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# **MOTIVATIONS FOR PUBLIC SERVICE IN CORRUPT STATES: EVIDENCE FROM POST-SOVIET RUSSIA**

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## MOTIVATIONS FOR PUBLIC SERVICE IN CORRUPT STATES: EVIDENCE FROM POST-SOVIET RUSSIA<sup>5</sup>

Throughout much of the world, corruption in the civil service undermines state capacity, impedes economic development, and saps citizens' morale. But while its pernicious effects are widely recognized, the roots of corruption remain poorly understood. Whereas most studies on corruption's origins focus on the incentives bureaucrats face once in office, this study contributes to a line of recently emerging research that considers the role of self-selection of citizens with a propensity for corruption into bureaucracies where corruption is known to be widespread. Drawing on a survey and experimental games conducted with students at an elite university in Moscow, Russia, we compare the attitudinal, behavioral, and demographic traits of students seeking public sector employment to the traits of their peers seeking jobs in the private sector. Contrary to studies conducted in other high-corruption contexts, such as India, we find surprising evidence that students who prefer a public sector career display *less* willingness to cheat or bribe in experimental games as well as *higher* levels of altruism. One interpretation of these findings is that corruption in Russia results from the transformation of bureaucrats' behavior and attitudes after entering the civil service, rather than through a process of corrupt self-selection.

JEL Classification: D73, H83.

Keywords: corruption, Russia, motivation, civil service, experimental games.

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Over the past several decades, scholars have accumulated extensive evidence of the negative political, social, and economic consequences of corruption. Yet understanding of corruption's origins, and of variation in levels of corruption across and within countries, has lagged far behind. Existing studies on the sources of corruption overwhelmingly focus on the incentives faced by state officials, ranging from micro-level considerations such as wages to macro-level considerations such as regime type.<sup>1</sup> By contrast, this study contributes to a recently emerging line of research that considers the role of self-selection into government bureaucracies. For example, in the high-corruption context of India, Hanna and Wang (2013) find that among university students, aspiring civil servants are more likely to cheat in laboratory experiments than their peers aspiring to careers in the private sector. Meanwhile, in the low-corruption context of Denmark, Barfort et al. (2015) find the opposite: Aspiring civil servants are less likely to cheat in laboratory experiments. Together, these findings suggest that part of cross-national variation in corruption results from the self-selection of individuals with a higher propensity for dishonesty into state bureaucracies where corruption is widespread and out of state bureaucracies where corruption is limited.

The notion of becoming a public servant with the explicit aim of self-enrichment runs counter to the image of civil service that has evolved in Western Europe and North America over the past two centuries. Public Administration scholars with a focus on Western countries have produced an extensive literature on the concept of "public service motivation" – a distinct set of attitudinal traits such as compassion, self-sacrifice, and commitment to public values – that distinguish public employees from their private sector counterparts (Perry and Wise, 1990; Perry, 1996). In line with this image, Barfort et al. (2015) find that aspiring civil servants in Denmark are more likely than students who plan on pursuing a private sector career to sacrifice personal financial gain in order to contribute to charity when playing a modified dictator game. They also find that standard indicators used by Public Administration scholars to measure public service motivation are robust predictors of who seeks a civil service career in Denmark. The realities of self-selection into the Indian civil service, however, appear to differ starkly, with Hanna and Wang (2013) producing evidence that

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<sup>1</sup>For reviews of the literature on corruption's consequences and origins, see Svensson (2005), Treisman (2007), and Olken and Pande (2012).

aspiring civil servants are less likely to trade off personal financial gain in favor of charitable contributions than their peers who intend to pursue private sector careers.

This paper extends the study of corrupt self-selection to the post-communist region, addressing the question: Who wants to become a public servant in corrupt states, and with what motivations? Drawing on a survey and experimental games with 804 students at a top university in Moscow, Russia, we compare the attitudinal, behavioral, and demographic traits of students seeking public sector employment to the traits of their peers seeking jobs in the private sector. As discussed below, Russia is a fitting setting for such analysis. It consistently ranks in the bottom quartile of global corruption rankings, yet government employment appears alluring to many. Recent surveys show that more than a third of Russian youth ages 18 to 24 would like to work in government agencies (VTsIOM, 2012), and throughout the late 2000s university applications to study Public Administration rose significantly (Bogdanova, 2010).

Recognizing that study of the sensitive topic of corruption entails significant challenges, our approach employs experimental games to elicit observable behavior. These games utilize incentive payments to reveal participants' preferences. Our first game measures propensity for dishonesty using an online dice task developed by Barfort et al. (2015).<sup>2</sup> Respondents were asked to guess a number between 1 and 6 and then self-report whether their guess matched a randomly generated outcome of a dice roll, an exercise that was repeated 40 times. Participants received higher payoffs for correct guesses, creating an incentive to cheat; the multiple rounds of guesses then facilitated estimation of individuals' cheat rates based on a comparison of reported distributions to the expected distribution of successful guesses. Our second game consists of a modified version of Barr and Serra's (2010) bribery experiment, in which participants are randomly assigned to the role of a citizen or a bureaucrat. The citizen is presented with a scenario in which she can increase her payoff by offering the bureaucrat a bribe to obtain a permit. Whether participants offer (in the role of citizen) or accept (in the role of bureaucrat) a bribe serves as an indicator for willingness to engage in corrupt behavior. Finally, to measure pro-social behavior we use a modified dictator game in

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<sup>2</sup>Barfort et al. (2015), in turn, build off the approaches pioneered by Hanna and Wang (2013) and Fischbacher and Föllmi-Heusi (2013).

which participants received a sum of money which could be retained or donated to a Russian charity of their choice.<sup>3</sup>

Contrary to expectations, we find evidence of corrupt self-selection *out* of public service in Russia: At least among Moscow students at an elite university, students aspiring to become civil servants are less likely to cheat and bribe in experimental games, and more likely to engage in pro-social acts such as donating to charities, than students seeking private sector careers. Analyses based on non-experimental survey indicators of dishonesty, corruption, altruism, and public service motivation also support these findings. Although our research design does not allow us to assess whether these results hold among Russian students more generally, one interpretation is that corruption in Russia results more from the transformation of bureaucrats' behavior and attitudes after joining the civil service, rather than from a process of corrupt self-selection.

Of course, many students may aspire to government employment for pragmatic reasons, rather than for the pursuit of personal gain or idealistic public service goals. In the United States and Europe, for example, individuals who highly value job security appear more likely to prefer public sector employment, while – as in most professions – children of government employees are disproportionately likely to follow their parents' career paths (Lewis and Frank, 2002; see also Buurman et al., 2012). A critical question is whether those who join state bureaucracies due to practical considerations are more likely to resemble their counterparts who seek public service with idealistic motives, or their counterparts who self-select into bureaucracies to benefit from corruption. We find that the answer is neither: While factors such as risk aversion and family ties are associated with a stronger preference for public sector employment, these factors are uncorrelated with indicators of dishonesty, willingness to engage in corruption, or altruism.

Our paper contributes to the broader literature on the roots of public sector corruption (for reviews, see Svensson 2005, Treisman 2007, and Olken and Pande 2012), as well as to longstanding debates over the impact of public service motivation on career preferences (for reviews, see Wright and Grant 2010 and Perry et al. 2010). Our paper also is related to

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<sup>3</sup>The pre-analysis plan documenting our research design is available via the EGAP registration database. See ID 20160601AA.

research on the buying and selling of public office, a phenomenon that points to an extreme form of corrupt self-selection in which aspiring civil servants pay current state officials to obtain public employment and then seek a return on this “investment” by collecting bribes (Wade, 1985; Darden, 2008; Zhu, 2008; Engvall, 2014). Most directly, our paper contributes to a nascent literature using experimental games to study self-selection into or out of the public sector. As noted above, Hanna and Wang (2013) and Barfort et al. (2015) explore the relationships between students’ propensity to cheat and preferences for public sector employment in India and Denmark, respectively. Banerjee et al. (2015) similarly find that Indian students preparing for a career in the civil service are more likely to embezzle in a laboratory corruption game than students enrolled in business school. Alatas et al. (2009), also drawing on a laboratory corruption game, find no difference in the willingness to give or accept bribes across Indonesian students who intend to pursue a public sector career and their counterparts intending to pursue a private sector career, but this might be due to a very small sample size.

We build on the existing literature in several ways. First, we offer what we believe to be the first study of this type conducted in Eurasia. Second, we employ multiple experimental games, one with a focus on dishonesty and one with a focus on corruption per se, allowing us to consider the ways in which the concepts of dishonesty and corruption are similar or distinct. Third, we investigate multiple measures of career preferences and disaggregate public sector employment into specific types of career paths, such as federal government versus local government agencies, producing fine-grained insights into the types of government employment most prone to attract altruistic – or, conversely, dishonest – individuals.

The following section provides context for the setting of our study. Section 2 then discusses issues of measurement, research design, and data collection. In Section 3 we present our primary analyses, while Section 4 discusses possible interpretations of the results.

## **1 Background on Research Setting**

Russia is a fitting locale for a study on motivations for public service given its combination of high levels of corruption and rising interest in public sector employment among the younger generation. As can be seen in Table 1, in 2015 the watchdog agency Transparency Interna-

tional’s Corruption Perception Index (CPI) ranked Russia 119th out of 168 countries and territories, tied with Azerbaijan, Guyana, and Sierra Leone. For point of reference, India was ranked in a six-way tie for 76th place, along with Brazil, Bosnia, Burkina Faso, Thailand, Tunisia, and Zambia. The United States was tied with Austria in 16th place, while Denmark occupied the top spot, followed by its Nordic neighbors Finland and Sweden.

The CPI reflects the subjective assessments of experts and business executives and does not distinguish between grand and petty corruption. Transparency International’s Global Corruption Barometer (GCB), on the other hand, directly polls citizens across the globe about their encounters with corruption. Unfortunately, data for the most recent survey – the 2013 report – are incomplete for Russia. But for 2009, twenty-nine percent of Russian citizens reported paying a bribe in the last 12 months. Evidence of bribery was even more widespread in India, with 54 percent of Indian citizens reporting the payment of a bribe during the previous year in the 2013 GCB report, a stark contrast to 7 percent of US and 1 percent of Danish citizens. Data from the World Bank’s Enterprise Surveys on the percent of firms encountering a bribe request from a government official during the previous year offer a similar picture, with 14 percent of Russian firms facing a bribe request in 2012 and 23 percent of Indian firms facing a request in 2014, the latest years for which data are available.

**Tab. 1: National Indicators of Corruption Levels (selected countries)**

Country	TI Ranking	% of Citizens Paying Bribe	% of Firms Facing Bribe Request
Russia	119	31	14
India	76	54	23
United States	16	7	na
Denmark	1	1	na

Sources: TI Ranking refers to the 2015 ranking from Transparency International’s Corruption Perception Index ([www.transparency.org/cpi2015](http://www.transparency.org/cpi2015)). The percent of citizens paying a bribe refers to data from Transparency International’s Global Corruption Barometer ([www.transparency.org/research/gcb/overview](http://www.transparency.org/research/gcb/overview)). Data for Russia are from 2009; data for other countries are from 2013. The percent of firms facing a bribe request refers to data from World Bank’s Enterprise Surveys ([www.enterprisesurveys.org/data/exploretopics/corruption](http://www.enterprisesurveys.org/data/exploretopics/corruption)). Data for Russia are from 2012; data for India are from 2014.

