets, but it is unclear how widely these were disseminated among the peasantry.

constituents, then the *zemstvo* would not have been responsive to specifically peasant demands for public goods and services.[57]

In each district, the three curiae elected a specific number of assemblymen according to the "number of landowners, the size of arable lands they own, population of the towns, number and value of urban properties, number of townships, rural population, and the amount of land in possession of the rural communities."[58] In this way, representation was intended to reflect each curia's relative contribution to *zemstvo* revenues and their economic interest in local affairs.[59] However, even though the peasantry was over 85% of the rural population in European Russia and contributed the majority of local taxes, policymakers explicitly argued that peasant illiteracy and political inexperience required them to weigh the seat allocation towards the 1st curia, where the landed nobility predominated.[60] The first row of Table 3 (Part A) summarizes the resulting 1864 statute seat allocation. On average, the 1st curia assemblymen were the most numerous and when combined with the 2nd curia formed an overall majority in 322 of the 359 districts. The 3rd curia had a plurality in 73 districts and an absolute majority in 18 of those where eligible voters in the first two curiae were few.

Significant changes in the *zemstvo* political structure were enacted in 1890.[61] *Zemstvo* assembly and executive board decisions were subjected to increased oversight by external authorities.[62] But it was

[57] According to a contemporary observer of the Viatka province *zemstvo*, peasant assembly members, "[were] not ordinary peasants, but commercial and industrial ones, well-to-do, literate, and so on" (quoted in Pape, "'Peasant'," p. 509). In a speech to the Riazan provincial zemstvo meeting in 1879, the assemblyman A.I. Koshelev stated that, "I know how strongly outside influences press upon our peasants and how few assemblymen actually represent the social views and interests of the majority of the peasants" (quoted in Gradovskii, "Krest'ianskie").
[58] See *PSZ*, Series II, vol. 39, no. 40457, clause 33. Central government agencies with property (including the Tsar's personal property office) and specific interests in *zemstvo* activities were also allotted representation (ibid, clauses 40 and 55).
[59] According to an early proposal for the *zemstvo* reform, the level of participation ("*uchastie*") in the *zemstvo* was to be "proportional to the level of participation in its interests." See Russia, Khoziaistvennyi, *Materialy*, vol. 1, p. 149.
[60] Despite the assertion that representation was to be tied to contributions, members of the Commission on Provincial and District Institutions also argued that the allocation of seats had to favor the "class that is more educated and advanced, with greater understanding of political rights and some experience in civil life" (quote is from ibid, p. 159).
[61] This 1890 law (*PSZ,* series III, vol. 10, no. 6927) was part of the series of conservative reforms enacted under Tsar Alexander III. On the reform and the changes it entailed for the *zemstvo*, see Pearson, *Russian*; and Zakharova, *Zemskaia*.

the allocation of assembly seats that saw the most substantive changes. In 1889, the Ministry of Internal Affairs generated statistical data on the numbers of eligible voters by curiae in each district and noted how those numbers would translate into assembly seats according to a working *zemstvo* reform proposal.[63] Rather than group the electorate purely by the type of property ownership, these data outlined the number of eligible nobility, non-noble property owners, and peasants. The notes to this source point out that the proposed reform would allocate one seat per 20 fully qualifying voters in the "noble" and "non-noble" curiae, and one seat per 4000 peasants in the 3rd curia. Across the 34 provinces, the proposed allocation would have reduced the number of districts assembly seats to 8895, with 4182 (47%) from the nobility, 1367 (15%) from the non-noble private property owners, and 3346 (38%) from the peasantry.

The actual statutes issued in 1890 echoes the reform proposal as presented in the Ministry's data. Under the new law, the 1st curia electorate was restricted to the nobility, while all other private property holders (urban and rural) were placed in the 2nd curia. Peasants could only participate in the 2nd curia if they had separated from their community (and were no longer liable for a share of the community's tax and land obligations).[64] After the reform, provincial governors were required to pick assemblymen of the 3rd curia from a list of candidates proposed in the township meetings, rather than just certify those elected in the curia primary.[65] And finally, the 1890 reform did revise the legal allocation of assembly

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[62] Governors were also granted more authority to intervene in *zemstvo* budgets, policies, and internal issues. In addition, a new provincial-level supervisory body was created (the *Gubernskii po zemskim i gorodskim delam prisutstvii*) to monitor *zemstvo* activities and coordinate the institution's relationship with the ministries and other local government bodies.

[63] Reform proposals are mentioned in Pearson, *Russian*; and Zakharova, *Zemskaia*; but these studies provide few details. These electoral data, which derive from the mid and late 1880s, come from published and unpublished sources collected by the Central Statistical Committee of the Ministry of Internal Affairs and published in Russia, Tsentral'nyi, *Statisticheskiia* (1889). I found this source in the Russian National Library and have never seen it mentioned in the literature on the *zemstvo*.

[64] This rule limiting peasant property holder participation in 2nd curia primaries was apparently followed. For example, in Makar'ev district of Nizhnii Novgorod province, roughly 60 individuals had enough to property to qualify them to participate in the 2nd curia primary, and 38 of these were simply described as "peasants." However, when the list of possible voters was compiled, 24 were noted, but none of them were peasants. See TsANO, 50.247.1152.7-8 *ob.* and 34-63.

[65] In practice, this meant that the governors often selected the 3rd curia assemblymen recommended by the sitting executive boards or by district land captains (non-peasant local authorities established under an 1889 law). For example, the chairman of the Makar'ev district executive board (who was also the marshal of the district nobility) reported who he thought were the

seats by shifting electoral weight away from the 3rd and toward the 1st curia.[66] As Table 3 (Panel A) indicates, the statute number of assemblymen fell from 13,196 in the district *zemstva* (2284 in provincial assemblies) to 10,236 (1618), with most of the reduction coming from the 3rd curia's share. As a result, the 3rd curia lost more seats than the reform proposal had suggested.[67] The peasantry was left with a plurality in only 41 districts and a majority in 26 of these.

[Insert Table 3, Parts A and B, about here]

Panel B of Table 3 summarizes data from three *zemstvo* elections showing that the number of peasants *actually* elected to the district assemblies closely corresponded to the number of seats legally allocated to the 3rd curia and fell with the passage of the 1890 law. This underrepresentation translated into even lower shares of executive board positions.[68] For the 1883 election, for which these data are available for all districts, the peasants were the majority of sitting assemblymen in only 11 districts.[69]

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seven best candidates for the 3rd curia assemblymen in a letter to the governor in late July, 1892. The governor then chose the first five from the list of those candidates (TsANO, 72.20.29.12-14). In Ardatov district in 1898, a land captain refused to recommend one of the candidates because he was illiterate, while another was noted to be "literate, honorable, interested in social matters, and is worthy to be a representative." See TsANO, 72.20.33.3-5. In 1906, the direct election of 3rd curia assemblymen was reinstated, and representatives from each township met to elect (from among themselves) the assigned number beginning with the election of 1907. See *PSZ*, Series III, vol. 26, no. 28392, for the law and TsANO, 51.251.590, for a description of how the post-1907 new system worked in practice.

[66] In many districts, the law reduced the minimum size of land-holdings needed for voting privileges in the 1st curia in an effort to involve a greater portion of the shrinking number of land-owning nobility. By the mid-1880s, peasants comprised approximately 9.3% of the qualified property owners for the 1st curia across European Russia (Syrnev, ed., *Statistika*, Table XII). Only a small percentage of these peasants likely had forgone their assigned membership in rural communities to vote in the 2nd curia. The new law also placed limitations on the participation of other groups such as Jews and the clergy, even if they fulfilled the property qualifications. See McKenzie, "Zemstvo," pp. 41-44; and Zakharova, *Zemskaia*, on the shift from property to class as a basis for the *zemstvo* electoral structure.

[67] This may have been due to a final lowering of the property *tsenz*, which would have increased the corresponding number of voters in the first and second curia. Indeed, the mean 1st curia *tsenz* fell from 263.8 to 242.7 *desiatina* with the reform. See the appendices to the two relevant laws in the *Polnoe sobranie zakonov*.

[68] This is unsurprising since assemblies elected executive boards. Note that the correlation between the 3rd curia share under the 1864 law and the share of executive board positions held by the peasantry was 0.31 in 1883 (0.29 for the share of provincial assembly seats). Assemblymen did not always choose board members from among themselves. In 1907, the Semenov district assembly of Nizhnii Novgorod province selected a peasant who had been a board member since 1906 but was not a current assemblyman (TsANO, 51.251.590.138-141).

[69] However, only 4 of these were among the 18 districts that had a statute 3rd curia majority. The 1883 data also show that peasants were elected as 86% of the assemblymen from the 3rd curia. In contrast, they were only 9% (8%) of the eligible voters and 7% (0.9%) of the elected assemblymen in the 1st (2nd) curia primaries that year. Thus, the 3rd curia assemblymen can be treated as at least the nominal representatives of the peasantry. When it came to elections to the provincial assemblies, the peasantry only supplied 8.9% of the assemblymen in the 34 provinces in 1883.

Thus, the statute bias against the peasant population majority translated into minority political positions in almost all districts.

This mattered because *zemstvo* assembly decisions were taken by majority voting. Assembly minutes do indicate that many votes were contested, with proposals voted down or narrowly passing.[70] But since the 1st and 2nd curiae possessed outsized electoral weight, in theory they could overcome the 3rd curia on any issue, including internal elections for executive board positions. A simple median voter model would suggest that peasant preferences likely had little direct influence on policy formulation. However, if curia representation did express specifically "peasant" preferences, any association between the share of 3rd curia seats and budget outcomes should be more evident in those districts that were "contestable" – i.e. where small changes in assembly composition could shift the identity of the pivotal voter (assemblyman). This idea forms the basis of one of the empirical tests below.

Although assemblies were seen by contemporaries as the democratic heart of the *zemstvo*, much of the institution's actual policymaking was undertaken by the executive boards. These boards held the agenda setting power for assembly meetings and were important participants (along with specially elected commissions) in the budgeting process.[71] In environments with imperfect electoral processes, the identities of local executive authorities have been found to significantly affect the provisioning of public goods and services. The reforms in India mandated that a share of local council leadership positions be set aside for women, lower castes, and minority tribal groups. Those districts where

[70] Examples of close votes are plentiful within each *zemstvo*'s published accounts. An illuminating case occurred in the Semenov district (Nizhnii Novgorod province) assembly meeting of 1873, where the assemblymen voted 15-7 to dock the pay of the executive board while an investigation into their negligent management of the *zemstvo* was ongoing. See TsANO, 51.251.93.30.

[71] Cox, "Organization," summarizes the literature on agenda-setting, noting that the structure of agenda power can have dramatic effects on policy outcomes. *Zemstvo* executive board members were paid substantial salaries and received other perks (pensions, travel budgets, etc.), all of which were supposed to be set by the assemblies (*PSZ*, series II, vol. 39, no. 40457, clause 49). Defining these benefits took up large parts of early assembly meetings (for the long discussion by Nizhnii Novgorod's provincial *zemstvo* in 1865, see TsANO, 42.240.728.7-8). In contrast, not only were assemblymen unpaid, but they were explicitly prohibited from using their positions to "gain occupational advantages or salaries" (*PSZ*, series II, vol. 39, no. 40457, clause 39).

previously underrepresented (and poorer) populations received executive positions exhibited not only greater transfers to such groups but also had higher overall levels of public investment.[72] Such assignments of positions did not occur in the Russian case, but some peasants were elected to the executive boards (Table 3, Panel B).[73] Perhaps it was these positions, rather than 3rd curia assembly seats, that allowed peasant preferences over *zemstvo* budgets to be translated into policy.

Moreover, there are reasons to think that 3rd curia representation of peasant interests might have influenced *zemstvo* policy outcomes, despite the minority position, limited accountability of assemblymen, or attainment of relatively few executive positions. Recent research on Indian legislative reforms has shown that increasing the representation of a minority group, even if it does not result in a majority position, can influence policymaking and government spending.[74] The mere presence of peasants in the *zemstvo* assemblies may have given voice to policies that otherwise would have no advocates. In other cases, a minority peasant voting bloc may have lent critical support to more pro-peasant policymakers from the majority curiae.[75] Furthermore, there is evidence that many non-peasants were simply uninterested in *zemstvo* matters. The 1883 *zemstvo* data imply that only about 25% of eligible voters from both the 1st and 2nd curiae participated in their primary elections, compared to over

[72] These studies also find that underrepresented groups were more likely to express their policy preferences during assemblies headed by fellow group members. See Besley et al., "Politics"; and Chattopadhyay and Duflo, "Women.". These studies take advantage of the experimental structure of the Indian reforms, where villages and districts were randomly chosen to have a leader from one of these groups.

[73] This occurred as early as 1865 – only 4 years after the emancipation of the serfs – in Nizhnii Novgorod province when the Ardatov district assembly elected a peasant as a board member (TsANO, 42.240.12.1).

