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**Private Sector Policymaking**

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# Private Sector Policymaking

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## Abstract

Candidates often tout their private sector experience when running for public office. But do businessperson politicians actually govern differently? This paper argues that given their preferences and managerial expertise, businesspeople in office will adopt policies favorable to the business community and improve government efficiency. To test these claims, I collect data on over 33,000 Russian mayors and legislators and investigate policy outcomes using detailed municipal budgets and over a million procurement contracts. Using a regression discontinuity design, I find that businessperson politicians increase expenditures on roads and transport, while leaving health and education spending untouched. Prioritizing economic over social infrastructure brings immediate benefits to firms, while holding back long-term accumulation of human capital. However, businesspeople do not reduce budget deficits, but rather adopt less competitive methods for selecting contractors, particularly in corruption-ripe construction. In all, businessperson politicians do more to make government run for business, rather than like a business.

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Elections help ensure that politicians act according to the interests of their constituents. When politicians fear losing office, they make decisions that more closely reflect the policy preferences of their voters. However, politicians sometimes deviate from public opinion and stake out their own political positions. [Burden \(2007\)](#) argues that understanding such gaps between politician behavior and constituent preferences requires unearthing the ‘personal roots of representation.’ That is, what politicians do in office often depends on who they are as individuals, e.g. their personality, family history, work experience, and self-interest, and not just who they represent. Such traits translate into different policy agendas by affecting both how informed politicians are about certain issues and how much they care about them ([Fenno, 1973](#); [Carnes, 2013](#)). Empirically, scholars have shown that leaders’ preferences, and ultimately their ability to shape policy outcomes, depends on such characteristics as their education ([Besley, Montalvo, and Reynal-Querol, 2011](#)), race ([Hopkins and McCabe, 2012](#)), gender ([Chattopadhyay and Duflo, 2004](#)), and social class ([Carnes, 2012](#)).

One particular trait of growing interest is a career in the private sector ([Witko and Friedman, 2008](#)), a trend perhaps partly explained by the rise of several celebrity businesspeople to public office around the world. This paper develops a theoretical framework to explain why so-called businessperson politicians should behave differently in public office. First, they may possess superior knowledge of and interest in solving issues important to the wider business community. Driven by this set of preferences, politicians coming from the private sector may then push for pro-business policies, particularly those that improve the business environment and promote economic growth. But drawing on their experience managing enterprises and boosting firm productivity, businesspeople may also be uniquely positioned to improve the way government works. We might expect them to use their private sector know-how to increase the quality and lower the cost of public service delivery, for example, by eliminating wasteful spending. The question then arises: do businesspeople shape government to run *for* business (i.e. by adopting

pro-business policies) or *like* a business (i.e. by increasing government efficiency)?

Answering this question has significant consequences for how we should evaluate the priorities and quality of politicians. Individual leaders have been shown to produce dramatic effects on policymaking and economic outcomes (Jones and Olken, 2005). Some of these consequences may be less desirable for the average voter. For example, a pro-business policy agenda could open up opportunities for politicians to directly help connected firms, creating even further distance from the preferences of the voters that elected them. Institutional incentives may need to be redesigned to ensure that the class of leaders selecting into political office acts in the public interest (Besley, 2005).

This paper brings to bear several new data sources to investigate whether businessperson politicians in Russia make different types of policy decisions. In several ways, Russia is an ideal case to study the consequences of businesspeople taking public office. First, the task of identifying businessperson politicians can draw on nationwide firm registries and requirements that candidates report previous occupations. This allows for individual-level comparisons of politicians from business and non-business backgrounds. Next, the Russian government practices notable transparency in making public subnational data on budgeting and procurement processes. Scholars can both zero in on specific policy initiatives and compare officials across different positions in the legislative and executive branches as well as across levels of government. Finally, subnational politicians in Russia enjoy great autonomy to determine how state coffers are allocated.

My two-part research design first employs a regression discontinuity (RD) design to compare municipalities where businessperson mayoral candidates barely won office to those where they barely lost. To measure occupational background, I code whether each of 68,169 candidates from 2007-2015 worked in the private sector prior to campaigning in 19,886 mayoral elections. To measure pro-business and pro-efficiency outcomes, I collect data on the budgets for 25,240 municipalities and over 1 million procurement contracts. Finally to test different institutional arrangements, I also present analysis using data on

14,508 Russian regional deputies and investigate how businessperson politicians affect regional budget spending.

The analysis reveals that businessperson politicians in Russia adopt primarily pro-business policies while serving in government. I find that at both the municipal and regional levels, businessperson politicians increase expenditures on economic infrastructure, dedicating additional money to the construction of roads, rails, and ports. Levels of spending on health care and education do not change under businessperson mayors, nor the size of government decrease. And at the regional level, more businesspeople in office is associated with lower levels of corporate tax revenue. Prioritizing economic over social infrastructure brings immediate benefits to firms and opens up opportunities for rent-seeking, while holding back long-term accumulation of human capital. These results are robust to controlling for financial dependency between governments and party affiliation, with extensions showing that specific institutional arrangements play little role in preventing businesspeople from imposing their preferences on policymaking.

Next, even given their managerial expertise, businesspeople in elected office do little to improve government efficiency. The RD results indicate that municipalities run by businesspeople do not run smaller deficits; at the regional level, I even uncover evidence that more businessperson legislators results in larger deficit spending and higher levels of debt. Moreover, using detailed data on state procurement, I find that mayoral administrations run by businesspeople are less likely to adopt the most transparent, competitive mechanisms for choosing contractors: open auctions. This is particularly true for procurement in the construction sector, where opportunities for corruption are most favorable. Taken together, my analysis indicates politicians coming from the private sector refashion government to work for the business community, which may come at the expense of more lasting economic growth and improved government performance.

This paper makes several contributions to the literature connecting politicians' occupational background and specific policy outcomes. To date, we have only limited evidence

that business experience matters in politics, mainly through correlations between professional ties and roll-call voting in the U.S. (Witko and Friedman, 2008). Dreher et al. (2009) collects comprehensive cross-national panel data to show that former entrepreneurs are more likely to undertake market-liberalizing economic reforms. But businesspeople rarely win national office (the sample included only eleven entrepreneurs, or 2% of the total), and the authors argue selection into office does not undermine their results. Neumeier (2016) shows otherwise, finding that voters do not elect businesspeople at random, in that case to become U.S. governors. Politicians with private sector experience are more likely to win office during times of economic crisis. However, using matching methods to compare politicians fails to fully address this endogeneity and show that businessperson politicians indeed achieve higher growth rates and lower unemployment.

One recent exception is Kirkland (2018) who uses a regression discontinuity design based on close elections to examine the policy choices of U.S. mayors with business backgrounds. The results show that businesspeople allocate extra money to roads, but exhibit few other effects on the size or composition of budgets. The empirical analysis shown below uses a similar approach, but offers two improvements. First, the database draws on a significantly larger set of cities, which importantly are not limited by population size. This allows me to control for potential shocks to outcomes across space and geography using region and year effects, as well as reduce the vulnerability of the design to outliers around the threshold that may be driving the results. Furthermore, I bring to bear new data on government efficiency to test alternate hypotheses about whether businesspeople apply their management prowess in public office. These data-driven advantages lend additional credibility to the design and broaden the scope of outcomes analyzed. In the conclusion, I draw out the broader implications for representation and address the policy implications of businesspeople pushing their own interests while in office.

# 1 Theory

Where elected officials worked prior to entering government can significantly shape their political behavior. Many individuals serve in government during the latter stage of their professional careers, and work has shown that an individual's political attitudes and behavior are profoundly shaped by their workplace (Peterson, 1992). Winning election does not suddenly erase these formative experiences: politicians bring with them into office connections, allegiances to previous employers, and socialized policy preferences. Adolph (2013) applies this logic in showing how variation in the conservatism of central bankers depends in part on their differing professional experiences and career trajectories. Relatedly, Carnes (2013) find that legislators with a background in insurance are able to not only influence which insurance-related bills are considered, but also push for laws more favorable to their former industry.

There are a number of theoretical reasons to treat businesspeople as a distinct professional category, and thus to expect that they might behave differently from other kinds of politicians. Given their distinct political preferences and management experience, businessperson politicians may behave differently from other types of politicians. Below I draw on these differences to generate testable hypotheses about the specific policy actions that leaders from the business community may take while in office. This framework groups predictions into two categories.

## 1.1 Adopting Pro-Business Policies

First, businesspeople may have different preferences for government action and care about solving different problems facing society. In contrast to policymakers, businesspeople have spent their professional careers bringing goods and services to market. Upon taking elected office, their primary concern may be to use their newfound political influence to alleviate many of the obstacles they and entrepreneurs like them have faced within the business environment. Although self-interest drives political behavior among politicians

of all backgrounds (McGuire and Ohsfeldt, 1989), businesspeople in particular may be less concerned with holding onto elected office, and more focused on maximizing individual wealth and profits for their firms (and their associates). On average, business owners also tend to be wealthier than other candidates, which can shape their preferences over spending and redistribution (Gilens and Page, 2014).

Consequently, politicians coming from the private sector then may try to make government work *for* business. Under this reading, businesspeople in political office prioritize government actions that ease the costs of doing business and reduce government intervention in markets. Early work on urban politics in the United States has demonstrated how a cohesive bloc of business elites capitalized on their shared policy interests to successfully advocate for their own policy interests, which primarily meant pushing for stronger economic growth (Hunter, 2017). By devoting their slack economic resources to politics, businesspeople became a central part of municipal governing coalitions and were able to implement a variety of pro-growth policies (Stone, 1989). The preferences of businesspeople often unite around reshaping government to create “growth machines” (Logan and Molotch, 1987).

However, pro-growth policies may not be always be designed to serve the public interest. The political ambitions of some businesspeople stem from a desire to improve their own firms’ bottom line. Research has found that businesspeople elected to public office can increase their own firms’ revenue and profitability (Szakonyi, 2018). By self-financing their campaigns, businessperson politicians may feel less beholden to the public to implement more inclusive, encompassing policies. The notion that legislators would vote their own preferences and not fully represent their constituents is not new. For example, lawyer-legislators push for extensions of tort law that would help their private interests (Matter and Stutzer, 2015). Upon winning elected office, many candidates do not appear to put aside their past occupational allegiances.

How might businesspeople decide which types of pro-growth policies to adopt? And



what are the implications for public welfare? On one hand, politicians could prioritize improving social infrastructure, such as increased expenditures on health care, education and other welfare benefits that aid the labor force. Increasing human capital spurs greater employment, earnings, and technological innovation, while helping reduce inequality and obstacles to social mobility. However, these productivity-enhancing effects can take years to come to fruition and require long-term investments.

On the other hand, politicians could devote resources to building economic infrastructure, such as roads, railroads, and utilities. Firms then directly benefit from improved access to suppliers and markets as well as more reliable inputs such as electricity. Investing in economic infrastructure generates demand and reduces the costs of doing business. Given their professionalized preferences, I argue business will place a stronger emphasis on improving economic rather than social infrastructure. Their firsthand experience with the challenges of doing business increases the salience of these issues and can drive them to enter politics in the first place (Li, Meng, and Zhang, 2006), with the short-term financial payoffs too large to pass up. The economic impact of such investments are felt immediately by the business community, with often special advantages accruing to firms able to tap into state contracts. Ideologically, businesspeople coalesce around the idea that what is best for the business community is best for society as a whole.

**Hypothesis 1.** *Businessperson politicians will prioritize spending on economic infrastructure over social infrastructure.*

This decision over which type of infrastructure to prioritize has substantial implications for economic growth. The effectiveness of pro-growth policies depends on which sectors of the economy are targeted. Work using cross-national, disaggregated budget data suggests that shifting budget allocations from economic to social infrastructure has a positive and significant impact on growth rates, especially for developing countries (Devarajan, Swaroop, and Zou, 1996; Acosta and Morozumi, 2017). Investing in human capital places an economy on a stronger and more durable footing, while spreading benefits

among society far more equitably than investing in roads and ports. Alternately, rent-seeking tends to accompany spending on large economic infrastructure projects, especially in places with weak institutions that fail to hold politicians accountable (Robinson and Torvik, 2005).

Next, experience in the business world may predispose politicians to reduce the size of government and lower their tax burden. This motivation stems from an ideological opposition among businesspeople towards the role that government should play in society. Firms have strong interests in lowering their tax rates (Quinn and Shapiro, 1991), and cohesive business groups have successfully blocked government attempts to raise revenue in a variety of contexts (Fairfield, 2010). Surveys of nearly 20,000 firms from 26 transitioning countries in 2002, 2005, and 2009 indicate that managers rank tax rates as their biggest obstacle to doing business.<sup>1</sup> The situation is similar in Russia. According to a survey of 2,000 Russians in 2016, businesspeople are much more likely to support a deepening of market reforms, rather than a return to more nationalization.<sup>2</sup> In another survey from 2007, Russian entrepreneurs consistently advocated privatizing state assets, cutting taxes on individuals and drawing down government programs.<sup>3</sup>

**Hypothesis 2.** *Businessperson politicians will reduce government spending and cut corporate taxes.*

## 1.2 Improving Government Efficiency

Second, experience in the private sector may endow businesspeople with management skills and expertise that sets them apart from other types of politicians. A primary responsibility for most directors in the corporate world involves managing people, budgets, and

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<sup>1</sup>World Bank. "Business Environment and Enterprise Performance Surveys." Washington, DC, 2002, 2005, 2009.

<sup>2</sup>Survey conducted in September 2016 by the Levada Center.

<sup>3</sup>Survey of 1600 respondents conducted in July 2007 by the Levada Center.

physical resources. Directors have to oversee diverse teams, organize information flows, and delegate responsibilities, all with aim of maximizing efficiency, productivity, and ultimately profitability. Scholars have even argued that the key social skills required to succeed in business, namely persuasion, negotiation, and manipulation, may find relevant applications in political life (Ferris et al., 2007). Such organizational abilities and insights distinguish businesspeople from politicians coming from more narrow professions where management duties play a secondary role to applying one's specialized expertise, whether it be in medicine, engineering, or law. Businesspeople may be more effective managers, and therefore better able to improve how government works.