There is little evidence that levels of corruption in Russia are declining over time. Since 2000, Russia has consistently ranked in the bottom quartile of Transparency International’s CPI rankings. Yet during this period substantial shifts have occurred with respect to the allure of government employment. According to a periodic omnibus survey conducted by

Russia's Public Opinion Foundation (FOM), a non-governmental research organization, in 1998 just 6 percent of respondents in a nationally representative survey perceived employment in public administration (*gosudarstvennoe upravlenie*) to be a popular career path for Russian youth. By 2005 this figure had risen to 10 percent, and by 2011 it reached 19 percent. Tellingly, during this period the attractiveness of entrepreneurship declined significantly: 39 percent of respondents in 1998 perceived entrepreneurship as a popular career for youth compared to 20 percent in 2011.<sup>4</sup> Beyond survey data indicating a growing interest in government employment, in the late 2000s a number of journalists noted a significant increase in applications to study Public Administration at universities throughout the country. In 2010, for example, Moscow State University's School of Public Administration received 18 applications for every position, compared to 11 per position in bioengineering, 10 per position in economics, and 10 per position in world politics, the next most popular departments (Bogdanova, 2010). (In Russia, students apply to specific departments at a university, rather than to the university as a whole.) While there are a number of ways to interpret rising interest in public sector employment, at least some prominent voices have expressed concern that these trends reflect a process of corrupt self-selection. For example, in 2011 Russia's prime minister, Dmitry Medvedev, noted: "It worries me that young people want to become government officials. . . . [M]any questions arise when young people choose the route of government service. . . . Is it a prestigious profession? Not really. Does it pay well? It pays poorly. It means that they are choosing this route because it is a way to quickly get rich – corruption" (*Vzglyad*, July 14, 2011).

Clearly, Russia's leadership is directly grappling with the question of who seeks to become a public servant and with what motivations. Insight into this question holds relevance for immediate policy concerns in Russia, for countries throughout the world seeking to build a

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<sup>4</sup>The surveys posed the question: "In your opinion, which professions today are the most popular among young people?" Respondents could choose up to three careers. Between 1998 and 2001, the percentage of respondents perceiving a career in law to be popular rose from 31 to 42 percent. Perceived popularity of a career in finance stayed constant at around 40 percent, while the perceived allure of a career as professional criminal dropped from 17 to 2 percent, reflecting an end to the lawless period of the 1990s during which organized crime thrived (see, e.g., Volkov, 2002). Data are available via the online archive of the Russia Public Opinion Foundation (*Fond Obshchestvennogo Mneniya*) at [bd.fom.ru/pdf/d09pp11.pdf](http://bd.fom.ru/pdf/d09pp11.pdf).



principled and competent civil service, and for improved understanding of corruption's roots more broadly.

## 2 Data Collection and Research Design

### 2.1 Implementation

Our study was conducted in Moscow with undergraduate and masters students at one of Russia's top-five universities, with a particular focus on students in social science departments. Students were recruited using flyers, emails, and classroom announcements by research assistants. We also allowed students to invite other students to participate via a module at the end of the online survey.<sup>5</sup> Eight hundred and four students participated. We focused on students in social science departments because (1) this population contains a significant number of individuals both with an interest in and a realistic possibility of obtaining government employment yet also (2) exhibits significant variation in career goals, both across but also within departments. Data were collected between May 27 and June 15 of 2016.

Of the participants, 60 percent were women. Twenty-six percent were first-years, 25 percent were second-years, 21 percent were third-years, 18 percent were fourth-years, and 10 percent were MA students. The disciplines most heavily represented in the sample were Public Administration, comprising 25 percent; Economics, with 14 percent; Sociology, with 14 percent; Business, with 12 percent; Political Science, with 10 percent; and Communications, with 6 percent.<sup>6</sup>

The survey and experimental games were conducted online using Qualtrics.<sup>7</sup> Excluding

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<sup>5</sup>Students were allowed to invite up to five classmates by filling out an online invitation form at the end of the survey, which in turn sent out personalized automated email invites. Participants received an additional 200 rubles for each invitee who agree to participate (the email invites were embedded with the original participants' unique randomly generated codes, allowing us to track who had sent the invitation). This proved by far to be the most effective means of recruitment: 77 percent of participants were invited by a previous participant.

<sup>6</sup>Given that these types of studies are relatively novel in Russia, we were initially concerned about recruiting a sufficient number of students. Therefore, although we began recruiting with students solely from the Social Science Division, we did not filter out students from non-social science departments. Once it became clear that we would easily meet our recruitment targets, we created filters to limit the sample to social science students. Nevertheless, 4 percent of sample is from Computer Science and 4 percent from Mathematics. All results presented below are robust if students from Math and Computer Science are excluded.

<sup>7</sup>Portions of an English version of the research instruments were successfully piloted at Northwestern University in May 2015. During April 2016, Russian versions were piloted on a small set of students from the university where the study was conducted.

participants who appear not to have completed the study in one sitting, average participation time was 35 minutes.<sup>8</sup> We chose to conduct the study online rather than in a laboratory to facilitate higher participation rates and because we were aiming to develop a process and set of instruments that can be easily implemented at other universities. While an online study entails less control over the research environment and lower attentiveness on the part of research participants, we believe that higher participation rates, lower costs, and superior scalability outweigh these drawbacks. To mitigate concerns about participants' attentiveness, we employed screener questions (Berinsky et al., 2014). As discussed below, the overall level of attentiveness was high, and results are robust to the exclusion of inattentive participants.<sup>9</sup> To discourage students from participating multiple times, we used Qualtrics's "prevent ballot stuffing" feature, which impedes repeated participation from a single computer. We also required students to appear in person to present a unique, randomly generated code received at the end of the online study in order to receive their incentive payments, which provided a strong deterrent to students who might try to participate multiple times in order to earn additional money. All participants received a minimum of 500 rubles and had the opportunity to earn up to 2000 rubles, depending on their responses during the experimental games. On average, participants received approximately 1050 rubles.<sup>10</sup> It was made clear to participants that the payoffs for each of the four experimental games were independent and that their total payoff would be the sum of their earnings from across the games. All experimental games were conducted at the outset of the study to ensure that responses to survey questions would not influence participants' choices.<sup>11</sup>

## 2.2 Measuring Dishonesty and Corruption

Measurement of illicit or socially unsanctioned behavior presents significant challenges. Respondents may be unlikely to respond forthrightly to interview or survey questions pertaining

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<sup>8</sup>Students were allowed to start the study and return to finish at a later point in time. All but 14 percent of participants completed the study in under 60 minutes.

<sup>9</sup>More broadly, recent research demonstrates the consistency of results across laboratory and online experiments. See, e.g., Dandurand et al. (2008) and Clifford and Jerit (2014).

<sup>10</sup>Based on the monthly average exchange rate for May 2016, 500 rubles = approximately 7.50 USD.

<sup>11</sup>All participants first engaged in a modified dictator game, then in 20 rounds of the dice task game, then in the bribery game, then in a lottery game measuring risk aversion, and then in another 20 rounds of the dice task game. Survey questions then followed.

to dishonesty or corruption. Approaches developed in behavioral economics mitigate these challenges by using incentive payments to elicit observable behavior, from which participants' preferences can be inferred by the choices they make when actual financial loss or gain results from their decisions. To measure dishonesty and willingness to engage in corruption, we employed two games:<sup>12</sup>

*Dice Task Game* Our approach to measuring dishonesty utilizes the dice task game developed by Barfort et al. (2015).<sup>13</sup> Respondents were asked to imagine a dice roll, guess a number between 1 and 6, and then click to the next screen. On this screen a picture of a dice was shown with a randomly generated outcome. Participants were then asked to record the number they had imagined and then click to the next screen. For correct guesses, participants earned 15 rubles. For incorrect guesses, participants received 5 rubles. Since there was no way for our research team to observe participants' guesses, an incentive existed to dishonestly report guesses that matched the randomly generated outcome in order to increase one's payoff. Participants engaged in 20 rounds of this exercise at two points in the study, for a total of 40 rounds. A participant who cheated in every round received 600 rubles. An honest participant on average would guess between 6 and 7 rolls correctly, resulting in a payoff of just over 265 rubles. Comparison of a participant's number of successful guesses reported to the expected distribution of successful guesses under the assumption of honest reporting allows for estimation of the participant's cheat rate, as discussed in greater detail below.

*Corruption Game* Our bribery game builds off of Barr and Serra (2010) (for similar games, see Abbink et al. (2002) and Cameron et al. (2009)).<sup>14</sup> All participants were initially given 350 rubles at the outset of the game. We then randomly assigned participants to the

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<sup>12</sup>Dishonesty clearly is a related but not equivalent concept to corruption, which is usually defined as abuse of public resources or authority for private gain. While Barfort et al. (2015) and Hanna and Wang (2013) use dishonesty as a proxy for propensity to engage in corrupt behavior, Banerjee et al. (2015) and Alatas et al. (2009) study self-selection into public service using corruption games in India and Indonesia, respectively. Ours is the first study to our knowledge which simultaneously uses dishonesty and corruption games, allowing us to investigate the extent to which findings based on such games reflect similar or distinct phenomena.

<sup>13</sup>Barfort et al.'s (2015) approach builds on Hanna and Wang (2013), which in turn is a modification of Fischbacher and Föllmi-Heusi (2013).

<sup>14</sup>We use explicit corruption framing rather than neutral language (e.g., we use the term "bribes" rather than "transfers" and label the players "citizen" and "bureaucrat" rather than Player A and Player B). As Alatas et al. (2009) note, explicit framing may offer more direct insights into participants' motivations for engaging or not engaging in corruption, and like Alatas et al. (2009) we asked subjects to elaborate on the

role of citizen or bureaucrat and presented the citizen with a scenario in which she could receive an additional 450 rubles by obtaining a permit. When she seeks to obtain the permit, however, she is denied and given the chance to offer a bribe to the bureaucrat of a value ranging from 50 to 350 rubles (only increments of 50 were allowed). Bribing entails a risk of punishment, so for offering a bribe the citizen loses 100 rubles, regardless of whether the bureaucrat accepts or rejects the offer.<sup>15</sup> The bureaucrat then decides whether or not to accept the bribe, incurring a fine of 150 rubles for engagement in corruption, a cost larger than that imposed on the citizen to reflect the greater harm done to society when officials act corruptly. If the bureaucrat accepts the bribe, the citizen receives the permit and the correspondingly higher payoff.<sup>16</sup> If the citizen offers and the bureaucrat accepts a bribe, then two additional participants (chosen at random) each incur a loss of 50 rubles, representing the harm that corruption inflicts on society at large.

These payoffs were set up so that the bureaucrat is strictly better off accepting a bribe of 200 rubles or higher and indifferent between accepting and rejecting a bribe of 150 rubles. Conditional on the bureaucrat's acceptance of the bribe, the citizen is strictly better off offering a bribe of 300 rubles or less and indifferent between offering or not offering a bribe of 350 rubles. From a purely strategic perspective, citizens maximize their earnings by offering 200 rubles, an offer that a self-interested bureaucrat should accept. However, if the bureaucrat incorporates considerations other than financial payoffs into her decision and rejects the citizen's offer, the citizen is strictly worse off, receiving a payoff of 250 rubles rather than the 350 rubles with which she began the game. The indicators in which we were interested include whether an individual offers (in the role of citizen) or accepts (in the role of bureaucrat) a bribe.

