






## Public service motivation and sectoral employment in Russia: New perspectives on the attraction vs. socialization debate

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### ABSTRACT

Numerous studies have shown that public service motivation (PSM) is higher among public sector employees, particularly in western countries. But whether these trends result from high-PSM individuals selecting into public sector employment or from on-the-job socialization remains subject to debate. We address this question utilizing novel panel data on Russian university students. Examining the relationships between PSM and sectoral employment both before and after students enter the labor force, we find that: (1) high-PSM students are more likely to prefer public sector employment; (2) high-PSM students are more likely to be employed in the public sector following graduation; and (3) PSM increases upon entry into the workplace at approximately the same rate in both the public and private sectors. These findings suggest that at least during early career stages, the association between PSM and public sector employment results largely from an attraction-selection process, rather than a socialization process. Our analyses additionally provide evidence that theories of PSM based on the western experience may generalize to the context of developing or post-communist countries, despite the prevalence of corruption and a less pronounced public service ethos in many of these countries.

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Do individuals with high levels of public service motivation (PSM) self-select into public sector employment, or are individuals in the public sector more likely to develop high levels of PSM as a result of on-the-job socialization? Understanding the foundations for a good fit between organizations and employees is of crucial importance, given that extensive evidence links congruence between organizations and employees to improved employee satisfaction, performance, and retention rates (see, e.g., Bright 2008; Steijn 2008; Vandenabeele 2009; Wright and Pandey 2008). And with respect to employee fit in the public sector, public administration scholars have shown that public organizations are frequently a strong match for individuals who are willing to sacrifice self-interest to promote the public interest and who value the opportunity to help others – in short, for individuals who exhibit high levels of PSM (e.g., Crewson 1997; Houston 2000; Lewis and Frank 2002; Steijn 2008).

Existing studies of PSM and sectoral employment rely predominantly on cross-sectional data, however, which has limited their ability to address the question of whether the apparent fit between public sector employment and high-PSM individuals results from a selection process or from socialization that occurs after entering the workplace. A more recent body of work focused

on university students that have yet to be exposed to workplace socialization has produced evidence in line with the Attraction-Selection model (Schneider 1987), demonstrating that individuals with high PSM prior to entering the workforce are more likely to prefer public sector employment (e.g., Vandenabeele 2008; Carpenter, Doverspike, and Miguel 2012; Clerkin and Cogburn 2012; Van der Wal and Oosterbaan 2013; Piatak 2016). But to date, only a single study – Kjeldsen and Jacobsen's (2013) analysis of Danish physiotherapy students – has employed panel data to track PSM both before and after individuals join the labor market.<sup>1</sup> Among physiotherapists, Kjeldsen and Jacobsen find little support for the hypothesis that high-PSM individuals select into the public sector, showing that PSM in this sample is uncorrelated with the likeliness of joining a publicly owned clinic. They also find that PSM drops significantly in both the public and private sector in early career phases, possibly due to the “reality shock” of unrealistic expectations clashing with the realities of everyday work. The post-entry decline in PSM, however, is lower in the public sector, which they interpret as evidence of on-the-job socialization.

The design of our study, which is based on panel data of 387 students from an elite Russian university located in Moscow, supplemented by a broader sample of 804 students from this university and 376 students from a regional Russian university, is similar to that of Kjeldsen and Jacobsen (2013), but we advance the literature in several important ways. First, whereas Kjeldsen and Jacobsen focus on the low-corruption, western context of Denmark, we expand the study of PSM to the vastly different post-Soviet context. Our study – the first to employ a comprehensive, internationally validated measure of PSM in Eastern Europe or the former Soviet Union – thus offers a tough test of whether theories of PSM based on the western experience generalize to developing or post-communist countries in which a public service ethos may be less pronounced, the concepts of “public interest” or the “public good” may be differently understood, and public officials may frequently use their office for private gain.<sup>2</sup> Second, whereas Kjeldsen and Jacobsen focus on a single occupation in the healthcare sphere, we broadly analyze students' preference for and entry into different types of public and private sector jobs. Each approach has advantages and disadvantages, which we discuss in greater detail below, but we believe that the opportunity to study students seeking to enter positions more widely associated with government bureaucracies offers insights into important debates about the selection and socialization of civil servants, an issue of particular relevance in societies where corruption is prevalent.