Building off this expertise, we might then expect businesspeople to make government run *like* a business. That is, they will take steps to increase efficiency in bureaucratic service delivery, particularly by cutting down on wasteful spending. A large body of thought in public administration argues there are instructive lessons to be transferred from the private to the public sector (Box, 1999). Businesspeople may be well-positioned to implement this approach in reality. Running a successful business (generally speaking) requires delivering quality customer service and achieving profitability. By importing know-how from their private sector pasts, they may be uniquely capable to clean up bureaucracy, increase public sector productivity, and genuine improve government functioning.

How would we know if businesspeople were committed to improving government performance? For example, running a business more efficiently can mean many things, from re-allocating resources to high-performing units to maximizing supply chain efficiency. But in the corporate world, calculating firm-level productivity is somewhat straightforward: both inputs (i.e. capital, labour and materials) and outputs (i.e. sales, profits) are mostly observable (Syverson, 2011). On the other hand, measuring public sector productivity runs into several methodological challenges, particularly concerning the quality of outputs and usage of collective goods (Lau, Lonti, and Schultz, 2017).

I argue there are several observable implications of businesspeople acting to increase

government efficiency. First, politicians coming from the private sector may impose budget constraints and put their government's finances in order. Excessive government spending can be a symptom of bad political management and fragmented policy leadership (Alesina and Perotti, 1995). Since running a deficit is akin to a company making a loss, we might expect businesspeople to institute an ethos of fiscal responsibility within their administration. Although taking on reasonable debt loads may be essential for financing investment, businesses generally are more sensitive to the demands of their shareholders who require profits to sustain interest in their firms.

**Hypothesis 3.** *Businessperson politicians will run smaller budget deficits.*

Another approach on the rise in economics involves using administrative data on public procurement to capture how well governments achieve value for money spent (Lau, Lonti, and Schultz, 2017). Public procurement accounts for on average 13% of domestic GDP worldwide, and bureaucrats often have incredible discretion in deciding how contracts are allocated. Properly designing procurement systems can dramatically limit waste and improve the quality of deliverables. For example, introducing electronic procurement ('e-procurement') in India and Indonesia led to better road quality and fewer delays (Lewis-Faupel et al., 2016). The key point here is that by prioritizing best practices and closely monitoring spending, businesspeople politicians can reduce the price that the government pays to deliver key goods and services.

**Hypothesis 4.** *Businessperson politicians will push for more efficient public procurement.*

This overall drive towards efficiency has often featured prominently in the campaigns of businessperson politicians worldwide, even in Russia. In his 2018 race for the mayor of Nizhniy Novgorod, businessman Roman Koshelev declared the need to "optimize the work of municipal institutions, and reduce budget expenditures without sacrificing quality."<sup>4</sup> Just after his appointment as governor in 2004, businessman Oleg Chirkunov

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<sup>4</sup>Zercalo "Koshelev I Panov Proshli Na Vybery Mjera Nizhnego Novgoroda"

quickly announced that he viewed Perm Region as a ‘corporation.’ Contemporary media accounts described him changing the deputy leadership, firing workers who “did not like to neglect the lunch break and regularly took tea breaks several times a day”, and optimized the budget reporting system.<sup>5</sup> Beyond these promises though, we know little about whether businesspeople actually follow through and improve government performance.

## 2 Data and Research Design

I first investigate the effect of politicians’ private sector experience on policymaking using data on budgets and public procurement at the municipal level in Russia from 2007-2015. As a federal state, Russia is divided into approximately 23,000 municipalities.<sup>6</sup> Municipal governments provide for preschool, primary, and secondary education, health care, public transportation, utilities, and road construction (De Silva et al., 2009). Total municipal spending accounts for roughly 6% of Russian GDP.<sup>7</sup> Revenue comes from land and personal property taxes, tax-sharing agreements with higher-level units, and intergovernmental transfers.

Fiscal decision-making at the municipality level is concentrated in the hands of the local executive, or mayor. Recent reforms have limited the size of the mainly unpaid legislative council and endowed the executive with strong veto powers (Ross, 2007). The mayoral administration prepares economic prognoses and drafts the budget for the local

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*Zercalo.org*, January 12, 2018.

<sup>5</sup>Kravcova, Marija. “Perezagruzka Regional’nyh Jelit”. *Expert*. October 24, 2005.

<sup>6</sup>The number of municipalities is constantly changing due to unit merges and proliferation. Each region classifies municipalities into four types: municipal rayons and city okrugs (upper tier) and rural and urban settlements (lower tier). Appendix Table A1 presents summary statistics across the different types.

<sup>7</sup>See a more detailed breakdown of spending across line-items for regional and municipal governments in Appendix Table A4.

council, which then approves it. The administration also executes the budget activities, submitting only annual reports to the local council. This gives mayors disproportionate ability to influence the size and composition of spending, and effectively sidelines the legislative branch.

Mayors in Russia can either be elected through a popular vote (council-mayor model) or by council deputies (council-manager model).<sup>8</sup> Unfortunately, data on mayoral background is only available for municipalities that use the council-mayor model; I include region fixed effects to account for selection into different systems.<sup>9</sup> To build the sample of businessperson mayors, I first collected information on 19,886 municipal plurality elections in 13,308 municipalities, or 58% of the total across Russia.<sup>10</sup> Mayoral elections are largely competitive affairs, with an average of 3.4 candidates and 18% of elections decided by 10% or less. The average number of ballots cast per election was less than 4,000, suggesting that a small number of votes could tip the scales.<sup>11</sup>

## 2.1 Measuring Private Sector Experience

To identify experience in the private sector, I collect data on each mayoral candidate's primary, full-time occupation on their election registration form. I then code a binary in-

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<sup>8</sup>In some cases, a municipality may have both a popularly elected 'head of municipality' and an appointed 'head of administration', or city manager. The mayor has few powers, while the manager runs the government. I am unable to distinguish where the joint model is used, but such an arrangement should bias results downward.

<sup>9</sup>In the Appendix, I show that the type of municipality, size, and dependence on subsidies do not predict whether elections are used. Instead, which region a municipality is located in explains roughly 65% of the variation.

<sup>10</sup>Election data comes from the Russian Central Election Commission.

<sup>11</sup>Average turnout was also just under 60%, a relatively high figure for Russia. Candidates from the ruling United Russia party won 68% of mayorships, followed by political independents and members of systemic opposition parties, such as the Communists.

indicator for whether a candidate worked as a firm director, deputy director, or a member of a board of directors at the time of their candidacy. Although this identifies most businesspeople, it misses some who might not want to draw attention to their private sector past. In response, I match each candidate based on full name and region to a database of almost 12 million ‘individual entrepreneurs’ aggregated by the Professional Market and Company Analysis System (SPARK). Candidates registered there prior to their election were also coded as businesspeople.<sup>12</sup> This variable thus denotes candidates whose primary occupation during their campaign is in the private sector, and not professional politicians who draw on outside income from business interests.

Roughly 35% of elections (7,058) saw at least one businessperson run, with a sixth of those seeing candidacies from two or more.<sup>13</sup> Businesspeople won 22.5% of the elections they contested; overall, 8% of mayors during the period came directly from the private sector.<sup>14</sup> This rate of participation in Russia accords with other studies on the backgrounds of executive branch politicians. [Neumeier \(2016\)](#) finds that 10.7% of U.S. governors previously served as CEOs, while [Dreher et al. \(2009\)](#) finds 2% of national leaders had entrepreneurial experience.

## 2.2 Outcome Data

First, to test whether businesspeople implement ‘pro-business’ policies, I collect data on budgets from the Russian State Statistics Agency for all municipalities from 2007-2015. I measure spending on economic infrastructure by collecting data on municipal expenditures on the ‘national economy’; at this level, this money goes mainly to roads, railroads,

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<sup>12</sup>Limited information is available on the firms connected to mayoral candidates, given that they are on average small and less likely to submit financial data.

<sup>13</sup>For elections with multiple businesspeople, I excluded all losing candidates, except in the rare cases of three or more businesspeople running, where I dropped the municipality.

<sup>14</sup>Appendix Section C.1 looks at the factors driving businessperson to run for office, finding more candidacies in larger and urban municipalities.

and telecommunications. For social infrastructure, I collect data on both education and health care spending. Each of these budget subcategory outcomes are measured as a fraction of the total expenditures for that year and take values between 0 and 1. I test the second hypothesis with a logged measure of all expenditures for each municipality. Unfortunately, municipal authorities have little authority to set tax rates or influence tax collection; to further test Hypothesis 2, in the next section I show analysis using regional data on corporate tax revenue. In the Appendix, I show distributions of all budget outcomes. Municipalities vary considerably as to the money they spend overall and on different types of infrastructure.<sup>15</sup>

To test whether businessperson politicians improve government efficiency, I look at two types of outcomes. First, I draw on the same municipal budget data and calculate each municipalities' deficit by dividing total expenditures by total revenue. In an effort to restrain government spending, Russian law enforces punishments for municipal governments that run high deficits, such as suspending intergovernmental grants. Even with these measures in place, 16% of municipalities ran a deficit of more than five percent of their total revenue, while over 40% ran surpluses of the same amount. This provides a window into the fiscal responsibility of municipal governments across Russia. In Appendix Section D.1, I show robustness checks to using a binary indicator for whether a municipal government exceeded the 5% deficit threshold.

The next measurement of efficiency focuses on how municipalities select contractors during public procurement tenders. International organizations and scholars alike argue that holding open, competitive auctions helps enforce transparency, reduce opportunities for corruption, and limit budget expenditures (Beth, 2007). Research on Hungary, Czech Republic and Italy has shown that the alternate approach—giving bureaucrats discretion to negotiate with suppliers on factors other than price—leads to considerably worse out-

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<sup>15</sup>See the Appendix Section D.1 for results using dependence on intergovernmental revenue transfers and other spending categories as outcome variables.



comes (Szucs, 2017; Palguta and Pertold, 2017; Baltrunaite et al., 2018). When bureaucrats can avoid using open, competitive auctions in favor of negotiated approaches, fewer bidders participate, more contracts are awarded to politically connected and anonymous firms, and ultimately higher prices are paid for the same goods and services. Work on Russia has uncovered similar findings: governments that use open auctions pay lower prices for the same goods and see less collusion among bidders (Yakovlev et al., 2016; Tkachenko, Yakovlev, and Kuznetsova, 2017).

No matter the size of the tender being procured, Russian bureaucrats have a choice about whether to use an open, competitive auction. Under this mechanism, the supplier that submits the lowest bid in a real-time online auction wins the contract.<sup>16</sup> Such ‘electronic auctions’ are used to procure roughly 50% of all government contracts. My measure thus captures the extent to which mayoral administrations use electronic auctions in their procurement. Russian mayors appoint the municipal officers who implement every step in the procurement process, from the decision about which mechanism to use to the signing and monitoring of the contract’s implementation. Moreover, newspaper accounts suggest many mayors intervene directly during the procurement process, for example, by accepting bribes to ensure certain contractors won negotiated construction tenders or blackmailing winners.<sup>17</sup>

To detect whether mayoral administrations are more likely to use auctions, I first collected public procurement data from Russia’s centralized portal (<http://zakupki.gov.ru/>),

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<sup>16</sup>Price thresholds regulate the types of *negotiated* mechanisms available to procurers in Russia. For purchases under 500,000 rubles (\$17,000), only sealed-bid auctions can be used. Tenders, which use criteria including but not only price, are used for purchases above that threshold.

<sup>17</sup>Filippovskij, Jernest “Vzjatku mjera naukograda sochli moshennichestvom.” *Kommersant*, July 7, 2018. Zajceva, Elena. “Mjeru Jaroslavlja Pred’javili Novoe Obvinenie” *Komsolmoskaya Pravda*, June 3, 2014

which launched on January 1, 2011 and provides information about all government purchases. Using the official tax identification codes for 20,581 mayoral administrations,<sup>18</sup> I then built a dataset of all 1,427,288 contracts signed from 2011 to 2015 by these local executive branches, totaling \$124 billion in procurement. I code a binary indicator for whether an electronic auction was used for each contract, and then calculate the percentage of all contracts that used auctions over each mayoral term. This variable “Competitive Procurement” thus takes values from 0 to 1. This approach rewards competition and efficiency: mayoral administrations that use electronic auctions are maximizing bidder participation and procedural transparency, while paying the lowest prices for goods or services.

I also coded contracts by their official two-digit product code, and calculated the percentage of contracts falling in the top five categories procured by mayoral administrations: construction, cars, furniture, office supplies, and food. Collectively these five categories account for 75% of all procurement by the mayor’s office itself; other expenditures in the municipal budget get routed through schools, hospitals, and other agencies where the mayor has weaker oversight over procurement practices. Below I show results specifically on construction procurement, where conceivably extra investment in economic infrastructure would be directed. Moreover, the construction sector is generally viewed as among the most ripe for corruption not just in Russia, but also through cross-national work on 42 countries (Kyriacou, Muinelo, and Roca, 2015). In Appendix Section D.1, I show results for the other four categories.

One final concern with studying Russian budget and procurement spending relates

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<sup>18</sup>This covers 92% of all municipalities, with the remaining missing due to problems with identifying the location of procurers in the portal’s database. I use official Russian OKOGU (classification) codes to identify all executive branch agencies at the eight digit OKTMO level. Some municipalities have several agencies with this classification, giving the financial department a unique tax identifier number. I include all executive agencies located within each municipality.

to the level of centralization within Russia's federal structure. It is undoubtedly true that Russian government during the Putin era has concentrated fiscal power within the federal center, relying on elaborate formulas and mechanisms for allocating transfers to lower governments and equalizing welfare. Municipal governments are particularly dependent on these subsidies to fund their expenditures.

However, I argue that interpreting budget expenditures and procurement outcomes as reflective of the preferences of local politicians is valid for several reasons. First, even controlling for region, year, and municipality 'type', Appendix Figures A.1 and A.2 show significant variation between municipalities on every spending category, from deficits and procurement outcomes to spending on different types of goods and services. This variation suggests that other political factors beyond the centralized formulas must be taken into consideration. Second, recognizing that transfers from the center may be accompanied by strict dictates, I include a control for lower-level dependence on subventions and intergovernmental grants as well as region fixed effects. Finally, if all spending and procurement decisions for the thousands of municipalities were being made in Moscow, we should not expect any effect of the identity of local mayors on different outcomes. A fully centralized state should bias against finding statistically significant results on a municipality having a businessperson candidate.

