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Princelings in the Private Sector: The Value of Nepotism

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ABSTRACT

What is the value of a family tie? Nepotism is a common feature of democratic and non-democratic systems, but our understanding of how and why family members of government officials receive preferential treatment is limited. Using administrative data on the universe of Moscow citizens to identify family links, I adopt a difference-in-differences design to estimate the labor market returns of having a relative enter the Russian government from 1999 to 2004. Employment rates and annual wages increase for individuals related to federal bureaucrats. Surprisingly, these relatives just as often find work in the private sector, over which the government has no formal control. To explain this, I demonstrate that companies strategically hire officials' family members in order to receive state contracts and preferential regulatory treatment. Governments may be willing to overlook this type of favoritism in the allocation of jobs, since even if they do not benefit directly, nepotism creates a class of individuals invested in the current power structure.

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> In Russia three types of businesses exist: big, medium, and small.
>
> The big ones belong to the bureaucrats, the medium ones to their wives, and the small ones to their children.
>
> *Russian Joke*

In late 2013, investigations led by the New York Times exposed highly suspicious employment practices by JPMorgan in China.[1] Over the past eight years, one of the world's leading investment banks had engaged in 'relationship hiring', giving cushy jobs to the under-qualified relatives, or princelings, of high-ranking Chinese officials. This Sons and Daughters program ultimately led to a $264 million fine from the U.S. Securities and Exchange Commission and further inquiries into the company's operations in South Korea, India, and Indonesia. JPMorgan is far from the only company to give hiring preference to the relatives of government officials. The immediate family members of politicians and bureaucrats have secured lucrative jobs from private companies in Bangladesh (Cohen and Knox, 2012), Thailand, the United States (Koehler, 2015), and the Arab Gulf states.

Our understanding of the mechanisms driving political nepotism is still limited. Even with all these high-profile scandals, most of the relatively small literature focuses on nepotism as it relates to the public sector.[2] Here the presumption is that nepotistic ties offer relatives greater opportunities in government positions. Politicians can influence state agencies to hire their kin (Fafchamps and Labonne, 2017) or can tap name recognition and other electoral resources to help family members running for public office (Dal Bó *et al.*, 2009; Rivera, 2016).

This paper outlines another avenue for understanding how nepotism works. The abundance of anecdotal evidence suggests that politically connected families reap immense financial rewards through the private sector. I argue that private firms strategically make hiring decisions with the intention of gaining access to employees' family members. Just as JPMorgan targeted certain Chinese princelings for their political connections, adopting nepotistic hiring practices allows a firm to protect and expand its business activities. This strategy does not come without its own set of risks, as many companies

[1] Silver Greenberg, Jessica, Ben Protess, and David Barboza. "Hiring in China by JPMorgan Under Scrutiny" *New York Times.* August 17, 2013; Silver Greenberg, Jessica and Ben Protess, "JPMorgan Hiring Put China's Elite on an Easy Track" *New York Times.* August 29, 2013.

[2] To date, the lone exceptions are Folke *et al.* (2017) and Manacorda and Gagliarducci (2016) which look at favoritism in the full labor markets in Sweden and Italy, respectively.

may be wary of hiring politicians' relatives. In the vast majority of countries, the practice is illegal and public exposure can inflict serious reputational and financial harm. Relatives may be unqualified to hold their positions. Taking on excess and expensive labor costs can damage firm productivity, while hiring individuals based on their connections may undermine the morale of those hired on merit.

What ultimately makes the difference for firms are the payoffs from nepotistic hiring. I show that hiring family members does not just endear companies to political actors, but actually results in tangible rewards such as state contracts and better regulatory treatment. Companies target officials with more clout and who work in government ministries of more direct relevance to economic production. This creates a potentially vicious circle: firms recognize the advantages of courting officials through their families, and then self-interested officials encourage the practice. This paper is among the first to draw out the economic incentives motivating the labor market favoritism enjoyed by government officials and their families.

To demonstrate this mechanism, I draw on detailed information on the universe of Russian officials serving in the federal government between 1999 and 2004. Researching nepotism immediately runs into the problem of identifying family links. Here I adopt an empirical strategy that uncovers politically connected families by using shared last names and naming conventions at the household level. I employ official registration data collected by law on all residents of Moscow, Russia, and build a comprehensive database of individuals registered at the same domicile with the same last name. I combine this family household data with administrative data on officially reported income over six years to build a panel dataset of all residents of Russia's capital.

I then employ a difference-in-differences design to measure the causal effect of having a relative take a position in one of fifteen federal ministries or the presidential administration. My baseline estimates show that individuals are roughly 5.1% more likely to be employed when they have relatives working in federal office. Those individuals who were already employed at the time their relatives enter government earn roughly 4.8% more annually at their current position. Specific characteristics of the family tie in part drive these results. First, I find spouses are nearly twice as likely to be employed and earn roughly 8.8% in additional income, conditional on being employed, when their partners are in the federal government. Children of federal employees fare somewhat worse, but still enjoy sizable advantages in the labor market. Government seniority also matters. Older and better-paid federal employees (both rough proxies for clout) are more likely to secure jobs for their kin, as well as see them earn more at their jobs. Importantly, family members both take up new employment opportunities (as in, enter the labor market) and improve their salary and relative influence within existing positions. Nepotistic hiring can be an important asset for upward mobility in the labor market.

Next, individuals with relatives in office are just as likely to secure employment in a private firm than in the public sector. To uncover why, I collect micro-level transaction data from the Russian Central Bank between the Russian government and all legal entities. I find that private companies that hire more individuals with relatives in federal office are better able to access federal government procurement. New firms, as well as those working in service industries such as trade and transportation, especially benefit from nepotistic hiring. Developing connections through family networks can help a firm strengthen its reputation and market its services to the government. But access to procurement is only part of the story. My analysis shows that firms strategically hire individuals with family connections to specific federal institutions in order to access nonmonetary goods from the state. Officials working in government ministries that provide the most relevant services and regulations to firms are most likely to see their family members benefit from nepotism.

This paper extends and improves upon the existing literature on corruption, business–government relations, and autocracy in several ways. While recent work has also uncovered benefits accruing to family members of politicians in places such as Indonesia and Italy (Fafchamps and Labonne, 2017; Manacorda and Gagliarducci, 2016), this paper introduces a novel technique for better identifying the families of government officials. The combination of detailed registration data and naming conventions allows me to establish co-residence and build family units based on individual households, rather than large geographic constituencies. This improves the accuracy of the family links data and the analysis of labor market favoritism. In addition, this paper shows that nepotism extends beyond elected politicians and high-level corporate executives (Amore and Bennedsen, 2013); common government bureaucrats have remarkable opportunities to secure employment opportunities for their families. I demonstrate that the private returns to holding political office accrue not just to individual politicians (Eggers and Hainmueller, 2009; Fisman *et al.*, 2012), but also a range of family members who simultaneously ascend to positions of economic influence.

Next, this study demonstrates and explains an understudied way by which private firms can cultivate access to public officials. In contrast to existing work, I use firm-level transactions data to show the channel of how companies working in the private sector are rewarded for hiring family members of officials. Unlike Sweden, where improved employment prospects for officials' family members come from delaying higher education (Folke *et al.*, 2017), this paper uncovers the 'shady' corruption that pervaded the Russian government during the period. In all, nepotistic hiring is best understood as a type of corporate political strategy, by which firms build political inroads through their payrolls. And not all political connections are created equal: firms are strategic in choosing which officials to court with employment opportunities for their family members. The strategy of nepotistic hiring may be both less costly and

less observable than lobbying or appointing a politician to a board, making it not only commonly practiced but also difficult to combat. By identifying the types of officials, relatives and government ministries are most likely to engage in nepotism, this paper provides a starting point for policymakers to tackle the problem head on.

Finally, I extend our understanding of how autocratic regimes manage the distribution of rents to the economic coalitions that support their claims to power (De Mesquita *et al.*, 2002; Haber, 2006). The private sector returns available to one's family members offer an additional financial incentive for an individual to enter government and commit to the regime. Autocratic regimes may be willing to overlook this type of favoritism in the allocation of jobs, since even if they do not benefit directly, nepotism creates a class of individuals who are investing in the current power structure. Non-democratic regimes face numerous challenges to reproducing their power over time, including identifying loyal cadres (Egorov and Sonin, 2011) and handling tricky succession issues (Brownlee, 2007). By implicitly sanctioning, if not encouraging, nepotistic practices, regimes can see additional rewards flowing to their supporters through family networks. Familial heirs learn how business–government relations are constructed and become implicated in corrupt economic schemes. This paper thus responds to calls for studies of autocratic power that resides outside of formal institutions (Pepinsky, 2014). Even in regimes that hold competitive elections, informal, personalistic ties can play an important role in structuring relations between economic and political elites.