[74] See Pande, "Can Mandated." Studies of local democratic reforms in China also provide evidence that the installation of elections, even if imperfectly formulated, can have positive incentive effects for politicians that result in better public sector outcomes. See Brandt and Turner, "Usefulness"; and Luo et al., "Elections."

[75] This could occur under some form of log-rolling or horse-trading. The anonymous writer of a 1907 article in the *Nizhegorodskaia zemskaia gazeta* explicitly called on 3rd curia assemblymen to ally with progressively minded 1st curia representatives to expand *zemstvo* activities ("Zemskie," p. 480). Numerous accounts of *zemstvo* assemblies describe a sharp split between conservative and liberal *noble* assemblymen over issues such as primary education and the voting system itself (e.g. Lilenkova and Gudrov, "Evoliutsiia"). Unfortunately, the minutes of *zemstvo* assemblies that I have consulted rarely provide details on the identities of assemblymen and never specify how individuals voted on particular issues. This makes it hard to reconstruct the motives and maneuvering behind policy initiatives or assembly debates.

80% of the peasants electors selected in the township-level meetings.[76] Although some authors have remarked on the passivity of peasant participants in assembly meetings, other contemporaries noted substantial enthusiasm for *zemstvo* affairs among the 3rd curia assemblymen.[77]

Setting aside representation and executive authority, there is a more fundamental question regarding the linkage between the *zemstvo* electoral system and budget decisions: what should be our *a priori* assumptions about peasant preferences over public spending and revenue policies? Scholars have labeled the relatively few districts with 3rd curia majorities "peasant *zemstva*" and argued that they spent more on the provision of public goods and services, especially when it came to rural primary education.[78] Other categories of public expenditures – medical care, roads, etc. – plausibly entailed more diffuse benefits, which may have limited their *relative* appeal to the peasantry.[79] Based on this interpretation, we might expect to see a positive relationship between the 3rd curia's share of assembly seats and spending, especially on education and other peasant "targeted" public goods. However, and as explored in more detail below, this raises the important question of just what determined the allocation of seats within the assemblies.

Furthermore, assemblymen from the first two curiae may have been just as interested in more local public spending or in funding for rural schools. If such expenditures improved local economic

[76] See Syrnev, ed., *Statistiska*. These 1883 data are the only detailed information available on *zemstvo* election outcomes at the district level. Similar evidence can be found from archival records indicating that 1st and 2nd curia *primary* meetings often did not even achieve a 2/3 quorum of their allocated assembly seats. For examples from Nizhnii Novgorod province and the elections of 1898 and 1907, see TsANO, 51.251.425 and 72.20.1363.

[77] Donald Mackenzie Wallace, a Scottish traveler in the 1870s, spent time visiting a district *zemstvo* in Novgorod province and described the peasants at the assembly meetings as very active participants in the proceedings. See Wallace, *Russia*, vol. 2, pp. 12-13). In contrast, D. V. Khotiaintsev, a noble representative to the Nizhnii Novgorod provincial assembly in 1900, went so far as to claim that peasants, "still don't understand the necessity of self-government in the *zemstvo* – for them, the administration of the assembly simply means obligations" (quoted in Lilenkova and Gudrov, "Evoliutsiia," p. 138).

[78] For discussions of the peasant *zemstva*, see Atkinson, "Zemstvo," pp. 119-121; McKenzie, "Zemstvo," p. 40; and Pape, "'Peasant'." Veselovskii, *Istoriia*, vol. 4, pp. 196-200, coined the term "peasant *zemstvo*" and provides some limited evidence that the *zemstvo* in those areas had higher levels of expenditures, especially in education. It is also worth noting that gentry and urban property holders relied more on private education and urban schools. By focusing on *district*-level expenditures below, I am excluding provincial *zemstvo* spending on secondary schools that primarily catered to non-peasant children.

[79] For example, peasants comprised less than 50% of the patients admitted to the Vladimir provincial *zemstvo* hospital in 1884, although they were more than 90% of the population. See *Otchety*, p. 45.

conditions (or changed relative factor returns), non-peasants possibly stood to benefit, especially if a large share of the costs were borne by the peasantry.[80] Alternatively, with *zemstvo* expenditure levels around a relatively low 1-2 rubles per capita, the local non-peasant elite may have simply "bribed" the peasantry by giving them small benefits in exchange for social quiet.[81] In either case, the number of 3rd curia assemblymen would not identify a unique set of peasant policy preferences over expenditures, regardless of the political structure. But if 3rd curia representation allowed the peasantry to achieve real political influence, then some of the costs of any extra spending may have been shifted onto property owners in other curiae.[82]

Part 3: The Empirical Implications of *Zemstvo* "Democracy"

The *zemstvo* was clearly not an egalitarian system of policymaking. Representation was not proportional, even by property ownership. But did the political structure of the *zemstvo* allow the peasantry some political voice on taxes or expenditures? The previous part of the paper presented several hypotheses regarding the relationship between peasant representation and/or authority and *zemstvo* budget policies. First, the identity of who held actual political power within the new institution may have influenced *zemstvo* decisions. Did the attainment of executive positions by the newly emancipated peasantry affect spending and revenue patterns? Second, if the majority voting structure of

[80] This argument is at the heart of the model of Indian local democracy and public good provision in Rosenzweig and Foster, "Democratization," where government spending changes relative factor prices, thereby differentially affecting the economic and political power of factor owners.

[81] Acemoglu and Robinson, "Persistence," argue that apparent improvements in political institutions may not lead to better economic outcomes if elites can make investments to maintain *de facto* power by "bribing" other groups. Eklof, *Russian*, p. 58, asks, "Whom did the *zemstvos* represent, and who determined the direction and set the pace of zemstvo activities?" He answers this by asserting that the *zemstvo* "represented only the elite and not the people" (p. 60).

[82] Zhang et al., "Local," find that the creation of local elections in China shifted the tax burden away from the voting population towards local enterprises. Minutes of *zemstvo* meetings record numerous debates over revenues and whether to approve external borrowing, suggesting that these were contentious issues. Simple models of local public finance suggest that property taxes, such as those employed by the *zemstva*, are often more "efficient" in the sense that property owners are typically local and interested in fostering local economic development. See Oates, "Fiscal," and the discussions in Bird and Vaillancourt, eds., *Fiscal*. In the model of Bardhan and Mookerjee, "Decentralisation," the overall welfare effect of decentralization depends crucially on exactly how public services are financed.

the *zemstva* really mattered, than the 3rd curia's influence on policies may have been more evident in districts where the peasant representatives were pivotal voters. And finally, even if the statute assembly seat allocations did not lead to 3rd curia majorities or executive authority, having more peasant representatives may have influenced *zemstvo* policies through other indirect channels. Of critical importance in addressing these empirical possibilities is to understand why exactly the electoral structure of the *zemstvo* – especially the distribution of seats by curia – varied across districts.

These are not all the issues one might address regarding the *zemstvo*, but they are key ones for understanding how the institution functioned and whether this form of local government functioned in any sort of "democratic" fashion. To investigate these hypotheses, I collected district-level *zemstvo* expenditure and revenue data for a number of years from a variety of sources.[83] I matched these data to information on the legal allocation of assembly seats (from the two statutes), to the actual political authority by curia from the 1883 data, and to a variety of other socio-economic indicators. These last variables are generally only available for a small number of years in the study period (roughly 1870 to 1910), which limits the possible matches to the *zemstvo* budget data. In addition to the spatial richness of the resulting dataset, the budgetary information for years before and after 1890 makes it possible to exploit the temporal variation in the 3rd curia assembly seat shares. The variables in the dataset are summarized and the sources documented in Tables 2 and 3 and the Appendix Table. An ancillary outcome of this data collection effort is one of the first (panel) datasets in Russian economic history that covers a significant geographic area at a sub-provincial level. In the sections that follow, I use these data to study the budgetary implications of the *zemstvo*'s structure in a series of empirical steps.

[83] These data originated in the yearly budgets proposed by the executive boards to each district *zemstvo*. The analysis in this paper is limited to years selected to represent the period of significant *zemstvo* activity from the 1870s to the 1900s. There are a few other years of district-level budget information available for the post-1900 period (in rare publications that are costly to access), but preliminary study suggests that incorporating additional data would not change the main results of this paper.

Peasant Political Positions and *Zemstvo* Property Tax Rates

I begin the analysis on the revenue side of the ledger. If we consider the 1903 cross-section, which has information on revenues by source, those districts with greater 3rd curia representation under the 1890 law were associated with a greater share of revenues from property taxes (correlation of 0.3), and districts with a greater share of property revenues spent more per capita (correlation of 0.29) and more on both education (0.47) and healthcare (0.38). These correlations do not control for other factors, but they hint at a connection between the electoral structure, *zemstvo* revenue policies and the provision of local public goods and services. But variation in revenue sources across districts is not an adequate way to measure the impact of the political structure on *zemstvo* policymaking. The amount of taxable property and the amount of non-property tax revenue (enterprise and work passport fees, for example) were related to the level of economic development, rather than to explicit decisions of the *zemstva*. However, property tax rates were set upon by the assemblies. External authorities – especially provincial *zemstva* – occasionally stepped in to change rates, but district *zemstva* retained substantial autonomy.[84]

We may examine the impact of the *zemstvo* political structure on revenue decisions by looking at the differential between *zemstvo* tax rates on peasant (communal) land and on privately owned land in 1885. On average, communal land was taxed at 20.2 kopeks per *desiatina*, versus 16.9 kopeks for private land (Table 2). While it may be possible that communal land was better on average, data on grain yields from the 1890s would suggest otherwise (Appendix Table).[85] Table 4 reports results from estimating the following simple OLS model of the percentage gap between the two tax rates:

[84] The types of property subject to *zemstvo* taxation were defined in temporary rules on the introduction of the *zemstvo* (*PSZ*, Series II, vol. 39, no. 40458). This law contained no explicit rules on tax rates. Although land was to be differentiated by "value and income" (Statute 11), the rates were supposed to be applied equally to communal and private land.

[85] Communal allotment land (*nadel'naia zemlia*) was the land granted to peasant communities in the settlements that followed emancipation. Ownership rights and obligations for this land were held by the village as a whole, and this property was legally differentiated from privately owned land. The settlement process gave former serf owners the right to claim their share of property first, which would imply that the land left to the former serfs was of worse quality.

$$Y_i = \beta_0 + \beta_1 \times PeasantPoliticalInfluence_i + \beta_2 \times GrainYieldDifferential_i + (\beta_3 \times X_i) + p_j + \varepsilon_i \quad (1)$$

Here, Y is the log difference between the two tax rates (private – communal). The model includes log differences in mean oat and rye yields (the two most important crops grown throughout European Russia) on the two types of land over the period 1884-1900, as well as provincial fixed effects (p_j).[86] In the first column of Table 6, "Peasant Political Influence" is measured by the 3rd curia seat share under the 1864 law.[87] Taking advantage of the timing of the data on tax rates, the other models presented in Table 4 incorporate measures of actual peasant political achievement taken from the unique data on the 1883-1886 electoral cycle. These models offer more direct tests of the impact of peasant involvement in the *zemstvo*.[88] Finally, the X_i vector includes a number of other controls for local economic conditions.[89]

[Insert Table 4 about here]

The results in Table 4 offer support for an effect of peasant political participation on *zemstvo* property taxes. The positive and statistically significant coefficient on the assembly seat share in columns 1 and 4 imply that 1% greater peasant representation reduced the tax rate gap by approximately 1%, a relatively large effect. This is consistent with representation allowing the peasantry to equalize tax rates. However, when the actual share of peasants elected by the 3rd curia are included in the model

[86] Provincial fixed effects help control for overall land quality and regional differences in how the peasant land settlements occurred. Expressing the dependent variable or the grain yield differentials in logged differences does not change the results.

[87] Numerous other controls (the X_i s: the portion of communal land arable, agricultural wages, etc. – see the Appendix Table) were investigated but did not appreciably change the results. Including a dummy and an interaction term for "contestable" (see below) also had no effect.

[88] For the 3-year term 1883 to 1886, members of the 3rd curia held 436 (34.5%) of the 1263 positions on district executive boards, but only 7 (5.3%) of the 133 seats on the provincial boards (Russia, Tsentral'nyi, *Sbornik*, 1890, p. 49). Unfortunately, district-level spending data are unavailable for this particular electoral period.

[89] The main results are robust to the set of controls included. The share of arable land controls for local agricultural conditions, while the urban population share proxies for the level of local commercial (and industrial) activity. This latter variable also helps control for the amount of taxable non-land property in the district. The share of land in communal property is meant to control for underlying differences in the two types of property created after 1861.

(column 2), the coefficient is negative and insignificant. If the share of peasants in executive board seats is used (column 3), the estimated coefficient, although having the expected sign, is small and not statistically significant.