### **2.3 Research Design and Balance Checks**

Using the municipal data, I use a regression discontinuity (RD) design based on close elections (Lee, 2008). I compare budget outcomes in municipalities which saw a businessperson candidate narrowly win office with those that saw one narrowly lose office. Given a sufficiently large sample size, this approach helps account for unobserved differences and provides causal estimates of the treatment effect of having a businessperson become mayor. Budget outcomes are averaged over the years a businessperson mayor either held office (if he or she won) or would have held office (if he or she lost). I include the initial

(pre-election) level for each budget outcome, as well as the average total expenditures per year (logged) in these model specifications. Unfortunately, procurement data is available only starting in 2011. For the models analyzing the use of electronic auctions over the mayoral term, I include controls for average total expenditures (logged) and the total volume of contracts (logged).<sup>19</sup> The unit of analysis is each municipality mayoral term and the forcing variable is the vote margin of the businessperson candidate. Businessperson vote margin can range from -1 to 1, with a cutoff point of zero.

I adopt a variety of model specifications to more precisely estimate the treatment effect. First, I show simple OLS models on the full sample, not restricting based on businessperson margin of victory, while alternately including covariates and fixed effects. The point estimates reflect basic correlations between having a businessperson serve as mayor and not, while excluding all municipalities that saw no businessperson candidates. Next, I restrict to very close elections (a 3% or 5% margin of victory). These difference-in-means specifications compare only those municipalities with intense competition between businessperson candidates and their opponents. The narrow OLS specifications use municipality type fixed effects and cluster standard errors on region and year.

The main RD specifications employ a local-linear control function and the optimal bandwidth  $\hat{h}$  calculated using a triangular kernel through the [Calonico, Cattaneo, and Titiunik \(2014\)](#) (CCT) algorithm. The local-linear specifications take the following form:

$$Y_i = \alpha_i + \beta * z_i + \gamma * f(Margin_i) + \eta * z_i * f(Margin_i) + Covariates_i + \epsilon_i \quad (1)$$

where  $Y_i$  is the outcome variable for municipality  $i$ ,  $z_i$  is a binary treatment indicator for whether a businessperson mayoral candidate won or lost,  $f(Margin_i)$  is the local-linear function interacted with the treatment to fit above and below the threshold, and  $Covariates$

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<sup>19</sup>Appendix Table A.1 contains summary statistics. In Appendix Table C.2, I examine the determinants of missingness in the budget, procurement, and election data, finding that coverage improves for more populous municipalities.

is a vector of factors that also influence government spending, including the pre-election values. I also calculate the municipality's dependence on subventions to fund the local budget, as dependence may constrain local political autonomy. I control for population size using the size of the voter list (logged), and include electoral turnout, the logged number of candidates, and binary indicators indicating the party affiliation and incumbent status of the businessperson candidate. Municipal type fixed effects are included in all models, while region and year fixed effects (end of term) are used alongside covariates to capture differences in institutional arrangements and time shocks.

For the RD design to return a valid causal estimate, observations located around the cutoff point should not display signs of sorting. In other words, municipalities where businesspeople barely won and lost should not differ substantively beyond the outcome of the election. [Ross \(2007\)](#) argues opposition candidates face administrative pressure in mayoral elections. However, recent research has found that even amidst claims of interference, close elections at the regional level in Russia show balances along a number of dimensions ([Szakonyi, 2018](#)). To verify this also holds for municipal elections, I run several validity checks. First, [Figure 1](#) shows the results of a [McCrary \(2008\)](#) density test which evaluates whether businesspeople are more likely to win close elections. The results suggest that the assumption of continuity around the cutoff point of 0 is met. Although some mayoral candidates may benefit from electoral manipulations, these opportunities are not disproportionately allotted to businesspeople.

Next, I examine whether there are specific characteristics of municipalities that predict whether businesspeople win or lose close elections. These placebo tests use the same specifications as above, except that the initial (election year) values of the outcome variables and covariates are regressed on the treatment. The aim is to detect whether treatment status is significantly associated with any of these predictors, which would suggest that businesspeople enjoy advantages in winning close elections. In [Figure 2](#), I present the t-statistics from regressions on twenty placebo covariates using four model specifications.

The covariates capture the size of municipality (budget expenditures and population), the economic situation at the time of the election (change in year-on-year revenue and expansion of housing stock),<sup>20</sup> the desirability of the mayoral office (the number of candidates), candidate characteristics, and pre-treatment budget spending (the shares of the budget devoted to education, health, the economy, etc.). The t-statistics in the left panel are from two specifications using OLS on narrow bandwidths (3% and 5%) while those in the right panel derive from a local-linear specification on a 10% and the optimal CCT bandwidth for each outcome.<sup>21</sup>

In none of the four specifications do the t-statistics exceed, or even approach, a value of two, which is generally accepted as the lower bound of statistical significance. In other words, businessperson politicians do not enjoy special advantages in close elections. This is not to claim that elections at the municipal level are completely free and fair. But we can be more confident in the point estimates produced by the RD design. At least with regards to close elections involving businesspeople, victory is being more or less randomly assigned. Neither deteriorating economic conditions nor specific political characteristics of municipalities or candidates are associated with businesspeople narrowly beating their rivals.

### 3 Empirical Results

Figure 3 present a graphical representation of the RD treatment effect for the main outcomes: budget deficits, competitive procurement (all purchases), competitive procurement (construction purchases), and spending on economic infrastructure, health, and ed-

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<sup>20</sup>GDP data is unfortunately not available at the municipal level. Instead I capture a downturn in economic conditions by controlling for decreases in government revenue and the construction of new housing units, both reasonable indicators of economic growth in Russia.

<sup>21</sup>The full point estimates from these models can be found in Appendix Table B.1.

ucation. Each panel plots the average value over the mayor's term, after controlling for pre-election values and municipality type. The bandwidth used is a 20% vote margin on each side of the threshold, with observations collapsed into bins of 1.5% (on average, bins include 30.6 observations). The plots suggest that municipalities with mayors with private sector experience see a smaller percentage of construction-related procurement being conducted using open auctions, with more expenditures also going to the local economy. However, they do not account for variation over regions and years, nor do they take into account other factors influencing how budgets are allocated.

First, in Table 1, I examine whether businessperson mayors adopt pro-business policies. In each Panel, Columns 1 and 2 present simple OLS results for the full sample, Columns 3 and 4 narrow the bandwidth to 3% and 5% and calculate differences-in-means, and Columns 5 and 6 show local linear specifications using the optimal CCT bandwidth (with and without controls). As shown in Panel A of Table 1, businessperson mayors do increase spending on economic infrastructure, which at the local level means roads, railroads and telecommunications. The magnitudes of the point estimates are large and statistically significant; on average, these means that an additional 4% of a municipality's total budget is allocated to economic infrastructure. Businessperson mayors prioritize areas that immediately help the broader business community.

Panels B and C of Table 3 then look at expenditures on social infrastructure, specifically health and education, finding that businessperson politicians do not prioritize investments in human capital. Expenditures on health care are generally unchanged upon a businessperson taking office, while there may be weak evidence that businesspeople cut spending on education. Similarly, there is little evidence that businessperson mayors affect the total size of government (Panel D). The models return positive and negative point estimates that vary depending on specification and the controls included. We cannot conclude that businessperson mayors reduce the size of government. Instead, the results suggest they reallocate budget expenditures to fund areas of most interest to firms.

Table 2 next investigates the effects of having a businessperson mayor on government efficiency, as measured by budget deficits (Panel A), the percentage of all procurement using electronic auctions (Panel B), and the percentage of construction procurement using auctions (Panel C). First, there is no clear evidence that businesspeople impose more fiscal responsibility in their municipalities. Across the specifications, the point estimates on the treatment again fluctuate from positive to negative and none of the RD estimates are statistically significant. The coefficients are not large, while the results using a binary indicator for a large deficit do not return substantively different estimates (see Appendix Section D.1).

The estimates in Panel B suggest that perhaps mayoral administrations run by businesspeople may be less likely to use electronic auctions to procure all their goods and services. The point estimates are all negative, but not statistically significant. However, when we break down procurement into construction (Panel C), the largest spending category and most associated with corruption, we see a different story. When businesspeople become mayor, the percentage of corruption procurement conducted using electronic auctions falls drastically, ranging from 4-12% depending on the model specification. Businessperson mayors are not acting to enforce transparency and competition in the construction sector, instead giving bureaucrats discretion to use alternative selection mechanisms widely associated with collusion and rent-seeking. Appendix Table D2 shows that the lower utilization of auctions is somewhat specific to procurement in the construction sector, and not endemic to the administration buying office supplies, food, or furniture, where the rent margins are lower and the public's ability to scrutinize purchases is greater.

The municipal analysis demonstrates that businessperson mayors do more to push a pro-business agenda than to improve government performance. These results are robust to controlling for the municipality's dependence on transfers as well as the party membership of the businessperson candidates. In the Appendix, I show additional evidence that institutional arrangements, such as the strength of democratic institutions and parti-



san alignment with governors, do little to constrain businessperson mayors from pushing their pro-business agendas. The absence of strong heterogenous effects suggests that businesspeople are adeptly able to navigate different types of government structures.

### **3.1 Robustness: Spending by Regional Legislatures**

To probe these institutional findings further, I next analyze data on Russian regional legislators. The added advantages of studying this level are multiple. Unlike municipalities, regional legislative and executive branches work together to pass budgets. Legislative committees have the resources and capacity to hold open hearings with stakeholders, reject line-items, add their own amendments, and even send budgets bill back to the executive for further changes. Greater parity between the two branches enables us to explore whether the ability to businesspeople to affect policy is specific to institutional arrangements. Moreover, although regional legislatures engage in relatively little public procurement themselves, much more detailed budget data is available.

Data on regional budgets run from 2008-2015.<sup>22</sup> To measure pro-business policies, I look at how much money is spent on the subcategories of national economy, health care, and education, as well as logged total expenditures. Each subcategory outcomes is measured as a fraction of total expenditures (or for property taxes, total revenue) and takes values between 0 and 1. In Appendix Section D.3, I show results using data specific subcategories, regional borrowing, and macro-level outcomes. I measure efficiency again through deficits, or the ratio of expenditures to revenue.

To measure legislator background, I collect data on 14,508 regional deputies from 80 regional parliaments over 2008-2015. I code whether each regional legislator had worked as a firm director or individual entrepreneur before taking office, while also matching leg-

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<sup>22</sup>The period is restricted due to accounting changes in 2008. As Appendix Section A.1 shows, regional legislatures vary in how they allocate money to different areas. Roughly equal shares of expenditures are devoted to the economy, health care, and education.

islators to their SPARK entries. The main predictor then is the percentage of all legislators that are businesspeople.

The unit of analysis is the region-year, with the main predictor lagged since budgets are set in the previous calendar year. Identifying exogenous sources of variation in successful businessperson candidacy at the regional level in Russia is challenging, if not impossible. Well-identified approaches that study legislator background take advantage of quota systems or quirks in proposal rules that introduce exogenous variation in the politicians that govern. No such institutions are present in Russia. Instead, I run OLS models with both region and year fixed effects. The estimates are underidentified, but account for within-region variation over time and time shocks that affect spending across Russia. In addition, I control for the lagged value for each outcome, total expenditures, gross regional product, population, urbanization, dependency on federal subsidies, indicators for the governor's party and business background, and the percentage of seats controlled by the ruling party. All models show standard errors clustered on region and year.

The results from the region level specifications echo the municipal analysis. Just as in the case of mayors, businessperson legislators allocate additional money economic infrastructure. The point estimates in Table 3 indicate a substantively large, statistically significant increase in spending on the economy (Columns 1 and 2), rather than education health care. A one standard deviation increase in the percentage of businesspeople in parliament raises the amount of budget expenditures on roads by roughly \$11 million.

Businesspeople also do little to make government more efficient (Columns 9 and 10), even potentially running up higher budget deficits. A one standard deviation increase in the percentage of businessperson legislators increases the deficit by roughly 2%. Since regional governments can tap commercial financing, businessperson legislators take advantage of regional governments' access to credit markets to issue bonds (results shown in Appendix Table D.7).

Finally, in Appendix Table D.7, I look at whether businesspeople taking political power

have downstream effects on other economic indicators. Greater presence of businessperson politicians may increase private and public investment, but the effects, though large, are not precisely estimated. I also do not find evidence that having businesspeople take office lowers the level of unemployment. Businessperson legislators also favor the private sector by reducing the tax burden on all firms, as measured by the percentage of revenue derived from the corporate property tax, one of the three taxes that regional governments have the authority to change. In sum, the regional analysis confirms the findings from the municipal RD design: businessperson politicians do little to change the overall size of government, but find money (in this case, through bond issuances) to invest in economic rather than social infrastructure.

## 4 Concluding Remarks

Citizen-candidate models argue that voters take into account the personal characteristics of candidates when making their vote choice (Besley and Coate, 1997; Osborne and Slivinski, 1996). This paper helps demonstrate that their reasoning is correct: having experience in the private sector results in politicians setting priorities that advantage the business community, while doing little to improve how government works. This raises significant questions about representation and accountability (Pitkin, 1967; Przeworski, Stokes, and Manin, 1999): are voters' interests being properly represented when businesspeople help themselves in power? Interpreted in isolation, the results presented here could suggest that businessperson politicians are allocating spending towards the issues that voters care about and are truly focused on improving the economy. For example, roads in Russia are of particularly low quality and voters may be electing these businesspeople precisely to pass budgets that fix the problem.

Taken together though, the evidence in this paper suggests a different dynamic at work: businessperson politicians prioritize policies of most importance to their own community. Representative surveys of 287,987 Russians over 2009-2011 indicate that roads

rank no higher than seventh on a ranking of the fifteen most pressing local problems, trailing issues like housing, health care, alcoholism and drugs, corruption, high prices, and unemployment (see Appendix Table A10). Surveys of businesspeople tell a different story about priorities. The same cross-regional surveys suggest they are much more concerned about roads than the average voter. More specifically, a 2016 survey of 400,000 companies in Russia revealed that poor road construction was one of three primary obstacle for doing business in Russia (along with corruption and bureaucratic inspections).<sup>23</sup> It then follows that businesspeople place such a strong emphasis while in office on economic infrastructure. Their approach to government intervention in the economy is decidedly pro-business, as in defending the interests of incumbent firms, rather than pro-market, as in promoting free and open competition (Zingales, 2009).