*Non-experimental Measures* In addition to the two games described above, we posed a

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motivations underlying their decisions at the end of the game. For further consideration of framing effects, see Abbink and Hennig-Schmidt (2006) and Barr and Serra (2009).

<sup>15</sup>To avoid the conflation of risk aversion and aversion to corruption, we chose, following Barr and Serra (2010), not to make punishment probabilistic. Our script explained to participants, however, that they should interpret the 100 ruble loss as the "expected value" of a fine, which realistically in Russia might entail a large cost but small chance of being caught.

<sup>16</sup>We use strategy elicitation for the bureaucrat role, in which the participant indicates whether she would accept or reject each possible bribe amount. After the study concluded, payoffs were determined by randomly sorting participants into pairs of citizens and bureaucrats. This process was made explicit to participants.

series of questions taken from the World Values Survey asking respondents to assess the extent to which actions such as avoiding a fare on public transport, stealing property, or accepting a bribe in the course of one’s official duties can be justified. We also asked questions drawn from Transparency International’s GCB about the extent to which participants perceive corruption to be a problem in Russia.

### **2.3 Measuring Public Service Motivation**

*Pro-Social Preferences Game* Following Banuri and Keefer (2013), Hanna and Wang (2013), and Barfort et al. (2015), we measured pro-social preferences using a variant of the dictator game in which participants were allotted 400 rubles and then could choose to donate any amount from 0 to 400 rubles (in increments of 50) to one of four Russian charities: the Gift of Life Foundation, the Liza Alert Movement, the Anti-Corruption Foundation, or the World Wildlife Fund. Actual donations were made in accordance with the participants’ preferences. The game therefore places participants in a scenario that encompasses a direct tradeoff between personal financial gain and efforts to promote broader societal goals.

*Non-experimental Measures* We also employed a 16-item version of the Public Service Motivation (PSM) index developed by Kim et al. (2013). This version of the index builds on the original index created by Perry (1996) but was designed by an international team of scholars to account for cross-cultural distinctions. The index consists of a series of attitudinal questions measuring four dimensions of PSM: (1) attraction to public service, (2) commitment to public values, (3) compassion, and (4) self-sacrifice. We also presented participants with a series of questions about the job attributes they value most, including attributes such as “being useful to society” and “helping other people.”

### **2.4 Measuring Career Preferences**

We measured career preferences in multiple ways. The first is a dichotomous indicator for which respondents had to indicate which of the following best describes their career preferences: a job in the private sector (*chastnyi sektor*) or a job in the public sector (*gosudarstvennyi sektor*). The second approach asked respondents to imagine they are free to choose any job, and then asked them to rate their likeliness of choosing specific career paths

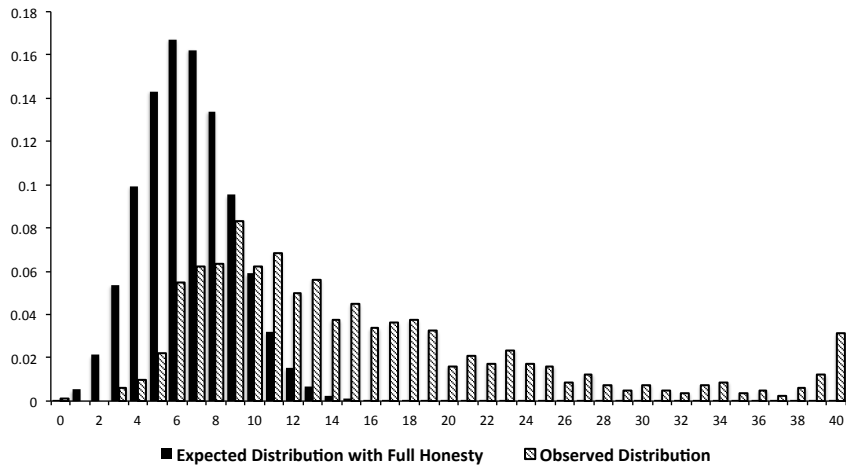
on a scale of 1 to 7, where 1 represents “very unlikely” and 7 represents “very likely.” Nine career paths were evaluated: federal government, regional or local government, the government “budget sector” (e.g., public health, science, education, culture), private corporations, small or medium-sized business, ownership of a private business, banking or finance, consulting, and the non-profit sector. As a robustness check, we also asked respondents to consider the distinction between the job they would like to have and the job they are most likely to have upon graduating. They were then asked to rate the likeliness of near-term employment in each of the previously stated career paths, again on a 1 to 7 scale. In our analyses below we considering a number of ways of aggregating responses to these multi-part questions to create a one-dimensional scale of private versus public sector career preferences.

## 2.5 Other Measures

To measure risk aversion, we used a series of seven paired lottery choices in which participants chose between a series of fixed payoffs and lotteries with a 50 percent chance of receiving no payment and a 50 percent chance of receiving a higher payment (see Holt and Laury 2002). The first choice was between 20 rubles for certain or a 50/50 chance of receiving 20 rubles – a lottery that only a highly risk acceptant person would select. The second choice was between 20 rubles for certain or a 50/50 chance of receiving 30 rubles. With each subsequent choice, the lottery winnings increased by 10 rubles until the seventh choice in which participants were asked to decide between 20 rubles for certain or a 50/50 chance of receiving 80 rubles. The indicator of interest is the number of certain payoffs an individual chooses before switching to a riskier – though potentially higher paying – lottery.<sup>17</sup> We additionally collected a wide variety of data on demographic and attitudinal indicators that have been shown or hypothesized to influence career preferences, including gender, age, class year (i.e., first-year, second-year, MA student), field of study, home region, size of home city, religion, relatives’ occupations, family income, ability (measured with self-reported GPA and Unified State Exam (EGE) scores), and personality traits (measured using the 10-item version of the Big Five indicators).

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<sup>17</sup>Participants’ earnings for the game were then calculated as the sum of payoffs for all seven choices.



Observed Distribution vs. Expected Distribution with Honesty (N=804)

**Fig. 1: Number of Correct Guesses for 40 Dice Rolls**

### 3 Analysis

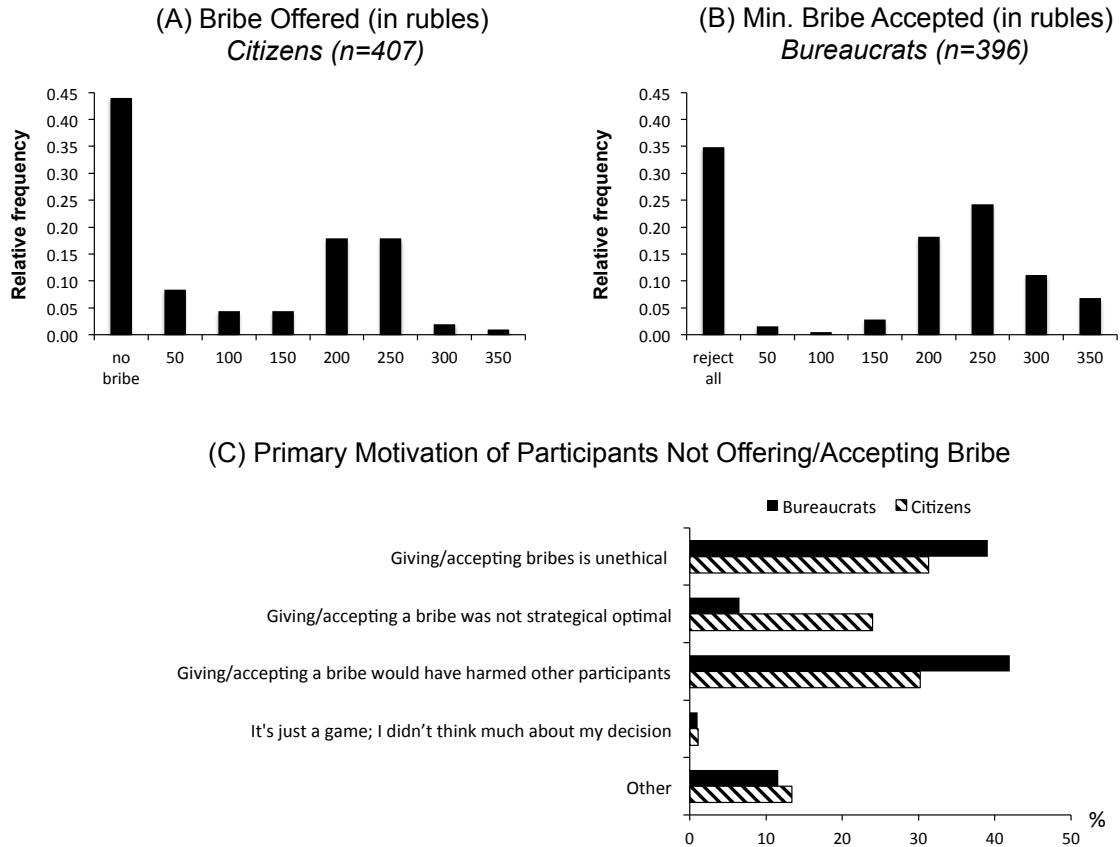
#### 3.1 Descriptive Statistics from Experimental Games

Before turning to the primary analyses, this section provides an overview of the findings from the experimental games and of students’ career preferences, beginning with results from the dice-task game. As in studies conducted in other countries, significant heterogeneity in individuals’ propensity for dishonesty emerged. As can be seen in Figure 1, only three percent of the sample purely maximized their payoffs by reporting 40 correct guesses. Sixteen percent of the sample reported 7 or fewer correct guesses – the amount of or lower than the number of correct guesses an honest individual would be expected to make by chance – indicating that at least 16 percent of participants were fully honest. Approximately 70 percent of respondents reported 10 or more correct guesses, despite the fact that the probability of honestly guessing right 10 or more times is around 12 percent.<sup>18</sup>

To pull apart the extent to which an individual’s reported number of correct guesses

<sup>18</sup>Cross-national comparisons are fraught with complications and may result from differences in the sample composition, among other factors. But as a point of comparison, 13 percent of Barfort et al.’s (2015) sample of Danish students reported 40 correct guesses, while only 10 percent of the danish sample reported 7 or fewer correct guesses. Seventy-three percent of the Danish sample reported 10 or more correct guesses. Fifty-five percent of the Danish students reported correct guesses above the 99th percentile of the expected distribution with honesty (more than 13 correct guesses), compared to 46 percent in the Russian sample. In Hanna and Wang’s (2013) sample of Indian students, 34 percent of the sample reported results above the 99th percentile, but the format of their dice game differed slightly – and, critically, the game was conducted in a laboratory rather than online, which most likely reduced participants’ belief that cheating was unobservable.

reflects dishonesty or random luck, Barfort et al. (2015, 12) derive an estimator for an individual's cheat rate, based on the fact that each participant's reported number of correct guesses  $Y_i$  is a function of the number of dice rolls  $K$ , the probability of a correct guess  $p$ , and individual  $i$ 's true (unobserved) cheat rate  $\theta_i$ , such that  $Y_i = K(p + (1 - p)\theta_i)$ . Rearranging produces an estimated cheat rate  $\hat{\theta}_i = \frac{1}{1-p} \frac{1}{K} Y_i - \frac{p}{1-p}$ .<sup>19</sup> For our sample, the mean cheat rate is 0.26 with a standard deviation of 0.27.