Family Connections at the Federal Level in Russia

The period in Russia under study in this paper (1999–2004) experienced dramatic changes in the way the federal government in Russia was organized. This turnover is key to developing a strong identification strategy to investigate how nepotism works. On January 1, 2000, Vladimir Putin was appointed interim President by Boris Yeltsin, later formalizing his position by winning election in March 2000. Putin's election marked the arrival of a relative newcomer to the federal government. Although he had previously served in the presidential administration, the intelligence services, and briefly as Prime Minister, Putin had spent barely six years in Moscow when he assumed the presidency.[3] From the very beginning, Putin was in many ways too weak to impose his will on political institutions, having arrived into office without a strong 'launching organization' with which to run the country (Haber, 2006). His grand designs for implementing economic and political reforms

[3]Some suspect that Yeltsin's choice of Putin centered on his newness to the political arena and ability to act as a balancing force (Reddaway, 2001).

quickly encountered resistance from powerful, entrenched elites (Rutland, 2003).

To be successful in office, Putin required his own team of officials, ones loyal to him but also capable of governing.[4] This meant both bringing new faces into government and replacing high-level officials from the previous government. By the end of Putin's first four-year term, all but one of the 17 Yeltsin-era ministers had left office.[5] Several ministries saw turnover at the top multiple times between 1999 and 2004. New appointees then brought former colleagues with them into office. For example, Minister of Economic Development German Gref brought with him many of liberal economists from Moscow think tanks in order to spearhead new initiatives (Åslund, 2004). Other ministries were reorganized, combined with other agencies or even eliminated. In sum, Putin's first term in office saw widespread reshuffling of cadres and a whole host of new people occupying federal-level office.

Suspicions about federal officials using their positions to benefit both themselves and their families under the Putin administration have grown over the past decade. In a society where informal ties are key to performing basic duties (Ledeneva, 1998), holding a position in a federal agency or ministry can unlock considerable opportunities for self-enrichment. Civil society activists have used sophisticated investigative techniques (Enikolopov *et al.*, 2018) as well as crowd-sourcing (Healy *et al.*, 2012) to document corruption among federal officials and employees of state-owned enterprises. The picture of Russia that emerges is one plagued by high-level graft, with individuals and businesses alike benefitting by developing personal connections to policymakers (Holmes, 2008).

What is less understood is how these advantages accrue to family members. The few journalistic reports usually resemble tabloid treatments of some outrageous act by a child of a powerful official. Example behaviors include showing off Lamborghinis, private jets and assault rifles,[6] or flouting traffic laws.[7] In early 2016, the Russian newspaper Novaya Gazeta tracked the career trajectories of the relatives of several high-ranking state officials,[8] but much of the investigation unearthed how leaders hide assets by registering them in the

[4]Relying on Yeltsin-era holdovers to govern was fraught with risks. Public opinion had turned sharply against Yeltsin's 'family', a group of political insiders (including Yeltsin's own daughter) and connected oligarchs that had wielded disproportionate power and been accused of significant corruption.

[5]The lone exception was Sergey Shoigu, the Minister of Emergency Situations, in office from 1994 to 2012.

[6]Stewart, Will. "'Some People Drive, I Prefer the Yacht"'. *Daily Mail.* June 30, 2016.

[7]Osborn, Andrew. "Kremlin targets Russian Elite's Street Racer Kids in Pre-vote Crackdown" *Reuters.* June 8, 2016.

[8]"Chinovniki i ix Semi" *Novaya Gazeta* Special Project: Offshores. April 3, 2016. Recent examples are Alexey Navalny's investigation into the children of Procurator General Yuriy Chaika in 2015 and Press Secretary Dmitry Peskov in 2017.

names of family members. So far there has been no comprehensive work on how official positions in Russia might benefit the careers of relatives.

Building Family Links

The data used to establish family links in Russia come from several sources. This first is an administrative database containing registration data for all Moscow residents. Beginning in 1993 (as a replacement for the Soviet *propiska* system), the Federal Migration Service of Russia has required Russian citizens to record the place of their permanent residency with the authorities. Registration is mandatory once an individual has resided in the same location for over 90 days, is recorded in an individual's passport, and determines eligibility for many government services. Companies openly purchase this data from the Russian government and repackage it for end-users in the private sector.

I obtained this registration database (entitled 'Larix') from the company Moscow Center for Economic Security. The Larix database includes information on names, places of registration, birthdates, and property owners. By law, individuals can only be registered at one location at a time, but the Larix database does include historic registration entries, for example, for those individuals who move residences. Many entries thus date to the early 1980s. In all, the Larix database is best understood as a complete history of residency for Muscovites from 1991 to 2005, with coverage of some individuals from the late Soviet period.[9]

I build family links by identifying individuals who co-reside in a household and share a last name. To do this, I first standardized the current and former addresses of every Muscovite in the Larix database. Next, I lemmatized female last names to define a general last name 'stem', turning 'Ivanova' into 'Ivanov'. I create household units by grouping individuals who share the same last name and lived at the same location (apartments, houses, etc.) at any point within the database. This procedure does not require family members to live in the same household for the entire period. For example, ties between adult children and their parents are still captured as long as they were officially registered together under a roof at any point in time. Children can leave home to attend university or get married, but their prior common residency with their parents confirms a family tie. Norms of co-residence among nuclear families were strong in Russia at the turn of the century. Difficulties acquiring separate housing, especially during the economic transition from communism,

[9]This paper received university IRB approval to collect, de-identify, and analyze the data. All of the data used is available in the public domain and existed prior to the start of the study. The results below do not divulge any familial links between specific individuals nor do they implicate any persons in illicit behavior. Only aggregate analysis and patterns are used.

meant that most adult children lived with their parents before getting married. Survey evidence from the mid-1990s found that roughly half of young families still lived with the husband's or wife's parents or other relatives (Vishnevsky, 1996).

This approach can still create several types of measurement error. First, because it measures family links using household and last name data, there could be individuals living in an apartment who share a last name but are for some reason not related. One example would be roommates with the same last name. This type of error would create downward bias on the estimates since the data would estimate the effect of a family tie where one did not exist. Below I exploit Russian naming conventions and marriage norms to ensure that only household members who have more immediate familial relations are included in the analysis.

Second, false negatives could arise if individuals fail to register where they actually reside. These unregistered individuals would not enter the analysis sample. However, because I am interested in the effect of federal appointments, where scrutiny of applicants is considerably higher, family members are less likely to falsify or neglect their registration. Finally, the dataset is not able to detect family links between individuals who never reside together or who do not share a last name. For example, the link between a child and a divorced parent who has moved out of the household prior to 1991 or changed his or her last name would not appear in the dataset. The possible selection bias introduced though would not be correlated with the time-varying treatment status employed in the main analysis.

I matched household members to their employment records using administrative data on reported earnings from the Russian State Pension Fund from 1999 to 2004. Employers are required to submit documentation to the Pension Fund on annual wages paid to employees. This dataset covers all Moscow residents, was made public in 2005 by an employee, and is available online from several websites for a nominal sum. The Russian daily Vedomosti confirmed the accessibility of the database online and verified that the official salary information was correct.[10] In addition, the data has been extensively analyzed and validated in a number of articles in economics. Braguinsky and Mityakov (2015) compare the Pension Fund data with official data on Moscow labor markets from the Russian State Statistics Agency, finding that the sector-year employment averages from the two databases are broadly comparable for each year and using the average over 1999–2004.[11] I match entries between

[10]Doroxov, Roman, Tutushkin, Alexander, and Aleksei Nikolski. "Muscovites Under the Hood." Vedomosti. May 26, 2005.

[11]Some individuals and firms underreport salary data in order to avoid paying taxes. This was especially the case prior to the introduction of the flat income tax in 2003 that shrunk the shadow economy. Underreporting was largely firm-specific and the results are robust to models with firm fixed effects.

the registration and employment datasets using individuals' first, middle and last names, and birthday.[12] All individuals born after 1984 were dropped from the dataset to focus on adult employment. Unfortunately, the Pension Fund dataset is quite limited. Education information is not available, nor are time-varying characteristics such as reliance on state benefits or university attendance.