In line with research on U.S. cities (Tausanovitch and Warshaw, 2014; de Benedictis-Kessner and Warshaw, 2016), this paper also finds that different types of governing institutions do little to affect how mayors and legislators affect policy. The cohesive preferences and outcomes achieved by businesspeople are even more impressive considering the heterogeneous set of industries and financial interests they represent.<sup>24</sup> The way forward may involve strengthening rules governing the selection of individuals into political office (Braendle, 2016). Requiring that politicians distance themselves from conflicts of interests before taking office could ensure the delivery of public rather than private goods.

Finally, there are reasons to believe that the findings from Russia tell us more broadly about how businesspeople govern in other countries, both democratic and not. Although Russia has become undoubtably more authoritarian under Vladimir Putin, the business-

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<sup>23</sup>The survey was conducted by the Russian Agency of Strategic Initiatives and covered firms in 81 regions. Appendix Section E.2 shows that business environment indexes rank Russia particularly low worldwide with regards to road quality.

<sup>24</sup>This paper is unable to fully investigate how different *types* of businesspeople push for policies. This question is ripe for future research.

people analyzed here are not plucked into power by an autocrat from above. They expend vast resources to win competitive elections, and then enjoy considerable autonomy in deciding how their governments are run. Therefore, subnational businessperson politicians in Russia face many of the same trade-offs as their counterparts abroad: how best to allocate scarce resources across a number of competing, deserving priorities. Regardless of the institutional framework they face, businesspeople appear ready and able to co-opt the state to benefit themselves. What seems to matter most for predicting their policies are their individual preferences and self-interest.

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FIGURE 1: MCCRARY DENSITY TEST

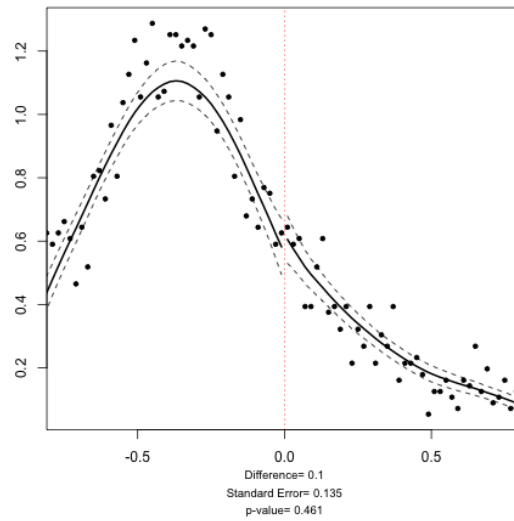
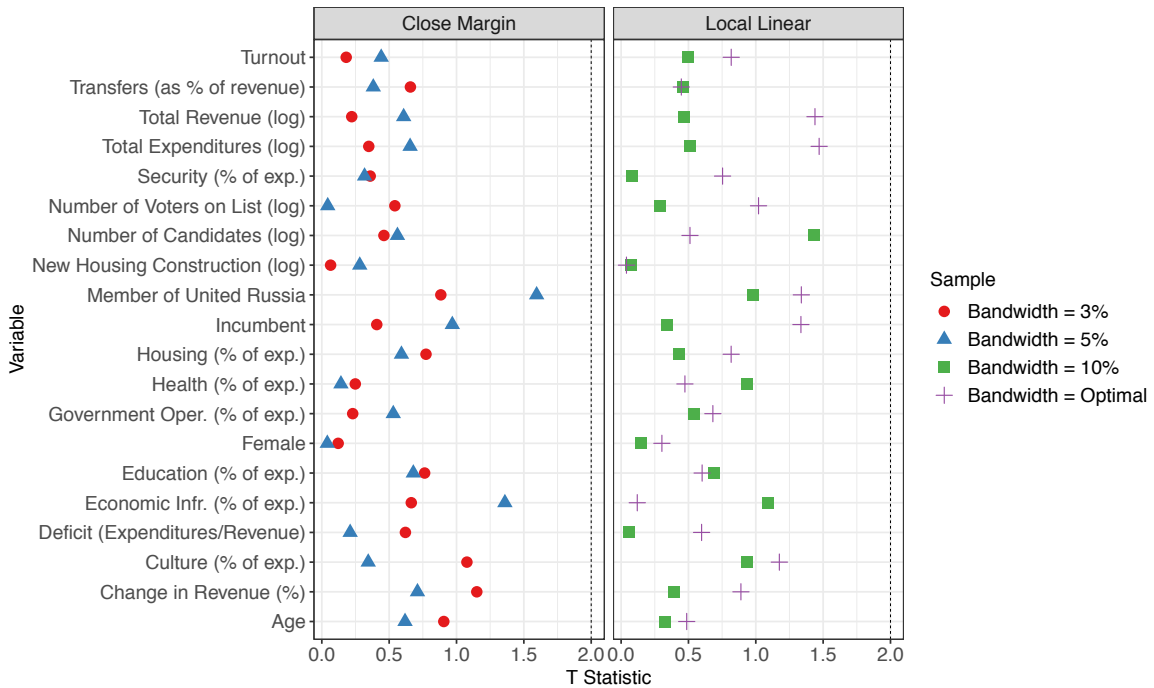
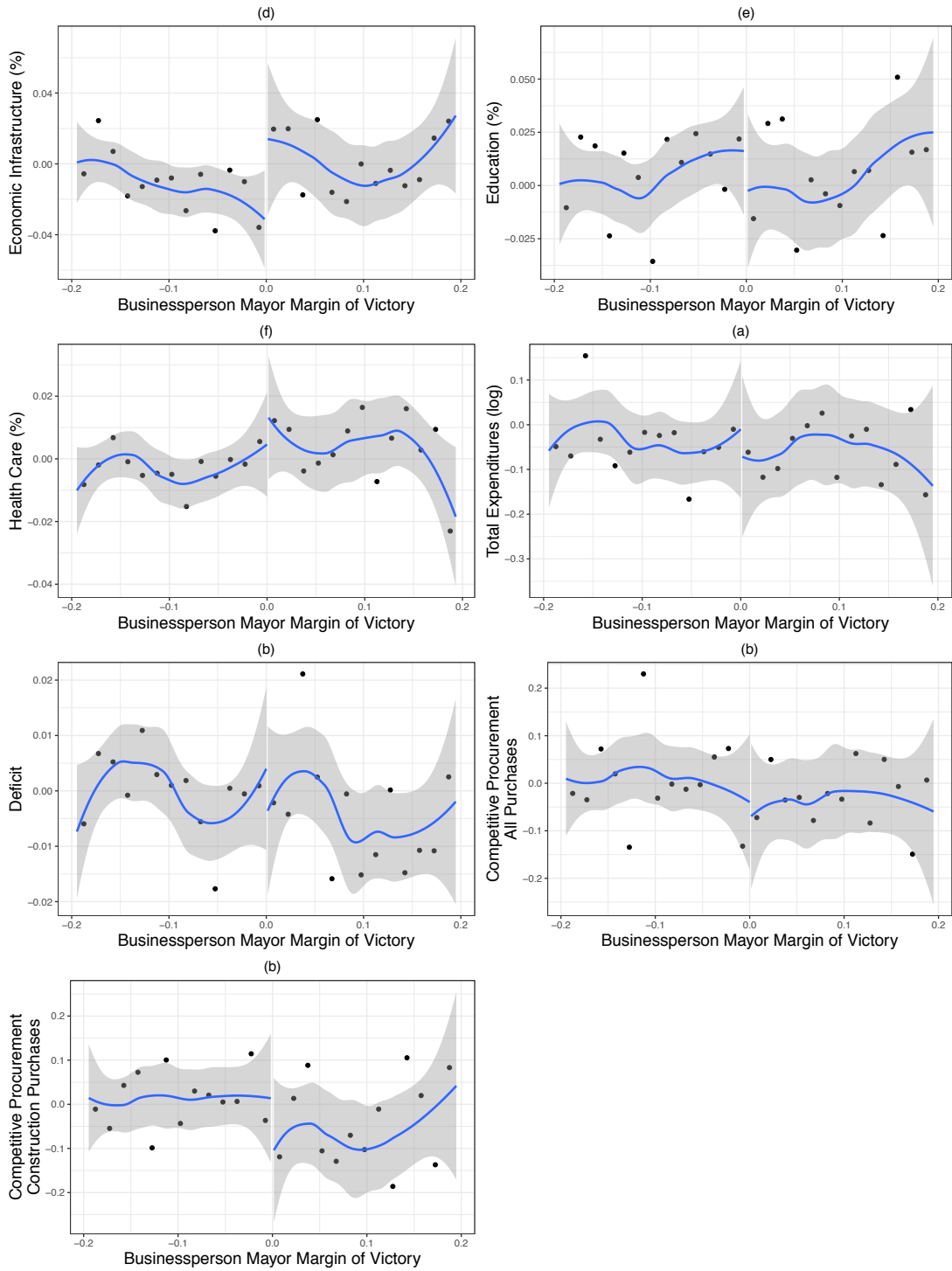


FIGURE 2: BALANCE TESTS



The figure shows the t-statistics from placebo regressions using the outcomes listed in the rows. The left panel shows simple OLS models, while the right shows those with local-linear control functions. The point estimates used to generate these statistics can be found in the Appendix.

FIGURE 3: GRAPHICAL RD PLOTS



**TABLE 1: ADOPTING PRO-BUSINESS POLICIES**

Panel A: Economic Infrastructure						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.003 (0.002)	0.001 (0.002)	0.042 (0.025)	0.030** (0.015)	0.039*** (0.015)	0.038*** (0.006)
Bandwidth	1	1	0.03	0.05	0.18	0.18
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	1,940	1,915	60	103	397	389

Panel B: Education						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.006 (0.004)	0.006 (0.004)	-0.010 (0.015)	-0.006 (0.011)	-0.025** (0.011)	-0.020 (0.014)
Bandwidth	1	1	0.03	0.05	0.27	0.27
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	1,432	1,414	54	78	466	458

Panel C: Health Care						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.004 (0.003)	0.002 (0.004)	0.009 (0.008)	0.007 (0.010)	0.012 (0.008)	0.011 (0.009)
Bandwidth	1	1	0.03	0.05	0.22	0.22
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	1,356	1,329	51	81	358	353

Panel D: Total Expenditures						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	-0.046** (0.021)	0.003 (0.020)	-0.061 (0.087)	-0.011 (0.050)	-0.006 (0.037)	0.054* (0.029)
Bandwidth	1	1	0.03	0.05	0.32	0.32
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	2,796	2,732	104	171	1,170	1,141

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 The panels examine the percentage of expenditures dedicated to economic infrastructure (A), education (B), health (C), and total expenditures (D). All models use OLS with standard errors clustered on region and year.

**TABLE 2: IMPROVING GOVERNMENT EFFICIENCY**

Panel A: Budget Deficit						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	-0.003** (0.001)	-0.003* (0.002)	-0.002 (0.009)	0.005 (0.010)	-0.0004 (0.004)	0.003 (0.007)
Bandwidth	1	1	0.03	0.05	0.35	0.35
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	2,650	2,600	99	164	1,231	1,156

Panel B: Competitive Procurement - All Purchases						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	-0.014* (0.008)	-0.001 (0.018)	-0.025 (0.033)	-0.050 (0.049)	-0.031 (0.053)	-0.016 (0.032)
Bandwidth	1	1	0.03	0.05	0.25	0.25
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	2,235	2,186	83	134	715	696

Panel C: Competitive Procurement - Construction Purchases						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	-0.023 (0.021)	-0.003 (0.026)	-0.112 (0.075)	-0.038 (0.067)	-0.127*** (0.045)	-0.093*** (0.025)
Bandwidth	1	1	0.03	0.05	0.26	0.26
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	1,942	1,898	72	111	655	637

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 Panel A examines the budget deficit in each municipality (the ratio of expenditures to revenue), Panel B examines the percentage of all contracts procured using electronic auctions, while Panel C examines the percentage of construction contracts procured using electronic auctions. All models use OLS with standard errors clustered on region and year.

**TABLE 3: REGIONAL LEVEL ANALYSIS**

	Pro-Business						Pro-Efficiency			
	Econ. Expend. (%)		Education (%)		Health (%)		Total Spending (log)		Deficit (%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Perc. Businesspeople	0.076*** (0.023)	0.071*** (0.023)	-0.022 (0.021)	-0.027 (0.022)	-0.014 (0.025)	-0.008 (0.027)	-0.056 (0.170)	-0.127 (0.172)	0.109* (0.058)	0.136** (0.068)
Total Expenditures (log)	0.151*** (0.019)	0.139*** (0.012)	-0.065*** (0.017)	-0.073*** (0.017)	-0.031** (0.014)	-0.039*** (0.013)			0.192*** (0.070)	0.207* (0.106)
GRP (log)		-0.005 (0.014)		0.018** (0.009)		0.023** (0.011)		0.121*** (0.037)		-0.071 (0.047)
Population (log)		0.084 (0.155)		-0.120 (0.224)		-0.011 (0.160)		-0.180 (0.461)		-0.416 (0.290)
Urbanization		-0.341 (0.235)		0.064 (0.294)		0.144 (0.182)		0.741 (0.852)		-0.087 (0.584)
Held Regional Election		-0.001 (0.001)		0.0003 (0.001)		0.0003 (0.001)		-0.002 (0.005)		-0.001 (0.003)
Dependence on Subsidies		0.045 (0.039)		-0.061* (0.032)		-0.024 (0.026)		0.237* (0.138)		-0.064 (0.135)
UR Governor		0.006 (0.006)		0.004 (0.008)		0.003 (0.008)		-0.00005 (0.017)		-0.008 (0.014)
Businessperson Governor		0.006 (0.005)		0.013** (0.006)		0.005 (0.004)		0.039* (0.021)		0.005 (0.012)
UR Control of Legislature		-0.007 (0.016)		-0.007 (0.024)		-0.016 (0.016)		0.100 (0.062)		0.044 (0.032)
Region, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	640	560	640	560	640	560	640	560	640	560

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 Columns 1 and 2 examine total regional expenditures (thousands of rubles, logged), while the remaining models examine ratios either of expenditures over revenue (Columns 3 and 4), or other subcategories of official government spending (Columns 5-10). All models use OLS and cluster errors on region and year.