**Fig. 2: Bribes Offered and Accepted**

The bribery game also produced a significant amount of heterogeneity with respect to willingness to engage in an act explicitly labeled as corrupt. Fifty-six percent of participants randomly assigned to the role of citizen offered a bribe, while 65 percent of participants

<sup>19</sup>Importantly, Barfort et al. (2015) show that this measurement error for this estimator is decreasing in the number of dice rolls  $K$  and decreasing in the probability of correct guesses  $p$ , which motivates their design of the dice task game with 40 rounds and a low probability  $-\frac{1}{6}$  of correct guesses. Although unbiased, Barfort et al. (2015) recognize that a downside of their estimator  $\hat{\theta}$  is that for a sufficiently small  $Y_i$ , the estimated cheat rate will be negative.



assigned to the role of bureaucrat were willing to accept a bribe.<sup>20</sup> In total, 61 percent of participants offered or accepted a bribe. Panels A and B of Figure 2 show the full distribution of bribe offers from citizens and the minimum level of acceptable bribes for bureaucrats, respectively. Of the citizens who offered a bribe, 32 percent chose the strategically optimal amount – 200 rubles – but an equal number of citizens offered 250 rubles, apparently perceiving the need for a premium to incentivize the bureaucrat’s acceptance. This premium appears warranted, for 37 percent – a plurality – of the bureaucrats accepting bribes set their minimum acceptable level at 250 rubles, rather than the strategically optimal 200 rubles.

Whereas the the dice task game focuses narrowly on willingness to employ dishonesty in order to increase one’s payoff, the bribery game encompasses multiple dimensions of a real-world bribery experience: the question of ethical norms, the strategic uncertainty about whether a bribe will be accepted or rejected, and the potential harm to other members of society. To better understand which of these concerns motivated participants who refrained from offering or accepting bribes, we asked these subjects to elaborate on their decision at the conclusion of the bribery game. As Panel C of Figure 2 shows, the two most frequent answers were that offering/accepting a bribe is unethical or that the subject wanted to avoid imposing harm on other participants (respondents could choose only one motivation for their decision).

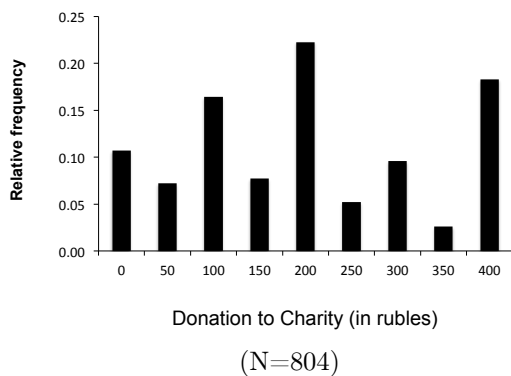
In addition to the dice task game and the bribery game, we asked respondents to assess the justifiability of three specific behaviors related to dishonesty and corruption: the use of public transport without paying (e.g., fare evasion), the theft of others’ property, and the acceptance of a bribe in the course of one’s duties. For each of these, respondents were presented with a 1 to 10 scale, where 1 represents “never justifiable” and 10 represents “always justifiable.” Respondents were relatively willing to justify the use of public transport without paying, producing an average rating of 5.46 with a standard deviation of 2.28. They were much less willing to justify theft (average rating of 2.13 with a standard deviation of 1.51) and bribery (average rating of 2.63 with a standard deviation of 1.77). All three of

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<sup>20</sup>The disparity across roles is at least partly the result of the game’s setup: As long as the bureaucrat refused to accept a bribe of less than 150 rubles, she retained at least the earnings with which she started the game. The citizen, by contrast, faced the risk of encountering an honest bureaucrat, in which case the citizen’s bribe offer of any amount would be rejected, resulting in lower payoff.

these indicators are positively correlated. But while all pairwise correlations are statistically significant at a 0.1% level, the correlations are relatively weak, ranging from a correlation coefficient of 0.20 between the transport and bribe indicators to a coefficient of 0.39 between the theft and bribe indicators (with a correlation coefficient of 0.24 between the transport and theft indicators).

Finally, Figure 3 presents the distribution of donations participants made to charity in the dictator game. Only 11 percent kept all 400 rubles for themselves. A plurality of participants – 22 percent – donated 200 rubles, or half of their earnings. A full 18 percent gave away all 400 rubles. While the dictator game offers data based on decisions with a direct financial impact on participants, it measures only a single dimension of pro-social behavior. The Public Service Motivation index we employed, by contrast, captures attitudes related to one’s attraction to public service, commitment to public values, compassion, and self-sacrifice, albeit via direct survey questions rather than an experimental setting. The PSM index consisted of 16 items (four for each of the index’s dimension). For each item, participants were asked to indicate the extent to which they agreed with the statement on a 1 to 5 scale, where 1 represents “strongly disagree” and 5 represents “strongly agree.” The PSM indicator used below is an unweighted average of the 16 items. The average PSM rating was 3.62, with a standard deviation of 0.56.



**Fig. 3: Charitable Donations in Dictator Game**

Table 2 shows that the indicators of dishonesty and corruption are closely related, and that for the most part non-experimental indicators are tightly correlated with indicators from the experimental games, despite concerns about social desirability bias. Meanwhile,

**Tab. 2: Cheating, Bribing & Altruism: Correlations Across Indicators**

(A) Dependent Variable = Cheat Rate in Dice Game						
	(1)	(2)	(3)	(4)	(5)	(6)
Gave/Accepted Bribe	0.104*** (0.018)					
Fare Evasion Justifiable		0.006 (0.004)				
Theft Justifiable			-0.007 (0.007)			
Bribes Justifiable				0.014* (0.006)		
Donation Level					-0.033*** (0.004)	
PSM Index						-0.039* (0.019)
Intercept	0.198*** (0.013)	0.228*** (0.025)	0.275*** (0.018)	0.225*** (0.018)	0.394*** (0.020)	0.401*** (0.072)
<i>N</i>	803	804	804	804	804	803
<i>R</i> <sup>2</sup>	0.036	0.003	0.001	0.008	0.104	0.007
(B) Dependent Variable = Gave/Accepted Bribe in Bribery Game						
	(1)	(2)	(3)	(4)	(5)	(6)
Cheat Rate	0.347*** (0.057)					
Fare Evasion Justifiable		0.026*** (0.007)				
Theft Justifiable			0.018 (0.011)			
Bribes Justifiable				0.077*** (0.009)		
Donation Level					-0.036*** (0.006)	
PSM Index						-0.233*** (0.026)
Intercept	0.515*** (0.024)	0.463*** (0.045)	0.568*** (0.030)	0.403*** (0.031)	0.751*** (0.030)	1.449*** (0.095)
<i>N</i>	803	803	803	803	803	802
<i>R</i> <sup>2</sup>	0.036	0.015	0.003	0.078	0.037	0.070
(C) Dependent Variable = Donation Level in Dictator Game						
	(1)	(2)	(3)	(4)	(5)	(6)
Cheat Rate	-155.85*** (15.45)					
Gave/Accepted Bribe		-51.03*** (9.23)				
Fare Evasion Justifiable			-6.32** (2.07)			
Theft Justifiable				-3.56 (3.10)		
Bribes Justifiable					-8.97** (2.76)	
PSM Index						66.97*** (8.041)
Intercept	240.83*** (6.32)	231.07*** (7.25)	234.69*** (12.40)	207.77*** (7.84)	223.75*** (8.48)	-42.27 (29.36)
<i>N</i>	804	803	804	804	804	803
<i>R</i> <sup>2</sup>	0.104	0.037	0.012	0.002	0.015	0.083

Panels A and C present results from OLS regressions; Panel B, from linear probability models. Robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

subjects who cheat or bribe in experimental games, or justify related behavior in responses to survey questions, are much less likely to make contributions to charity in the dictator game. Such subjects also receive much lower scores on the PSM index.

Panel A of Table 2 indicates, for example, that the cheat rate for subjects who offered or accepted a bribe in the corruption game is 10.4 percentage points higher than for those who did not. Those who believe that accepting bribes can be justifiable were also more likely to cheat in the dice task game. However, no statistically significant relationship emerges between cheating in the dice task game and beliefs about the justifiability of theft or avoiding payment on public transport, even though these indicators would seem to directly relate to dishonesty. Meanwhile, a robust negative relationship is apparent between pro-social preferences and cheating. For each additional 50 rubles donated to charity, subjects' cheat rate falls by more than 3 percentage points on average. In other words, participants who kept all of the money from the dictator game on average cheated on around 40 percent of the dice rolls; subjects who donated all of their earnings on average cheated on just 13 percent of the dice rolls.

Panels B and C similarly show that experimental and non-experimental indicators of dishonesty are positively correlated with willingness to give/accept bribes in the corruption game and negatively correlated with willingness to give donations in the dictator game.<sup>21</sup> The one indicator that stands out is the question concerning justifiability of theft. While the indicators about the justifiability of bribery and avoiding payment for public transport are robust predictors of subjects' choices to give or accept bribes and to donate or not in the dictator game, the indicator for theft is not a statistically significant predictor of play in any of the experimental games. One possibility is that question about theft is measuring a distinctly different dimension of ethical beliefs than the questions about bribery and unpaid public transport; another possibility is that respondents' are for some reason less willing to offer truthful assessments regarding the justifiability of theft.

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<sup>21</sup>The dependent variable in Panel C has been scaled so that results can be interpreted in terms of the number of additional rubles donated or retained given a one-unit increase in the independent variable.

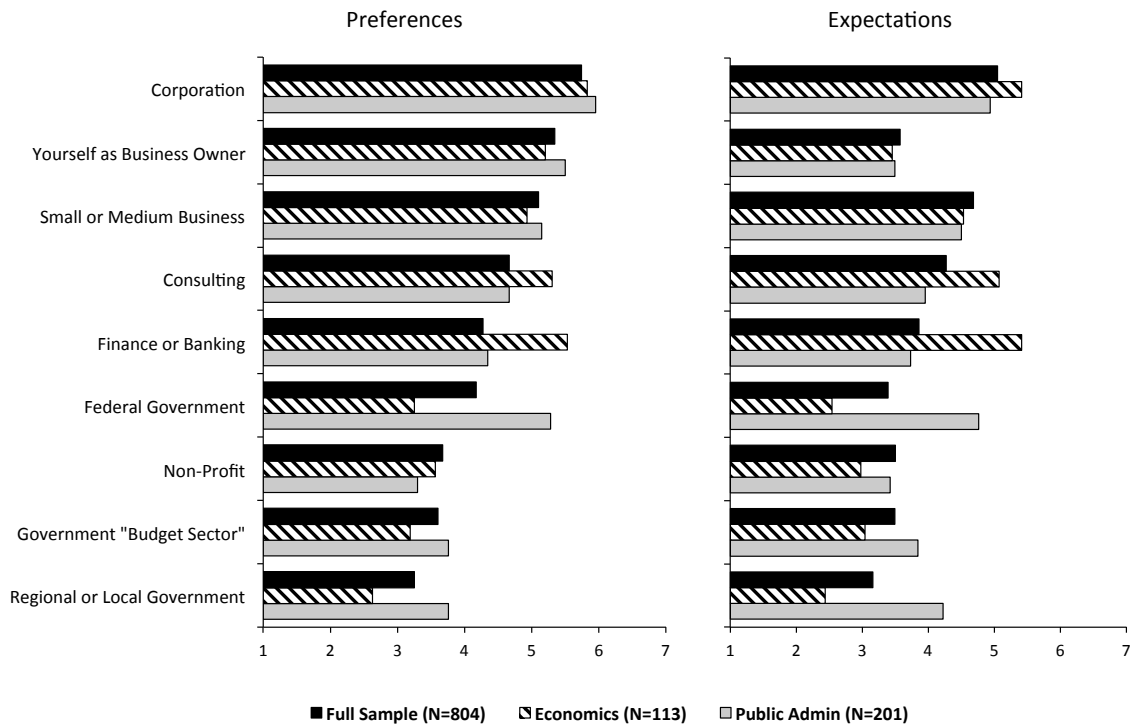
### 3.2 Descriptive Statistics On Career Preferences