The focus of this paper is on the bureaucratic rents of nepotism, i.e. the advantages accrued to non-elected appointees in federal government structures. For clarity, I refer to the person who works in federal office as the 'relative', as the focal individual (on whom labor market outcomes are measured) as the 'individual.' To enter the dataset, relatives had to earn at least 30,000 rubles during at least one year at one of fifteen federal ministries or the Russian Presidential Administration. I identify ministries and the presidential administration using tax identification numbers (INNs), which are available for all entries in the Pension Fund data.[13] Relatives who worked for more than one federal institution in one year (0.8% of the data) were dropped to ease interpretation of the effects of specific agencies. The output is a panel dataset of the annual employment status of 7,944 relatives who worked for the federal government at any point from 1999 to 2004.[14]

Next, using the data on household units, I identified all 'individuals' who had one of these relatives working in federal office. One concern with relying on co-residence data is that many individuals may be assigned to the same family unit, but in reality may have weak or non-existent links to one another. To focus the analysis on immediate familial relations, I first take advantage of Russian naming conventions. Russia uses a patronymic system whereby fathers' names are adapted and used as middle names for their children. For males, this means adding -ovich, -evich, or -ich to the father's first name: the son of Vladimir takes Vladimirovich as his middle name.[15] This allows me

[12]Unfortunately, it is impossible to verify whether individuals are being incorrectly matched between the two datasets. The Pension Fund data do not include information on residency nor does the registration dataset have information on employment to cross-validate. No studies on uniquely identifying individuals using name, date of birth, and city of residence have been done in Russia, but evidence exists from the US that the combination of gender, birthday, last name, and zip code makes an individual unique at a rate of 1 in 2.7 billion (Ansolabehere and Hersh, 2017).

[13]A list of the ministries and summary statistics is available in Table A2 of Appendix. Several ministries did not submit employment data for all six years and were excluded from the analysis. As of January 2000, the average annual salary for Muscovites was roughly 30,000 rubles. In the Appendix, I show that the results are robust to changing that threshold by 10,000 ruble increments from any positive income to 40,000 rubles.

[14]In the Appendix, I apply a broader definition of family links that includes any individual with the same last name living in the household. This approach returns a slightly larger sample of federal employees (12,697) and their relatives (21,103). The empirical results using this larger sample return point estimates smaller in magnitude, but which are robust in terms of statistical significance.

[15]For females, the suffixes are -yevna, -ovna, or -ichna.

to identify individual who is either the son or daughter, or the father, of the relative that works in federal office.[16]

I use a slightly coarser method to detect husband–wife relationships. I code whether a individual was married to a relative in federal office based on two criteria: (1) whether the two people were of the opposite sex and (2) whether there was less than six years of age difference between the two.[17] This method also has an obvious drawback, for it assumes that parents cannot be of the same gender. While Russian law prohibited same-sex marriage during this period, the extent of same-sex co-habitation is unknown. Presumably these individuals would not change their legal last names after entering into such an arrangement due to societal taboos.

In all, I was able to identify 10,064 individuals who had close familial (parental or marital) ties to a relative working in federal office. I coded individuals' employment status in a given year and their total annual income to build a similar employment trajectory from 1999 to 2004. Summary statistics on 'relatives' and 'individuals' are presented in Table 1, which compares both groups to the full sample of all unconnected individuals in the dataset. Relatives in federal office are more often employed overall, with larger median salaries compared to the individuals analyzed in this paper. The average salary for relatives is also significantly larger due to several of them working at times in the private sector and making exorbitant salaries, upwards of $1 million a year. Relatives in federal office also are less likely to be female and slightly older. Individuals, however, look very similar to the rest of the population that does not enter the analysis.

Research Design and Identification Strategy

I adopt a difference-in-differences design to estimate the labor market returns for individuals when their relatives take federal office. The unit of analysis is the 'individual-year'.[18] The main outcomes relate to the annual labor market: a binary indicator for whether the individual is employed and log annual income, conditional on being employed.[19] The treatment takes a value of 1

[16]For each of the father–child relationships, I require an age difference of at least 15 years to ensure the parental relationship. This method has one obvious drawback. I cannot detect mother–child relationships since mothers' names are not passed down to their children. Therefore, this sample only includes individuals where the relative is either father or child.

[17]The results are robust to using three or nine years as the threshold. See Appendix for more information.

[18]An ideal research design would be able to take into account monthly employment patterns to more precisely estimate the effect when a connection to the federal government was established. Unfortunately, the Pension Fund data only give information on individuals' employment on a monthly basis for two of the six years available.

[19]I define employment if the individual has any positive income in that year. The results are robust to using a variety of minimum thresholds.

Table 1: Summary statistics.

		Relatives in federal office	Individuals	Full sample
(1) Number of individuals		7,944	10,064	6,042,858
(2) Number of years worked				
	Mean	4.8	4.14	3.72
	Median	5	5	4
	SD	1.38	1.76	1.87
(3) Annual salary, Thous. $				
	Mean	22.69	4.95	3.15
	Median	2.42	1.42	0.81
	SD	1589.73	68.32	287.05
(4) Age in 1999				
	Mean	43.2	41.08	41.23
	Median	46	44	40
	SD	12.26	13.9	15.76
(5) Percentage female		0.35	0.47	0.53

for years when an individual has a relative in federal office and 0 otherwise. I then estimate the following equation:

$$y_{it} = \alpha + \beta \sum_j d_{ij} emp_{jt} + X_{it} + \nu_i + \mu_t + \epsilon_{it} \tag{1}$$

where y_{it} indexes the two outcome variables for individual i at time t, $\sum_j d_{ij} emp_{jt}$ is an indicator for having a 'relative' in federal office at time t (with d_{ij} as a binary indicator if there is a family link between a federal official and an individual and emp_{jt} as a binary indicator equal to one if the relative j works for the federal government at time t), X_{it} is a vector containing time-varying characteristics of individual i such as age, ν_i is an individual-specific fixed effect, μ_t is a year fixed effect, and ϵ_{it} is an uncorrelated error term. Identification on the estimate of β comes from the dual individual and year fixed effects which capture the effect of a relative entering and leaving federal office on individual-level labor market outcomes. Since the identification strategy hinges on changes in the employment status of the 'relative', all those federal employees who remained in office every year from 1999 to 2004 are excluded from the sample. Similarly, individuals who never had a family member enter federal office are excluded.[20]

The key identifying assumption of this specification is not directly testable since we cannot observe the potential outcomes for each individual in the labor

[20]I also exclude the small number of trajectories where an individual had multiple relatives in federal government during the period.

market in the absence of the change in treatment status. For example, this assumption would be violated if individuals with relatives entering federal office would have enjoyed better labor market prospect regardless of how their relatives fared. Even without this direct test, below I present several other identification checks to counter alternative explanations that there are individual or family-specific trends not related to nepotism driving the results.

First, I check whether there are parallel trends between relative and individual employment status. Treatment status should not be correlated with trends in individual labor market outcomes that occur prior to a relative taking office. Potential employers must not be able to anticipate that individuals will have relatives appointed to federal positions, which otherwise would undermine the sequencing necessary for identification. To illustrate that the parallel trend assumption holds, I construct event study graphs as shown in Figure 1. First, I subset the sample to include only individuals who experienced entrances or exits of relatives into federal office. Next, I calculated the residuals from regressing each of the outcomes on individual and year fixed effects (and including time trends), but without the indicator for the treatment effect.

The goal is to absorb variation in the outcomes through the fixed effects and plot the effect of a change in treatment status. Shown on the y-axis, the residuals are averaged each year according to two groups: individuals with relatives who entered their federal position and those with relatives who exited their position. The x-axis captures the two years prior to and following the change in treatment status, marked by the dotted line (the entrance or exit, year '0'). For both labor market outcomes, the trend prior to the change in treatment status is parallel. Individuals with relatives taking federal office do not see greater employment opportunities or rising wages with respect to those with relatives leaving federal office. In other words, employers do not anticipate the change in individuals' political connections, lending credibility to the identification strategy of the treatment being applied at the federal employee (relative) level.