We find strong evidence that PSM among Russian students at these two universities predicts a preference for public sector employment. Although the evidence is less robust, we also find that high-PSM individuals are more likely to be employed in the public sector following graduation from university. Contrary to Kjeldsen and Jacobsen (2013), we find no evidence of a “reality shock” upon workplace entry. Instead, PSM increases for both public and private sector employees in our sample in the first one to three years of their careers. The rate of PSM increase is marginally greater for the public sector, and three years after the initial PSM measurement in 2016 individuals in the public sector continue to exhibit higher PSM than their peers in the private sector. Our finding of a PSM “bump” in the early years of employments contrasts not only with the findings of Kjeldsen and Jacobsen (2013), but also with other works showing a tendency for PSM or prosocial motivation more broadly to decline over time (Buurman et al. 2012; Ward 2014). This finding therefore offers fertile ground for future research.

Overall, our results offer support for the hypothesis that high-PSM individuals are attracted to public sector employment. Our study additionally provides evidence that the widely documented reality shock – a sharp decline in PSM when entering the workforce – is not universal. Finally, our finding of a link between PSM and sectoral employment in Russia extends the boundaries of the PSM research agenda's generalizability, suggesting that even in countries with widespread corruption and bureaucratic traditions seemingly at odds with PSM, scholars and practitioners seeking to develop best practices for recruiting and retaining high quality civil servants should not underestimate the importance of public service motivation.

## Theory

### *PSM and attraction-selection effects*

When Perry and Wise (1990, 368) introduced the concept of PSM – “an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” – more than a quarter a century ago, one of their first predictions, based on an attraction-selection framework, was that individuals’ with high levels of PSM would seek employment in public organizations. As Perry, Hondeghem, and Wise (2010, 683) elaborated in later work, “The rationale for the prediction was straightforward.... Individuals who are high in PSM would seek out contexts compatible with their dispositions, and the contexts to which they likely would be attracted were organizations that satisfied their prosocial and altruistic orientations.” Over time, scholars have continued to develop theoretical frameworks that draw on the Attraction-Selection-Attrition Model (Schneider 1987) and Person-Environment Fit Theory (Kristof 1996) to link PSM to a preference for public sector employment (for an overview, see Kjeldsen and Jacobsen 2013, 901-904).

In line with Perry and Wise’s initial predictions, as well as the predictions of the ASA Model and P-E Fit Theory, early studies showed a clear correlation between higher levels of PSM and public sector employment (e.g., Crewson 1997; Houston 2000; Lewis and Frank 2002; Steijn 2008). These studies, however, left open the question of whether citizens with high PSM self-select into the public sector or whether higher PSM among public sector employees results from on-the-job socialization. To address this issue, scholars began assessing PSM and career intentions among subjects who had yet to enter to undergo workplace socialization: university students. Carpenter, Doverspike, and Miguel (2012), Clerkin and Coggburn (2012), and Piatak (2016) provided evidence from US universities of a positive association between PSM and public sector preferences, while in Europe Vandenabeele (2008) and Van der Wal and Oosterbaan (2013) identified a link between PSM and public sector preference among students in Belgium and the Netherlands, respectively. Kjeldsen and Jacobsen (2013), however, did not find evidence that Danish physiotherapy students with high PSM levels were more likely to select into public sector employment, although they did find that once in the workforce PSM levels declined more slowly among public sector physiotherapists relative to their private sector counterparts.

Studies outside of a western context have been much more limited. A cross-national study by Vandenabeele and Van de Walle (2008, 233) based on data for 30 countries from the International Social Survey Programme (ISSP) found higher levels of PSM among public sector workers relative to private sector employees in all regions of the world with the exception of Asia (see also Bullock, Stritch, and Rainey 2015). And while Lee and Choi (2016) did not find a correlation between PSM and career intentions among South Korean students, Liu et al. (2011) concluded that specific dimensions of PSM, such as self-sacrifice, are predictive of Chinese students’ preferences for a public sector career. Similarly, Sanabria-Pulido (2018) found that among Colombian students who had left the workforce to pursue graduate studies, those with high PSM were more likely to choose the public sector upon returning to the workplace. To date, only two articles have examined these issues in the post-communist context, and neither employed a comprehensive, standardized measure of PSM. Houston (2014) analyzed ISSP survey data and identified a positive correlation between PSM and public service *occupations* (i.e., jobs in either the public or private sector with a public service orientation) but no consistent relationship between PSM and *sectoral* employment in Russia and five Eastern European countries. Nezhina and Barabashev (2019), meanwhile, show that among a sample of Russian MPA and MPP students, those expressing prosocial motives, such as a desire to help others, are more likely to prefer public employment.