When presented with a dichotomous choice, just under 23 percent of the sample expressed a preference for government employment over a private sector career. However, this aggregate statistic masks significant variation across departments: At one end of the spectrum, approximately 46 percent of students in the Public Administration department prefer a public sector career. At the other end, just 5 percent of Economic students expressed such a preference. The dichotomous variable also obscures significant variation across different types of public and private sector employment. As can be seen in Figure 4, students express a much stronger preference for employment in the federal government than in regional or local governments or in the government “budget sector” (*byudzhetniyi sektor*), the broad term encompassing state-funded jobs in health, education, science, and other sectors. On a scale of 1 to 7, where 1 represents “highly unlikely” and 7 represents “highly likely,” students on average rate their likeliness of choosing a career in the federal government a 4.17, compared to 3.60 for the budget sector and 3.25 for regional or local government jobs.<sup>22</sup> For students in the Public Administration department, who are more inclined to seek government jobs overall, the distinction between federal, regional or local, or budget sector jobs is even more pronounced, with average ratings of 5.28, 3.76, and 3.76, respectively. It is also worth noting that despite the greater interest in government employment among Public Administration students, a job with the federal government is only the third ranked career path, following a corporate job and ownership of one’s own business. This reflects the broader fact, noted above, that more than half of students in the Public Administration department preferred a private sector career when presented with a dichotomous choice.

Respondents’ answers regarding their expectations of where they will be employed following graduation from university closely mirror career preferences, although for nearly all career paths respondents rated the likeliness of obtaining a job lower than their preferences for the job on the 7-point scale. This is particularly apparent for owning a business, which received an average expectations rating nearly two points lower than its average preferences rating. Other careers perceived as relatively tough to obtain included work for the federal

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<sup>22</sup>Differences in means are statistically significant at the 0.01% level.



**Preferences:** *Imagine you're free to choose any job. How likely would you be to choose each of the following?*

**Expectations:** *Keeping in mind the distinction between the job you would like to have and the job you are most likely to have in the near future, how likely is it that after graduating you will work for each of the following?*

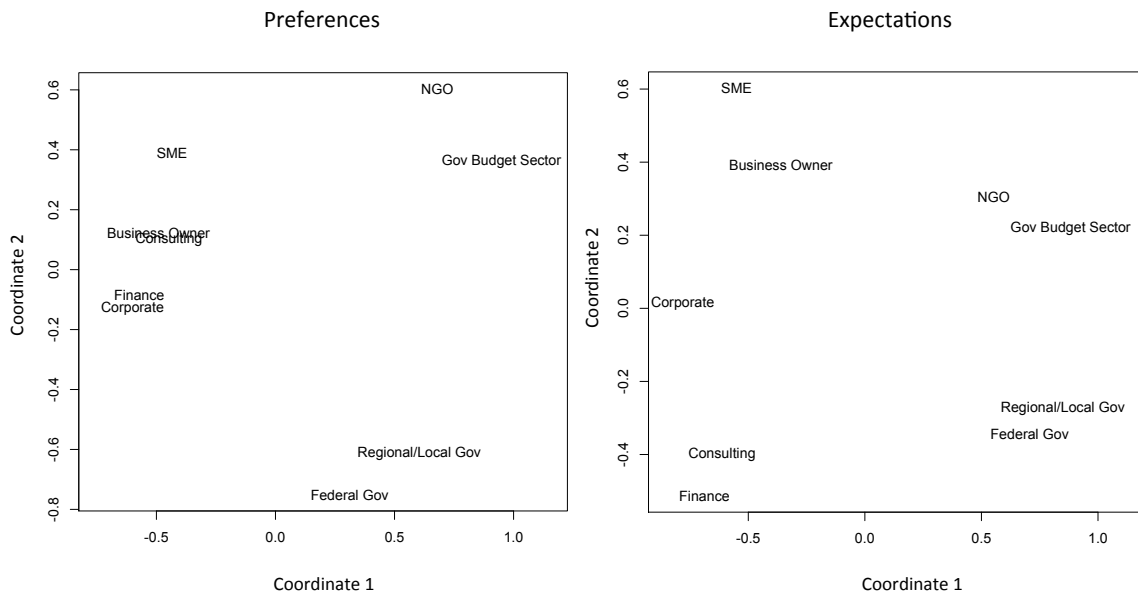
Average Ratings (1 = highly unlikely, 7 = highly likely)

**Fig. 4: Career Preferences**

government, with a gap of approximately 0.80 points between the average preferences and expectations ratings, and corporate work, with approximately a 0.70 point gap. On the other hand, practically no gap emerged between preference and expectations ratings for work in regional or local government agencies, the government budget sector, or non-profit organizations. Indeed, among students in the Public Administration department, students rated their likeliness of actually working for regional or local government nearly a half point higher than their average preference rating for such work; these students' expectation ratings also were higher than their preference ratings for work in the government budget sector and for work in non-profit organizations, albeit by just one-tenth of a point.

To facilitate analysis of the factors predicting career preferences, we adopted several approaches to reduce the career ratings to a one-dimensional private/public scale. The analyses that follow below rely on the dichotomous indicator discussed above, as well as on coordinates produced using metric multi-dimensional scaling (MDS), an exploratory data analysis

technique that rescales a set of dissimilarity measurements to reduce the dimensionality of data set. We first sought to confirm that our multiple measures of government work fall on a similar dimension. As can be seen in the two panels in Figure 5, which show the first two coordinates from conducting metric MDS on the correlation matrix of the nine career paths, there is a clear clustering of the three government-related professions to the right side of the figures, with work in a non-governmental organizations also fitting into this cluster. The private sector jobs cluster to the left of the plots. We then conducted MDS on the individual-level responses to the nine career preference items, identified the coordinate positively associated with public sector careers and negatively associated with private sector careers, and rescaled the coordinate scores for this dimension to have a mean of zero and standard deviation of one. Other approaches to reducing dimensionality, such as averaging ratings for the three public sector careers or summing the ratings for public sector careers and subtracting the sum of the private sector careers, produce similar results in the analyses that follow. Results are also similar regardless of whether or not careers in the non-profit sector are included or excluded from the analysis and are additionally robust to the use of measures of career expectations in places of measures of career preferences.



**Fig. 5: Metric Multidimensional Scaling (MDS) of Career Preferences and Expectations**

### 3.3 Self-Selection and Career Preferences

We now turn to our primary analyses. The dependent variable of the OLS regressions presented in specifications (1) through (4) in Table 3 is the private/public career preference scale discussed above, with higher values indicating a greater preference for the public sector. Coefficients can be interpreted as the change in the public/private career preference scale rating, measured in standard deviations, associated with a one-unit change in an independent variable.

As can be seen in the first and second rows of Table 3, there is a robust and highly statistically significant negative relationship between cheating or bribing and a preference for the public sector. A subject who cheated in every round of the dice task game on average has a rating approximately half a standard deviation of the private/public career preference scale lower than a subject who reported honestly in all rounds of the game. Subjects who offered or accepted a bribe in the corruption game on average also have a rating on the public/private career preferences scale approximately half a standard deviation lower than subjects who refused to partake in a bribe transaction. Finally, there is a clear positive relationship between donation levels in the dictator game and preferences for public employment. Each additional 50 rubles donated to charities is associated with 7.6 percent of a standard deviation higher ratings on the public/private career preference scale. In other words, on average participants who donated all 400 rubles of their earnings for the game had a public/private career preference rating around half a standard deviation higher than those who donated nothing. Notably, even in specifications that include indicators from all three games, all coefficients of interest remain statistically significant and reasonably large in magnitude, as can be seen in column (4).

The results of linear probability models with the dichotomous career preference variable shown in specifications (5) through (8) in Table 3 offer a similar picture, although the results are not as robust as in the first four models. Subjects who cheated on all dice rolls on average have about a 6 percent lower probability of preferring a public sector career, while subjects who gave or accepted a bribe in the corruption game have about a 9 percent lower probability. However, only the results from the bribery game are statistically significant.



**Tab. 3: Predictors of Career Preferences: Experimental Indicators**

	Public-Private Career Preference Scale				Dichotomous Career Preference Indicator			
	<i>higher values = higher preference for public sector</i>				<i>1=public sector pref., 0=private sector pref.</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cheat Rate	-0.568*** (0.133)			-0.267* (0.134)	-0.061 (0.052)			-0.007 (0.055)
Give/Accepted Bribe		-0.467*** (0.071)		-0.385*** (0.071)		-0.087** (0.031)		-0.077* (0.032)
Donation Level			0.076*** (0.013)	0.054*** (0.013)			0.012* (0.006)	0.009 (0.006)
Intercept	0.148** (0.049)	0.282*** (0.057)	-0.306*** (0.062)	0.087 (0.091)	0.244*** (0.021)	0.281*** (0.025)	0.179*** (0.026)	0.240*** (0.041)
<i>N</i>	804	803	804	803	804	803	804	803
<i>R</i> <sup>2</sup>	0.023	0.052	0.039	0.081	0.002	0.010	0.006	0.014

Specifications (1) – (4) present results from OLS regressions; specifications (5) – (8), from linear probability models. Robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Each additional 50 rubles donated in the dictator game is associated with a 1.2 percent increase in the probability of preferring a public sector career, indicating that on average a subject who donated all of her money would have a 9.6 percent higher probability of preferring a job with the government than a subject who offered nothing to charity.

**Tab. 4: Predictors of Career Preferences: Non-Experimental Indicators**

	Public-Private Career Preference Scale				Dichotomous Career Preference Indicator			
	<i>higher values = higher pref. for public sector</i>				<i>1=public sector pref., 0=private sector pref.</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fare Evasion Justifiable	-0.025† (0.015)				-0.011† (0.007)			
Theft Justifiable		0.054* (0.022)				0.001 (0.010)		
Bribe Justifiable			-0.044* (0.020)				0.004 (0.009)	
PSM Index				0.472*** (0.064)				0.118*** (0.025)
Intercept	0.138 (0.089)	-0.115† (0.060)	0.117† (0.064)	-1.709*** (0.233)	0.289*** (0.040)	0.226*** (0.026)	0.216*** (0.027)	-0.200* (0.090)
<i>N</i>	804	804	804	803	804	804	804	803
<i>R</i> <sup>2</sup>	0.003	0.007	0.006	0.069	0.004	0.000	0.000	0.025

Specifications (1) – (4) present results from OLS regressions; specifications (5) – (8), from linear probability models. Robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Table 4 presents results using non-experimental indicators of dishonesty, corruptibility, and public service motivation. For the OLS regressions using the public/private career preferences scale as a dependent variable (specifications (1) through (4)), the results are relatively similar to the results that emerge when using experimental indicators. The more willing subjects are to view fare evasion or the receipt of bribes as justifiable, the lower their preference for a public sector career.<sup>23</sup> Meanwhile, in line with expectations, the higher

<sup>23</sup>By contrast, the more willing subjects are to view theft as justifiable, the higher their preference for the

subjects score on the public service motivation (PSM) index, the higher their preference for a public sector career. Finally, when the dichotomous career preference indicator is used as the dependent variable in place of the continuous career preferences scale (see specifications (5) through (8)), the correlations between career preferences and non-experimental variables of dishonesty or corruption are not statistically significant. PSM scores, however, remain a robust predictor of a preference for a public sector career.