In addition to these main results, other coefficient estimates exhibit telling patterns. The positive coefficient on the urban population share suggests that in more urban districts, privately owned land may have possessed greater commercial potential and was therefore taxed at a higher rate. Districts with relatively more arable land or more land in communal hands showed more equal tax rates. Although the serf population share was uncorrelated with the tax gap (column 4), the positive coefficients on the arable and communal shares may reflect the greater implicit bargaining power of the peasantry in districts where they held more wealth, irrespective of the *zemstvo*'s electoral structure. [90] Alternatively, because peasants had little say over which (communal) property they received in the settlements of the 1860s, in districts with more communal land, the best property with higher associated tax rates was likely claimed by former serf owners or other individual property holders.[91]

The absence of any association between *actual* peasant positions in the *zemztvo* and the tax rate gap suggests that the effects of greater statute 3rd curia representation may not entirely reflect direct political channels. To investigate this further, I interacted the assigned curia seat share with the serf population share, the arable land share, and the communal land share (column 5). While none of the interaction terms are statistically significant, the larger size of the curia seat effect (now 1.9) and the communal land share coefficient (up to 1.8) in column 5 imply that the allocation of seats was likely

[90] These two variables are correlated (coefficient of 0.66). Although the relative grain yield variables – the only available direct measure of productivity differentials on the two types of land – showed little association with the tax gap, these may be imperfect measures of the characteristics of taxable property. Note that the share of communal land in 1877 was only marginally correlated with the 1864 statute 3rd curia seat share (0.16) and uncorrelated with the share of peasants on executive boards in 1883 (-0.06). Therefore, the communal land variable is probably not picking up any direct political mechanism at work within the *zemstvo*. However, see the discussion of endogeneity below.

[91] This is akin to a revealed preference argument. Moreover, the land settlements of the emancipation reforms were notorious for not granting communities sufficient *complementary* types of property – hay meadows, grassland, etc. – to cultivated arable land. This may have lowered the relative value of communal property in terms of income / tax generating capabilities.

related to other district characteristics, and that the impact of statute representation may not have been linear. It seems that the effect of 3rd curia representation on the tax rate gap was smaller in districts where land was better or where there were fewer serfs. These would have likely been districts where non-peasants (especially non-serfs) played a larger role in local economic and political life.

The findings in Table 4 do imply some sort of relationship between the allocation of assembly seats and *zemstvo* policies. The political structure did matter, but the strength of the effect depended on district characteristics. And whether the estimated coefficients represent a causal mechanism is less clear and depends on what drove the variation in share of seats assigned to the 3rd curia. If unobservable determinants of the seat allocation were correlated with the error term in equation 1, then the resulting estimates of the 3rd curia share effect may be biased.[92] I return to this issue at several points below.

Did Peasant Representation Influence *Zemstvo* Spending?

Tax rate differentials are only indirect signals of the role politics played in the district *zemstva*. A relative shift in the burden of taxes did not necessarily mean that the electoral structure of the *zemstvo* allowed the peasantry to increase publically provided goods and services. A more direct test is to consider how spending levels and patterns were related to *zemstvo* electoral outcomes, and especially to the positions achieved by the newly emancipated peasantry. While the 1883 data on *zemstvo* politics can be matched to the 1885 data on *zemstvo* taxes, there exists no similar budget information on expenditures for the same electoral cycle. However, district-level spending data do exist for other years and may be matched to the statute curiae shares (under both laws) and other covariates. This allows me to explore whether the *zemstvo*'s structure did create channels for the peasantry to influence the

[92] The bias on the estimated coefficient could go in either direction, depending on the underlying correlation. For instance, districts with greater unobserved differences in land quality may have been precisely those where peasants were poorer, less politically active, or more likely to engage in rebellion. Any of these factors may have led policymakers – concerned about rebellion as well as capable local administration – to allocate fewer seats towards the 3rd curia. The result would be an upward bias on the estimated coefficient.

provision of local publically provided goods and services. The concern about the possible endogeneity of the curia share variables remains.

I begin the analysis of expenditures with the following simple cross-sectional model, where Y_i is per capita *zemstvo* spending in total or on a particular category in district *i*:[93]

$$Y_i = \beta_0 + \beta_1 \times 3rdCuriaSha\ re_i + \vec{\beta}_2 \times X_i + p_j + \varepsilon_i \qquad (2)$$

3rdCuriaShare is the portion of district assemblymen allocated to peasant communes under the 1864 or 1890 law (depending on the year of the dependent variable). As in the models of Table 4, I include the share of votes in the 3rd curia rather than all three curia shares separately, because there were a number of districts where the 1st and 2nd curia were unified into one. I control for other factors that may have affected the supply or demand for *zemstvo* spending. These constitute the X_i vector, which includes land or property characteristics, indicators of the level of local economic development, and other possible determinants of either the demand for or supply of *zemstvo* expenditures.[94] I vary these controls over specifications due to necessity (not all years of budget data could be matched to the similar controls) and as a check on the underlying correlations. If the coefficients on the curia share variables change significantly as controls are added, that may be a sign that an unobserved component of the error term is biasing the estimates. Finally, the regressions include provincial fixed effects (the p_j term) to control for unobserved regional characteristics and any factors specific to the *zemstvo* in a particular

[93] For a similar empirical approach, see Pande, "Can Mandated." I also estimated versions of Equation 2 with the shares of spending allocated to different categories as the dependent variable. I comment briefly on these results below but do not report them in the interest of space. Running the specifications in log form does not affect the main results. By necessity, the population data do not exactly match the budget years. See the Appendix Table and the discussion below Table 6 for more information. Note that the dependent variables are defined as the number of kopeks per capita.

[94] For example, with Russia slowly industrializing over the last decades of the 19th century, new types of employment may have increased the returns to basic education. Residents in more agricultural districts may have demanded relatively less spending on education as a result.

province.[95] Including provincial fixed effects means that the identification of any *zemstvo* representation effects relies on within-province differences in the shares of seats allocated to the 3rd curia.

Local income and wealth levels were related to the ability to finance *zemstvo* expenditures and to the demand for the services such spending provided. To capture this, different specifications of equation 2 include some or all of the following variables: the average male agricultural wage for the period 1884 to 1900, the portion of the land area that was arable, the share of the adult male population occupied primarily in agriculture, and measures of per capita local tax receipts in various years.[96] I also include both the share of the population that was urban (at different points in time) and a dummy variable equal to one if the provincial capital was in the district. Commercial activity and wealth was likely concentrated in urban centers, which also possessed non-*zemstvo* town governments that collected their own taxes and acted as alternative suppliers of public goods and services. The clearest case of this was in those districts where provincial capitals were located. Urban governments in provincial centers funded public services that catered to the entire province, and the central government also concentrated its activities in those cities. To take account of any scale effects in *zemstvo* spending, some specifications include the log of the total land area of the district.[97]

Migration was limited in this period due to work passport requirements, residential restrictions, and high transportation costs, so it is unlikely that Tiebout sorting induced any endogeneity between

[95] This would include policy decisions (including spending) by provincial *zemstvo* that affected all districts equally. The correlation between provincial and district spending was positive and significant (see above), which suggests that the two levels were more complements than substitutes.

[96] The wage variable is defined as the mean of the male harvest and planting wages, each an average for the period 1884 – 1900. The arable share is from 1881 but was probably fairly constant over time. The share of the adult male population with agriculture as their first occupation is from the 1897 National Census. The measures of tax receipts are total receipts from central government, *zemstvo* "collections" (*sbory*), and peasant communal and township collections for 1) 1877 – referring only to the rural taxed population and given on a *per soul* (adult male tax unit) basis, and 2) the period 1888-1897 – referring to the entire population and given as the mean *per capita* burden across those years. See the Appendix Table for more information.

[97] More densely populated areas may have required lower per capita spending if consumption of *zemstvo*-provided services was non-rival, or if there were economies of scale in producing public goods. Since I measure *zemstvo* spending in per capita terms, including population density directly into the model might introduce spurious correlations. I settled on using total land area (in log format) to avoid this issue.

peasant representation and *zemstvo* policies. But some provinces with *zemstva* were only recently incorporated into the Empire, and there may have been a different level of demand for public goods in such frontier areas. Therefore, in some specifications I control for the share of the population in the district born in another province in 1897. The portion of the population that were serfs in 1860 (the variable in the models of Table 4), which may be correlated with unobservable district conditions, was *not* related to the spending decisions of *zemstva* in any year (results are available upon request). Finally, I also interacted the curia share variables with several of the controls in the X_i vector as in Table 4. Experimenting with other possible determinants of the supply or demand for *zemstvo* spending did not appreciably change the findings presented below.[98]

For the baseline specifications, I focus on two years of budget data – 1883 and 1903 – that bracket the 1890 reform and can be matched to many of the control variables mentioned above. Exploratory work with other years of expenditure data (1877, 1896, 1901, and 1906) suggests that the 1883 and 1903 results are representative of the pre- and post-reform periods.[99] Table 5 reports the regression estimates for three dependent variables from the 1883 data: total per capita expenditures and per capita expenditures on education and healthcare.[100] The results provide little support for any

[98]These measures include other agricultural wage variables, the number of railroad stations in the district (in 1875), average rye and oat yields in the 1890s, and the share of males 20-29 who were recorded as literate in the 1897 census. This last variable was likely endogenous to *zemstvo* spending, especially on education. I also estimated models with the number and/or spending of the communes and townships in each district. In districts with more communities ("rural societies" in the Appendix Table), the costs of coordinating a given level of public services may have been higher. Moreover, there may have been some amount of tax competition or substitutability between the spending by these different levels of government. None of these variables turned out to be significant. The issue of substitutability is returned to below.

[99] Cross-sectional results for these other years are available upon request. The 1883 budgets were produced *before* the 1883 election that produced the electoral data employed in Table 4. The source of the 1883 data – Russia, Tsentral'nyi, *Dokhody* was an official publication of the Ministry of Internal Affairs Central Statistical Committee. The key source of the post-1901 budgetary data – Russia, Statisticheskoe, *Dokhody* – has volumes with information on the years 1910, 1911, and 1913. There is far less district-level information available to match to these later years, so they are excluded from the present analysis. It is unlikely that these years would exhibit significantly different results.

[100] Education and healthcare were the only categories of expenditures available for 1883. The former included all types of educational spending, while the latter included everything formally budgeted for

relationship between 3rd curia representation and *zemstvo* expenditures before the 1890 reform.[101] The signs on the curia variable coefficients are negative, although never statistically significant. Areas with more land in communal property, which may have been poorer, showed significantly lower total expenditures and expenditures per capita on healthcare, while there is some evidence of lower expenditures in provincial capital districts (especially on healthcare).[102] Despite direct elections, (relatively) large shares of district assembly seats, and little external control over *zemstvo* policymaking, peasant representation through the 3rd curia appears to have had little relationship with how the institution spent money before 1890, at least according to the simple specifications of Table 5.

[Insert Table 5 about here]

When I apply the same empirical model to the 1903 data, I find very different results. In Panel A of Table 6, which presents results for total per capita expenditures, the estimated coefficients on the 3rd curia assembly share are large, statistically significant, and positive. A one standard deviation increase in the share of seats assigned to the 3rd curia (roughly 12%) is associated with roughly 15 more kopeks spent per capita. I again find that areas where communes held relatively more property had lower levels of spending. Taken together, these two results suggest that when the 3rd curia's share of assembly seats was higher relative to the share of communal property, district *zemstvo* assemblies voted for more spending. Although only marginally significant, districts where the nobility were relatively more numerous (often those with provincial capitals) exhibited a lower level of spending. Areas with more agricultural employment saw lower levels of expenditures, which may reflect lower returns (demand) for *zemstvo* spending. Other measures of local income and wealth (agricultural wages, total state and local

[101] This finding remains if the 3rd curia share is interacted with the portion of the land in arable or the portion in communal property. These results are available upon request.
[102] The results in column 5 do suggest that those areas where peasants held more communal property were slightly more inclined to spend funds on education (results obtained when the dependent variable is a share of total spending also support this). Primary schooling was growing fastest in the far north and east, where districts were larger and peasants controlled more property (Nafziger, "Financing").

taxes per capita, etc.), the migrant population share, and other controls (not shown) were unrelated to spending levels.

[Insert Table 6 about here]

If we look at Panel B of Table 6 (which draws on the model of column 5 in Part A), the 3rd curia relationship seems to be especially strong for spending on education and *zemstvo* administration. These two categories contribute about 50% of the total expenditure effect. Education was precisely the category of expenditures that scholars have associated with high peasant demand. *Zemstvo* administration included executive board salaries, office expenses, support for other local government bodies (courts, treasuries, etc.), and prison maintenance. The other three categories of expenditure all show positive, albeit smaller, coefficients on the 3rd curia share.