# Supplementary Appendix Private Sector Policymaking

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# A Summary Statistics

## A.1 Analysis Data

- Table A1 presents the summary statistics for the data used in the municipal level analysis. Table A2 breaks down some of the same indicators by the four different types of municipalities. Table A3 presents the summary statistics for the data used in the regional level analysis.

**TABLE A1: MUNICIPALITY LEVEL - SUMMARY STATISTICS**

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Businessperson Mayor	2,235	0.222	0.416	0	0	0	1
Businessperson Vote Margin	2,235	-0.253	0.373	-0.929	-0.516	-0.044	0.913
Municipal Rayon	2,235	0.179	0.383	0	0	0	1
City Settlement	2,235	0.121	0.326	0	0	0	1
Rural Settlement	2,235	0.660	0.474	0	0	1	1
City District	2,235	0.040	0.196	0	0	0	1
Geographic Size (log)	2,203	10.285	1.792	0.811	9.242	11.268	16.593
Number of Voters on List (log)	2,235	8.010	1.412	4.635	6.915	9.171	12.698
Turnout	2,235	0.559	0.144	0.123	0.462	0.658	1.000
Number of Candidates	2,235	4.025	1.679	2	3	5	17
United Russia Mayor	2,235	0.656	0.475	0	0	1	1
Businessperson Incumbent	2,235	0.040	0.196	0	0	0	1
Businessperson Age (log)	2,235	3.793	0.215	2.996	3.664	3.951	4.290
Businessperson Female	2,235	0.164	0.370	0	0	0	1
Outcomes Averaged Over Term							
Deficit (Expenditures/Revenue)	2,231	0.998	0.037	0.752	0.986	1.010	1.238
Competitive Procurement - All Purchases	2,235	0.602	0.343	0.000	0.352	0.891	1.000
Competitive Procurement - Construction Purchases	1,942	0.755	0.328	0.000	0.665	0.991	1.000
Economic Infrastructure (as % of expenditures)	2,191	0.102	0.087	0.001	0.041	0.140	0.882
Education (as % of expenditures)	1,476	0.186	0.242	0.0001	0.001	0.439	0.832
Health (as % of expenditures)	1,842	0.033	0.051	0.00003	0.003	0.045	0.726
Total Expenditures (log)	2,235	10.307	1.930	6.792	8.825	11.686	18.675
Government Administration (as % of expenditures)	2,228	0.280	0.167	0.025	0.132	0.398	0.830
Transfers (as % of revenue)	2,224	0.649	0.225	0.002	0.509	0.825	0.989
Pre-Election Indicators							
Total Expenditures (log)	2,235	9.975	1.994	6.375	8.464	11.443	16.608
Transfers (as % of revenue)	2,186	0.647	0.251	0.001	0.509	0.838	1.000
Education (as % of expenditures)	1,217	0.204	0.224	0.00002	0.002	0.429	0.826
Health (as % of expenditures)	1,122	0.066	0.077	0.00002	0.004	0.112	0.624
Economic Infrastructure (as % of expenditures)	1,629	0.071	0.101	0.001	0.013	0.083	0.843
Government Administration (as % of expenditures)	2,227	0.300	0.190	0.020	0.127	0.439	0.963
Deficit (Expenditures/Revenue)	2,118	1.000	0.074	0.690	0.974	1.022	1.358

**TABLE A2: MUNICIPALITY LEVEL –SUMMARY STATISTICS  
BROKEN DOWN BY MUNICIPALITY TYPE**

	City Okrug	Municipal Rayon	Urban Settlement	Rural Settlement
N	491	1,815	1,649	18,409
Total Expenditures (mil. rub)	3,503.5	835.5	167.2	22.6
Total Revenue (mil. rub)	3,396.2	831.8	167.1	22.4
Dependence on Subsidies (%)	56.6	74.8	50.1	64.8
Population (ths.)	143.1	30.4	14.3	1.7
Territory (ths. hectares)	133.2	940	74.1	47
Mayoral Procurement (mil. rub)	235.1	67.7	45.6	5.1
Mayoral Construction Procurement (mil. rub)	88	29.1	21.5	2.9

Values taken from 2015 and averaged across all units in category. One ruble equals approximately \$0.02.

**TABLE A3: REGION LEVEL - SUMMARY STATISTICS**

Statistic	N	Mean	St. Dev.	Min	Max
Total Budget Expenditures (log)	560	24.663	0.856	22.658	28.102
Gross Regional Product (log)	560	19.558	1.099	16.807	23.328
Population (log)	560	14.036	0.900	10.827	16.317
Urbanization	560	0.295	0.124	0.000	0.729
Region Election Year	560	0.188	0.391	0	1
Dependence on Subsidies (%)	560	0.380	0.189	0.022	0.881
Government Expenditures (%)	560	0.039	0.015	0.015	0.154
Legislative and Executive Branch Expenditures (%)	560	0.005	0.004	0	0.034
Other Agency Expenditures (%)	560	0.031	0.015	0.005	0.148
Deficit (%)	560	1.060	0.079	0.732	1.585
Health Expenditures (%)	560	0.146	0.057	0.023	0.271
Education Expenditures (%)	560	0.172	0.078	0.027	0.330
Housing Expenditures (%)	560	0.034	0.045	0.000	0.258
Social Policy Expenditures (%)	560	0.175	0.050	0.026	0.345
Total Economic Expenditures (%)	560	0.182	0.057	0.083	0.457
Agriculture Expenditures (%)	560	0.052	0.037	0.0004	0.267
Fuel and Utilities Expenditures (%)	560	0.004	0.014	0.000	0.138
Roads and Transportation Expenditures (%)	560	0.080	0.039	0.008	0.255
Private Investment (log)	556	10.452	1.047	7.709	13.265
Regional Government Investment (log)	556	8.102	1.146	4.741	12.376
Unemployment (%)	560	0.070	0.028	0.008	0.217

## A.2 Overview of Regional and Municipal Spending

- Table A4 gives an item-by-item breakdown of spending by regional and municipal governments, totaled across all the units at each administrative level. Data comes from the Russian Ministry of Finance. The top rows display the expenditures for each item in USD billions in 2015, and then as a percentage of the total expenditures, the last row in the table. The left section of the table shows data for regional governments, while the right shows it for municipal governments.
- The table clearly shows that municipal spending is spread across several important subcategories: education (accounting for nearly 50% of all expenditures), followed by housing, national economy, government, and social policy. Note that these are summed across the four municipality types. More detail on the breakdown by different types can be found in the next section.

**TABLE A4: REGIONAL AND MUNICIPAL EXPENDITURES BY LINE ITEM (2015)**

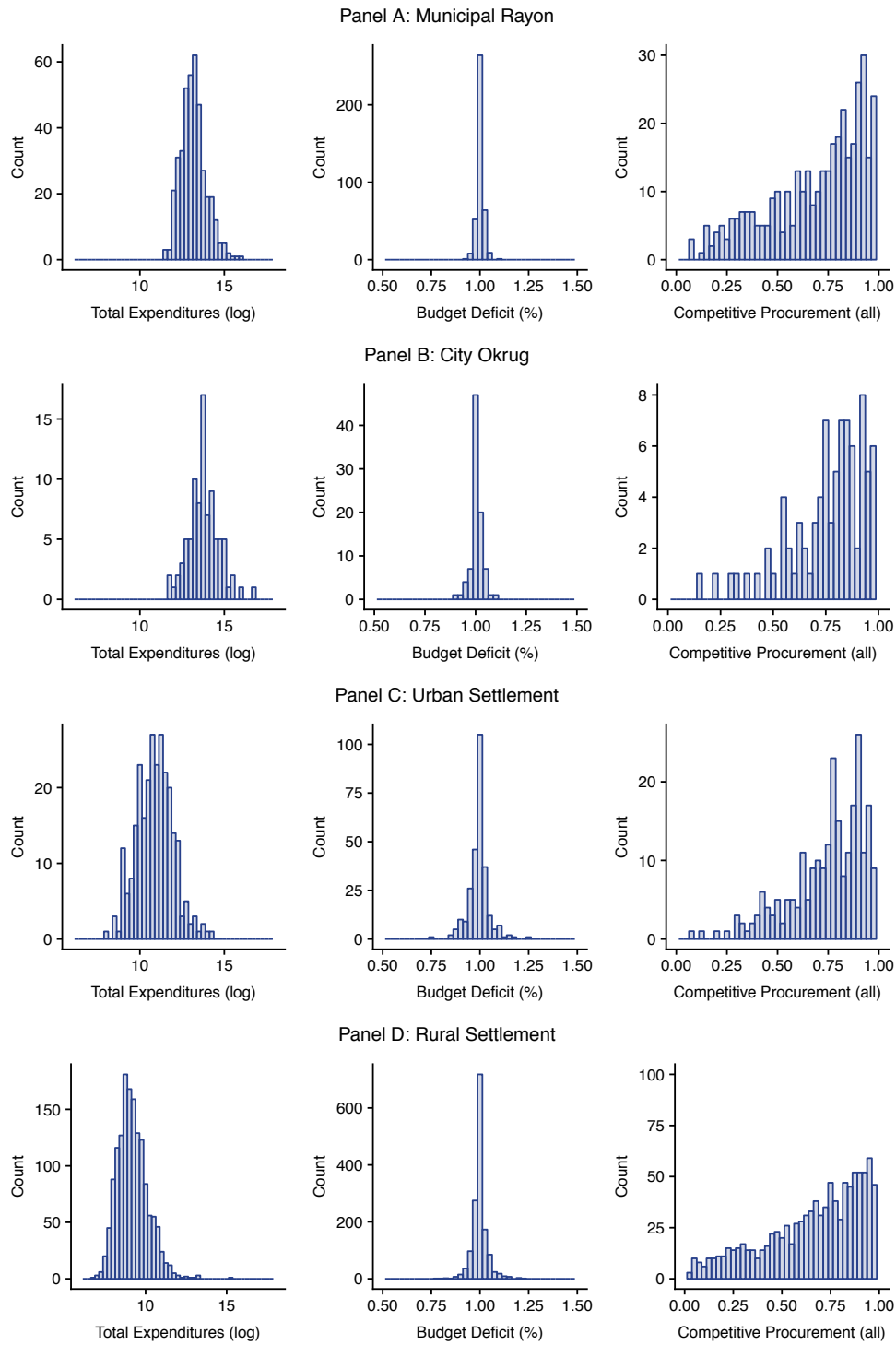
Item	Regional	% of Total	Municipal	% of Total
Common Government Expenses	4.76	3.51	5.57	9.39
Defense	0.06	0.05	0.06	0.11
Law Enforcement	1.44	1.06	0.42	0.70
Economy	27.68	20.40	5.80	9.76
Housing and Communal Services	10.05	7.41	7.71	12.98
Environmental Protection	0.33	0.24	0.06	0.09
Education	30.35	22.36	28.60	48.15
Culture	2.53	1.86	3.03	5.10
Health Care	22.52	16.59	0.31	0.51
Social Policy	24.39	17.98	4.86	8.18
Physical Culture and Sport	2.45	1.80	1.05	1.76
Mass Media	0.62	0.46	0.11	0.19
Debt Payments	2.14	1.58	0.37	0.62
Transfers	6.38	4.70	1.46	2.46
Total Deficit	-1.80		-1.06	
Total Expenditures	135.70		59.40	

All figures are from the year 2015 and shown in billions USD, using an exchange rate of 60 rubles per dollar. The percentage columns show the portion of total regional (Column 3) or municipal (Column 5) spending for each line item, that is, divided by the total expenditures line at the bottom of the table. Deficit calculates total income minus total expenditures.

### A.3 Distribution of Outcomes by Municipality Type

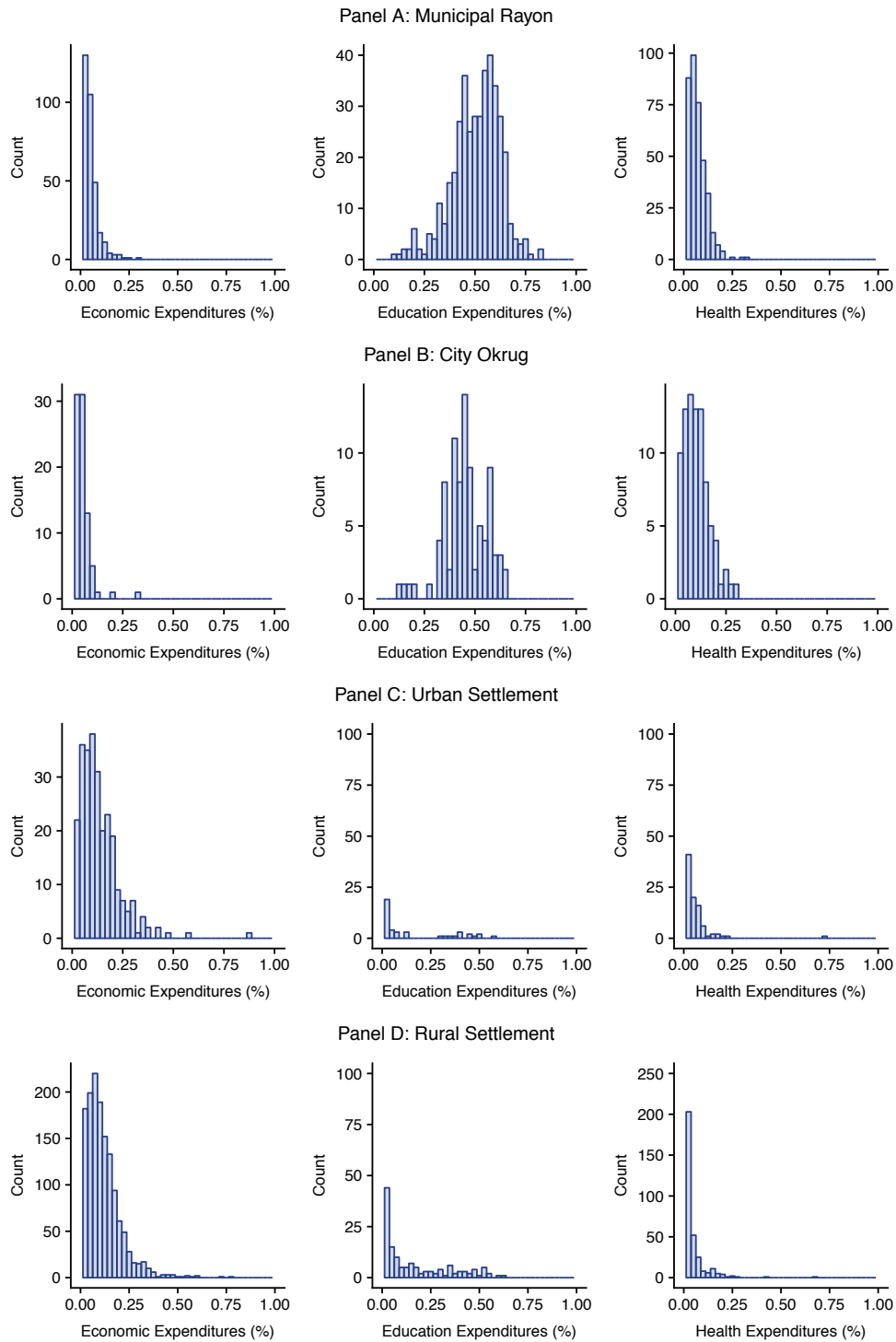
- Figures A1 and A2 present the distribution of the main outcome variables at the municipal level. Figure A1 depicts total expenditures (thousands of rubles, logged), budget deficit (total expenditures divided by total revenue), and the percentage of procurement tenders that used electronic auctions to select suppliers. Figure A2 depicts the percentage of total expenditures dedicated to economic and social infrastructure, the latter measured as education and health care.
- Each panel contains a subset of the municipalities according to their official classification: municipal rayon, city okrug, and urban and rural settlements. There is clear variation across these types in the size of spending and the amounts dedicated to various line-items. This is reasonable considering the differences in the legislation governing the types, including the functions they are responsible for. However, within each type, variation is tightly compacted.