**Tab. 5: Career Preferences and Most Valued Job Attributes**

(A) Public-Private Career Preference Scale <i>higher values = higher preference for public sector</i>										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Job Security	-0.018 (0.038)									
High Income		-0.349*** (0.042)								
Good Benefits			-0.007 (0.039)							
Promotion Opps				-0.239*** (0.043)						
Interesting Work					0.091 <sup>†</sup> (0.048)					
Help Others						0.297*** (0.034)				
Benefit Society							0.346*** (0.033)			
Good Schedule								0.095** (0.036)		
Connections									-0.094** (0.035)	
Prestige										-0.195*** (0.035)
Intercept	0.063 (0.143)	1.403*** (0.174)	0.021 (0.129)	0.978*** (0.182)	-0.410 <sup>†</sup> (0.212)	-0.921*** (0.110)	-1.123*** (0.110)	-0.327* (0.130)	0.316* (0.123)	0.595*** (0.113)
<i>N</i>	804	803	804	804	804	804	804	804	804	804
<i>R</i> <sup>2</sup>	0.000	0.077	0.000	0.042	0.004	0.095	0.129	0.009	0.009	0.039
(B) Dichotomous Career Preferences Indicator <i>1 = preference for public sector, 0 = preference for private sector</i>										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Job Security	0.063*** (0.015)									
High Income		-0.046* (0.020)								
Good Benefits			0.041** (0.016)							
Promotion Opps				0.015 (0.017)						
Interesting Work					-0.047* (0.022)					
Help Others						0.062*** (0.014)				
Benefit Society							0.061*** (0.014)			
Good Schedule								-0.027 <sup>†</sup> (0.015)		
Connections									0.027 <sup>†</sup> (0.015)	
Prestige										0.020 (0.014)
Intercept	0.003 (0.051)	0.411*** (0.083)	0.103* (0.049)	0.166* (0.070)	0.437*** (0.101)	0.036 (0.044)	0.028 (0.046)	0.320*** (0.056)	0.138** (0.051)	0.167*** (0.045)
<i>N</i>	804	803	804	804	804	804	804	804	804	804
<i>R</i> <sup>2</sup>	0.022	0.007	0.008	0.001	0.006	0.023	0.023	0.004	0.004	0.002

Panel A presents results from OLS regressions; Panel B, from linear probability models.  
Robust standard errors in parentheses. <sup>†</sup> significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

A final piece of evidence that altruistic students in the sample are self-selecting in, and public sector, a finding at odds with our other results. As noted above, the indicator measuring justifiability of theft – unlike the indicators for the justifiability of fare evasion or bribery – is not correlated with the experimental indicators of dishonesty and corruption. Why this is the case, and why willingness to justify theft is positively correlated with a preference for public employment, deserves more attention. But it is worth considering the extent to which the indicator of theft measures beliefs about actions which are harmful to other private actors, whereas the fare evasion of payment for public transport and bribery indicators measure beliefs about actions that are harmful to the state or public resources.

students motivated by pecuniary gain self-selecting out, of public sector employment pertains to responses about which job attributes respondents value most. As shown in Table 5, the more a respondent values a high income, the less likely she is to prefer the public sector. On the other hand, more a respondent values a job in which she can help others or benefit society, the more likely she is to prefer the public sector. These findings are robust in analyses using both the continuous and dichotomous career preference indicators.

In summary, the evidence presented so far is consistent with self-selection of students who are more prone to dishonesty and corruption, and less likely to demonstrate altruism, out of the public sector. Below we explore the robustness of these results when taking into account other factors that influence career paths.

### **3.4 Field of Study and Career Preferences**

One possibility is that the results introduced above primarily reflect differences across academic disciplines. Laboratory corruption experiments by scholars such as Frank and Schulze (2000) have shown, for example, that economics students are more likely to engage in illicit acts. As discussed in preceding sections, economics students in our sample are much less likely than students in departments such as Public Administration to prefer a public sector career. If economics students are also more likely to cheat and bribe, or less likely to donate, then the above results might reflect spurious correlation driven more by disciplinary divides than individuals' personal traits.

Below we show that economics students in our sample are indeed more prone to dishonesty and less altruistic than students from other departments (see Table 8). But the findings presented in Table 6 demonstrate that these distinctions across academic departments are not driving our primary results regarding self-selection into or out of the public sector.<sup>24</sup> Although the inclusion of department dummy variables, as well as a number of other control variables discussed at greater length in later sections, reduces the magnitude of the coefficients of interest, the correlations between career preferences and experimental indicators of cheating, bribing, and donating that were statistically significant in Table 4

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<sup>24</sup>The lower number of observations in these analyses reflects the fact that not all students took the EGE exam (our measure for ability discussed below).

**Tab. 6: Predictors of Career Preferences (With Controls)**

	Public-Private Career Preference Scale				Dichotomous Career Preference Indicator			
	<i>higher values = higher preference for public sector</i>				<i>1=public sector pref., 0=private sector pref.</i>			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cheat Rate	-0.451** (0.139)			-0.239† (0.143)	-0.044 (0.047)			-0.019 (0.049)
Gave/Accepted Bribe		-0.320*** (0.075)		-0.260*** (0.076)		-0.054† (0.031)		-0.049 (0.031)
Donation Level			0.063*** (0.014)	0.048** (0.015)			0.006 (0.006)	0.004 (0.006)
Male	-0.191* (0.074)	-0.159* (0.074)	-0.128† (0.075)	-0.110 (0.074)	-0.008 (0.032)	-0.003 (0.032)	-0.003 (0.033)	0.001 (0.033)
Risk Aversion	0.047 (0.029)	0.037 (0.029)	0.049† (0.029)	0.044 (0.029)	0.036** (0.012)	0.034** (0.012)	0.036** (0.012)	0.035** (0.012)
Family Ties	0.158* (0.077)	0.161* (0.078)	0.150† (0.078)	0.152* (0.077)	0.072* (0.032)	0.072* (0.032)	0.071* (0.032)	0.071* (0.032)
Ability (EGE scores)	-0.015** (0.005)	-0.015** (0.005)	-0.015** (0.005)	-0.015** (0.005)	-0.009*** (0.002)	-0.009*** (0.002)	-0.009*** (0.002)	-0.009*** (0.002)
<i>Department relative to Public Admin</i>								
Political Science	0.420** (0.151)	0.451** (0.149)	0.451** (0.150)	0.467** (0.147)	-0.205** (0.068)	-0.200** (0.067)	-0.202** (0.068)	-0.199** (0.067)
Sociology	0.036 (0.115)	0.059 (0.116)	0.074 (0.116)	0.075 (0.115)	-0.293*** (0.053)	-0.289*** (0.053)	-0.289*** (0.053)	-0.288*** (0.053)
Communications	0.492** (0.184)	0.446* (0.182)	0.501** (0.180)	0.492** (0.183)	-0.503*** (0.052)	-0.508*** (0.052)	-0.502*** (0.051)	-0.505*** (0.052)
Business	-0.236† (0.127)	-0.187 (0.127)	-0.209† (0.125)	-0.183 (0.126)	-0.341*** (0.047)	-0.333*** (0.047)	-0.339*** (0.047)	-0.333*** (0.047)
Economics	-0.501*** (0.115)	-0.477*** (0.116)	-0.450*** (0.116)	-0.404*** (0.115)	-0.322*** (0.046)	-0.315*** (0.046)	-0.317*** (0.046)	-0.309*** (0.046)
CS & Math	-0.019 (0.135)	-0.021 (0.133)	0.021 (0.137)	0.010 (0.137)	-0.293*** (0.062)	-0.294*** (0.062)	-0.290*** (0.063)	-0.291*** (0.063)
Other	0.149 (0.135)	0.128 (0.135)	0.202 (0.137)	0.193 (0.133)	-0.240*** (0.057)	-0.242*** (0.056)	-0.235*** (0.057)	-0.237*** (0.057)
<i>Class Year relative to Freshman</i>								
Sophomore	-0.073 (0.098)	-0.078 (0.097)	-0.095 (0.097)	-0.088 (0.096)	-0.013 (0.044)	-0.014 (0.044)	-0.015 (0.044)	-0.015 (0.044)
Junior	-0.127 (0.107)	-0.168 (0.108)	-0.165 (0.107)	-0.163 (0.106)	-0.057 (0.047)	-0.062 (0.047)	-0.061 (0.047)	-0.062 (0.047)
Senior	-0.156 (0.120)	-0.137 (0.120)	-0.185 (0.120)	-0.177 (0.118)	-0.144** (0.045)	-0.142** (0.045)	-0.147** (0.045)	-0.145** (0.045)
MA Student	0.278 (0.182)	0.223 (0.179)	0.274 (0.184)	0.213 (0.179)	0.118† (0.070)	0.108 (0.070)	0.118† (0.070)	0.107 (0.070)
Intercept	1.119* (0.451)	1.219** (0.451)	0.721 (0.460)	0.948* (0.457)	0.969*** (0.180)	0.988*** (0.180)	0.931*** (0.180)	0.967*** (0.182)
<i>N</i>	676	676	676	676	676	676	676	676
<i>R</i> <sup>2</sup>	0.173	0.182	0.183	0.204	0.201	0.204	0.201	0.205

Specifications (1) – (4) present results from OLS regressions; specifications (5) – (8), from linear probability models. Robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

above remain significant in nearly all analyses in Table 6. The one exception pertains to the correlation between donation levels and career preferences when the dichotomous career preferences indicator is used in specification (7).

Even more noteworthy is that evidence of self-selection based on individual-level traits emerges even in analyses focusing on variation *within* departments. Table 7 shows regressions of both career preference variables on the experimental indicators for cheating, bribing, and donating by department. For specifications in Panel A using the continuous public/private

career preferences scale as the dependent variable, a public sector preference and bribing in the corruption game are negatively correlated in every department; the same holds for public sector preferences and cheating in all departments except for Computer Science and Math.<sup>25</sup> Likewise, there is a positive association between a public sector preference and donation levels within every department. Despite the small sizes of the sub-samples, more than half of these department-level regressions are statistically significant at a 10 percent level or smaller.