At the same time, districts with a greater share of property in the hands of peasant communes saw lower spending on medical care.[103] More agricultural areas saw slightly lower spending on education and infrastructure, which is consistent with lower returns to education or road maintenance in less commercial districts. The presence of the provincial capital results in a negative coefficient for medical spending, which implies that some substitution (urban government spending for *zemstvo*) was possibly at work. The significant and negative coefficients on the nobility's population share in a district – especially for education – suggest that the *zemstvo* may have responded to external political power that was at least possibly opposed to peasant interests.[104] The "additional controls," including the urban population share, the arable land share, the tax and wage variables (from Panel A), and the log of total land area never produced significant (statistically or otherwise) coefficients.

[103] Rather than using per capita spending, if each category's share of total expenditure is used as the dependent variable, medical spending actually has a negative coefficient (the others are positive, with education being the largest). The lower spending on administration in such districts may reflect a substitution between *zemstvo* spending and activities of the communal and township forms of peasant self-government. See below.

[104] Similar but opposite results appear if the share of the population who was not nobles or townsmen in 1897 is included.

Intriguingly, when I include an interaction of the 3rd curia share with the portion of the population who were nobles in 1897 (not shown), the estimated coefficient is large (roughly 2.3 for total spending), positive, and statistically significant. The size of the 3rd curia coefficient is larger (around 3 for total spending) and still statistically significant. This reinforcement effect is present for education spending but not for medical care.[105] Therefore, the associations between statute peasant representation and *zemstvo* spending were more prominent in districts where the 3rd curia share was large *and* there were a relatively large number of nobles (i.e. potential 1st curia voters). Like the tax results, this implies that the 3rd curia share variable does represent a real political mechanism.

Overall, the statute share of peasant representation seems have mattered more after the 1890 reform than before. The positive coefficients on the 3rd curia share in Table 6 may imply a direct effect of representation on policymaking, but they also might also reflect targeted "bribery" by the non-peasant majorities in the *zemstvo* assemblies, or some unobserved factor that is correlated with the 3rd curia seat share. The reinforcement effect identified by the interaction of 3rd curia share with the nobility's share of the population is more consistent with the first two possibilities than with the third. However, identifying the causal mechanism behind these results depends on knowing what was behind the variation in the 3rd curia. Therefore, the next section turns to empirically investigate precisely what drove the variation in the share of seats held by the curiae under the original law and the 1890 reform.

Understanding the Variation in Peasant *Zemstvo* Representation

Part 2 noted that policymakers used population, landholdings, and economic 'interest" as criteria in allocating district *zemstvo* assembly seats among the different curiae prior to the reform of 1864. But exact rules mapping district characteristics into representation by the different curiae were not defined

[105] The coefficients on the interaction terms for the other models (of infrastructure, welfare, or administrative spending) were also not significant. Various other interactions were attempted but generated no significant results. These estimates are not presented due to space constraints, but they are available upon request.

for either the 1864 or 1890 laws. Although the change in mean initial and revised curia shares is evident in Panel A of Table 3, these number hide substantial variation: the standard deviation of the 3rd curia was 6.7 under the 1864 law and 12.2 under the 1890 law. This variation took very different forms under the two legal regimes. Panel A of Figure 3 plots the densities of the two 3rd curia seat distributions. While the 1864 density is distributed normally around the mean of 41%, the 1890 density is tight around 1/3 of the seats, with a small number of districts scattered above that norm. Furthermore, the 1890 3rd curia shares are more highly correlated with the peasantry's population share than are the 1864 shares (see the bottom of Table 3, Panel A).[106] The two 3rd curia seat shares are positively correlated (coefficient of 0.34), which implies that some underlying factors – perhaps the ones mentioned by the original policymakers - continued to guide the setting of the curia seats. To better understand the mechanisms behind *zemstvo* policymaking, it is important to first determine which district characteristics help to explain the allocation of seats in district assemblies.

[Insert Figure 3 about here]

The Minister of the Interior, P. A. Valuev, in his proposal for the 1864 statutes, provided explicit amounts (*tsenzi*) of communal or private land that corresponded to one 1st or 3rd curia seat in each district. These guidelines were formulated amidst fears of peasant unrest but with a stated goal to match representation to economic "interests" in local affairs.[107] Using the district-level data, I can "predict" the assigned share of assembly seats in 1864 based on information known at the time: the proposed land

[106] The peasant population share is defined as the total population minus the nobility and townsmen (*meshchane*) according to the 1897 National Census. Thus, the greater correlation with the 1890 shares may reflect the relatively close date. However, this share – roughly 89% in 1897 – had likely changed little over time. Other aspects of the 1890 reform decreased the connections between the peasantry and representation (see Part 2). For example, the reform made executive positions a formal part of the state service system, which created educational requirements that were often difficult for peasant assemblymen to achieve.

[107] The "policymakers" behind the *zemstvo* and peasant reforms were members of the Main Committee and affiliated central government bodies. These reformers solicited proposals and information on local conditions from provincial committees of noble landowners between 1857 and 1860. See Emmons, *Russian*.

tsenzi, the portion of the population who were serfs, and the portion of the population in urban areas.[108] The peasant population share is not included because data are only available for 1897. Instead, I include the portion of the population who were serfs in 1860. The first column of Table 7 presents results from a linear regression model of the 1864 share of 3rd curia assembly seats using these variables.[109]

[Insert Table 7 about here]

As would be expected, the urban population share in 1863 and a dummy for whether the provincial capital is in a district are negatively associated with the share of 3rd curia seats in 1864.[110] The large and statistically significant coefficient on the provincial capital dummy variable suggests that those districts had much larger 1st and 2nd curia assembly shares than other similar districts. And in apparent reaction to fears of peasant unrest, less representation was granted in districts where serfdom had been more prominent.[111] The *tsenz* coefficients have the expected signs – positive for the 3rd curia and negative for the 1st – but they are not statistically significant. Although Valuev was the central figure in *zemstvo* reform, the State Council apparently did not rely exclusively on his input in finalizing the details of the curia system. Therefore, after taking into account serfdom, the location of the provincial capital, and the province itself (through the fixed effects), there remains a substantial unexplained component to the variation in the 3rd curia's share of assembly seats under the 1864 law.[112] While some

[108] I also include an indicator variable for whether a district had the provincial capital, and the share of the land in arable in 1881 (which was likely constant over time). The proposed seat *tsenzi* are taken from Russia, Khoziaistvennyi, *Materialy*, vol. 2. I convert the *tsenzi* to numbers of seats in the two curiae by using the amount of communal and privately held land from the 1877 data (Russia, Tsentral'nyi, *Statistika*). Including a dummy variable for whether the *tsenz* was a mean for more than one part of a district (N = 10) did not change the results.

[109] The models include district provincial effects and are estimated with robust and clustered standard errors. The results are robust to including other controls from post-1864 data. In particular, the results *do not* change if the portion of land in communal property in 1877 is included (this information is partially incorporated into the 3rd curia *tsenz* variable).

[110] If the 2nd curia seat share is utilized as the dependent variable in similar models, the coefficients on these "urban" variables have the expected positive signs. Note that the results in Table 4 are unchanged if the provincial capital dummy variable is included.

[111] A one standard deviation increase in the share of the population that were serfs in 1860 was associated with a 2.4% lower share in assembly seats allocated to the 3rd curia.

[112] The provincial fixed effects contribute roughly 1/3 of the explained part of the variation in the model of 1864 3rd curia shares (compare the within and overall R^2). But almost 2/3 of the variation remains unexplained.

of this may have been due to a discrete number effect (in computing the shares), there may have been a "random" component to the 3rd curia's representation. I consider the implications of this below.

The 1890 tightening of the distribution of assembly seat shares came amidst a conservative shift in Tsarist policies regarding the *zemstvo* (see Part 2). Underlying this shift was a concern that the 1st and 2nd curiae were increasingly dominated by merchants, peasants, and other non-gentry property holders. Panel A of Figure 3 shows that there was a considerable tightening of the distribution of 3rd curia seat shares around a lower mean, and Panel B indicates that this tightening occurred across the 1864 distribution. But Panels A and B indicate that a number of districts retained considerably more than the 30% norm: 37 districts had 3rd curia shares under the 1890 law that were greater than 40%. Almost all of these had even higher shares under the 1864 law, and 27 out of these 37 districts were located in the provinces cited by Veselovskii and others as possessing "peasant *zemstvo*."[113] If these 37 districts are excluded, the standard deviation of the 1890 3rd curia share is only 2.1. But does this completely explain the variation in the 1890 curia shares?

Utilizing data available to policymakers in the 1880s, I estimate models similar to column 1 in Table 7 for the 1890 statute curia share. The other three columns of Table 7 present these results. The model in the second column closely follows the 1864 model, only replacing the 1863 urban population share with the 1883 share. While the portion of serfs and the urban variables are no longer correlated with the 3rd curia share under the 1890 law, a number of other results stand out in column 2. Although the results on both the *tsenz* variables have plausible signs, the large and statistically significant coefficient on the number of 1st curia *tsenz* implies that the 1890 law did result in more 3rd curia seats in areas with fewer large private landholdings.[114] This parallels the interrelationship between representation and the number of nobility in 1897 in Table 6. The constant term is quite similar to the

[113] These provinces were the northern ones of Olonets, Perm, Viatka, and Vologoda.
[114] Note that this effect is weakened but does not disappear if districts with more than 40% of assembly seats in the hands of the 3rd curia are excluded from the model.

one in column 1, despite the large difference in the mean shares between the two laws. These findings persist if we add the 1864 3rd curia share to the model of column 2. The 1864 electoral variable has no explanatory power once the province and other controls are taken into account.

Finally, the last column of Table 7 reports a similar model that includes the ratio of the number of noble landowners in 1889 that fulfilled the 1864 *tsenzi* to the total number of noble landowners in 1877.[115] This variable is meant to capture the size of the noble electorate relative to the total number of noble landowners. If the 1890 reform was mostly in reaction to the declining electoral power of the nobility in the *zemstvo*, then we would expect the coefficient on this variable to be positive. However, the results in column 4 show that a large electorate relative to the total landowning nobility 12 years earlier was actually negatively related to the 1890 3rd curia share of assembly seats. Therefore, the reform reinforced existing electoral structures – the districts that retained large number of 3rd curia assemblymen were those where relatively few nobility were eligible to vote in the 1st curia anyway. While a large part of the variation in the 1890 shares remains unexplained, those districts with (without) a relatively large number of private holdings saw the smallest (largest) share of *zemstvo* assembly seats assigned to peasant curia. Both before and after 1890, districts with the largest shares of peasant assemblymen were located in provinces with relatively few nobles. These were exactly the districts known to possess "peasant *zemstva.*"

Extensions to the Baseline Models: "Peasant *Zemstva*" and "Contestability"

Were the results in Tables 5 and 6 simply an indication that the "peasant *zemstva*" districts – which were located in sparsely populated northeastern provinces with few landed elite – saw greater

[115] The mean of this variable is 1.1 and the standard deviation was 4.2. The denominator of this variable is actually the total number of nobility with holdings at least as large as 1/10 of the land *tsenz* under the 1864 law (from Russia, Tsentral'nyi, *Statisticheskiia*, 1889). Nobility with holdings between 1/10 and a full tsenz could pool together to vote in 1st curia primaries. Large values imply a larger smallholding nobility (who may have given up their holdings between 1877 and 1889). In 1877, the nobility held approximately 80% of the land in private ownership.

spending, especially on education? Or were such correlations evident further down the distribution of assembly seat shares? A simple way to address these questions is to exclude the provinces with "peasant *zemstva*" and re-estimate models from Tables 4-6. Table 8 reports the coefficient estimates on the 3rd curia share variable and several interaction terms (those in Table 4 and the ones mentioned in the text above).[116] Overall, the direct channel from the statute 3rd curia seat share to tax or spending policies is weaker outside of the "peasant *zemstvo"* provinces. In column 1, there is some sign that the curia's share still mattered in districts where more of the population was serfs in 1860. But the models of 1883 *and* 1903 expenditures show little direct connection between the 3rd curia share and spending. However, there remain some interaction effects in 1903: statute representation was positively related to spending (overall and on education) in districts with more nobles and with more land in communal property. But why do we find any connection between representation and *zemstvo* policies at all?

[Insert Table 8 about here]

Excluding the provinces with peasant *zemstva* weakens the findings from Tables 4-6. That does not necessarily mean that the political structure had no effect on *zemstvo* policy, because the earlier results were identified off district variation *within* provinces. But if representation did matter, then why do the results in Table 5 not support this? And what do these results mean if the 3rd curia representatives held far less than a majority of the assembly seats, even with an additional assemblyman? In a standard model of voting in legislatures or committees, the effect of additional representation should be stronger in settings where the majority opinion is "swing-able." To get at this, I define a measure of the "contestability" of the assembly as a dummy variable equal to one if the 3rd curia was assigned a portion of the seats near the majority cut-off (between 40 and 60% of the total seats under both laws). I then re-estimate versions of the models from Table 8 but include an interaction between this measure and the

[116] The corresponding models in Tables 4-6 are cited in the note underneath Table 8. I do not report estimates from models for other types of spending, but these are available upon request. The excluded provinces are Perm, Olonets, Viatka, and Vologda, which are north and east of Moscow.

relevant 3rd curia share variable. The key results are reported in Table 9. This approach tests whether the earlier coefficient estimates were driven by action around the assembly majority threshold – i.e. when a new peasant assemblyman would potentially be a "swing voter." It is worth noting that the number of these contestable districts changed sharply with the 1890 reform. Under the initial law, 208 districts had 3rd curia shares between 40 and 60%. After 1890, only 18 districts fell into that range. I experimented with changing the range for the 1890 shares, but this had little effect on the results.