In summary, the majority of existing studies with a focus on western countries indicate that PSM is higher among public sector employees and that young people with higher PSM are more

likely to seek public sector employment when they enter the workforce; the evidence beyond the western context is more mixed. Moreover, with the exception of Kjeldsen and Jacobsen (2013), a lack of evidence based on longitudinal research designs has limited examination of whether career preferences translate into actual career paths following graduation.<sup>3</sup> We therefore extend analysis of attraction-selection effects in two ways: first, by analyzing not only the relationships between PSM and contemporaneous career preferences but also between PSM and actual career paths following university graduation; and, second, by examining these attraction-selection effects in the novel context of post-Soviet Russia using a comprehensive, internationally validated measure of PSM. Drawing on earlier works, we hypothesize:

*Hypothesis 1:* Prior to entering the workplace, university students with higher PSM will be more likely to prefer a public sector career.

*Hypothesis 2:* After graduating from university, students with higher PSM will be more likely to be employed in the public sector.

### **PSM and workplace socialization effects**

A central question in debates over PSM has pertained to how, if at all, PSM evolves over time, and to what extent on-the-job socialization may influence PSM. Following Kjeldsen and Jacobsen (2013, 904) and other earlier works (Bauer, Morrison, and Callister 1998, 150; Cable and Parsons 2001, 2), we define socialization as “the process by which an individual acquires the values, knowledge, and expected behavior needed to participate as an organizational member.” In all organizations, both public and private, personal values of employees are likely to converge with the values of the organization. Otherwise, clashing perceptions of the norms for success at the individual and organizational level create uncomfortable dissonance, leading employees to either adapt their values or seek other employment (Cable and Parsons 2001, 3). With respect to PSM, influential works by Perry (2000) and Moynihan and Pandey (2007, 41-42) emphasize that public sector organizations are more likely to foster a specific set of values accentuating the importance of sacrificing self-interest in order to serve the public interest. As Moynihan and Pandey (2007, 42) explain, “Public organizations are not just a means to produce outputs; they are also social institutions in which individuals interact and influence each other in the context of a structured environment. Conformity to organizational norms is likely a clear instance of the endogenous nature of individual preferences” (see also Brewer 2008, 149).

A related question is how the transition from university into the labor market itself affects PSM. Cable and Parsons (2001, 2-3) note that individuals experience a “reality shock” any time they join a new organization, as different organizational norms challenge fundamental assumptions and expectations based on an individual’s previous experiences. If the initial socialization process upon entering a new workplace leads newcomers to discover that there is a mismatch between their personal values and the organization’s values, then employees will either be inclined to switch places of employment or adapt their personal values (Cable and Parsons 2001, 3). From this perspective, PSM would be expected to decline among idealistic labor market entrants who discover that public service values are not embodied in public sector organizations to the extent they had hoped. Such reality shocks may be particularly profound for employees aspiring to provide public services when aspirations clash with bureaucratic red tape that impedes progress toward idealistic goals, as shown in classic case studies of social workers (Blau 1960) and police recruits (Van Maanen 1975). Kjeldsen and Jacobsen (2013) attribute the decline in PSM they observe among physiotherapy students upon entering the labor market to such a reality shock.<sup>4</sup>

Although scholars have produced empirical evidence of workplace socialization more broadly (e.g., Chatman 1991; Cable and Parsons 2001), analyses of changes in PSM over time in general are few, and studies of the effects of on-the-job socialization on PSM are particularly rare. Using intrinsic satisfaction with the nature of one’s work as a proxy for PSM, Georgellis and Tabvuma’s

(2010) analysis of British Household Panel Survey data demonstrates that workers who transition from private to public sector employment experience a spike in satisfaction following entry into the public sector that persists for up to five years. By contrast, both Moynihan and Pandey (2007) and Buurman et al. (2012) show that PSM and prosocial motivation declines over time among public sector employees, particularly when public sector employees encounter bureaucratic red tape. Ward (2014), meanwhile, shows that key components of PSM increase among participants in the AmeriCorp national service program relative to a control group during the course of their service. Although PSM among these participants declines over the next seven years, the rate of decline is slower than among the non-participants in the service program. And as noted above, Kjeldsen and Jacobsen (2013) – the only study to track respondents prior to and immediately following entry into the workplace – show that PSM among Danish physiotherapy students declines in the early career stages following entry into the labor market in both the public and private sectors, but at a slower rate in publicly owned organizations, a trend they attribute to public-sector socialization.