We also might be concerned about other unobserved shocks that might simultaneously affect federal employment and the private sector earnings of individuals from their household. For example, the household might gain an unmeasured connection to a politician who simultaneously helps different members enter federal office and compete for better jobs on the wider labor market. To defend against this claim that such simultaneous shocks are driving the result, I exploit the mandatory retirement age for civil servants: age 60 for males and age 55 for females. As Section 2.1 in Appendix indicates, these cutoffs are not entirely strict. Federal government institutions can extend employment by up to five years for individual workers. Although some stay on in their positions into their 60s, the majority of federal employees do retire in greater numbers around their respective age thresholds. These exits due to retirement age are unrelated to unobserved shocks. In the Appendix, I show

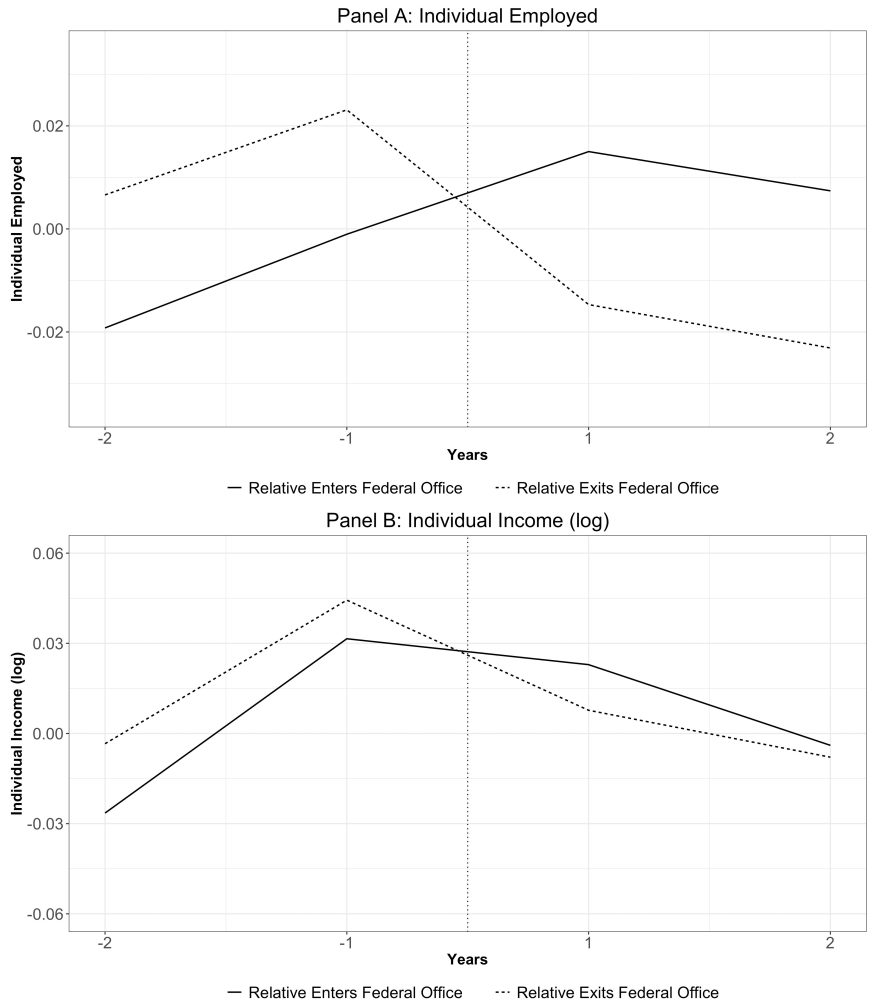

Figure 1: Event studies.

The mean residuals from a regression of individual employment status (Panel A) and log annual income (Panel B), conditional on being employed, on individual and year fixed effects. The x-axis measures the years before and after the 'entrance' of a relative into federal office or his or her 'exit' from federal office.

robustness checks using samples that only include federal relative employment trajectories which presumably ended in retirements.

A related concern is that there are family-specific trends influencing both a relative's chances of entering the government and an individual's prospects in

the wider labor market. For example, under a 'changing the guard' scenario, the fortunes of some families may be ascendant while others are declining, perhaps because their skill set is becoming more or less attractive to employers. If true, this would create an association between the labor market outcomes of individuals and their politically connected relatives that has nothing to do with firm-centered nepotistic practices. To investigate this, I run models using the full sample that include linear 'individual' and 'family' time trends for the main outcomes. These help assuage concerns that family members are picking up better jobs at the same time, as would be the case if family-specific factors or networks were driving employment.

Finally, we might be concerned about the positive labor market opportunities conferred by having a relative take a full-time job may not be specific to federal government positions, thereby undermining the claim that nepotism influences hiring decisions. Here again a family-specific trend of relatives simultaneously upgrading jobs would explain the association. To check this, I construct a placebo analysis in Section 3 of Appendix that examines the labor market outcomes for individuals who have relatives take jobs in one of Russia's 20 largest private banks during 1999–2004. The sample construction is identical to that described above for federal officials, in that I use the housing registration data to identify family links and the Pension Fund data to identify individuals entering and exiting these large financial institutions. The results show that individuals do not benefit from having relatives work in a large bank, either by gaining employment or earning additional income. The point estimates in all models are not statistically different from zero, even when the specifications look at just the top 10 banks. This evidence demonstrates that there is something unique about having relatives enter the federal government, which I argue stems from the political connections that private firms can capitalize on.

Empirical Analysis

Effects on Relatives' Labor Market Outcomes

I report results for the two labor market outcomes for individuals in Table 2. The unit of analysis is the individual-year; all specifications use linear probability models (OLS). The outcome variable in Panel A is a binary indicator for whether an individual was employed in a given year, whereas Panel B looks at the log annual income for the individual, conditional on being employed. We are most interested in the point estimate on 'Relative in Federal Office', the indicator for an individual having a relative hold federal office each year.

The models demonstrate quite clearly that having a family member hold federal office is associated with strictly positive effects on an individual's

Table 2: Family links and employment outcomes.

	(1)	(2)	(3)	(4)	(5)
Panel A: Individual employed					
Relative in federal office	0.051	0.051	0.043	0.032	0.032
	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)
Demographic controls	No	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Individual FE	Yes	No	Yes	Yes	Yes
Age FE	No	No	Yes	No	No
Individual time trends	No	No	No	Yes	No
Family time trends	No	No	No	No	Yes
Control group mean	0.64	0.64	0.64	0.64	0.64
Observations	60,384	60,384	60,384	60,384	60,384
R^2	0.411	0.022	0.437	0.638	0.587
Panel B: Income (log)					
Relative in federal office	0.048	0.040	0.039	0.035	0.036
	(0.013)	(0.015)	(0.013)	(0.017)	(0.016)
Demographic controls	No	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Age FE	No	No	Yes	No	No
Individual FE	Yes	No	Yes	Yes	Yes
Individual time trends	No	No	No	Yes	No
Family time trends	No	No	No	No	Yes
Control group mean	4.41	4.41	4.41	4.41	4.41
Observations	39,884	39,884	39,884	39,884	39,884
R^2	0.767	0.151	0.773	0.892	0.872

The outcome variables are a binary indicator for whether an individual was employed (Panel A) and their log income, conditional on being employed (Panel B). All models are linear probability with standard errors clustered on individual and year. Column 1 includes individual fixed effects, Column 2 controls for individual age and drops fixed effects, Column 3 adds age fixed effects, and Columns 4 and 5 include linear 'individual' time-trends and 'family' time-trends, respectively. Control group mean measures employment rates and income (in thousands of dollars) when a relative was not in office.

likelihood of holding a job, as well as on their total income, conditional on being employed. Individuals with relatives in office are approximately 5.1 percentage points more likely to be employed. The baseline employment rate for individuals without connections is 64%, meaning that being related to a federal employee increases one's chances of being employed by 7.9%. Panel B restricts the analysis to only individuals who are employed to see how their wages at these positions change when relatives enter federal office. The results show a small, positive, and statistically significant effect. An individual's income increases by roughly 4.8% each year they have a relative in federal office. We see a moderate wage premium being conferred to individuals coming from politically connected families.

These point estimates are robust to a variety of model specifications. Column 2 adds demographic controls while excluding the individual fixed effect, while Column 3 includes both individual fixed effects and a fixed effect for the age of the relative in federal office for each year. We see in both cases strong employment advantages still accruing to individuals with relative in office. Finally, the results are robust to adding individual time trends in Column 4 and family time trends in Column 5. These more stringent specifications help allay concerns that there are other factors affecting both individual and relative employability, and provide confidence that even as individual wages increase over time, nepotism can result in additional earnings.[21]

Table A3 in Appendix provides additional evidence that unobserved shocks are not driving the effect of having a relative in federal office. First, the models suggest that having a relative leave federal office has a roughly equal effect on an individual's employability to having a relative enter office.[22] But more importantly, the magnitude of these effects does not change when the sample is subset to those exits presumably caused by a relative retiring from federal office. We see that even though the sample size drops, individuals related to retiring federal officials see lower employment rates and thus earn less income. This robustness check, taken together with consistent results found when different time trends are included in Table 2, helps increase our confidence that the main results reflect true causal estimates.