[Insert Table 9 about here]

. The results of this exercise give mixed support to a significant "majority" effect. For the tax differential, the effect of the 3rd curia does seem to be larger for the contestable districts. In contrast, the 1903 models show negative, small, and marginally significant coefficients on the interaction term. But this interaction only affects 18 districts, 13 of which were in provinces with "peasant *zemstvo*," and the direct curia effect is much larger.[117] But for the 1883 results, the positive and statistically significant coefficient on the interaction term in the education spending model implies that those districts with more "influential" peasant representation did have greater expenditures. However, even these coefficients (the direct effect and the interaction) reflect a small *total* effect of extra representation – less than 1 kopek per 1% increase in the 3rd curia share.

At most, the 3rd curia share of assembly seats was only slightly related to *zemstvo* budget politics through a swing-voter mechanism. Additional experiments with non-linear terms or with more flexible forms of "contestability" produced no other signs of non-linear effects of 3rd curia representation.[118] The earlier discussion reported several other mechanisms – executive influence, agenda setting, logrolling, etc. – for how a non-median voter might see his preferences influence policy outcomes in the *zemstva*.

[117] The coefficients are roughly two times the size of those in Table 6. This stems from the other interaction terms (the noble population share, the communal land share, etc.) that are in the models of Table 9 but not in the models of Table 6. Besley, "New Political," briefly describes some criticisms of the median voter model tested in this approach..

[118] These experiments included adding quadratic forms of the 3rd curia variables, replacing the contestability interaction with a set of dummies over the distribution of 3rd curia shares, and truncating the sample to only consider "contestable" districts.

Keeping the peasant *zemstvo* and contestability results in mind, I return to the question of interpreting the 3rd curia "effect" in the discussions below.

Extensions to the Baselines Models: The Endogeneity Issue

If the distribution of 3rd curia representation was random under the two laws, then the results in Tables 5 and 6 (and 4 to a lesser extent) could be interpreted causally. According to one scholar, the assignment of 3rd curia electoral shares under the 1890 law was largely "arbitrary."[119] Perhaps the stronger results for the post-1890 cross sections (including the 1896 and 1906 ones that are available upon request) stem from the seemingly more "random" assignment of the 3rd curia shares, despite other components of the 1890 reform that limited the direct influence of the peasantry on *zemstvo* decision-making. The stated intent of policymakers at the time, along with the findings in Table 7, suggests that both the 1864 *and* the 1890 distributions of 3rd curia seat shares were related to the underlying property and populations structures. But once these factors are controlled for (partially by provincial fixed effects), then the residual variation in the 3rd curia shares might be uncorrelated with any unobserved determinants of *zemstvo* budgeting practices. Finally, the coefficient on the curia variable in Table 6 does not substantially change as different covariates are included. This could be interpreted as an indication that remaining unobservables are not dramatically biasing the results.

However, it still may have been the case that something unobservable may be driving the statute seat shares and *zemstvo* expenditures (and taxes), both before and after 1890.[120] One example could be the (unobservable) progressiveness of the local nobility that might be positively correlated with the

[119] See Eklof, *Russian*, p. 58 and Footnote 23.

[120] One piece of evidence on this is that most of the "effect" of the 3rd curia share in Table 6 appears to derive from the *unpredictable* part of the variable. I used the results of Table 7 to predict the 3rd curia shares (for both laws) and derive the standard errors of the predicted values. When I entered these standard errors into the models estimated in Table 9 (without the contestability terms), they soaked up the explanatory power of the predicted 3rd curia shares for the tax model and the 1903 models. The coefficients on the predicted shares were insignificant. Moreover, the standard error was positively associated with spending on education in the 1883 model. The issue is whether this standard error is correlated with any unobserved factors driving *zemstvo* budget decisions.

willingness to level or allocation of spending, thereby resulting in an upward bias on the 3rd curia coefficient.[121] An obvious way to addressing this issue would be through an instrumental variable framework. Unfortunately, none of the available variables that might be determinants of the 3rd curia assembly shares can be plausibly excluded from the second stage regression. The *tsenzi* and the distribution of serfs in 1860 were possibly functions of underlying land quality or local economic conditions that may have influenced *zemstvo* spending. However, both variable generated insignificant coefficients when entered directly in the models of Table 6, and the curia share coefficient estimates for 1903 are not dramatically different between the OLS and the IV specifications.[122] But this is not proof that there is no bias in the coefficient estimates, since there may remain lingering unobservable factors correlated with both the instruments and the curia shares.

A second way to address the possibility of endogeneity is to take advantage of the multiple years of spending data to control for the fixed (over time) part of the unobservable determinants of *zemstvo* policymaking that may be correlated with the peasant curia share. To do this, I first introduce district-level fixed effects into equation 1 and merge the 1883 and 1903 data to create a 2-period panel dataset. I then estimate the following model, where the other controls are subsumed into the X_{it} vector:

$$Y_{it} = \beta_0 + \beta_1 \times 3rdCuriaShare_{it} + \beta_2 \times X_{it} + \lambda_t + p_d + \varepsilon_{it} \qquad (3)$$

[121] Most plausible stories produce a positive bias in the coefficient, leading to an overestimate of any effect of curia representation on *zemstvo* budget policies.

[122] These results are available upon request. The two possible instruments – the original *tsenzi* formulated by Valuev in his reform proposal and the portion of the population in (roughly) 1860 who were serfs – were not direct determinants of the 1890 curia shares. The F-statistic for the "excluded" instruments for the 1864 first stage is 14.6 but for 1890, it is only 3.6. If I use these three instruments for the seat shares in similar specifications as in Tables 5 or 6, the results change little (again, these are available upon request). The 3rd curia shares are still positively and significantly related to total *zemstvo* spending and to spending on education in 1903. The results for 1883 are still inconclusive. I also experimented with three-stage least squares approaches using predicted values of the 1864 curia share as an instrument for the 1890 share with little success, although there are certainly a number of reasons why this variable should not be treated as excludable in either of the latter stages. I also tried including the number of townships or the number of communes per township as instruments, since these may have been correlated with the underlying structure of local politics (and, hence, the allocation of seats) prior to 1864. This possibility is suggested by McKenzie, "Zemstvo," and by the structure of the 3rd curia elections reported in the archival accounts for Nizhnii Novgorod province. However, the number of townships or communes proved to be poor predictors of the 3rd curia seat shares once population and land factors were taken into account.

Here, t is the year, the λ_t is a year dummy (= 1 in 1903), and the p_d are district effects. I estimate this model in first-differences and is equivalent to including the fixed effects and pooling the two cross-sections. This approach takes advantage of the change in the 3rd curia's electoral share between the 1864 and 1890 laws and maps the effects of that change into *changes* in *zemstvo* spending. Many of the variables employed in the baseline specifications were only available in the cross-section around the 1903 *zemstvo* data, so the differencing wipes these out (and the year effect is absorbed into the constant). Rather than employ the relatively constant level of land held by the peasant communes, I include the share of land owned (under private property rights) by the nobility, which did change over time.[123] The estimates from this model are reported in Table 10.

[Insert Table 10 about here]

The results in Table 10 provide some support for an effect of the peasant curia share on *zemstvo* expenditures. The coefficient on the 3rd curia electoral share variable is positive and statistically significant for all categories and is larger for education than medical expenditures.[124] Although the percent of land owned by the nobility and the tax variable (not shown due for space reasons) are uncorrelated with spending, the urban variable is strongly and positively associated with spending for education and overall. This suggests that areas experiencing higher economic and commercial growth were funneling more into *zemstvo* activities. The interaction terms included here show little sign of non-linear effects. Estimating the model under the different specifications and other functional forms of the variables did not appreciably change the results.[125] Even after controlling for fixed and unobserved

[123] This should pick up some of the underlying determinants of the curia shares, as well as variation in noble involvement in local government.
[124] The 1883 cross section does not have information on the other spending categories.
[125] The results are the same when working in other forms of the variables, when various interactions with initial conditions are included, or when the model is estimated with district fixed effects (which should produce less efficient estimates in short panels).

district characteristics (including whether the district was in a province known for possessing "peasant *zemstva*"), there is a strong relationship between the seats assigned to the 3rd curia and expenditures.

There are at least two concerns with the findings in Table 10. First, the short panel means that if the key variables in either cross-section are measured with non-random error, the simple OLS approach will not accurately identify the partial correlation between peasant electoral share and *zemstvo* spending.[126] Second, this panel data approach is an imperfect solution to the endogeneity problem if the *change* in electoral shares is possibly correlated with unobservable factors driving the *change* in *zemstvo* expenditures. Consider Figure 3 again. While districts from the entire 1864 distribution had 1890 3rd curia seat shares around 1/3, the districts that saw larger adjustments those districts that likely had larger *unobserved* reasons for greater peasant representation in the 1864 law.[127] Alternatively, those districts that retained large 3rd curia shares were likely those that had relatively few private property owners to fill 1st and 2nd curia seats in the first place. If the conservative backlash that drove the 1890 reform was, in part, a reaction to the behavior of the more "liberal" districts with greater peasant representation, then the actual effect of the 3rd curia share on spending might actually be greater than the results of Tables 6 would suggest.[128]

The availability of cross-sections of expenditure data for 1877, 1896, and 1906 offers the chance for a more extended panel analysis. Unfortunately, many covariates cannot be matched to these cross-sections as easily as even the small number available for 1883 and 1903. However, if the 1877 tax and noble land shares are matched to 1877 and 1883; the 1905 land data and 1890s tax variable are matched to 1896, 1903, and 1906; and the urban population share is matched to each cross-section from the

[126] Both cross sections represent budgeted expenditures, rather than the amount *actually* spent. However, budgeted amounts are precisely what the assemblies voted upon.
[127] Note again that one of the reasons that the 1890 law might produce variation in the 3rd curia share even with a 1/3 norm is from a discrete number effect.
[128] Zakharova, *Zemskaia*, and other scholars do not note any such targeted reactions against specific *zemstva* in the preparation of the 1890 reform. The State Council did close a number of *zemstva* for brief periods between 1865 and 1890.

closest year, then an expanded model with district fixed effects can be estimated for total spending and spending on education.[129] This is not a fully satisfactory approach for a number of reasons (especially as it does not solve the dynamic endogeneity problem in the models of Table 10), but the inclusion of these other years of data may help eliminate any bias from the shortness of the two-period panel.

[Insert Table 11 about here]

Table 11 presents results from estimating this full (five year) panel specification for total and education per capita expenditures.[130] The noble population share, urban population share, and tax variables (not shown due to space constraints) were all unrelated to spending per capita in these two models. Various interactions with the 3rd curia variable (also not shown) failed to produce any significant results. The positive coefficient on the "Year" variable for education shows that this category of spending was growing sharply over time (I find the same result if I use the share of education spending as the dependent variable). And while the direct (constant over time) effect of the 3rd curia share was essentially zero, peasant representation did seem to matter more as time went by. This was especially true for total spending. Thus, these results are consistent with those in Tables 5, 6, and 10: as time went by, the statute share of peasant representation in *zemstvo* assemblies seemed to matter more, even as total *zemstvo* expenditures increased sharply in the 1880s and 1890s.

Interpreting the Empirical Findings: Do the Results Mean that the *Zemstva* Were Democratic?

The findings of Tables 4-11suggest that *zemstvo* budgeting was responsive to local demands and characteristics of constituent populations. In a sense, this is enough to label the *zemstvo* democratic. Rather than budgets simply being a random (or completely rent-seeking) assignment of revenues or

[129] Although population data is available for various years, the numbers do not represent full censuses (except for 1897) but are from local tax rolls and may not reflect the exact population. The findings in Table 11 are robust to using different population years.

[130] I estimated a host of panel models with different types of non-linear terms and interaction effects. None of these generated results that were interesting or departed dramatically from those presented in earlier tables.

allocation of funds, the institution did generate public goods and services that catered to the predominantly rural and peasant population. This is true despite the layers of elections and bureaucracy between peasants and assemblymen, the strongly biased allocation of representation in the assemblies, the "tyranny of the majority" that may have reigned in the assembly sessions, and numerous mechanisms that allowed external authorities to interfere in anything the *zemstvo* did.