Our longitudinal analysis extends the study of on-the-job socialization and PSM. Unlike Kjeldsen and Jacobsen's (2013) focus on a specific occupation, our study is based more broadly on a sample of students from social science departments and we consider a range of public and private sector career paths. The benefits of Kjeldsen and Jacobsen's approach is to hold nearly all factors other than sectoral employment constant, mitigating potentially confounding effects that could result from individuals entering public-service oriented jobs in the private sector or jobs in the public sector where public service is less likely to be a key motivational factor. We believe, however, that our design's relative gains in external validity more than compensate for what we lose with respect to internal validity, allowing us to analyze how PSM levels affect selection into civil service and other government bureaucracies and socialization upon entering this sphere. As discussed in the following section, these questions are particularly important in the context of post-Soviet countries and transitioning or developing countries in general. Again drawing on earlier research, the second part of our study therefore evaluates two hypotheses:

*Hypothesis 3:* PSM will decline in the immediate period following students' entry into the workplace in both the public and private sectors.

*Hypothesis 4:* Average PSM levels will remain higher in the public sector relative to the private sector due to socialization effects.

### ***A tough test of generalizability: PSM and sectoral career preferences in the Russian context***

Theories of PSM in general, and of why high-PSM individuals might select into the public sector or why public sector employment might inculcate high PSM, were developed in and draw disproportionately on empirical evidence from North America and Western Europe.<sup>5</sup> In addition to presenting novel longitudinal analysis of PSM prior to and after labor market entry, a key contribution of this study is to extend debates over attraction and socialization to the unique context of post-Soviet Russia. Extending the study of PSM to new contexts offers insights into the extent to which findings based on studies conducted in developed countries might generalize to developing or transition countries, and vice versa. Should we expect high-PSM individuals in Russia to select into the public sector and for public sector employment in Russia to foster higher PSM?

There are at least three reasons why the link between PSM and public sector preferences might not be expected to hold in the Russian context. First, historical legacies have produced bureaucratic traditions in Russia that arguably are incompatible with key tenets of PSM. In western countries there are various concepts underlying national administrative values, such as "public service ethos" in Great Britain or "l'éthique du bien commun" in Canada, that clearly show affinities with the notion of PSM (Vandenabeele and Van de Walle 2008, 224; see also Vandenabeele,



Scheepers, and Hondeghem 2006, 20-21). In Asian countries, meanwhile, scholars have pointed to Confucian traditions as a basis for national administrative values compatible with PSM (Liu, Tang, and Zhu 2008, 694; Kim 2009, 841). By contrast, “state officialdom in Russia has, almost without exception, always been just that – the servant of the state, not of citizenry or the public” (Rowney and Huskey 2009, 6), with bureaucrats considering themselves beholden to first the Tsars and later the Communist Party, not to the public at large. This history has created a bureaucratic culture that some see as “devoid of a public service ethos” (Houston 2014, 847).

Second, the tumultuous political and economic transitions of the 1990s may have exacerbated tendencies for Russian public officials to place personal interests over the public interest, potentially reducing the likelihood that individuals with high PSM would select into or remain in Russia’s public sector. Nezhina and Barabashev (2019), for example, note how continuous administrative restructuring, some of it inspired by the New Public Management and aimed at downsizing of the bureaucracy and the creation of pay-for-performance systems, reduced the prestige of public sector employment and possibly crowded out intrinsic motivations among current and aspiring civil servants. Perhaps more importantly, the transition upended morals and principles, raising confusion about the very meaning of terminology such as the “public good,” particularly among younger generations.

Finally, Russia’s high levels of corruption may both undermine PSM levels among current bureaucrats and dissuade individuals with high PSM to seek public sector employment in the first place.<sup>6</sup> Frequently defined as the abuse of public office or public resources for private gain (Fisman and Golden 2017, 23-25), corruption is the antithesis of PSM, a concept centered on serving the public interest. Accordingly, Hanna and Wang (2017) find that in the high-corruption context of India, students who exhibit high levels of prosocial motivation in laboratory games express a preference *not* to enter the civil service, while their counterparts who cheat in laboratory games are more likely to prefer the public sector. Cross-national analysis by Cowley and Smith (2014), meanwhile, shows that while intrinsic motivation is in general higher among public sector employees relative to their private sector counterparts, this correlation is weaker in countries with high levels of corruption, arguably because idealistic individuals choose to leave – or are forced out – of corrupt bureaucracies.