[21] Another explanation for the employment finding is that individuals are more likely to enter the formal sector (i.e. registered firms) when they have a relative enter government. To test this, Section 2.6 in Appendix splits the sample before and after flat tax reform was introduced in Russia in late 2001, which significantly increased voluntary tax compliance and reduced tax evasion. If the association between individual and relative employability was being driven by a higher propensity to report income, we should expect smaller coefficients in the post-reform period, when the size of the shadow economy was reduced. The point estimates on individual employment in the pre- and post-reform periods are nearly identical. Tax evasion and compliance do not seem to be driving the results.

[22] This is not the case with regard to individual income, where entrances are driving the increasing salaries. I interpret this as evidence that existing employees are not being punished by their relatives leaving office, possibly because the political connections have already been established.

Individual-Level Heterogeneity

Why does having a family member hold federal office improve employment prospects? To investigate mechanisms, I look at heterogeneity at the individual level in Table 3. First, we might expect variation in the type of familial relationship to affect how nepotism works. As the joke in the Introduction suggests, federal officials may work harder to secure spousal benefits (which they can more easily enjoy and manage), rather than prioritizing their children. To test this, I divide the sample into different types of family links. Column 1 acts as a benchmark to compare heterogeneous effects with the main specifications (it is identical to Column 1 of Table 2). Column 2 subsets the sample to individuals whose father entered federal office,[23] Column 3 subsets to individuals whose son or daughter entered federal office, and Column 4 looks at the labor market trajectory of husbands and wives.

The results indicate that spouses of federal employees benefit most from nepotism, enjoying a nearly 8.3% increase in employment status, or nearly twice the probability of being employed, and an 8.8% increase in wages. Tables in the Appendix confirm that this result is not sensitive to the requirement that husbands and wives be no more than six years in age apart. Spouses may be more attractive to potential employers given their age and work experience, and can command higher wages that would benefit the household as a whole. An alternative explanation is that spouses may simultaneously retire, suggesting that the decrease in employment for a spouses is a mechanical function of a couple deciding to exit the labor market together. I address this issue in Section 2.1 in Appendix by excluding individuals related to retiring relatives (discussed above) from the analysis. The main results are robust to their exclusion. Simultaneous spousal retirements are not driving the results.

However, children also enjoy significant advantages, with point estimates both statistically significant and proximate to the mean of all relatives studied in the sample. Federal employees do not appear to help their (presumably elderly) parents find work. Employers may be less interested in paying the higher labor costs of seasoned workers just in gain access to the political sphere.

To investigate further the relationship between age and employability, Column 5 of Table 3 interacts a binary predictor for having a family member in federal office with the age (demeaned) of the individual in 1999. The point estimate on the interaction term is negative in both panels, but not statistically significant. This result aligns with the previous results that federal officials are better able to secure employment for their spouses rather than their children. Popular accounts of nepotism suggest that some of the costs of this type of corruption come from having less experienced, less deserving family members of officials win prestigious jobs at the expense of more qualified candidates.

[23]Due to patronymic naming conventions, I cannot with high confidence identify the mother–child relationships using the household data.

Table 3: Individual-level heterogeneity.

	Full Sample	Father	Son/ Daughter	Wife/ Husband	Full Sample	Full Sample	Full Sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Individual Employed							
Relative in federal office(s)	0.051	0.038	0.027	0.083	0.051	0.050	0.052
	(0.005)	(0.010)	(0.011)	(0.006)	(0.005)	(0.005)	(0.005)
Relative in federal office * individual age					−0.001		
					(0.0004)		
Relative in federal office * relative in federal office age						0.0003	
						(0.0004)	
Relative in federal office * relative in federal office salary (log)							0.023
							(0.009)
Individual, year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Group Mean	0.64	0.57	0.70	0.65	0.64	0.64	0.64
Observations	60,384	16,362	9,852	34,170	60,384	60,384	60,384
R^2	0.411	0.368	0.460	0.430	0.412	0.411	0.411
Panel B: Total Income (log)							
Relative in federal office	0.048	0.056	0.022	0.088	0.049	0.045	0.051
	(0.013)	(0.032)	(0.031)	(0.015)	(0.013)	(0.013)	(0.013)
Relative in federal office * individual age					−0.0001		
					(0.001)		
Relative in federal office * relative in federal office age						0.002	
						(0.001)	
Relative in federal office * relative in federal office salary (log)							0.065
							(0.024)
Individual, year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control group mean	4.41	7.61	4.30	2.88	4.41	4.41	4.41
Observations	39,884	9,454	6,776	23,654	39,884	39,884	39,884
R^2	0.767	0.746	0.762	0.780	0.767	0.767	0.767

The outcome variables are a binary indicator for whether an individual was employed (Panel A) and his/her log income (Panel B), conditional on being employed. Column 1 is the base model from Table 2. The next models subset to instances where the relative in federal office is the father (2), son/daughter (3), or husband/wife (4) of the individual. All constituent terms in the interactions are demeaned. Control Group Mean measures employment rates and income (in thousands of dollars) when a relative was not in federal office. Standard errors are clustered on the individual and year levels.

Unfortunately, the datasets on Russia do not contain measures of experience or education. Using age alone the best available proxy for work experience, we cannot rule out the argument that nepotism returns less qualified candidates.

Next, I look at how the age and position of the relative in federal office affect the payoffs of nepotism. Older federal employees as well as those with more seniority might be better able to secure jobs for their relatives. Unfortunately, the pension data do not provide information on job titles or responsibilities, but age and income serve as reasonable proxies for the relative influence bureaucrats command within government institutions. Column 6 of Table 3 shows interactions of the main predictor (having a relative) and the age (demeaned) and the relative, while Column 7 interacts the main predictor with the average salary (logged) the relative earned while in federal office. The results suggest that seniority (as measured by age) matters. A ten-year increase in the age of one's relative in federal office translates into a nearly 2% increase in wages. The same is true for the results on salary. Doubling a federal employees' salary increases the probability of one of their family members being employed by roughly 30%. Federal employees with more work experience and that earn more money in office are indeed better positioned to help their family members in the labor market.

Lastly, having a relative in federal office may result in qualitatively different kinds of employment opportunities. Fafchamps and Labonne (2017) argue that politicians are uniquely able to place relatives as managers in the public sector, which comes under the purview of their elected office. For all employed relatives, I coded the ownership of the job from which they received the most income in each year. To code ownership, I merge the Pension Fund data with complete registration data for all firms from the Russian State Statistics Agency based on tax identification numbers (INNs). The registration data contains two classification codes that identify whether firms are owned by private or state entities, including the level of government responsible: the All-Russian Classifier of Forms of Ownership (OKFS) and the All-Russian Classifier of Government Entities and Administration (OKOGU).[24] In Table 4, I created a binary outcome variable for each of these scenarios, i.e. employment in a private firm (Column 1), state-owned enterprise (Column 2), the federal government (Column 3), regional government (Column 4), and local government (Column 5). The results are striking. Family ties matter at least as much, if not more, for entering private sector jobs as they do for the public sector. Ties are important for acquiring positions in the federal government, followed by the regional government and state-owned enterprises. However, a good portion of relatives wind up working for private firms.

[24]For more details on the firm-level data, see Section 1.5 in Appendix.

Table 4: Family links and type of employment.

	Private firm	SOE	Federal Gov.	Regional Gov.	Local Gov.	Salary Rank	Previous Job
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Relative in federal office	0.013	0.004	0.014	0.011	0.00002	1.231	−0.008
	(0.004)	(0.002)	(0.003)	(0.002)	(0.0003)	(0.323)	(0.001)
Individual, year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control group mean	0.26	0.23	0.15	0.08	0.00	65.77	0.01
Observations	60,384	60,384	60,384	60,384	60,384	32,338	60,384
R^2	0.565	0.616	0.656	0.728	0.609	0.813	0.366

The headers in Columns 1–5 indicate binary outcomes for the type of organization where the individual was employed. The outcome variable in Column 6 is the individual's salary rank at their place of employment, with higher ranks indicating higher pay. Organization fixed effects are included in this model. In Column 7, the outcome variable is a binary indicator for whether an individual was employed in an organization that the relative in federal office had been employed prior to taking their office. Standard errors are clustered on the individual and year levels.

Nepotism also helps individuals climb the ladder in their current positions. In Column 6, I calculated the percentile salary rank using data on all employees in each organization in each year. I then restrict the sample to only employed individuals working in firms of at least 40 people and includes a fixed effect for the employer, in addition to the individual and year fixed effects.[25] The results suggest that having a connection to a federal official can significantly improve own's internal standing with their employer. Individuals rise 1.3 percentiles in each year that they have a relative in office.