Peasants likely benefited more than other groups from the types of spending undertaken by the *zemstvo*, and their representatives seem to have been able to give some political voice to these demands. According to the 1883 electoral data, districts with a greater share of assembly seats assigned to the peasant curia had more assemblymen who were peasants. More peasant authority in the assemblies did appear to reduce the *zemstvo* tax gap between communal land and land in private hands. And the statute shares of peasant electoral power did translate into more *zemstvo* spending per capita, especially on education.[131] But the spending effects are only really evident after the 1890 reform, when the districts with larger shares of 3rd curia seats were perhaps not representative. Moreover, some of the identified effects are quite small. And non-peasants also benefited from *zemstvo* activities. Without more direct evidence on peasant preferences for public spending, the observable correlations can only be tenuously interpreted as causal. Were 3rd curia assemblymen really able to express distinct preferences over particular configurations of public budgets, or did the expenditure and revenue patterns reflect the interests of a local elite who were simply bribing the peasants? Furthermore, the statute allocation of seats within *zemstvo* assemblies reflected the preferences of the policymakers. Without more explicit

[131] Effects for other spending categories are evident, but the persistence of such a relationship for education across a number of years of data is especially telling. I provide one last falsification check that this really did represent some sort of political mechanism at work within the *zemstvo*. A survey in 1881 by the Central Statistical Committee of the Ministry of Internal Affairs collected data on communal and township spending (Russia, Tsentral'nyi, *Mirskie*, 1883). These were exclusively peasant forms of self-government. I matched these data to the variables drawn on for Table 5 to estimate a similar model as equation 2. Regardless of exactly which controls are included, or which interactions are specified, I find no relationship between peasant representation in the *zemstvo* and communal or township spending per capita. However, the coefficients on communal land share and other variables closely resemble (in sign and significance) those found in Table 5. These results are available upon request.

knowledge of exactly how the number of seats were set, the empirical findings presented in this paper should be only cautiously employed in describing the *zemstvo* as democratic.

Part 4: Concluding Thoughts / Future Extensions

This paper makes an initial foray into investigating one of the most important and least explored institutions in 19th century Russian economic history – the *zemstvo*. In contrast to standard conceptualizations of Tsarist Russia as completely centralized, the story emphasized here is one that involves local self-government and a unique form of decentralized decision-making over public revenues and expenditures. Not only was the *zemstvo* extensively involved in local public services – from schooling and medical care, to agronomy and road maintenance – but it was an arena where the newly emancipated peasantry could actually give voice to their concerns. I find evidence consistent with this story – peasant electoral power in the *zemstvo* was positively associated with relative tax rates (shifting the burden in the peasantry's favor) and spending per capita, especially on education. Although the exact channel of causality behind these findings remains hidden, and, indeed, some of the results seem to imply that there may be no democratic channels at all, the story of the *zemstvo* is a useful complement to recent works on political representation and local public goods in India and other developing societies.

There are a number of issues that must be dealt with to develop a more complete understanding of the effects of the *zemstvo*'s political structure. Further research is necessary before the statute 3rd curia assembly seat shares may be accepted as plausibly exogenous once we condition on local conditions. This may require archival work on the legislative commissions that generated the laws of 1864 and 1890. Also necessary is a more detailed account of exactly how an assembly seat might affect *zemstvo* budget and program decisions. Ongoing study of a large number *zemstvo* meeting minutes and budget

records will hopefully unveil more details about the politics of policymaking in rural Russia. A more comprehensive analysis of all the different activities of the *zemstva* is another natural step forward – minutes, executive board reports, and published sources such as the *Dokhody* volumes offer incredibly detailed accounts of where every ruble came from and where each one went. Finally, it is worth noting that the long-run objective of this research project is to look at the impact of the *zemstvo* on Russian economic development over the period. The aggregate evidence points to the important effects of this institution in terms of public goods and services, even if the underlying political structure was perhaps less than fully democratic. With the new district-level dataset, it is possible to investigate whether *zemstvo* expenditures, or even the extra bit of spending encouraged by peasant assemblymen, actually had a measureable impact on the rural population. For example, ongoing research has begun to compare educational outcomes between *zemstvo* and non-*zemstvo* districts and finds that the new institution did seem to deliver faster growth in school provision.[132]

Despite remaining uncertainty in the mapping between political structure and budgetary outcomes, it is clear that the *zemstvo* was a new type of electoral institution in what was perhaps the quintessential absolutist state of the 19th century. Prior to 1864, there had been a long tradition of elected self-government among peasants, urban classes, and the nobility. However, these bodies catered exclusively to their respective social estates, collected little in the way of revenues, and funneled few resources towards public goods and services. The *zemstvo* was a critical component of a revamped local public sector after the Great Reforms, and its electoral structure served as a model for the system created with the founding of Russia's first real parliament – the Duma – in 1905. Economic historians have yet to unravel the implications of these political changes for economic growth in the late-Tsarist period. Doing so would contribute to contribute to a growing literature on the political economy of development and improve our understanding of the origins of the Russian Revolution of 1917.

[132] See Nafziger, "Financing," for additional evidence on the *zemstvo*'s role in financing education.

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Table 1: Total *Zemstvo* Revenues and Expenditures, Select Years
(millions of current rubles)

	Revenues			Expenditures			
	Property Taxes	% of total	Total	Education	Healthcare	% of total	Total
1871	15.6	72.7	21.5	1.6	2.1	18.1	20.7
1880	26.8	73.7	36.3	5.0	6.4	32.6	35.1
1886	28.1	67.8	41.5	6.7	9.2	36.7	43.4
1896	42.3	70.4	60.1	9.9	18.3	46.3	60.9
1903	64.6	64.9	99.5	19.1	30.2	49.6	99.5
1906	83.4	67.1	124.2	25.3	35.9	49.3	124.2
1913	155.4	62.3	249.4	87.7	70.2	63.3	249.5

Note: Numbers refer to the sum of district and provincial revenues and expenditures for just the 34 provinces with *zemstva* in 1903. The spending totals for 1871 and 1880 do not include Samara province (hence the differences between total income and expenditures). Property tax income in 1871 and 1880 is defined slightly more broadly than the years that follow (hence, the larger portion of total income). Data for 1871 and 1880 are budgeted rather than actual totals. The difference in total spending and income for 1913 reflects extra expenditures on items budgeted in 1912. Finally, the price indices of Mironov ("Wages") and Gregory (*Russian*) show growth of approximately 35% between the early 1870s and 1913. With the population of the *zemstvo* provinces increasing from roughly 50 to 88 million, real per capita *zemstvo* expenditures increased by 500% over the period. Sources: 1871 and 1880 are taken from Veselovskii, *Istoriia;* 1886 is from Russia, Tsentral'nyi, *Sbornik*, 1890, pp. 226-233; 1896 is from Russia, Tsentral'nyi, *Zemskie*; and 1903-1913 are from Russia, Statisticheskoe, *Dokhody*.

Table 2: Mean *Zemstvo* Land Taxes, Select Years (kopeks)			
1 *desiatina* = 2.7 acres	Mean	SD	N
1877 Tax assessment per *desiatina* of any land type	13.4	5.8	359
1885 Tax assessment per *desiatina* of peasant allotment land (sum of provincial and district *zemstva)*	20.2	7.8	357
1885 Tax assessment per *desiatina* of privately owned land (sum of provincial and district *zemstva)*	16.9	8.9	359
1890 District tax assessment per *desiatina* of peasant allotment land	18.0	8.1	354
1890 District tax assessment per *desiatina* of non-peasant land	13.9	8.2	354
1903 District tax assessment per *desiatina* of any type of land	20.9	9.8	359
1913 Tax assessment per *desiatina* of peasant allotment land (sum of provincial and district *zemstva)*	62.7	-	-
1913 Tax assessment per *desiatina* of any land type (sum of provincial and district *zemstva)*	50.8	-	-

Sources: N refers to the number of districts supplying data. 1877 data are from Russia, Departament, *Statisticheskiia*; 1885 from Skalon, ed., *Zemskiia*; 1890 from Veselovskii, *Istoriia*, vol. 1, Appendix VII, pp. 648-652; and 1903 and 1913 from Russia, Statisticheskoe, *Dokhody*. The 1913 data are averages of all taxes across all types of land and refer to all 40 provinces with *zemstva* at that time. There were 100 kopeks in a ruble.

Table 3, Part A: Statute Representation in District *Zemstvo* Assemblies

N = 359	1st Curia (Private Landowners)	2nd Curia (Urban Property Owners)	3rd Curia (Peasant Communities)
1864 Law	46.1	13.0	40.9
1890 Law	52.6	14.7	32.7

Correlations

3rd Curia Share (1864) and Peasant Share of Population (1897) = 0.61

3rd Curia Share (1890) and Peasant Share of Population (1897) = 0.25

Note: The means from the 1864 law include a small number of adjustments of seat that allocations that occurred before 1890, including all but one of the districts of Bessarabia province, which only opened a *zemstvo* in 1870, and in Ufa province, which opened a *zemstvo* in 1875. Sources: *PSZ*, Series II, vol. 39, Issue 3 [Appendices], and Series III, vol. 10; Russia, Khoziaistvennyi, *Sbornik*; Troinistikii, ed., *Pervaia*; and Obchinnikov, *Zakony*.

Table 3, Part B: Actual Representation in the District *Zemstva*

Assemblies	Nobility	Merchants / Urban Classes	Clergy	Peasants
1865-1867	4962 (41.7%)	1296 (10.9%)	774 (6.5%)	4581 (38.4%)
1883-1885	5595 (42.4%)	2223 (16.9%)	305 (2.2%)	5073 (38.5%)
1890-1893	5697 (55.2%)	1415 (13.8%)	0 (0.0%)	3174 (31.0%)

Executive Boards (shares)	Nobility	Other	Peasants
1886	55.5%	13.6%	30.9%
1903	71.9%	9.8%	18.9%

Note: For the 1865-1867 period, only 29 *zemstvo* provinces conducted elections. As a result, the total number of assemblymen = 11915 (in contrast with 34 provinces and 13196 assemblymen in 1883-1885), including 302 of unknown social class. In 1883-1885, 86.4% (N = 4635) of 3rd curia representatives were peasants. The 1890-1893 data do not include 37 districts where the 1st and 2nd curiae were unified into one. Sources: Veselovskii, *Istoriia,* vol. 3, pp. 433-434 and 674-676; Russia, Tsentral'nyi, *Sbornik*, 1890, pp. 226-233; Syrnev, ed., *Statistika*; and Zakharova, *Zemskaia*, p. 14.

Table 4: What Determined *Zemstvo* Land Tax Rate Differentials in 1885?

Dependent variable:	Communal-Private Property Tax Differential in 1885 (% of Private Land Rate)				
Gap in oat yields (log difference)	0.155	0.191	0.207	0.154	0.134
communal vs.private land, mean of 1884-1900	(0.251)	(0.232)	(0.261)	(0.253)	(0.248)
Gap in rye yields (log difference)	-0.0663	-0.0672	-0.105	-0.0662	-0.0595
communal vs.private land, mean of 1884-1900	(0.248)	(0.247)	(0.252)	(0.248)	(0.233)
Share of the population in urban areas, 1883	0.413**	0.237	0.248	0.417*	0.423*
Official urban communities	(0.200)	(0.158)	(0.163)	(0.241)	(0.226)
Share of land denoted as "arable" in 1881	0.713***	0.708***	0.743***	0.711***	0.960
Out of all land	(0.193)	(0.181)	(0.196)	(0.203)	(0.972)
Share of land in communal property, 1877	0.390**	0.452**	0.379**	0.394**	1.819**
Out of all land	(0.169)	(0.172)	(0.168)	(0.173)	(0.856)
3rd Curia Assembly Seat Share, 1864	0.914**			0.921**	1.972*
Under original statutes	(0.396)			(0.433)	(1.039)
Peasant share of 3rd curia assembly seats, 1883		-0.144			
Seats actually held by peasants		(0.151)			
Peasant share of district executive board, 1883			0.133		
Positions actually held by peasants			(0.107)		
Share of the population who were serfs, c. 1860				0.00725	-0.783
Serfs in 1857 / Total population in 1863				(0.163)	(0.743)
3rd curia share x Serf share					1.913
					(1.587)
3rd curia share x Share of arable land					-3.320
					(2.181)
3rd curia share x Communal land share					-0.626
					(2.041)
Constant	-1.183***	-0.702***	-0.844***	-1.189***	-1.628***
	(0.241)	(0.210)	(0.162)	(0.275)	(0.499)
Observations	357	357	357	357	357
Provincial fixed effects?	Yes	Yes	Yes	Yes	Yes
R^2 (within)	0.145	0.130	0.134	0.145	0.164
R^2 (overall)	0.350	0.341	0.349	0.349	0.375

Note: *** p<0.01, ** p<0.05, * p<0.1 See Tables 2 and 3, the Appendix Table, and the text for information on the variables in these specifications. The regressions are all OLS with provincial fixed effects and robust and clustered (at the provincial level) standard errors. The dependent variable is defined as the log difference of the tax rates per *desiatina* (2.7 acres) on private and communal (peasant) land. The "share" variables are redefined here to be of the form 0.XX.