This all said, Russia does exhibit several features that might make public sector employment attractive to high-PSM individuals. First, as Norris (2003, 82) argues, the legacy of welfare states in the post-communist region may instill values consistent with PSM, such as the importance of helping those in need: “In Scandinavia, Western Europe and post-Communist Europe, all nations with strong welfare states and many professionals employed in the public sectors, working for the government was also associated with helping other people.” Second, some scholars have challenged the claim that “serving the state” in the Russian context is at odds with PSM. Referring to Russian President Vladimir Putin’s effort to revitalize the Russian state, as well as Putin’s personal popularity, Nezhina and Barabashev (2019, 127) suggest that the “improved government and patriotic reputation of the president raise prosocial attitudes and the desire to work for the Russian government.” Third, an important stream of recent political science research on Russia suggests that despite widespread corruption, Russia is far from a typical kleptocracy in that Russia’s elites – including the bureaucratic apparatus – place significant value on national interests and social welfare. Taylor (2018, 136-7), for example, emphasizes that Russian public officials’ “decisions clearly sometimes are motivated by the desire to make real improvements in the lives of average Russians,” and “[t]his expectation among both the population and elites that the state must continue to provide certain services of a welfare state distinguishes Russian misrule from more authentic versions of kleptocracy.” From this perspective, public officials under Putin have been combining corruption with efforts to improve Russians’ quality of life and Russia’s geopolitical stature. Youth motivated by these latter goals may find public service appealing despite the

existence of corruption, and certain occupations or agencies within the Russian bureaucracy may be conducive to fostering PSM.

Ultimately, the relationship between PSM and sectoral career preferences and socialization in Russia is an empirical question, analysis of which we turn to below. But what is clear is that the Russian context presents a particularly tough test of generalizability with respect to the hypotheses that high-PSM individuals will select into the public sector or that public sector employment will socialize employees in a way that increases PSM.

## Research design

### Sample

Our first study was conducted with 804 students at an elite Moscow university between May 27 and June 15 of 2016. We focused on students in social science departments, a population that contains a significant number of individuals both with an interest in and a realistic possibility of obtaining public sector employment yet also exhibits significant variation in career goals. We recruited students using flyers, emails, and classroom announcements by research assistants and also allowed students to invite other students to participate via a module at the end of the online survey.<sup>7</sup> Of the Moscow participants, 60% were women. The disciplines most heavily represented in the sample were public administration, comprising 25%; economics, with 14%; sociology, with 14%; business, with 12%; political science, with 10%; and communications, with 6%.

Once per year in the three years following the study we contacted participants who had graduated and who had agreed to participate in a follow-up survey to collect info about their current place of employment.<sup>8</sup> The third follow-up survey, conducted in 2019, also re-measured PSM. By 2019, we estimate that 596 of the original 804 participants – all but students in their first year at the time of the initial study – had graduated. Of these, we received at least one response regarding current careers from 387 students (65 percent). Forty-eight of respondents in the panel were not currently employed, primarily because they were enrolled in post-graduate studies. These are excluded from analyses of post-graduate sectoral employment, leaving us with 338 observations. For analyses concerning PSM levels following entry into the labor market, we rely only on the 2019 wave, to which we had 328 responses (a 55% response rate), 267 of whom responded to the PSM index questions.

To examine whether results from Russia's capital city would generalize to a regional setting, we conducted a second study at a major regional university between December 8, 2017 and January 22, 2018. Three hundred and seventy six students participated in the second study. Of the participants in the regional study, 69% were women. Fifty-six percent were from the university's Institute of Economics and Economic Management, 34% from the Institute of Public Administration and Entrepreneurship, and 10% were from other institutes. The smaller size of the initial sample at the regional site, as well as the fact that fewer students from the initial study have yet to graduate, limit our ability to create a panel. Accordingly, we employ the data from the second research site to analyze attraction-selection effects but unfortunately cannot examine socialization effects at this site.