**Tab. 7: Predictors of Career Preferences by Department**

(A) Public-Private Career Preference Scale									
<i>higher values = higher preference for public sector</i>									
	Pub Admin	Poli Sci	Soc	Comm	Bus	Econ	CS/Math	Other	Full Sample
Cheat Rate	-0.723** (0.275)	-0.858† (0.489)	-0.289 (0.432)	-0.983† (0.523)	-0.347 (0.508)	-0.373 (0.288)	0.091 (0.255)	-0.848** (0.310)	-0.568*** (0.133)
Intercept	0.276** (0.098)	0.676*** (0.153)	0.129 (0.121)	0.884*** (0.198)	-0.208 (0.147)	-0.532*** (0.111)	-0.123 (0.147)	0.428** (0.154)	0.148** (0.049)
<i>N</i>	201	79	113	49	97	113	65	84	804
<i>R</i> <sup>2</sup>	0.033	0.033	0.005	0.071	0.009	0.018	0.001	0.065	0.023
Bribe	-0.273† (0.139)	-0.665** (0.224)	-0.243 (0.175)	-0.333 (0.272)	-0.356† (0.203)	-0.612** (0.225)	-0.338 (0.217)	-0.412† (0.221)	-0.467*** (0.071)
Intercept	0.240* (0.101)	0.904*** (0.178)	0.214 (0.147)	0.735*** (0.166)	-0.058 (0.170)	-0.173 (0.207)	0.104 (0.186)	0.406* (0.170)	0.282*** (0.057)
<i>N</i>	201	79	113	49	96	113	65	84	803
<i>R</i> <sup>2</sup>	0.019	0.103	0.019	0.032	0.033	0.077	0.041	0.041	0.052
Donation	0.077** (0.026)	0.021 (0.042)	0.040 (0.030)	0.031 (0.052)	0.086* (0.039)	0.100** (0.031)	0.011 (0.041)	0.090* (0.042)	0.076*** (0.013)
Intercept	-0.256† (0.138)	0.398† (0.217)	-0.097 (0.139)	0.450† (0.247)	-0.649*** (0.186)	-0.964*** (0.119)	-0.137 (0.150)	-0.146 (0.184)	-0.306*** (0.062)
<i>N</i>	201	79	113	49	97	113	65	84	804
<i>R</i> <sup>2</sup>	0.042	0.002	0.014	0.007	0.057	0.085	0.001	0.043	0.039
(B) Dichotomous Career Preference Indicator									
<i>1=public sector preference, 0=private sector preference</i>									
	Pub Admin	Poli Sci	Soc	Comm	Bus	Econ	CS/Math	Other	Full Sample
Cheat Rate	-0.058 (0.143)	0.179 (0.233)	0.017 (0.175)	0.016 (0.138)	-0.018 (0.100)	-0.080* (0.040)	-0.084 (0.104)	-0.041 (0.174)	-0.061 (0.052)
Intercept	0.472*** (0.050)	0.226** (0.068)	0.173** (0.053)	0.056 (0.053)	0.097* (0.039)	0.079* (0.032)	0.161** (0.057)	0.286*** (0.073)	0.244*** (0.021)
<i>N</i>	201	79	113	49	97	113	65	84	804
<i>R</i> <sup>2</sup>	0.001	0.007	0.000	0.000	0.000	0.014	0.005	0.001	0.002
Bribe	-0.072 (0.071)	-0.070 (0.106)	-0.008 (0.075)	-0.029 (0.069)	-0.004 (0.065)	-0.035 (0.059)	-0.090 (0.093)	-0.104 (0.100)	-0.087** (0.031)
Intercept	0.495*** (0.051)	0.310*** (0.087)	0.182** (0.059)	0.074 (0.051)	0.097† (0.054)	0.080 (0.055)	0.192* (0.079)	0.333*** (0.080)	0.281*** (0.025)
<i>N</i>	201	79	113	49	96	113	65	84	803
<i>R</i> <sup>2</sup>	0.005	0.006	0.000	0.004	0.000	0.004	0.016	0.013	0.010
Donation	0.002 (0.014)	-0.021 (0.020)	-0.007 (0.012)	-0.017 (0.016)	0.009 (0.013)	0.011 (0.009)	0.018 (0.014)	0.038 (0.023)	0.012* (0.006)
Intercept	0.447*** (0.072)	0.351*** (0.102)	0.204** (0.062)	0.134 (0.093)	0.057 (0.055)	0.018 (0.027)	0.077 (0.049)	0.141 (0.093)	0.179*** (0.026)
<i>N</i>	201	79	113	49	97	113	65	84	804
<i>R</i> <sup>2</sup>	0.000	0.012	0.002	0.030	0.006	0.018	0.017	0.039	0.006

Panel A presents results from OLS regressions; Panel B, from linear probability models.

Robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

In summary, students' field of study clearly is an important predictor of career prefer-

<sup>25</sup>Computer Science and Mathematics are two separate departments that we have combined for the purpose of these analyses.

ences, but differences in students' traits across academic departments do not account for our finding that less dishonest and more altruistic students appear to self-select into the public sector.

### 3.5 Other Predictors of Career Preferences

In addition to altruistic or avaricious motives, practical considerations almost certainly play a role in students' career choices. For example, existing studies on career preferences point to factors such as risk aversion, gender, ability, and relatives' occupations (see, e.g., Lewis and Frank, 2002; Buurman et al., 2012; Dal Bó et al., 2013; Hanna and Wang, 2013; Barfort et al., 2015). Individuals who care more about job security may be more likely to seek employment in the government, where guarantees of long-term employment may be greater. Overall, women may be more likely to prefer public employment, though findings related to gender may be sensitive to the specific type of public sector employment in question. As with nearly all professions, there is evidence that citizens with relatives in government positions may have a stronger preference for public employment. And, given that public sector salaries often are lower than private sector compensation, it may be the case that all else equal, high-ability job applicants prefer a private sector career path.

We showed already in Table 6 above that our primary results regarding self-selection are robust to the inclusion of controls for risk aversion, gender, ability, and relatives' occupation. Table 6 also shows mixed support for these factors as predictors of career preferences, with distinctly different results across the two sets of career preference indicators. Male students, for example, are less likely to express a preference for a public sector career in analyses based on the continuous public/private career preference indicator, while no robust relationship between gender and career preference emerges with the dichotomous indicator.<sup>26</sup> Risk averse individuals appear more inclined to prefer a public sector career, but these results emerge only when utilizing the dichotomous indicator. Family ties – measured with a dummy variable that takes a value of 1 if the respondent has a relative employed in the public sector – are

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<sup>26</sup>This appears to reflect the fact that males are more likely to prefer employment with federal government agencies or regional and local government agencies but less likely to prefer employment in the government budget sector. When distinct types of public sector careers are aggregated, as is the case with the dichotomous career preferences indicator, gender preferences may cancel out.

positively correlated with a preference for the public sector, using both career preference indicators. Meanwhile, ability, as measured by EGE scores – a Russian standardized test taken by students in their final year of high school – is negatively correlated with a public sector preference, regardless of which indicator is used for the dependent variable.

**Tab. 8: Predictors of Cheating, Bribing, and Altruistic Giving**

	Cheat Rate	Bribe	Donation
Male	0.015 (0.022)	0.121** (0.039)	-55.46*** (10.31)
Risk Aversion	0.008 (0.008)	-0.020 (0.015)	-4.52 (3.84)
Family Ties	-0.004 (0.026)	0.002 (0.044)	7.94 (11.61)
Ability (EGE scores)	0.001 (0.001)	0.002 (0.003)	-0.37 (0.68)
<i>Department relative to Public Admin</i>			
Political Science	-0.004 (0.037)	0.091 (0.073)	-23.21 (18.98)
Sociology	-0.018 (0.031)	0.047 (0.063)	-23.76 (16.56)
Communications	0.062 (0.054)	-0.055 (0.111)	-29.47 (29.09)
Business	-0.014 (0.034)	0.135* (0.064)	-16.55 (16.82)
Economics	0.078* (0.039)	0.188** (0.062)	-68.11*** (16.27)
CS & Math	0.000 (0.042)	-0.005 (0.074)	-31.70 (19.40)
Other	0.045 (0.040)	-0.005 (0.068)	-57.39** (17.79)
<i>Class year relative to Freshman</i>			
Sophomore	0.011 (0.029)	-0.002 (0.055)	13.49 (14.40)
Junior	0.050 (0.031)	-0.055 (0.058)	11.50 (15.16)
Senior	-0.030 (0.033)	0.017 (0.061)	33.99* (15.94)
MA student	-0.034 (0.047)	-0.221** (0.085)	15.71 (22.21)
Intercept	0.095 (0.128)	0.446† (0.238)	280.95*** (62.26)
<i>N</i>	676	676	676
<i>R</i> <sup>2</sup>	0.029	0.066	0.093

Columns (1) and (3) presents results from OLS regressions. Column (2) presents results from a linear probability model. Robust standard errors in parentheses.

† significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

A critical question is whether students who enter the public sector for pragmatic reasons are more likely to resemble civil servants who seek public office for purposes of self-enrichment, or civil servants who seek public office for the purposes of bettering society. For example, if women are less likely to engage in bribery, then the self-selection of women into the public sector may be a good thing for civil services seeking to curtail corruption. On the

other hand, if civil servants who use family ties to join the state bureaucracy are more likely to engage in bribery, then it may be important for anti-corruption initiatives to limit nepotistic recruitment of future bureaucrats. Finally, if high-ability applicants are more prone to dishonesty or corruption, then meritocratic screening devices – such as civil service exams – inadvertently could lead to the hiring of civil servants with undesirable individual traits.

Table 8 shows, however, that there is no correlation between risk aversion, ability, or relatives' occupations and the experimental indicators for dishonesty, corruption, and altruism. Men, however, on average had approximately a 12 percent lower probability than women of giving or accepting a bribe in the corruption game. Men also on average donated approximately 50 rubles less than women in the dictator game. Returning to the role of students' field of study, Economics students' average cheat rate in the dice game was approximately 8 percentage points lower than the cheat rate of Public Administration students. Economics students also had nearly a 19 percent higher probability than Public Administration students of giving or accepting a bribe in the corruption game, and economics students donated nearly 70 rubles less on average than their counterparts in the Public Administration department. Interestingly, although Business students were more likely than Public Administration students to offer bribes in the corruption game, they did not cheat more nor donate less in the other two games.

Overall, we do find some evidence that women, risk averse individuals, lower-ability workers, and citizens with relatives in the public sector are more likely to prefer public sector employment, although some of these correlations are dependent on the indicator used to measure career preferences. However, with the exception of gender, none of these variables are robust predictors of dishonesty, corruption, or altruism. The evidence therefore suggests that while pragmatic considerations play a role in who seeks public sector employment, factors such as risk aversion, ability, or family ties are orthogonal to propensity for engaging in dishonest or corrupt acts.

### **3.6 Robustness Checks**

We conduct a number of robustness checks. Our core finding that students who are more prone to cheat and bribe, and less willing to donate to charity, in experimental games appear



to self-select out of the public sector remains robust in all analyses. Following Barfort et al. (2015), we addressed possible concerns related to the dice game. First, we confirmed that our results regarding the cheating indicator from the dice game are not driven by the 25 students who cheated in all 40 rounds. Excluding these students has no effect on the results. Second, given that subjects engage in the dice roll game over multiple rounds, it is possible that over time they came to cheat more due to fatigue or boredom. However, we find that the cheat rate for the first 20 dice rolls and second 20 dice rolls was nearly indistinguishable – 25.5 and 26.6 percent respectively. Conducting our primary analyses using the results only for the first 20 dice rolls has no effect on our results.