Table 5: Understanding District *Zemstvo* Expenditures in 1883 – Baseline

	Expenditures Per Capita					
	Total				Medical	Education
% 3rd curia assembly seat share, 1864	-0.0710	-0.231	-0.221	-0.277	-0.0769	-0.0669
	(0.190)	(0.281)	(0.271)	(0.273)	(0.114)	(0.0612)
% Land in communal property, 1877		-0.333**	-0.337**	-0.400***	-0.105***	0.0503
		(0.142)	(0.142)	(0.131)	(0.0369)	(0.0412)
Contains provincial capital (equals 1 if yes)		-4.760	-4.643	-4.817	-4.677**	-0.657
		(4.831)	(4.621)	(5.066)	(2.006)	(1.258)
Log (Total land area), 1881			-0.787	-1.552	0.565	2.532*
			(3.939)	(3.991)	(1.123)	(1.362)
Rural direct tax obligations per "soul", 1877				0.00824		
In kopeks				(0.0365)		
Additional Controls	No	Yes	Yes	Yes	Yes	Yes
Observations	342	342	342	326	342	342
Provincial Fixed Effects	34	34	34	33	34	34
R^2 (within)	0.001	0.119	0.120	0.135	0.037	0.036
R^2 (overall)	0.008	0.246	0.240	0.239	0.041	0.057

Note: *** p<0.01, ** p<0.05, * p<0.1 Regressions are estimated by OLS with robust and clustered (by province) standard errors in parentheses. The explanatory variables are described in the text and summarized in Table 3 and the Appendix Table. All "%" variables are in percentage points – i.e. 80% = 80. The 1883 expenditures data are missing 17 observations distributed across 13 provinces. The "Additional Controls" include the portion of land that was arable in 1881, the portion of the population urban in 1883, and a constant term. If provincial fixed effects are not included in the model of column 1, then the coefficient estimate on the curia share variable is -0.308 (s.e. = 0.349) with an R^2 of only 0.008.

Table 6a: Understanding District *Zemstvo* Expenditures in 1903 – Baseline

	Total Expenditures Per Capita				
% 3rd curia assembly seat share, 1890	1.232***	1.307***	1.363***	1.296***	1.293***
	(0.379)	(0.408)	(0.405)	(0.378)	(0.388)
% Land in communal property, 1905		-0.864**	-0.821**	-0.937**	-0.924**
		(0.339)	(0.335)	(0.350)	(0.375)
Contains provincial capital (equals 1 if yes)		-10.02	-11.51	-1.267	-1.232
		(10.03)	(11.25)	(11.19)	(11.12)
% Adult males in agriculture, 1897			-0.403**	-0.298*	-0.298*
			(0.155)	(0.148)	(0.168)
% Population born outside province, 1897			-0.168	0.521	0.540
			(1.263)	(1.155)	(1.163)
% Population in the nobility, 1897				-19.58	-19.63
				(12.64)	(12.37)
Mean male agricultural wage, 1884-1900, kopeks					0.00485
Mean of daily planting and harvest wages					(0.353)
Tax obligations per capita. 1890s					-0.0242
In kopeks					(0.0881)
Additional Controls	No	Yes	Yes	Yes	Yes
Observations	359	359	359	359	358
Provincial Fixed Effects?	Yes	Yes	Yes	Yes	Yes
R^2 (within)	0.056	0.116	0.124	0.136	0.137
R^2 (overall)	0.101	0.225	0.248	0.220	0.219

Table 6b: By Category

N = 358	Medical	Education	Roadwork	Administration	Welfare and Economic Measures
% 3rd curia assembly seat share, 1890	0.198***	0.368***	0.194	0.313**	0.0915***
	(0.0688)	(0.0658)	(0.118)	(0.116)	(0.0320)
% Land in communal property, 1905	-0.258***	-0.149	-0.0852	-0.275***	-0.0229
	(0.0883)	(0.0928)	(0.0840)	(0.0946)	(0.0330)
Contains provincial capital (equals 1 if yes)	-5.642	1.637	2.002	0.650	0.245
	(3.579)	(3.322)	(1.589)	(1.843)	(1.210)
% Adult males in agriculture, 1897	-0.0746	-0.0780*	-0.0940*	-0.00676	-0.00282
	(0.0637)	(0.0409)	(0.0470)	(0.0303)	(0.0261)
% Population in the nobility, 1897	-5.265*	-7.066**	-2.977***	-3.043**	-2.393**
	(2.745)	(2.902)	(1.024)	(1.410)	(1.110)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Provincial Fixed Effects?	Yes	Yes	Yes	Yes	Yes
R^2 (within)	0.141	0.152	0.086	0.213	0.028
R^2 (overall)	0.206	0.267	0.054	0.310	0.018

Note: *** p<0.01, ** p<0.05, * p<0.1. The specification is the same as in Table 7. The variables are described in the text and summarized in Table 3 and the Appendix Table. "Additional Controls" include the portion of land that was arable in 1881, the portion of the population urban in 1904, the log of the total land area, and a constant term in both panels. In Panel 8b, "Additional Controls" also includes the migrant population share and the wage and tax variables of Panel 8a. In Panel 8a, excluding fixed effects from the first model results in a coefficient of 1.547 (s.e. = 0.776) on the 3rd curia share variable

Table 7: Determinants of District *Zemstvo* 3rd Curia Assembly Seat Quotas

Dependent variable (%s):	3rd Curia Shares, 1864	3rd Curia Shares, 1890		
% Population in urban areas	-0.141	-0.0557	-0.0570	-0.0789*
1863 or 1883	(0.0887)	(0.0515)	(0.0493)	(0.0457)
Contained provincial capital	-4.465***	-1.014	-1.037	-0.557
= 1 if yes	(1.261)	(0.978)	(1.025)	(0.996)
Log (# of full 3rd curia *tsenz*)	1.034	1.870	1.876	1.480
1877 communal land / suggested norm, 1863	(0.817)	(1.313)	(1.334)	(1.120)
Log (# of full 1st curia *tsenz*)	-0.271	-4.543***	-4.545***	-4.917***
1877 private land / suggested norm, 1863	(0.396)	(1.081)	(1.090)	(1.338)
% Population serfs,	-0.100***	-0.0164	-0.0172	-0.0104
Number of serfs in 1857 / Population in 1863	(0.0193)	(0.0450)	(0.0438)	(0.0327)
% of land that is arable, 1881	0.0297	-0.0634	-0.0632	-0.0836
	(0.0222)	(0.0696)	(0.0693)	(0.0798)
3rd Curia share under the 1864 law			-0.00730	
			(0.0599)	
Noble landowner ratio				-0.306*
# landowners in 1877 / # landowners in 1889				(0.174)
Constant	43.15***	44.01***	44.33***	47.25***
	(3.212)	(7.753)	(8.201)	(9.016)
Observations	349	349	349	339
Provincial Fixed Effects?	Yes	Yes	Yes	Yes
R^2 (within)	0.265	0.295	0.295	0.264
R^2 (overall)	0.343	0.464	0.464	0.406

Note: *** p<0.01, ** p<0.05, * p<0.1 The regressions are OLS with provincial fixed effects and robust and clustered (by province) standard errors. The dependent variables are the share of district *zemstvo* assembly seats allocated to the 3rd curia under the two laws (defined in percentage points, as the other % variables are here). The # of curia *tsenz* refers to the sum of land owned communally or privately (in 1877, when such data are available – see the Appendix Table), divided by the amount of land corresponding to one assembly seat for that curia according to *zemstvo* reform proposal of P.A. Valuev (see Russia, Khoziaistvennyi, *Materialy*, vol. 2, pp. 67-80). Before taking the logs of these two variables, I add 0.1 to deal with the log of zero problem (affecting 3 observations – the results are unchanged). The "Nobility landowner ratio" takes the number of landowning nobility from the 1877 data and divides it by the number of landowning nobility eligible to vote in *zemstvo* primaries in 1889 (before the 1890 reform). This number is taken from Russia, Tsentral'nyi, *Statisticheskiia*. Nine districts have missing data. The other variables are summarized and sourced in the Appendix Table.

Table 8: Dropping the Provinces with "Peasant *Zemstva*"

	1885	1883		1903	
	Property Tax	Per Capita Spending		Per Capita Spending	
	Differential	Total	Education	Total	Education
% 3rd curia assembly seat share, 1864 or 1890	1.664	-0.136	0.282	-0.471	-0.0133
	(1.491)	(0.636)	(0.200)	(1.496)	(0.419)
Interaction Terms (with % 3rd curis)					
% Land in communal property, 1877 or 1905	-2.271	-0.00886	-0.00506	0.0585	0.0245**
	(2.136)	(0.0149)	(0.00465)	(0.0436)	(0.0109)
% Land that was arable, 1881	-1.439	0.00614	-0.00285	-0.0785**	-0.0307***
	(2.290)	(0.00940)	(0.00318)	(0.0370)	(0.0103)
% Population that were serfs, c. 1860	2.605				
	(1.907)				
% Population in the nobility, 1897				3.020**	0.693**
				(1.262)	(0.276)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Observations	317	305	305	318	318
Provincial Fixed Effects?	Yes	Yes	Yes	Yes	Yes
R^2 (within)	0.214	0.119	0.063	0.132	0.092
R^2 (overall)	0.408	0.134	0.011	0.173	0.148

Note: *** p<0.01, ** p<0.05, * p<0.1. These models drop all observations from Perm, Olonets, Viatka, and Vologda provinces. Otherwise, column 1 is equivalent to column 5 in Table 4, columns 2 and 3 are equivalent to columns 3 and 6 in Table 5 (with the two interaction terms added), and columns 4 and 5 are equivalent to column 5 of Panel A and column 2 of Panel B in Table 6 (with the three interaction terms added). The dependent variable (and some of the controls) in column 1 are in logs, which changes the interpretation of the coefficients. The 1864 3rd curia share variable is used for the first three models, and the 1890 for the last two models (similarly for the % Communal land variable – both in levels and interactions).

Table 9: Were the Effects Different in More "Contestable" Districts?

	1885	1883		1903	
	Property Tax	Per Capita Spending		Per Capita Spending	
	Differential	Total	Education	Total	Education
% 3rd curia assembly seat share, 1864 or 1890	1.740	-0.0813	0.0373	3.125**	0.742**
	(1.033)	(0.538)	(0.149)	(1.412)	(0.282)
% Population in the nobility, 1897	0.254**	0.0464	0.0428**	-0.247*	-0.0799
	(0.119)	(0.0600)	(0.0172)	(0.128)	(0.0520)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Observations	357	342	342	358	358
Provincial Fixed Effects?	Yes	Yes	Yes	Yes	Yes
R^2 (within)	0.172	0.122	0.053	0.236	0.206
R^2 (overall)	0.365	0.231	0.053	0.230	0.238

Note: *** p<0.01, ** p<0.05, * p<0.1. The models are the same as in Table 9, although the "peasant *zemstva*" observations are not dropped here. The interaction terms are retained in Table 10 (part of the "Additional controls"), although the results do not change sharply if they are excluded. However, their inclusion makes these results not directly comparable to those in Tables 5 and 6 (but see the text).

Table 10: First-Difference (Panel) Analysis of District *Zemstvo* Expenditures, 1883 and 1903

Dependent Variables (Δ Expenditures per capita, kopeks):	Total expenditures	Medical expenditures	Education expenditures	Total expenditures
% 3rd curia assembly share (Δ)	0.812**	0.246***	0.309***	1.445**
	(0.334)	(0.0845)	(0.0699)	(0.629)
% Land owned by the nobility (Δ)	-0.392	-0.0295	-0.0601	-0.481
	(0.317)	(0.104)	(0.0857)	(0.315)
% Population in urban areas (Δ, 1904 - 1863)	0.811**	0.228	0.409**	0.776**
	(0.320)	(0.162)	(0.200)	(0.326)
Δ % 3rd curia x % Commune land, 1905				-0.0968
				(0.177)
Δ % 3rd curia x % Noble pop., 1897				-0.0122
				(0.00904)
Constant	60.26***	21.16***	17.38***	58.96***
	(6.999)	(1.919)	(1.692)	(6.181)
Observations	335	335	335	335
R^2 (overall)	0.067	0.044	0.114	0.075

Note: *** p<0.01, ** p<0.05, * p<0.1 See Tables 5-6 and the Appendix Table for information on the variables underlying these specifications (before differencing). The models are OLS regressions run on the differences in the variables between 1883 and 1903 (1903 values – 1883 values). The interaction terms are the differenced % 3rd curia share variable multiplied by the noble population share and communal land share taken in 1897 and 1905, respectively. Robust and clustered (by province) standard errors are in parentheses. There are some missing observations from 1883 for education and medical spending and from 1905 for the portion of land held by the nobility. As a result, roughly 2 provinces are dropped relative to Table 6. Including tax variables or the contestability interactions from Table 8 do not change these results.