**FIGURE A1: MUNICIPALITY LEVEL - OUTCOME DISTRIBUTION BY MUNICIPAL UNIT TYPE (1)**



The figure shows the distribution of three outcome variables at the municipal level: total expenditures, deficit (expenditures / income) and the percentage of tenders procured through electronic auctions. Each row indicates the type of municipality that the sample is subset to.

**FIGURE A2: MUNICIPALITY LEVEL - OUTCOME DISTRIBUTION BY MUNICIPAL UNIT TYPE (2)**

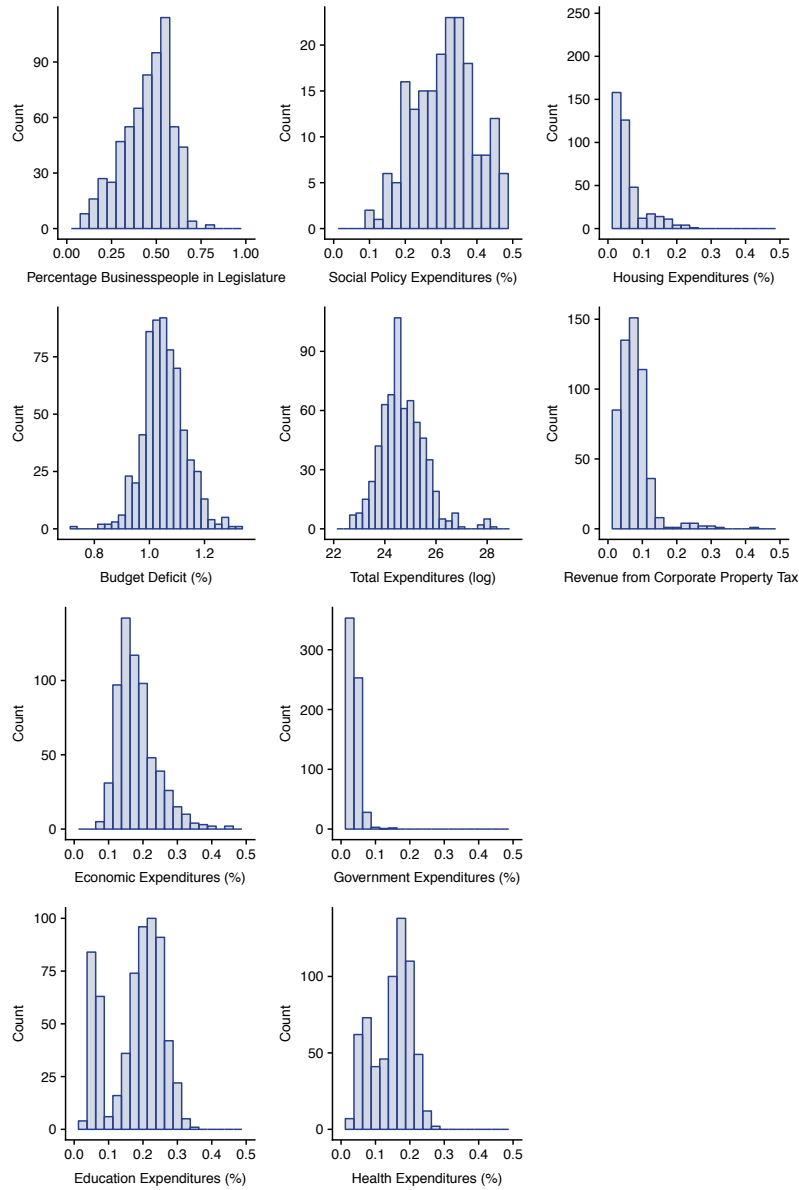


The figure shows the distribution of three outcome variables at the municipal level: expenditures on the economy, education, and health care. Each row indicates the type of municipality that the sample is subset to.

#### **A.4 Distribution of Outcomes by Region**

- Figure [A3](#) presents the distribution of the main predictor and outcome variables at the regional level, including the percentage of businesspeople in the regional legislatures, total regional expenditures, the ratio of expenditures to revenue (the deficit), and then the percentage of expenditures devoted to government agencies, economic infrastructure, health, education, housing, and social policy. The final panel looks at the percentage of revenue raised from corporate taxes.

**FIGURE A3: REGIONAL LEVEL - DISTRIBUTION OF OUTCOMES**





## B Municipality Level - Placebo Checks

- Table B1 shows the point estimates from placebo models that assess the validity of the RD design used at the municipal level. The aim is to identify any sorting around the winning threshold between municipalities where a businessperson won and those where he or she lost. Each column shows a model where a cofounder is regressed on the treatment, with Panel A presenting results from simple OLS models using a bandwidth of 5% vote margin and Panel B including a local-linear control function using an optimal bandwidth. All covariates are measured during the year of the mayor election (pre-treatment). Table B1 looks at budget data (different types of expenditures and revenue) and different proxies for economic conditions during the election (housing construction and the change in revenue relative to the year before). The voter list captures the number of voters registered (a proxy for the population of the municipality), and the number of candidates captures the level of competitiveness during the election. Finally, the models examine characteristics of the winning or losing businessperson candidate.
- In none of the models is there evidence of a significant relationship between a businessperson winning a close election and any of the pre-treatment covariates. Businesspeople do not win office in larger municipalities nor in places that had different spending patterns. Importantly, at the time of the election, these municipalities do not appear to be experiencing an economic downturn. Taken together, these results using a broad range of possible cofounders indicate that businessperson mayoral victories appear to be as-if random, an important assumption to be met to validate the regression discontinuity design.

**TABLE B1: PLACEBO EFFECTS**

Outcome:	Total Exp.	Education	Housing	Culture	Econ. Inf.	Gov. Admin	Security	Health	Total Revenue	Transfers	Deficit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	<b>Panel A: Close Margin RD with bandwidth of 5%</b>										
Businessperson Mayor	0.093 (0.142)	-0.024 (0.035)	0.021 (0.035)	0.007 (0.022)	-0.029 (0.021)	-0.016 (0.030)	0.002 (0.007)	-0.001 (0.007)	0.087 (0.142)	0.015 (0.040)	0.003 (0.012)
Observations	171	80	164	137	105	171	110	83	171	163	164
	<b>Panel B: Local linear RD with optimal bandwidth</b>										
Businessperson Mayor	0.192 (0.131)	-0.020 (0.034)	0.024 (0.030)	-0.018 (0.016)	-0.002 (0.018)	-0.017 (0.025)	0.005 (0.007)	-0.004 (0.008)	0.181 (0.126)	0.016 (0.035)	0.006 (0.010)
Observations	948	530	803	736	678	877	645	425	937	749	757

Outcome:	Chg. Revenue	Housing Const.	Voters	No. Candidates	Turnout	UR Member	Incumbent	Age	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<b>Panel A: Close Margin RD with bandwidth of 5%</b>								
Businessperson Mayor	0.038 (0.134)	-0.308 (0.434)	0.005 (0.120)	0.035 (0.063)	0.008 (0.018)	0.113 (0.071)	0.032 (0.033)	0.016 (0.026)	-0.002 (0.052)
Observations	160	37	171	171	171	171	171	171	171
	<b>Panel B: Local linear RD with optimal bandwidth</b>								
Businessperson Mayor	-0.004 (0.106)	-0.250 (0.281)	0.096 (0.094)	0.034 (0.067)	-0.013 (0.016)	0.091 (0.068)	0.045 (0.033)	0.011 (0.023)	-0.014 (0.045)
Bandwidth	0.26	0.23	0.3	0.15	0.22	0.24	0.17	0.27	0.28
Observations	889	177	1,081	534	782	837	571	980	1,020

Outcome variables are indicated in the column headers. The top panel uses simple OLS with a bandwidth of 5% (vote share), while the bottom includes a local linear control function with an optimal bandwidth from Calonico, Cattaneo, and Titiunik 2014. The models only include municipality type fixed effects and no other controls. Errors are clustered at the region and year levels.

## C Municipality Level - Selection and Data Coverage

### C.1 Determinants of Businessperson Candidacy

- Table C1 analyzes the determinants of businessperson candidacy at the municipal level. The placebo checks shown above demonstrate that there does not appear to be sorting in close elections. But businesspeople do not run for office in every municipality. The regression discontinuity design excludes all municipalities without such candidates; this selection analyzes potential biases from businesspeople selecting into candidacy in certain municipalities, something that could affect external validity. In Columns 1 and 2, the outcome is a binary indicator for whether a businessperson ran for office, Columns 3 and 4 look at the total number of businessperson candidates, and Columns 5 and 6 look at whether a businessperson won.
- The evidence first suggests that businesspeople are less likely to run (and win) in rural settings where populations are less dense and geographic territories are larger. This is reasonable considering the types of firms operating in rural regions in Russia, where much of the economic activity is heavily concentrated in agriculture. Businesspeople are also more likely to run in elections where there is not an incumbent also running. These results suggest that competitive, open elections without an incumbent running attract stronger, better financed campaigns from businesspeople who see a greater chance of winning. The effects of having a businessperson candidate also then reflect the fact that the comparison is being made over districts that are also getting a new mayor (which is controlled for in the set of covariates in the main RD results). Finally, businesspeople also appear to run in districts that are less dependent on higher levels of government for subsidies (but they do not necessarily win). Greater fiscal autonomy may be part of the appeal for these individuals running at this level.

**TABLE C1: WHERE DO BUSINESSPEOPLE RUN FOR MAYOR?**

	Businessperson Candidate (0/1)		No. Businessperson Candidates		Businessperson Won	
	(1)	(2)	(3)	(4)	(5)	(6)
City District	-0.021 (0.030)	-0.006 (0.047)	0.242*** (0.078)	0.186* (0.109)	0.012 (0.021)	0.033 (0.026)
Municipal Rayon	-0.028 (0.022)	-0.010 (0.040)	-0.064 (0.039)	-0.107 (0.078)	-0.001 (0.013)	0.018 (0.022)
Rural Settlement	-0.069*** (0.020)	-0.053*** (0.021)	-0.163*** (0.038)	-0.101*** (0.035)	-0.034** (0.013)	-0.038** (0.016)
Number of Voters on List (log)	0.087*** (0.006)	0.085*** (0.007)	0.163*** (0.013)	0.153*** (0.015)	0.011*** (0.003)	0.014** (0.006)
United Russia Candidate Ran	-0.009 (0.010)	-0.010 (0.014)		-0.075*** (0.029)	-0.013** (0.006)	-0.015* (0.009)
Incumbent Ran	-0.053*** (0.008)	-0.045*** (0.010)	-0.104*** (0.014)	-0.097*** (0.018)	-0.056*** (0.005)	-0.057*** (0.006)
Year 2008	-0.040 (0.043)	0.001 (0.051)	-0.120 (0.108)	-0.077 (0.128)	-0.027 (0.033)	0.001 (0.036)
Year 2009	0.028 (0.043)	0.081 (0.050)	0.010 (0.092)	0.085 (0.116)	-0.048* (0.028)	-0.007 (0.028)
Year 2010	0.040 (0.040)	0.101** (0.047)	0.058 (0.093)	0.155 (0.119)	-0.048* (0.028)	-0.007 (0.028)
Year 2011	0.056 (0.049)	0.122** (0.059)	0.077 (0.100)	0.185 (0.133)	-0.053* (0.030)	-0.016 (0.029)
Year 2012	0.038 (0.044)	0.097* (0.051)	0.045 (0.096)	0.138 (0.124)	-0.048* (0.028)	-0.012 (0.026)
Year 2013	0.017 (0.043)	0.073 (0.050)	0.024 (0.099)	0.119 (0.127)	-0.070** (0.028)	-0.031 (0.029)
Year 2014	-0.001 (0.043)	0.038 (0.050)	-0.049 (0.092)	0.010 (0.117)	-0.073** (0.029)	-0.035 (0.029)
Total Expenditures (log)		-0.001 (0.010)		0.046** (0.021)		-0.007 (0.009)
Economic Development (as % of expenditures)		0.011 (0.045)		0.048 (0.075)		-0.023 (0.027)
Government Administration (as % of expenditures)		-0.059 (0.038)		0.147** (0.075)		0.007 (0.030)
Transfers (as % of revenue)		-0.067** (0.027)		-0.099** (0.044)		0.002 (0.014)
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,456	11,300	17,456	11,300	17,456	11,300
R <sup>2</sup>	0.144	0.142	0.200	0.209	0.039	0.035

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines when businesspeople run and win office during mayoral elections. The unit of observation is a mayoral election, with the outcome in Columns 1 and 2 being an indicator if a businessperson ran, the outcome in Columns 3 and 4 being a count of the number of businesspeople, and the outcome in Columns 5 and 6 being a binary indicator if a businessperson won the election. All models use OLS and cluster errors on region and year.