Beyond the dice game, it might be possible that a number of students at an elite university have some knowledge of the types of games we employed, which could influence their choices. At the conclusion of our survey, we asked students whether they were familiar with the games they played (or similar games). Approximately 31 percent expressed some familiarity. However, we found no statistically significant differences in the cheat rates, bribe rates, or donation levels across students who expressed familiarity and those who did not. Moreover, excluding the 31 percent who had encountered experimental games again does not reflect our results. We additionally asked at the end of the survey whether participants had any doubts about the true nature or goals of the research, on a 1 to 4 scale with 1 representing no doubts whatsoever and 4 representing strong doubts. Twenty-one percent expressed some doubts and an additional 5 percent expressed strong doubts. We do find that subjects reporting strong doubts were more likely to cheat and bribe, and less likely to donate. However, our primary results remain robust to excluding these subjects from our analyses.

A third set of issues pertains to our use of an online research instrument. One significant concern is that subjects participating in online research may be easily distracted. Previous research has shown that low levels of attentiveness can influence respondents' choices in survey experiments and suggests the use of screener questions – trick questions that ask respondents to follow a precise set of instructions – to sort out attentive from non-attentive participants (Berinsky et al., 2014). We utilized two screener questions and found that 83 percent of subjects answered both screeners correctly, while 97 percent answered at least one

screeners question correctly. We found no statistically significant differences in the play of attentive and non-attentive participants in the experimental games, and our primary results remain robust when conducting analyses only on subjects who answered both screeners correctly. As an alternative check on attentiveness, we conducted analyses after excluding the bottom decile of subjects with respect to the time taken to complete the games and surveys. Again, we found no statistically significant differences across the experimental indicators of those who most quickly completed the study and the rest of the sample, and our primary analyses remain robust to the removal of those who may have rushed through the study.

A related concern is that students may have participated in the study while located public settings where the presence of friends or acquaintances might have influenced their choices. We asked participants to report whether they participated from their computer at home, on their computer in a public setting, on a university computer, on a tablet, on a smartphone, or on some other device. Eighty-one percent reported using a computer in the privacy of their home. We found no correlation between participants' choice of device and their play in the experimental games, with just one exception – the 9 percent of students who used a tablet on average cheated more in the dice game. We conducted our primary analyses using only the 81 percent who participated via a computer at home and again found all results to be robust.

Finally, an important consideration is whether students' career preferences are correlated with actual career paths. While important, such concerns should not be overstated. As shown in Section 3.2 above, subjects' ratings of career preferences and career expectations show similar tendencies. Correlation coefficients between the preferences and expectations scales range from 0.45 for owning one's own business to 0.66 for work in banking or finance. Correlation coefficients between preferences and expectations for the three public sector positions are each around 0.60. Additionally, while comprehensive data on the career paths of students at the university where we conducted the study are lacking, a small non-scientific survey conducted by the university in 2013 found that 43 percent of its recently graduated Public Administration alumni were working in the public sector, exactly in line with the

46 percent of Public Administration students in our sample who express a preference for a public sector career. In short, the existing evidence indicates that career preferences, career expectations, and actual outcomes are closely related. Nevertheless, we also conducted our analyses using a public/private career expectations scale in place of the public/private career preferences scale.<sup>27</sup> Once again, all findings regarding self-selection away from the public sector of those more likely to cheat and bribe and less likely to donate remain robust.

## 4 Interpretation of Findings

Given that Russia's overall levels of corruption remain high, our results indicating corrupt self-selection *out* of government bureaucracies raise a number of questions. How is it possible that those who appear less likely to engage in corruption self-select out of government, yet public sector corruption remains widespread?

While a comprehensive answer is beyond the scope of this paper, we offer several preliminary interpretations. The first is that the university where we conducted the study may be an outlier and that evidence of corrupt self-selection could emerge with analyses of subjects from other universities or other regions of Russia. Without further research, we cannot say whether our results generalize to other universities. Certainly, in a country as vast as Russia it would be reasonable to expect regional divides, as well as divides between elite and less competitive universities. That said, even a finding that pertains uniquely to our sample is of substantive importance: The site of our study is a large, prestigious educational institution whose graduates regularly go on to influential positions within the government. Any patterns pertaining to these students offer insights into the workings of Russia's bureaucracies and therefore are important in their own right.

A second possibility is that our results reflect the fact that students at elite universities are likely to enter government in relatively elite posts. As discussed in Section 3.2, students at the university where we conducted the study express a much stronger preference for employment in a federal government agency than in a regional or local agency or in a budget sector position. It is possible that corrupt self-selection occurs at lower levels of bureau-

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<sup>27</sup>This scale was constructed using the process described in Section 3.2 to construct the public/private career preferences scale.

cracies, while at higher levels aspiring civil servants enter for idealistic reasons. However, disaggregating our results by specific types of public sector employment, as we do in Table 9, shows precisely the opposite. For all three public sector career paths, cheat rates and bribe rates are negatively correlated, and donation levels positively correlated, with preferences for public sector employment. But evidence for self-selection of the most honest and altruistic individuals into the public sector appears to be most pronounced for budget sector positions, followed by regional and local agencies, and least pronounced for the elite federal government positions. This becomes even more apparent when the disaggregated public sector career preferences are regressed on respondents' most valued job attributes. Table 10 shows that respondents who place a higher value on income, the opportunity to make influential connections, and prestige are more likely to prefer employment in a federal government agency. There is no correlation, however, between preferences for federal government employment and placing value on the opportunity to help others or benefit society. By contrast, placing value on income, connections, or prestige is either uncorrelated or negatively correlated with preferences for regional or local government employment and with employment in the budget sector, while valuing the opportunity to help others or benefit society is a robust predictor of both of these positions in lower levels of the public sector. In short, the available evidence does not indicate that our results are limited to elite positions in the state bureaucracy.

**Tab. 9: Predictors of Disaggregated Career Preferences**

	Federal Government			Regional Government <i>higher values = higher preference</i>			Government Budget Sector		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cheat Rate	-0.044 (0.266)			-0.367 (0.241)			-0.665** (0.231)		
Gave/Accepted Bribe		-0.173 (0.148)			-0.363** (0.133)			-0.429*** (0.129)	
Donation Level			0.040 (0.028)			0.035 (0.025)			0.112*** (0.024)
Intercept	4.178*** (0.100)	4.271*** (0.117)	4.008*** (0.133)	3.347*** (0.092)	3.470*** (0.105)	3.112*** (0.117)	3.772*** (0.087)	3.861*** (0.101)	3.150*** (0.113)
<i>N</i>	804	803	804	803	802	803	804	803	804
<i>R</i> <sup>2</sup>	0.000	0.002	0.003	0.003	0.009	0.002	0.010	0.014	0.026

OLS regressions with robust standard errors in parentheses. † significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

A third interpretation is that idealistic aspiring public servants join the civil service but then become more willing to engage in corruption, and perhaps less optimistic about benefiting society, throughout their careers. Buurman et al. (2012) provide some evidence

Tab. 10: Disaggregated Career Preferences and Most Valued Job Attributes

(A) Employment in Federal Government Agency <i>higher values = higher preference for public sector</i>										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Job Security	0.20** (0.08)									
High Income		0.22* (0.09)								
Good Benefits			0.17* (0.08)							
Promotion Opps				0.40*** (0.08)						
Interesting Work					-0.44*** (0.10)					
Help Others						0.01 (0.07)				
Benefit Society							0.09 (0.07)			
Good Schedule								-0.16* (0.07)		
Connections									0.35*** (0.07)	
Prestige										0.29*** (0.07)
Intercept	3.46*** (0.28)	3.27*** (0.38)	3.63*** (0.25)	2.51*** (0.34)	6.13*** (0.44)	4.12*** (0.24)	3.88*** (0.24)	4.73*** (0.26)	2.98*** (0.25)	3.30*** (0.23)
N	804	803	804	804	804	804	804	804	804	804
R <sup>2</sup>	0.01	0.01	0.01	0.03	0.02	0.00	0.00	0.01	0.03	0.02
(B) Employment in Regional or Local Government Agency										
Job Security	0.15* (0.07)									
High Income		-0.12 (0.08)								
Good Benefits			0.16* (0.07)							
Promotion Opps				0.15* (0.07)						
Interesting Work					-0.23* (0.10)					
Help Others						0.24*** (0.07)				
Benefit Society							0.29*** (0.06)			
Good Schedule								-0.03 (0.06)		
Connections									0.10 (0.07)	
Prestige										-0.01 (0.06)
Intercept	2.70*** (0.25)	3.72*** (0.35)	2.75*** (0.23)	2.64*** (0.31)	4.26*** (0.44)	2.50*** (0.21)	2.31*** (0.22)	3.35*** (0.23)	2.90*** (0.23)	3.28*** (0.21)
N	803	803	803	803	803	803	803	803	803	803
R <sup>2</sup>	0.01	0.00	0.01	0.00	0.01	0.02	0.03	0.00	0.00	0.00
(C) Employment in Government Budget Sector										
Job Security	0.07 (0.07)									
High Income		-0.40*** (0.08)								
Good Benefits			0.14 <sup>†</sup> (0.07)							
Promotion Opps				-0.27*** (0.08)						
Interesting Work					0.07 (0.09)					
Help Others						0.48*** (0.06)				
Benefit Society							0.55*** (0.06)			
Good Schedule								0.12 <sup>†</sup> (0.07)		
Connections									-0.14* (0.07)	
Prestige										-0.20** (0.06)
Intercept	3.34*** (0.25)	5.21*** (0.32)	3.17*** (0.23)	4.71*** (0.32)	3.27*** (0.42)	2.09*** (0.19)	1.82*** (0.20)	3.19*** (0.23)	4.07*** (0.22)	4.22*** (0.20)
N	804	803	804	804	804	804	804	804	804	804
R <sup>2</sup>	0.00	0.03	0.01	0.02	0.00	0.08	0.10	0.00	0.01	0.01

OLS regressions with robust standard errors in parentheses. <sup>†</sup> significant at  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

of declining pro-social tendencies even among public sector employees in the Netherlands.

Early in their careers they found Dutch bureaucrats more likely to sacrifice personal financial

gain to make a donation to charity, but later in their careers these bureaucrats exhibit lower levels of pro-social behavior than their private sector counterparts. Unfortunately, research on bureaucrats' evolving attitudes and behavior over time is scarce, both in Russia and elsewhere. Pursuing this line of inquiry may be essential to better understanding the roots of systemic bureaucratic corruption.

## 5 Conclusion

Drawing on a survey and experimental games, this paper has shown that aspiring civil servants at an elite university in Moscow show greater preferences for altruism, lower tendencies for dishonesty, and less willingness to engage in acts labeled as corrupt, relative to their peers seeking careers in the private sector. This finding runs counter to the existing literature showing that in countries where corruption is widespread, such as India, citizens with low levels of altruism and a tendency for dishonesty self-select into state bureaucracies, presumably with the understanding that public sector positions are a vehicle for enrichment (Hanna and Wang, 2013; Banerjee et al., 2015). Indeed, our findings mirror the results of similar studies in the low-corruption environment of Denmark (Barfort et al., 2015).

A number of fruitful research agendas emerge from our study. Expanding the project to other sites within Russia is critical to interpreting the results. Additional research must also undertake the challenging task of more rigorously evaluating changes in bureaucrats' attitudes and behavior over time after they enter the civil service. And more research on differences across distinct levels of government would seem warranted. Nevertheless, our results show that even in highly corrupt countries, not all aspiring civil servants enter state bureaucracies with illicit motives. Many may start their careers with the altruistic goals of improving society and helping others.

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