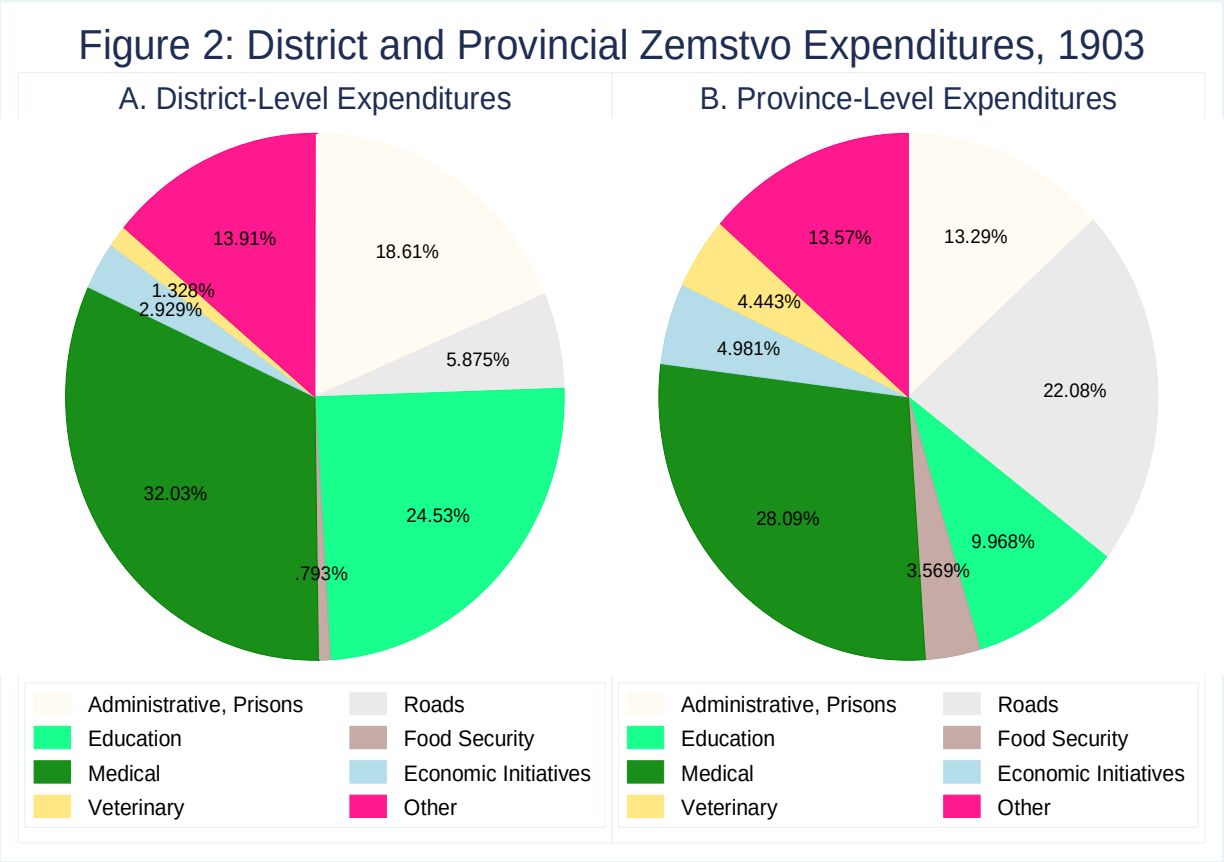
Table 11: Full Panel Specification, 1877-1906

Dependent Variables (kopeks):	Total Expenditures per Capita	Expenditures on Education per Capita
% 3rd curia assembly share	-0.541	0.0403
	(0.401)	(0.0909)
Year (1877 = 1 ➔ 1906 = 5)	3.348	3.634***
	(4.677)	(1.025)
% 3rd curia x Year	0.326**	0.0561*
	(0.135)	(0.0292)
% Population in urban areas	-0.811	-0.144
	(0.500)	(0.178)
% Land owned by the nobility	-0.441	-0.0480
	(0.295)	(0.0574)
Constant	71.68***	1.087
	(16.62)	(3.417)
Observations	1725	1703
District fixed effects?	Yes	Yes
R^2 (overall)	0.247	0.544

Note: *** p<0.01, ** p<0.05, * p<0.1. These variables are defined in earlier tables and the Appendix Table. The regression is OLS with district-level fixed effects and robust and clustered standard errors (by district).

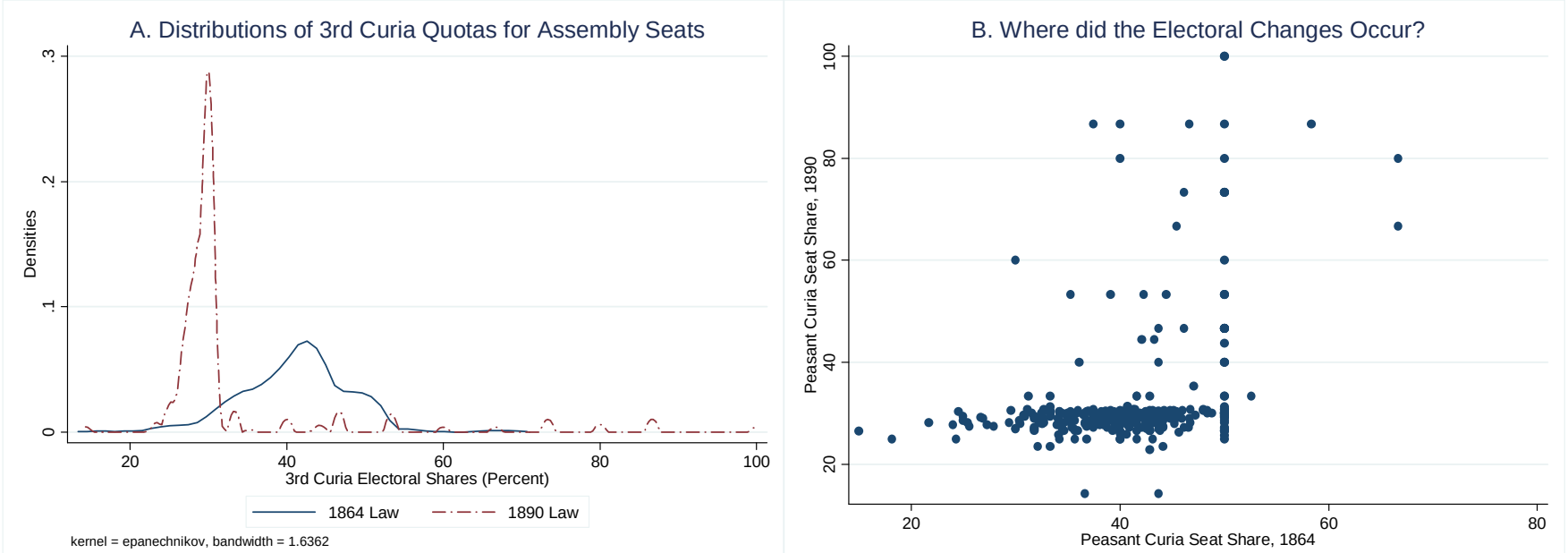
Figure 1: Russian Provinces with *Zemstvo*, c. 1900

Source: Robbins, *Tsar's*



Note: Data come from Russia, Statisticheskoe, *Dokhody*. The categories match those provided in the original source with a few exceptions. "Administrative, Prisons" includes obligatory expenditures on state institutions, on *zemstvo* administration, and on prison upkeep. "Economic Initiatives" includes agronomy, spending on fairs and trade promotion, and support for local industrial production. "Other" includes debt payments and capital depreciation. State expenditures through the *zemstvo* and inter-*zemstvo* transfers are not included.

Figure 3: The Change in Zemstvo Assembly Seat Quotas, 1864 vs. 1890



Note: The data underlying these figures comes from the appendices to the *zemstvo* laws of 1864 and 1890. See *PSZ*, Series II, vol. 39, no. 40457; and Series III, vol. 10, no. 6927.

INCOMPLETE…

Appendix Table 1: Summary Statistics for District (*Uezd*)-Level Data

	Mean	SD	N
1. Per capita zemstvo expenditures, 1906 (all per capita variables are in kopeks)	106.2	55.1	359
2. Per capita zemstvo expenditures, 1903	118.5	59.5	359
3. Per capita zemstvo expenditures, 1896	73.3	74.6	359
4. Per capita zemstvo expenditures, 1883			
5. Per capita zemstvo expenditures, 1877			
6. Per capita education expenditures, 1906			
7. Per capita education expenditures, 1903			
8. Per capita education expenditures, 1896			
9. Per capita education expenditures, 1883			
10. Per capita education expenditures, 1877			
3. Per capita expenditures on economic measures and social welfare, , 1903			359
4. Per capita zemstvo expenditures on healthcare, 1903			359
5. Per capita zemstvo expenditures on roadwork, 1903			359
6. Per capita zemstvo expenditures on administrative expenses, 1903			359
7. Per capita zemstvo expenditures on healthcare, 1883			330
8.			351
9. % of all land owned communally by peasantry, 1877			359
10. % of all land owned communally by peasantry, 1905			320
11. % of all land held by the nobility, 1877			359
12. % of all land held by the nobility, 1905			320
			332
			320
15. % gap in oat yields, communal vs. private land, 1883-1900	-14.7	8.1	359
16. % gap in rye yields, communal vs. private land, 1883-1900	-17.0	7.8	359
17. Mean male daily agricultural wage (planting and harvesting), 1884-1900 (kopeks)	53.2	11.1	358
18. Land area (in *desiatiny*)	675841	1020991	359
19. Total population, 1881 (divide by sq. miles to arrive at population density)	126474.6	61054.4	359
20. Total population, 1897 (divide by sq. miles to arrive at population density)	182643.6	123556.8	359
21. % Population serfs, 1857	39.1	23.9	356
22. % of the population in urban areas, 1863	8.4	10.1	357
23. % of the population in urban areas, 1897	9.40	11.62	359
24. % of population born outside province, 1897	5.40	6.48	359
25. % of adult males primarily engaged in agriculture, 1897	72.69	15.48	359
26. % of population NOT nobles or townsmen (peasants), 1897	92.86	6.5	359
27. % difference in land tax rates, 100 x (communal – private)/private, 1885	3.2	6.3	357
29. # of full 1st curia *tsenz*, proposed in 1863	24.1	20.7	359
30. # of full 3rd curia *tsenz*, proposed in 1863	15.9	11.0	359
31. % actual peasant share of 3rd curia assembly seats, 1883	85.6	16.8	359
32. % actual peasant share of executive board seats, 1883	31.2	28.1	359
33. "Contestable" = 1 if 40 < % peasant curia votes < 60, 1864	0.58	--	359
34. "Contestable" = 1 if 40 < % peasant curia votes < 60, 1890	0.05	--	359
35. Taxes (*sbory*) per soul (male tax unit) in 1877, state + *zemstvo* + peasant *sbory*, kopeks	243.3	41.8	343
36. Mean total taxes (*sbory*) per capita (1897), 1888 – 1897, all types of taxes, kopeks	149.0	56.8	359

Sources and Notes for Appendix Table:

Numerators for 1 and 3-6 are from Russia, Statisticheskoe, *Dokhody*; and for 2 and 7-8 are from Veselovskii, *Istoriia,* vol. 1 [Appendix]. Land variables for both 1877 and 1905 (9-14 and 18) are derived from Russia, Tsentral'nyi, *Statistika*; and Ershov, *Pozemel'naia*. Variables 15, 16, and 17 are from Russia, Ministerstvo, *Svod statisticheskikh*. Variable 19 is from Russia, Tsentral'nyi, *Mirskie;* and 22 is from Russia, Tsentral'nyi, [untitled]. Variable 21 is taken from Troinitskii, *Serf*; while 29 and 30 are derived from information reported in Russia, Khoziaistvennyi, *Materialy*, vol. 2. Variables 33 and 34 are defined from the information summarized in Table 3; number 27 comes from Skalon, ed., *Zemskiia*; and 31 and 32 come from Syrnev, ed., *Statistika*. All other variables are derived from the 1897 census data in Troinitskii, ed., *Pervaia*. "Portion" or "Share" indicates that the variable is a percent (41= 41%). 35 is taken from Russia, Kommissiia, *Priamye*; while 36 is provided in Russia, Department, *Svod*. 1877 expenditures per capita draw on 1881 population numbers, while the 1903 expenditures per capita rely on the 1897 national census numbers. Note that information on *zemstvo* expenditures in 1883, 1896, 1901, and 1906 and several other variables relevant for those years are also available in the dataset and were utilized in the panel specifications. These variables are summarized in footnotes accompanying the text.