## C.2 Missingness and Institutional Variation

- Table C2 looks at patterns of missingness in the outcome variables from the municipality data. The Russian State Statistics Agency requires all municipalities to submit their complete budget data but not all units comply every year. To investigate whether there are problems regarding selection and data availability, I examine eight outcomes in the year of initial mayoral elections. Missingness appears to be mostly a function of the size of the population of the district, and not its electoral competitiveness, whether as measured by the participation of incumbents, United Russia candidates, or businesspeople.
- Table C3 looks at data missingness with regards to the availability of electoral data. Some municipalities cancelled mayoral elections, opting instead for a city manager system where appointments were used to select leaders. Unfortunately, data on which municipalities opted for city managers is not available, but popular press accounts suggest that the decisions to move over to appointments were made at the regional level. The outcome variable in Table C3 is a dummy for whether a municipality held any mayoral election data during the period. Column 1 uses a basic model and finds that larger municipalities, both in terms of size and expenditures are more likely to hold elections. However, these effects almost disappear altogether when region fixed effects are included in Column 2. All of the point estimates on the municipal-level data fall to nearly zero and lose their significance, while the R-squared of the model jumps from 5% to nearly 70%. This indicates that the best (and only real) predictor of whether a municipality held an election was the region where it was located in. I account for this selection by including region fixed effects in the main RD results in the paper.
- Figure ?? maps the distribution of these elections across Russia. Two things deserve attention. First, the pockets of dark blue are closely clustered together, further evidence that regions are making the decisions for whether their member municipalities will hold election. Secondly, mayoral elections are held across the country and are not geographically concentrated in one part of Russia.

**TABLE C2: MISSINGNESS IN BUDGET DATA**

	Total Exp.	Econ. Infr.	Government	Education	Housing	Culture	Health	Procurement Data
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
City District	0.012 (0.042)	-0.002 (0.051)	0.002 (0.041)	0.338*** (0.068)	-0.065 (0.046)	0.060 (0.053)	0.064 (0.064)	-0.525*** (0.076)
Municipal Rayon	-0.004 (0.026)	0.056 (0.038)	-0.009 (0.027)	0.418*** (0.055)	-0.103** (0.042)	0.066* (0.038)	0.169*** (0.051)	-0.068* (0.039)
Rural Settlement	-0.018 (0.016)	-0.042* (0.023)	-0.017 (0.016)	-0.050* (0.027)	-0.007 (0.018)	0.012 (0.016)	-0.069*** (0.025)	-0.052** (0.025)
Number of Voters on List (log)	-0.002 (0.007)	0.049*** (0.009)	-0.002 (0.007)	0.050*** (0.007)	0.017** (0.008)	0.019*** (0.007)	0.097*** (0.011)	0.086*** (0.013)
United Russia Candidate Ran	0.006 (0.010)	0.001 (0.013)	0.006 (0.010)	0.011 (0.014)	0.005 (0.009)	0.009 (0.016)	0.006 (0.016)	0.007 (0.018)
Incumbent Ran	-0.003 (0.007)	0.015 (0.010)	-0.001 (0.008)	0.009 (0.008)	0.004 (0.008)	0.002 (0.012)	0.002 (0.010)	0.025** (0.012)
Businessperson Ran	0.006 (0.005)	0.008 (0.006)	0.004 (0.005)	0.007 (0.007)	0.006 (0.005)	0.007 (0.008)	0.001 (0.008)	0.010 (0.009)
Turnout	-0.008 (0.055)	-0.083 (0.058)	-0.012 (0.054)	0.028 (0.036)	-0.010 (0.057)	0.089 (0.061)	0.066 (0.050)	-0.074 (0.060)
Year 2007	0.028 (0.041)	0.099* (0.053)	0.038 (0.041)	0.067 (0.052)	0.037 (0.044)	-0.111 (0.062)	0.260*** (0.088)	
Year 2008	-0.011 (0.044)	-0.078 (0.050)	-0.014 (0.044)	0.023 (0.057)	-0.090* (0.052)	0.019 (0.092)	0.176** (0.079)	
Year 2009	-0.023 (0.048)	-0.161** (0.063)	-0.021 (0.047)	-0.004 (0.055)	-0.079 (0.048)	-0.097 (0.081)	0.217*** (0.078)	
Year 2010	0.013 (0.043)	-0.097* (0.057)	-0.025 (0.052)	-0.007 (0.054)	-0.078 (0.059)	-0.172* (0.093)	0.345*** (0.096)	
Year 2011	0.017 (0.062)	0.107 (0.066)	0.013 (0.064)	-0.011 (0.052)	-0.038 (0.068)	-0.098 (0.092)	0.355*** (0.096)	0.091*** (0.033)
Year 2012	0.010 (0.034)	0.152*** (0.043)	0.006 (0.034)	0.050 (0.046)	-0.053 (0.043)	-0.091 (0.091)	0.383*** (0.084)	0.121*** (0.033)
Year 2013	0.044 (0.043)	0.202*** (0.057)	0.037 (0.043)	0.018 (0.051)	-0.019 (0.050)	-0.086 (0.095)	0.427*** (0.108)	0.081*** (0.029)
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,456	17,456	17,456	17,456	17,456	17,456	17,456	9,271
R <sup>2</sup>	0.666	0.418	0.642	0.421	0.544	0.440	0.358	0.252

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines whether information on specific budget categories is available for municipalities that held mayoral elections. Each column examines a binary indicator for whether the budget category labelled above appears in the year that the election was held (the pre-treatment value). All models are OLS with errors clustered on region and year.

**TABLE C3: ELECTIONS VERSUS APPOINTMENTS IN MUNICIPALITIES**

Dependent Variable: Municipality Held Election			
	(1)	(2)	(3)
City District	-0.167* (0.087)	-0.030 (0.042)	-0.033 (0.041)
Municipal Rayon	-0.327*** (0.098)	-0.004 (0.043)	-0.004 (0.044)
Rural Settlement	0.036 (0.058)	0.009 (0.020)	0.004 (0.022)
Total Territory (log)	0.066*** (0.018)	-0.001 (0.007)	-0.001 (0.004)
Total Expenditures (log)	0.056** (0.023)	0.011 (0.011)	0.009 (0.008)
Dependence on Subsidies	0.004 (0.007)	0.001 (0.001)	-0.020 (0.025)
Budget Deficit	0.0005 (0.001)	0.0001 (0.0004)	-0.001 (0.015)
Population (log)			0.001 (0.007)
Region Fixed Effects	No	Yes	Yes
Observations	20,324	20,324	13,100
R <sup>2</sup>	0.054	0.688	0.730

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 The dependent variable in this table is a binary indicator for whether a municipality held any mayoral election data during the period. All columns present linear probability models with errors clustered on region.

## D Extensions and Heterogeneity

### D.1 Municipality Level - Additional Outcome Variables

- Tables [D1](#) and [D2](#) use the same regression discontinuity design to analyze several other variables of interest at the municipal level. Panel A in Table [D1](#) uses as an outcome a binary indicator for whether a municipality, on average, ran a budget deficit of more than 5% over each mayoral term. In line with the results in the main table, we do not see consistent evidence that businessperson mayors are more likely to run larger (or for that matter smaller) deficits. The point estimates are statistically indistinguishable from zero. The outcome in Panel B measures the percentage of municipal revenue that comes from upper-level transfers, i.e. intergovernmental grants and subventions from the federal or regional government that fund municipal budget activities. In all the models shown in the main text, this value is included as a control. Panel B puts it on the left hand side of the regression. The results suggest that municipalities run by businesspeople may be somewhat more likely to depend on these transfers, but the point estimates do not reach statistical significance.
- Next, Table [D2](#) analyzes outcomes that capture the percentage of procurement in the five largest product categories (procured by mayoral administrations) that use electronic auctions to select suppliers. The first two columns are the same from Table 2 in the main text, looking at electronic auctions in construction procurement. However, beyond construction, we do not see evidence that businessperson mayors influence the selection mechanisms for car, food, office supplies, or furniture procurement. This potentially due to the fewer opportunities to engage in rent-seeking when procuring goods and services in these categories.



**TABLE D1: MUNICIPALITY LEVEL - BUDGET SIZE AND DEPENDENCY**

Panel A: Large Budget Deficit (binary)						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	-0.011 (0.010)	-0.005 (0.018)	-0.065* (0.035)	-0.009 (0.061)	-0.009 (0.030)	-0.025 (0.038)
Bandwidth	1	1	0.03	0.05	0.32	0.32
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	2,655	2,605	99	164	1,125	1,100

Panel B: Revenue from Upper-Level Transfers						
Control Function:	None				Local Linear	
Bandwidth:	Global		3%	5%	Optimal	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.026** (0.013)	-0.004 (0.009)	0.100* (0.057)	0.040 (0.049)	0.013 (0.028)	0.012 (0.014)
Bandwidth	1	1	0.03	0.05	0.26	0.26
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	No	No	Yes
Observations	1,393	1,366	51	81	922	902

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 Panel A examines total spending in each municipality in thousands of rubles (logged), Panel B examines the ratio of expenditures to revenue, while Panel C examines the percentage of expenditures dedicated to government agencies. All models use OLS with standard errors clustered on region and year.

**TABLE D2: MUNICIPALITY LEVEL - PROCUREMENT**

	Construction		Cars		Food Products		Office Supplies		Furniture	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Businessperson Mayor	-0.127*** (0.045)	-0.093*** (0.025)	0.104 (0.064)	0.090 (0.059)	-0.499 (0.408)	0.124 (0.760)	-0.062 (0.179)	-0.024 (0.264)	-0.147*** (0.044)	-0.074 (0.154)
Bandwidth	0.26	0.26	0.18	0.18	0.16	0.16	0.28	0.28	0.3	0.3
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	655	637	152	150	30	57	132	132	185	184

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table analyzes the percentage of procurement contracts where suppliers are selected through electronic auctions, breaking down procurement into five categories (as indicated by the column labels). The two model for each outcome alternate including covariates, and region and year fixed effects. The bandwidths are all calculated using the algorithm described in Calonico, Cattaneo, and Titiunik 2014. All errors are clustered on region and year.

## D.2 Municipal Level - Heterogeneity

- The next set of tables examine the heterogeneity of the main effects using the municipal analysis. First, Table D3 investigates whether a businessperson mayor's ability to push for pro-business or pro-efficiency policies while in office depends on the level of democratization in his or her region. We might expect that places with stronger democratic institutions would constrain individual mayors from imposing their policy preferences so markedly upon entering government. Regions are considered democratic if they score above the median score (based on the sample of municipalities) on the Moscow Carnegie Center's Democracy Index, which is generally considered by scholars to be the best available measure of the strength of political institutions across the Russian regions (?).
- The point estimates in Panels A and B Table D3 suggest the influence of occupational background does not depend on the strength of political institutions. The only outcome where some heterogeneity is evident is investment in economic infrastructure, where businessperson politicians in less democratic regions are able to direct more money to the national economy. Weaker public scrutiny, whether by independent media outlets or capable opposition parties, may motivate politicians to invest more in sectors that are of greater interest to the business community.
- Next, in Table D4, I look at whether sharing a partisan affiliation with the governor affected mayors' ability to affect policy outcomes. In the main models, I included a control for the party affiliation of the businessperson candidates. Here I use that data to code an indicator if the governor in office at the beginning of the businessperson mayor's term (or expected term if he or she lost election) shared the same political party. The results again show little evidence of heterogeneity. None of the differences between the coefficients are statistically significant. Sharing party alignment with higher-level officials does not enable businesspeople to more forcefully push for their own policies.

**TABLE D3: MUNICIPALITY LEVEL - HETEROGENEITY BY DEMOCRACY SCORE**

Panel A: Pro-Business								
	Democracy Score							
	Low	High	Low	High	Low	High	Low	High
	Economy		Education		Health Care		Total Expenditures	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Businessperson Mayor	0.069*** (0.011)	0.025 (0.023)	-0.036 (0.022)	-0.007 (0.015)	0.006 (0.007)	0.008 (0.016)	0.067 (0.090)	-0.065 (0.059)
Bandwidth	0.26	0.26	0.18	0.18	0.16	0.16	0.28	0.28
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	Yes	No	Yes	No	Yes
Observations	158	188	94	150	127	117	205	304

Panel B: Pro-Efficiency						
	Democracy Score					
	Low	High	Low	High	Low	High
	Deficit		Comp. Procurement - All		Comp. Procurement - Const.	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.019 (0.011)	0.007 (0.014)	-0.069 (0.128)	-0.018 (0.067)	-0.168 (0.109)	-0.106 (0.072)
Bandwidth	0.26	0.26	0.18	0.18	0.16	0.16
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	Yes	No	Yes
Observations	194	281	306	409	277	378

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines heterogeneous treatment effects based on whether the region in which was considered democratic or not, using the median of the Carnegie Democracy Index for Russia's regions. Panel A examines the four main 'pro-business' policy outcomes and Panel 'B' examines the three 'pro-efficiency' policy outcomes, with columns presented for municipalities in regions with either low or high democracy scores. The regression models used include a linear control function and an optimal bandwidth calculated by the algorithm in Calonico, Cattaneo, and Titiunik 2014. Given the small sample size, the models do not include the full set of covariate controls (except the pre-election value of the outcome and controls for municipality size). Errors are clustered on the region and year levels.

**TABLE D4: MUNICIPALITY LEVEL - HETEROGENEITY BY PARTY ALIGNMENT**

Panel A: Pro-Business								
	Party Alignment							
	No		Yes		No		Yes	
	Economy		Education		Health Care		Total Expenditures	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Businessperson Mayor	0.043** (0.017)	0.066** (0.031)	-0.030* (0.015)	-0.007 (0.028)	0.006 (0.009)	0.014 (0.017)	0.007 (0.075)	-0.152 (0.152)
Bandwidth	0.26	0.26	0.18	0.18	0.16	0.16	0.28	0.28
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	Yes	No	Yes	No	Yes
Observations	275	71	206	38	192	52	397	112

Panel B: Pro-Efficiency						
	Party Alignment					
	No		Yes		No	
	Deficit		Comp. Procurement - All		Comp. Procurement - Const.	
	(1)	(2)	(3)	(4)	(5)	(6)
Businessperson Mayor	0.017** (0.007)	-0.002 (0.031)	-0.002 (0.061)	-0.192 (0.149)	-0.125* (0.070)	-0.143 (0.104)
Bandwidth	0.26	0.26	0.18	0.18	0.16	0.16
Municipality Type FE	Yes	Yes	Yes	Yes	Yes	Yes
Covariates; Region, Year FE	No	Yes	No	Yes	No	Yes
Observations	370	105	572	143	524	131

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines heterogeneous treatment effects based on whether the businessperson mayoral candidate and the governor shared the same political party. Panel A examines the four main 'pro-business' policy outcomes and Panel 'B' examines the three 'pro-efficiency' policy outcomes, with columns presented for municipalities in regions with or without party alignment between the municipal and regional executives. The regression models used include a linear control function and an optimal bandwidth calculated by the algorithm in Calonico, Cattaneo, and Titiunik 2014. Given the small sample size, the models do not include the full set of covariate controls (except the pre-election value of the outcome and controls for municipality size). Errors are clustered on the region and year levels.