Finally, relatives are not simply replacing their family members who have gone off to work for the federal government. In Column 7, I code a dummy outcome for whether an individual worked for any company where their relative in federal office had previously worked before entering government. The point estimate is negative and statistically significant, indicating that relatives are going off to work for new companies and organizations. The favoritism federal officials engender for their family members allows them to grow their economic

[25]To calculate percentile ranks, I use the Harrell–Davis Distribution-Free Quantile Estimator which performs well in assigning percentiles even in small samples, i.e. employers with less than 100 employees. The estimator failed to converge for employers with fewer than 30 employees, hence the lower bound.

and political network into areas and sectors they may have had little contact with before.[26]

Private Firm Mechanisms

Nepotism and State Procurement

This begs the final question for the paper: how are federal employees able to place their relatives into positions in private companies that they have no pre-existing ties to and have no control over hiring decisions? I argue that a main mechanism through which family ties create labor market advantages concerns the allocation of state procurement contracts. Firms that hire the family members of federal employees are better positioned to win state tenders. Just as JPMorgan hired the princelings of the Chinese ruling class to further its own business opportunities, Russian companies at the turn of the 21st century understood that providing personal rewards to family members of top politicians was an effective strategy to endear themselves in the corridors of power. The exceptional career trajectories of those closest to high-level Russian politicians is no accident. Their rise has been facilitated by private companies who wish to develop close ties with the administration and tap into Russian budgets.

To empirically test the claim that private companies benefit from hiring the family members of federal employees, I utilize a dataset of over 500 million inter-firm banking transactions over 1999–2004. In an exceptional work, Mironov (2013) documents and validates this one of a kind resource to examine how firms and government institutions interact.[27] Leaked to the public in 2005, the data constitutes a near-universe of Russian firms, and the slight bias towards Moscow does not cause problems, since my analysis only looks at the residents of that city. Each observation in the transactions data indicates the paying organization, the receiving organization, the date, and the transaction amount. My aim is to test for a relationship between the number of family members of federal officials that a firm or organization employs each year and the total

[26]This result raises the question about whether having a relative enter federal government frees an individual to change his/her job search tactics and pursue different opportunities. For example, the negative point estimate on working at a relative's previous employer could suggest that an individual can finally leave an undesirable position at that organization only when their relative secures better employment in the government. However, the main results in Table 2 demonstrate that nepotistic hiring helps bring individuals into the work force (by increasing their employability among certain firms) as well as can lead to wage increases for the currently employed. We do not see evidence that individuals are more likely to switch employment upon having relatives enter the government.

[27]Other academic works that have employed this data include Mironov and Zhuravskaya (2016) and Braguinsky and Mityakov (2015).

payments it receives from the federal government. I collected all transactions for the 11,017 employers of individuals from 1999 to 2004.

First, I identify all transactions where a federal government entity was the payer.[28] These transactions cover all payments made using the central banking system, leaving open the possibility that some are being made for reasons other than state procurement contacts. To narrow the measurement approach, I follow Mironov and Zhuravskaya (2016) in removing certain transactions that fall into this non-procurement category. First, I exclude all transactions originating in government tax agencies. Many of these payments are value-added tax rebates which firm apply for and receiver through the banking system. Next, I exclude all transfers from state-owned banks, since these may concern foreign currency transactions or transfers across bank accounts, rather than payments for services rendered. Finally, I remove all employers working in water or electricity provision (utilities) based on the sector code. As Mironov and Zhuravskaya (2016) argue, contracts for these public goods are not competitively allocated and may not depend on political connections. In Section 4.1 of Appendix, I show that the results are robust to including utilities in the analysis.

Once this restrictions have been applied, I sum and log all transactions to each employer from the federal government every year. Because the analysis is done at the employer-year level, I then sum the number of individuals with relatives in federal office that worked for each employer every year.[29] Merging the employee and transaction datasets is made possible through unique tax identification numbers (INNs) available in both datasets. In addition, I merge in firm characteristics from the complete firm registration data (described above and in Section 1.5 of Appendix) which contains information on firm age, sector based on the All-Russia Classifier of Types of Economic Activity (OKVED) and ownership based on the OKFS and OKOGU classifiers.[30]

My estimation strategy relies on a difference-in-differences design similar to that used in the individual-level analysis. The two main outcomes are whether an organization received any money from the federal government and the amount it received, conditional on receiving any money. I estimate the following equation:

$$y_{ot} = \alpha + \beta emp_{ot} + X_{ot} + \nu o + \mu t + \epsilon_{ot} \tag{2}$$

where y_{it} indexes the two outcome variables for organization o at time t, emp_{ot} is the count number of individuals with relatives in federal office at time t,

[28] As a placebo check, I perform the same procedures for payments originating in regional and local governments as well. I discuss this analysis below and in Section 4.2 of Appendix.

[29] To calculate this number, I use the main sample analyzed in Tables 1–4. Section 4.3 in Appendix shows that the results are robust to using the individuals whose relatives remained in federal government the whole period.

[30] Section 1.5 in Appendix goes into further detail about the construction of the analysis sample, which also includes removing banks and firms located outside of Moscow.

X_{it} is a time-varying measure of the total number of employees (logged) at organization o, ν_i is a organization-specific fixed effect, μ_t is a year fixed effect, and ϵ_{it} is an uncorrelated error term. Key to this identification strategy are the organization and year fixed effects that control for specific organization characteristics and time shocks. This empirical strategy does not incorporate the information on entrances and exits of relatives into federal office analyzed in the main specifications above. Instead, it simply adopts a unit-level (organization) fixed effects approach to identify the relationship between the annual number of family members of federal employees working in a firm and the amount of transfers from the federal government each organization receives in the same year.[31] The fixed effect is created using each organizations' tax identification number.

Finally, I also include an annual measure of employment to account for the possibility that changes in relative hiring are correlated with wider fluctuations in firm size. Expanding firms employ more workers (including potentially bureaucrats' family members) and may be more competitive at winning state contracts. By including a time-varying measure of employment, the models account for broader firm dynamics and help isolate the effect of relatives on exchange with the public sector.[32] In addition, in some models I include organization-specific time trends over the period.

I present the results in Table 5. Panel A uses the binary outcome of whether an organization received any transfers from government, while Panel B looks at the total amount transferred, conditional on any transfers being made. Panel B therefore subsets to only those employer-years where some transaction with the government occurred, hence the smaller sample size. The main specification is found in Column 1, which includes the full set of fixed effects and employment controls, while subsetting to only private firms. The results are unambiguous and statistically significant. Private firms that hire individuals with a relative in federal office are more likely to receive state contracts. Panel B indicates that the size of the contract also increases when family members of officials are employed. Firms can expect an 11% increase in the size of procurement revenues earned, even conditioning on any contract being offered. These results are robust to including organization-specific time trends in Column 2. We do not see evidence that there are larger trends regarding ramping up procurement access specific to these private firms that are colinear with their hiring of relatives.

[31] The results are robust to using a binary indicator of whether an organization had employed a relative in each year.

[32] The same includes all organization-years for which an organization was registered and had a transaction in the banking data, including a control for years where complete employment data is not available. In Section 4.2 of Appendix, I show that the results are robust to additional constraints on organization size.

Table 5: Firm-level mechanisms.

	(1)	(2)	(3)	(4)
Panel A: Received government contract				
No. of individuals with relatives in federal office	0.018	0.017	−0.006	0.077
	(0.004)	(0.007)	(0.008)	(0.024)
No. of individuals with relatives in federal office * firm age				−0.007
				(0.002)
Organization, year FE	Yes	Yes	Yes	Yes
Organization time trends	No	Yes	No	No
Employment controls	Yes	Yes	Yes	Yes
Control group mean	0.47	0.47	0.84	0.50
Observations	30,725	30,725	3,625	30,725
R^2	0.602	0.741	0.684	0.602
Panel B: Amount of government contracts (log)				
No. of individuals with relatives in federal office	0.113	0.120	0.076	0.404
	(0.033)	(0.049)	(0.034)	(0.246)
No. of individuals with relatives in federal office * firm age				−0.031
				(0.024)
Organization, year FE	Yes	Yes	Yes	Yes
Organization time trends	No	Yes	No	No
Employment controls	Yes	Yes	Yes	Yes
Control group mean	163.83	163.83	1379.11	125.39
Observations	15,280	15,280	3,165	15,280
R^2	0.718	0.863	0.849	0.718

The outcome variables are a binary indicator for whether an organization received contracts from the federal government (Panel A) and the log amount of contracts received, conditional on a contract being given. Column 1 is a reduced-form model that only includes private firms. Column 2 adds firm-specific time trends. The sample is subset to only state-owned enterprises in Column 3. Column 4 subsets again to only private firms while adding an interaction for age. All models control for the total number of employees an organization has in each year. Standard errors are clustered on the firm (organization) level.