### D.3 Region Level - Other Outcome Variables

- One advantage of conducting the regional analysis is the more finely grained budget and loan data to analyze. First, Table D5 runs the same region-level models to analyze the various subcategories under the ‘national economy’ line-item, which we saw businessperson legislators devote more money towards in the main text (shown again here in Columns 1 and 2). Looking at the three main subcategories, we see that the vast majority of the increased budget allocation in economic infrastructure goes specifically to roads and transport (Columns 7 and 8), and not agriculture or utilities. Moreover, Columns 9 and 10 suggest that businessperson legislators may also act to reduce corporate taxes, one of three taxes that can be set by regional legislators. In all, this table provides additional evidence that businessperson politicians devote more money to items of specific interest to their community, and may even act to reduce tax burdens, while also providing a strong robustness check for the municipal level analysis.
- Table D6 similarly breaks down different types of social policy investments in regional budgets. Overall, we see considerably less money dedicated to health, education and housing, though the point estimates generated by these models are not statistically significant. Adding up these three policy area into an umbrella ‘social policy’ category (Columns 7 and 8) returns some evidence that businessperson politicians reduce spending on social infrastructure as a whole.
- Finally, Table D7 examines other region-level outcome economic variables that could be affected by the presence of businessperson politicians active in the regional legislature. Columns 1 and 2 examine the level of private investment (thousands of rubles, logged), Columns 3 and 4 examine the level of government investment, Columns 5 and 6 look at the unemployment rate, and Columns 7 and 8 look at the change in bond debt from year to year. Regions have the added ability to issue commercial loans and bonds backed by state guarantees.<sup>1</sup>
- The point estimates on the percentage of legislators coming from the private sector are large both for explaining private and public investment. However, none of the coefficients are statistically significant, making it difficult to claim that having more businesspeople in power actually affects investment outcomes. Unemployment also appears unchanged when more businesspeople are in office. In general, business-

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<sup>1</sup>Remington, Thomas. “Here’s How Alexander Hamilton Would Understand Russia’s Regional Debt Crisis.” *Washington Post* March 24, 2016.

people have a larger direct effect on budget allocations, a policy decision which they have control over, rather than indirect effects on other economic indicators.

- In line with the results in the main text on deficits, we see that having more businesspeople sit in the regional legislature results in generally larger debt levels over time. We see that year on year changes in debt levels are greater when businesspeople are in elected office, indicating that they are using debt to finance the larger budget deficits.

**TABLE D5: REGION-LEVEL - ECONOMIC INFRASTRUCTURE BROKEN DOWN**

	Economic Expenditures (%)		Agriculture (%)		Fuel and Utilities (%)		Roads / Transport (%)		Corporate Property Tax (% Rev.)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Perc. Businesspeople	0.076*** (0.023)	0.071*** (0.023)	0.001 (0.014)	-0.005 (0.015)	0.009 (0.006)	0.007 (0.005)	0.082*** (0.021)	0.075*** (0.021)	-0.017 (0.024)	-0.039** (0.018)
Total Expenditures (log)	0.151*** (0.019)	0.139*** (0.012)	0.020 (0.012)	0.018 (0.014)	-0.002 (0.005)	-0.003 (0.005)	0.046*** (0.017)	0.038* (0.020)		
Total Revenue (log)									-0.053*** (0.011)	-0.054*** (0.011)
GRP (log)		-0.005 (0.014)		0.009* (0.005)		0.007 (0.005)		0.011** (0.005)		-0.006 (0.006)
Population (log)		0.084 (0.155)		-0.054 (0.082)		0.019 (0.033)		0.028 (0.127)		-0.136** (0.066)
Urbanization		-0.341 (0.235)		-0.270** (0.110)		0.002 (0.071)		0.020 (0.242)		0.095 (0.134)
Held Regional Election		-0.001 (0.001)		0.001** (0.0004)		0.00003 (0.0001)		-0.002** (0.001)		-0.0004 (0.001)
Dependence on Subsidies		0.045 (0.039)		0.001 (0.014)		0.006 (0.014)		0.071*** (0.024)		-0.013 (0.014)
UR Governor		0.006 (0.006)		0.001 (0.002)		0.0004 (0.002)		0.004 (0.005)		-0.007* (0.004)
Businessperson Governor		0.006 (0.005)		0.0004 (0.003)		0.001 (0.001)		0.006 (0.006)		0.001 (0.003)
UR Control of Legislature		-0.007 (0.016)		0.002 (0.007)		-0.001 (0.005)		-0.009 (0.018)		-0.005 (0.010)
Region, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	640	560	640	560	628	560	640	560	640	560

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines the percent of budget expenditures devoted to the total 'national economy' (Columns 1-2), agriculture (Columns 3-4), fuel and utilities (Columns 5-6), and roads and transport (Columns 7-8). Columns 9 and 10 look at the percentage of revenue coming from corporate property tax, one of three taxes that regional legislatures can set independently. All models use OLS and cluster errors on region and year.

**TABLE D6: REGION-LEVEL - SOCIAL INFRASTRUCTURE BROKEN DOWN**

	Health (%)		Education (%)		Housing (%)		All Social Policy (%)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Perc. Businesspeople	-0.014 (0.025)	-0.008 (0.027)	-0.022 (0.021)	-0.027 (0.022)	-0.021 (0.034)	-0.020 (0.037)	-0.081* (0.042)	-0.081* (0.048)
Total Expenditures (log)	-0.031** (0.014)	-0.039*** (0.013)	-0.065*** (0.017)	-0.073*** (0.017)	0.072*** (0.020)	0.083*** (0.019)	-0.073*** (0.026)	-0.071*** (0.021)
GRP (log)		0.023** (0.011)		0.018** (0.009)		-0.011 (0.015)		0.024 (0.028)
Population (log)		-0.011 (0.160)		-0.120 (0.224)		0.251 (0.215)		0.270 (0.360)
Urbanization		0.144 (0.182)		0.064 (0.294)		-0.056 (0.352)		0.294 (0.470)
Held Regional Election		0.0003 (0.001)		0.0003 (0.001)		0.0001 (0.001)		-0.0003 (0.001)
Dependence on Subsidies		-0.024 (0.026)		-0.061* (0.032)		0.010 (0.058)		-0.070 (0.073)
UR Governor		0.003 (0.008)		0.004 (0.008)		-0.005 (0.006)		0.017 (0.013)
Businessperson Governor		0.005 (0.004)		0.013** (0.006)		-0.002 (0.005)		0.019 (0.012)
UR Control of Legislature		-0.016 (0.016)		-0.007 (0.024)		0.037 (0.027)		0.011 (0.034)
Region, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	640	560	640	560	640	560	640	560

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 This table examines the percent of budget expenditures devoted to health (Columns 1-2), education (Columns 3-4) and housing (Columns 5-6). Columns 7 and 8 look at aggregated spending on social issues. All models use OLS and cluster errors on region and year.

**TABLE D7: REGION-LEVEL - OTHER ECONOMIC OUTCOMES**

	Private Investment		Government Investment		Unemployment Rate		Gov. Bond Issuances	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Perc. Businesspeople	0.642 (0.394)	0.448 (0.355)	0.404* (0.218)	0.379 (0.239)	-0.016 (0.010)	-0.015 (0.011)	0.045*** (0.017)	0.038** (0.017)
GRP (log)	0.673** (0.265)	0.381** (0.191)	1.678*** (0.182)	1.572*** (0.182)	-0.001 (0.006)	0.002 (0.007)	0.022* (0.012)	0.017 (0.011)
Population (log)		1.118*** (0.145)		0.505*** (0.113)		-0.008* (0.004)		0.003 (0.007)
Urbanization		-1.081 (1.378)		-0.339 (1.249)		0.098** (0.040)		-0.051 (0.125)
Held Regional Election		-3.859 (2.708)		0.224 (3.151)		0.208* (0.108)		-0.188 (0.296)
Dependence on Subsidies		-0.013 (0.011)		-0.001 (0.009)		-0.001** (0.0003)		0.0003 (0.001)
UR Governor		-0.126 (0.324)		0.310 (0.449)		-0.008 (0.010)		-0.003 (0.020)
Businessperson Governor		0.109 (0.075)		0.032 (0.078)		-0.002 (0.002)		-0.004 (0.007)
UR Control of Legislature		0.049 (0.083)		-0.043 (0.057)		0.001 (0.002)		0.006 (0.004)
Total Expenditures (log)		-0.096 (0.281)		-0.222 (0.339)		-0.005 (0.006)		-0.012 (0.007)
Region, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	556	556	556	556	640	560	640	560

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 Models examine private investment in Columns 1 and 2 (thousands of rubles, logged), public investment in Columns 3 and 4 (thousands of rubles, logged), the unemployment rate in Columns 5 and 6, and the change in bond issuances (Columns 7 and 8). All models use OLS and cluster errors on both region and year.



## E Surveys on the Policy Priorities of Voters and Businesses

### E.1 Individual-Level Survey Data on Pressing Issues

- Table E1 presents data from seven waves of the large-scale “Geo-rating” surveys conducted by the Public Opinion Foundation (<http://www.fom.ru>). Each survey contains roughly 50 questions, was conducted on a quarterly basis from 2009 to 2011 and polled on average 40,000 respondents (the largest survey wave in Q4 2009 and had over 70,000 respondents). The analysis looks at these seven waves because they contain an identical question that asks respondents to pick the five most pressing problems in their region out of a list of 20 possible options. I present the average number of respondents who chose each of the following eleven responses (which were consistently the highest ranked out of all available).

**English Language Text:** Tell me please, which of the following social and economic problems of our region as of late worry you most of all?

**TABLE E1: SURVEY RESPONSES ON MOST WORRISOME PROBLEMS**

	Q1 2009	Q2 2009	Q4 2009	Q2 2010	Q3 2010	Q4 2010	Q1 2011
Alcoholism	23.9	28.5	29.7	41.7	38.9	39.6	32
Corruption	17	20.7	19.7	20.2	19.6	17.6	17.9
Crime	19.4	19.3	19.9	12.7	10.7	11.8	5.8
Drugs	20.2	22.8	24	29.6	28.4	30	21.4
Education	8.9	9.4	8.2	9.8	8.6	8.1	19.8
Health Care	22.3	25.5	23.1	18.9	17.8	19.5	53.6
Housing	23.2	22.3	20.4	28.7	32.8	31.2	28.3
Price Levels	78	72.1	64.9	41.6	49.5	50.5	10.4
Roads	17.5	22.1	19.6	15.5	14.8	14.9	3.6
Unemployment	30.2	28.5	26.1	23.4	19.8	21.4	9.6
Wages	49.4	51.5	48	51.3	52	53	55.3

Each cell captures the percentage of respondents who answered that that issue was one of the first most worrisome in their region.

## E.2 Russia's Business Environment Rankings

- Table E2 presents data from the World Economic Forum's Global Competitiveness Index on Russia's business environment in comparative, cross-national perspective. The rankings range from 2007-2015, with the top row in the table indicating that Russia has generally experienced improvements in the ease of doing business, rising from 58th worldwide in 2007 (out of 125 countries) to 45th in 2015. However, its rankings on specific subcomponents show much wider variation. For examples it consistently ranks in the bottom quartile of countries in four categories: 'Burden of government regulation', 'Intensity of local competition', 'Property rights', and importantly for this study 'Road quality'. Transportation infrastructure is a key obstacle to doing business, holding back Russia's competitiveness on world markets. Given this subpar ranking, we might expect Russian businesses to prioritize increased investment in this area by their politicians.

**TABLE E2: RUSSIA'S BUSINESS ENVIRONMENT RANKINGS (WORLD ECONOMIC FORUM)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Global Competitiveness Index	58	51	63	63	66	67	64	53	45
Burden of government regulation	118	118	124	128	132	130	120	111	116
Ease of access to loans	86	86	99	107	91	86	68	56	57
Education system quality	46	36	56	78	82	86	85	84	82
Electricity supply quality	76	65	73	80	84	84	83	73	67
Broadband Internet access	60	59	68	50	47	47	46	43	48
Intensity of local competition	92	108	106	115	124	124	113	74	77
No. days to start a business	52	66	80	93	98	104	78	75	65
No. procedures to start a business	27	44	60	88	94	97	88	78	37
Property rights	122	122	121	128	130	133	133	120	122
<b>Road quality</b>	<b>106</b>	<b>104</b>	<b>118</b>	<b>125</b>	<b>130</b>	<b>136</b>	<b>136</b>	<b>124</b>	<b>123</b>
Tertiary education enrollment	14	16	14	12	13	12	14	19	18
Total tax rate as % of profits	90	94	87	95	95	105	124	116	109

This table shows Russia's rankings according to the World Economic Forum's (WEF) Global Competitiveness Index from 2007 to 2015. The first row is Russia's summary rank among the roughly 135 economies surveyed each year (the number changes slightly each year depending on the WEF's methodology). Thus, in 2007, Russia was ranked 58th out of 125 countries. According to the authors, the GCI provides a "holistic overview of factors that are critical to driving productivity and competitiveness" in each country, with over 150 individual components organized under nine subgroups: Institutions, Infrastructure, Macroeconomy, Health and primary education, Higher education and training, Market efficiency, Technological readiness, Business sophistication, and Innovation" (?). This table presents Russia's global ranks across a sample of the components, particularly those related to infrastructure, relations with government officials, and related obstacles to conducting business in the country. The full dataset can be found at <https://tcdata360.worldbank.org/indicators/gci>.