As a strategy to cultivate political influence, nepotism seems to pay off. Uncovering the rewards that employers earn from government engaging in nepotistic hiring is central to the interpretation of greater individual employment as evidence of corruption. One alternative explanation is that a relative may have to take a pay cut to enter government office; other family members must enter the private sector in order to compensate for the lost family income. The firm-level results push back against that interpretation: private firms are eager to take on individuals with political connections through their family because their hiring opens up doors to state procurement. This is not simply a story

of families approaching the labor market differently to smooth income, but rather a bidirectional, transactional relationship built around family ties to government officials.[33]

Column 3 shifts the focus by subsetting the sample to employers that are state-owned enterprises. In Russia, state-owned enterprises already have some degree of political connections by virtue of their ownership structure. We might expect then that nepotistic hiring should play a smaller role in determining their ability to win state contracts, and if so only on the margins. The directors of state-owned enterprises are directly appointed by government officials, with many times these officials themselves sitting on corporate boards. The results indicate that this is indeed the case: subsetting the sample to SOEs returns a point estimate in Column 3, Panel A, that is considerably smaller than that for private firms (Column 1) and statistically indistinguishable from zero. State-owned enterprises have other avenues to win contracts and may be less reliant on hiring family members of government officials to win support. The results in Column 3, Panel B, indicate that SOEs that hire family members may enjoy slightly a higher volume of contracts, perhaps because these relatives help SOEs improve their pre-existing ability to win contracts. Overall, this analysis demonstrates that nepotistic hiring advantages private firms in the procurement process more than state-owned enterprises, which is reasonable giving the pre-existing political ties enjoyed by the latter.

In the Appendix, I show an additional check by varying the source of the state contracts. Rather than just look at those originating in the federal government, I sum the amount that private firms earn from regional and local governments, respectively, again excluding tax agencies and banks. Recall that nepotistic hiring throughout this paper is driven by ties to federal government employees. Logically we should expect then that private firms are developing the most powerful political connections with federal government entities, while their ability to penetrate regional and local procurement processes should be affected to a lesser degree. Procurement processes in Russia are decentralized, with decisions about allocating contracts and attracting bidders made not in Moscow, but on site at regional and municipal institutions (Best *et al.*, 2018). As shown in Table A19 of Appendix, private companies that hire individuals with relatives to federal officials receive considerably weaker preferential treatment in the form of contracts from regional, and especially local governments. Political connections are not immediately transferrable to different levels of government. Winning a spot in the federal bureaucracy does not necessarily open up doors down the governmental chain.

[33]Other evidence against the compensation mechanism can be seen in Section 3 of Appendix that looks at entry into financial institutions. Having a relative enter into a better paid job in the private sector does not result in greater labor market participation among individuals.

Finally, we might expect variation in the value that different types of companies place on nepotism. Not all firms require this type of political connection to government. Some may already have political ties, such as politicians sitting on their boards or long-lasting lobbying relationships. Other companies may have been established years ago and retain permanent channels to government. In Column 4, I first interact the number of relatives with firm age, as measured by the number of years a company has been in operation. The negative and significant point estimates indicate that nepotism appears to be a more potent political strategy among younger firms. For every year a firm has been in business, the advantages of nepotism sharply decline. Newness to the market and the lack of solidified reputation may compel companies to hire well-connected employees as a way to gain footing.

The industry in which private companies operate also influences the value of engaging in nepotism. Companies that provide non-homogeneous goods, such as intermediary services, rely more on relation-based strategies to demonstrate quality and win clients, especially within the government. Figure 2 presents point estimates from Column 4, Table A7 in Appendix, where indicators for industry are interacted with the measure of connected individuals. The indicators are derived from the OKVED sector classifier, with firms collapsed into six sectors. Indeed, firms working in trade and transportation are more disposed to use nepotism to their advantage compared to those working in industries marked by greater fixed assets (such as mining, agriculture, and heavy manufacturing). Their revenue depends in part by directly providing goods and services to the government; hiring relatives of officials opens up immediate sales opportunities. For firms in other sectors, such as heavy manufacturing, the government is not an obvious customer and thus of less

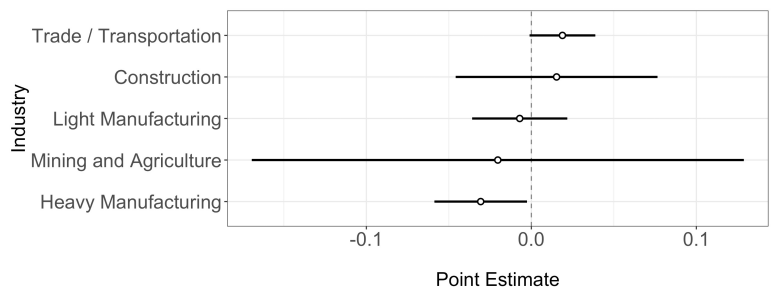

Figure 2: Effect of nepotism on contracts across industries.

Coefficients from a regression of a measure of the number of individuals with relatives working in federal office and a categorical variable for the sector their private company worked in. The dot is the point estimate on the interaction effect with 95% confidence intervals shown. The omitted dummy is for firms working in general services. Complete model results can be found in the Appendix.

interest. The relationships with officials that nepotism unlocks are more valuable to firms actively involved in selling to the state.

Non-procurement Benefits

Another channel by which firms might receive from hiring officials' family member could be through decreased regulatory burden or access to new markets. To test whether non-monetary assistance is traded in exchange for labor market favoritism, I examine heterogeneity across federal ministries and agencies. Firms may more often target certain ministries that oversee rules and the business environment. I interact dummy variables for each federal institution with the main predictor for whether a relative is employed there. The outcome variable is whether an individual is employed in the private sector during that year (i.e., the model specification is identical to that in Table 4, Column 1). I include interactions between a dummy for whether a federal employee held a job in each year and a dummy for the ministry the federal employee worked at.

The coefficients from these interaction terms are shown in Figure 3. Each line denotes the federal institution, with the dot indicating the point estimate. The omitted federal agency used as a benchmark is the Ministry of Science of Technology, whose point estimate falls roughly in the middle. Indeed, companies value some federal institutions more than others. The four agencies that are most likely to see their employees place relatives in private firms are Foreign Affairs, Emergency Situations, Energy, and Communications. Each offers unique benefits. For example, the Ministry of Foreign Affairs, with its network of international embassies and contacts, can open up trade opportunities and help alleviate customs disputes. The Ministry of Emergency Situations sets and enforces fire and safety guidelines, as well as coordinates inspections across the country. The Energy and Communications ministries provide important utilities for companies, such as access to electricity and regulation of telephone and internet markets. On the other end, the Ministries of Culture and Education are less attractive for private firms, either because their services are less essential for short-term business operations. The Ministry for Property Management also scores low in the minds of companies for good reason: the extensive privatization undertaken in the 1990s left a small number of assets in the hands of the state authorities, and commanded little interest from the private sector.

Unfortunately systematic data on the relative regulatory power (and attractiveness) of these ministries is not available for this time period in Russian politics. Information on regulations passed is incomplete and neither trade associations nor civil society organizations ran surveys to uncover how these institutions functioned. In response, I created two indicators of 'institutional' strength from the analysis datasets. First, I calculated the average number of

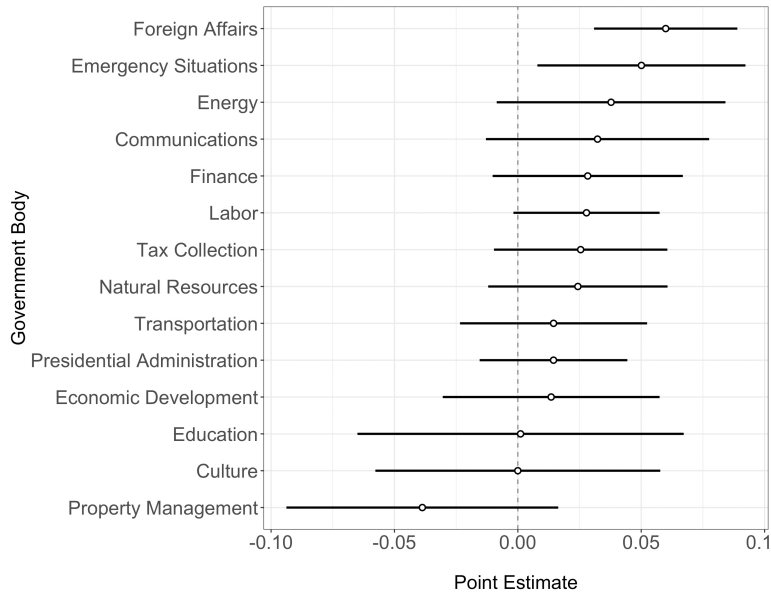

Figure 3: Private sector employment by ministry.

Coefficients from a regression of a dummy for an individual employed in a private firm on an interaction of a dummy for whether he or she had a relative in federal office and dummies for the federal institutions. The dot is the point estimate on the interaction effect with 95% confidence intervals shown. The omitted dummy is the Ministry of Science and Technology.

paid employees per institution using the Pension Fund data. Larger workforces might be indicative of greater responsibilities and regulatory power within the government. Second, I summed the average amount of payments that originated annually from each federal institution using the banking transactions data. This indicator gives a sense of the size of budget of each body; if firms are only interested in procurement contracts, we would expect a strongly positive correlation between the incidence of nepotism and the budgets of each ministry. In Figures 4 and 5, I plot the point estimates from the model graphically depicted in Figure 3 against these two measures of 'institutional' strength. The results indicate that firms value connections to larger federal institutions as measured by their labor force, but not their budgetary power, where the slope of the line is clearly negative.

By hiring relatives of federal government officials, private sector firms seek out other benefits beyond access to state contracts. Though nepotism offers access to procurement, officials working in government agencies that are not major players in allocating contracts also appear to hold sway in getting their relatives jobs in the private sector. The paucity of relevant data does not allow

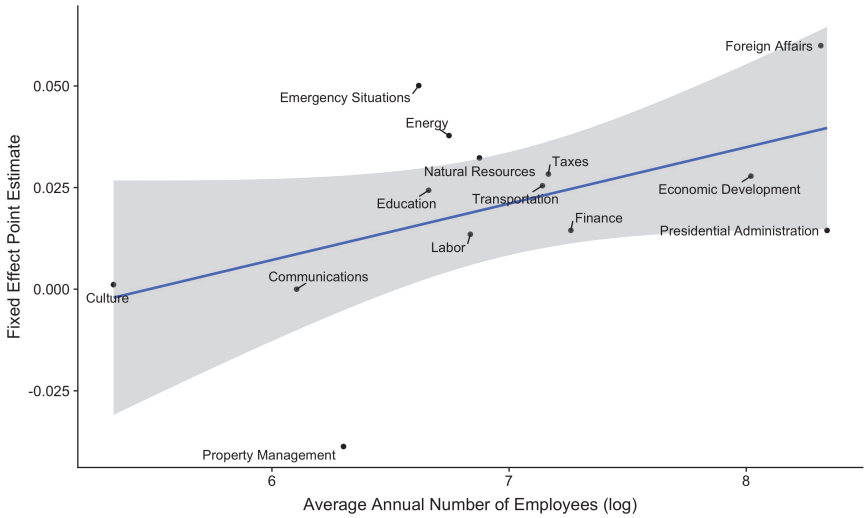

Figure 4: Ministry attractiveness by number of bureaucrats.

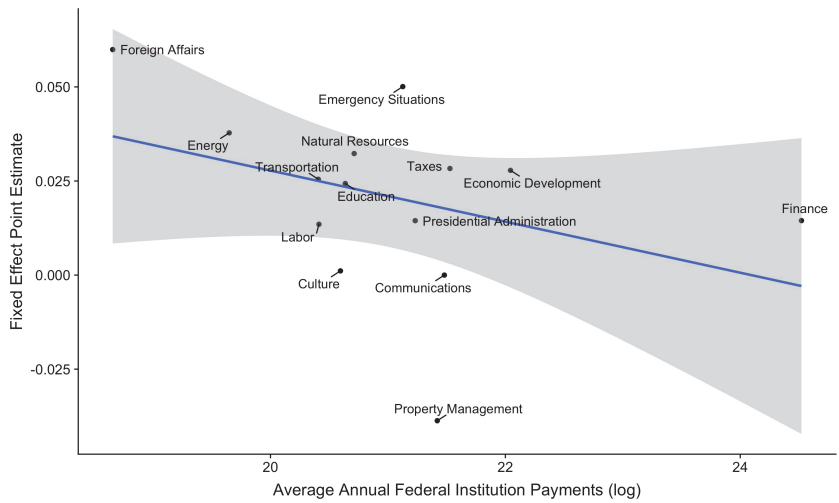

Figure 5: Ministry attractiveness by access to procurement.

Figure 4 plots two data points: (1) the coefficients from a regression of a dummy for an individual employed in a private firm on an interaction of a dummy for whether he or she had a relative in federal office and dummies for the federal institutions and (2) the average number of employees in each institution (logged). Figure 5 plots two data points: (1) the coefficients from a regression of a dummy for an individual employed in a private firm on an interaction of a dummy for whether he or she had a relative in federal office and dummies for the federal institutions and (2) the average amount of payments originating in each federal institution, measured in rubles and then logged. The omitted dummy is the Ministry of Science and Technology. The slope line from a linear regression is shown with 95% confidence intervals.

for a definitive testing of the mechanism, but private companies appear to engage in nepotism to influence regulations. Nepotistic hiring becomes akin to lobbying through its ability to open doors to policymakers and develop valuable political connections.

Conclusion

This paper empirically demonstrates that nepotism pays off in the labor market. Individuals fare better in terms of employment and wages when their family members enter federal office. The positive effect on income, although far from enormous, is both substantively and statistically significant in that individuals can earn a raise at their current place of work just for having a relative in government. This positive boon varies by seniority and the type of familial relationship, and can improve an individual's upward mobility at their job. Perhaps surprisingly, this paper also shows that this shady preferential treatment is not limited to the public sector. Private firms face strategic incentives to hire officials' relatives in order to secure contracts and regulatory assistance, especially when they are new to the market and work in sectors more dependent on personal relationships. I find that nepotism draws together government and business, as actors on both sides gain from officials' relatives entering lucrative positions.

Where might we expect this type of trading favors to be more prominent? First, countries with underdeveloped political institutions may allow nepotism to flourish to compensate for other weaknesses encouraging loyalty from elites. In autocratic regimes such as Indonesia under Suharto, nepotism was officially sanctioned, as family loyalties were viewed as traditionally stronger than officials' allegiance to the state (Robertson-Snape, 1999). During the early 2000s, Russia lacked a strong ruling party that could vet and monitor political elites. By allowing benefits to accrue to relatives of newly appointed government officials, the regime promoted a mutually reinforcing system by which government newcomers and aspirant private firms grew enmeshed within a corrupt system. Even developmental states such as Korea have viewed nepotism as a tool to manage powerful business groups and create mutual hostages (Kang, 2002). Relying on traditional loyalties can help solidify bonds between the public and private sectors when formal institutions are not insulated from political interference.

Yet developing strong, meritocratic governing institutions may not be enough. Without mechanisms for enforcing accountability and transparency around the rewards flowing to government officials, nepotism can easily take root in advanced industrial democracies. Even in many developed countries, business development requires nurturing relations with officials. Nepotistic hiring can become another arrow in the quiver of firms trying to build political

access. To date, institutional safeguards in place to prevent private companies from hiring politicians' relatives are still a rarity. We are only aware of the many qualitative examples discussed in the introduction because of anticorruption enforcement actions taken against US companies. Although the majority of countries worldwide require politicians to submit asset disclosures, these rarely extend to family members and their careers. Nepotism therefore can thrive where the private sector is economically dependent on the state, and where anticorruption efforts stop short of exposing family-level rewards.

This study raises but cannot fully answer the question of whether engaging in nepotism is a net good or bad for private firms and government entities. Most of widespread outcry against JPMorgan focused on the fact that the relatives of officials were not sufficiently qualified to hold the positions they were given. Indeed, evidence from this study suggests that both connected spouses and children received priority in the labor market, rather than older (and potentially more experienced) relatives. However, scholarly work has found evidence that bureaucrats who attain their positions through corruption deliver superior health service outcomes (Weaver, 2016). The limited data on the qualifications and job performance of Russian employees hired due to nepotism preclude such an investigation here, leaving the question open for future research.

Nepotism can also have large negative consequences for society. Government officials benefit financially by placing relatives in high places, while the entangled firms gain an unfair advantage in achieving access to state procurement and policymaking. Without institutions to punish participants for engaging in the practice, countries run the risk of an entrenched nexus between the public and private sectors sewn together by family ties. Private sector firms can be decisive political actors and finance opposition efforts (Arriola, 2012). Nepotism may increase their dependence on the government and reduce the likelihood that regimes, both democratic and non-democratic, will be held accountable for corruption.

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