A limitation of our study is that student data and contact information that would have allowed for random sampling do not exist at these universities, and so like much of the PSM research based on student samples caution is warranted when considering the extent to which our findings generalize to the broader student body at these universities or to students from other universities. That said, data we were able to obtain for the Moscow research site indicate that the types of students who chose to participate were broadly similar to those who did not. Forty-two percent of the Moscow student body at the time of the study was male, compared to 40% in our sample,

and approximately 47% of the student body were from regions outside of Moscow, compared to 50% in our sample.<sup>9</sup> We discuss these issues at greater length in the article's concluding section.

## **Implementation**

All surveys were conducted online using Qualtrics. The median participation time for the initial study was 37 minutes at both research sites; the follow up surveys required one to three minutes.<sup>10</sup> To mitigate concerns about participants' attentiveness in an online study, we employed screener questions designed to ascertain the extent to which respondents were reading closely (Berinsky, Margolis, and Sances 2014). Results at both research sites are robust to controlling for the number of screeners a respondent correctly answered and to exclusion of inattentive participants.

## **Measurements**

### **Public service motivation**

To measure public service motivation (PSM), we used a 16-item index developed by Kim et al. (2013). This version of the index builds on Perry's (1996) original index but was designed by an international team of scholars to account for cross-cultural distinctions. The index consists of an unweighted average of a series of attitudinal questions, shown in English and in Russian translation in Section A of the Online Appendix, measuring four dimensions of PSM: (1) attraction to public service (APS), (2) commitment to public values (CPV), (3) compassion (COM), and (4) self-sacrifice (SS). Section B of the Online Appendix presents the results of confirmatory factor analysis (CFA) showing that the four-factor model is a reasonable fit to the data for both the Moscow and regional study.<sup>11</sup> Additionally, reliability coefficients (Cronbach's  $\alpha$ ) for the full PSM scale and for each of the sub-components were at or above the 0.70 threshold for acceptable internal consistency with the exception of CPV in the Moscow study.

### **Career preferences and career paths**

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 rate their likelihood 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)<sup>12</sup>, private corporations, small or medium-sized business, ownership of a private business, banking or finance, consulting, and the nonprofit sector.<sup>13</sup> In the follow up surveys, we asked respondents to list which of these 9 career paths above best fit their current occupation, or whether they were currently continuing post-graduate studies or not working for other reasons.

In the analyses that follow we rely on the dichotomous sectoral preference indicator discussed above, as well as on a public sector preference index and private sector preference index constructed as an unweighted average of the public and private sector career preference variables, respectively. Factor analyses show that the three public sector variables load cleanly onto one factor while the five private sector variables load cleanly onto a separate factor. Conducting our analyses with indices constructed using factor scores rather than averages produces nearly identical results.



**Table 1.** Descriptive statistics.

	<i>Moscow Study (Full Sample)</i>					<i>Moscow Study (Panel Participants Only)</i>					<i>Regional Study</i>				
	Mean	SD	Min.	Max.	N	Mean	SD	Min.	Max.	N	Mean	SD	Min.	Max.	N
<i>Public Service Motivation</i>															
Post-Grad. PSM Index						3.80	0.48	1.81	5	267					
Pre-Grad. PSM Index	3.62	0.56	1.75	5	803	3.64	0.56	2	5	387	3.68	0.61	1.63	5	375
<i>Sectoral Employment</i>															
Post-Grad. Public Employment						0.15	0.36	0	1	338					
Pre-Grad. Public Preference	0.23	0.42	0	1	804	0.26	0.44	0	1	387	0.30	0.46	0	1	376
Public Sector Index	3.67	1.41	1	7	803	3.81	1.42	1	7	387	4.03	1.46	1	7	376
Private Sector Index	5.02	0.99	1	7	804	5.09	0.95	1	7	387	4.93	0.94	1	6.8	376
<i>Control Variables</i>															
Male	0.40	0.49	0	1	804	0.40	0.49	0	1	387	0.31	0.46	0	1	376
Relative in Pub. Sector	0.77	0.42	0	1	804	0.79	0.41	0	1	387	0.70	0.46	0	1	376
Religious	0.49	0.50	0	1	804	0.47	0.50	0	1	387	0.43	0.50	0	1	376
Risk Aversion	4.66	1.28	1	8	803	4.56	1.31	1	8	387	4.74	1.45	1	8	375
GPA	3.41	0.71	1	5	803	3.46	0.69	2	5	386	4.09	0.74	1	5	376
Family Income	4.21	1.84	1	9	793	4.24	1.90	1	9	382	3.66	1.59	1	9	370

Notes: *PSM* refers to Public Service Motivation. *Public Sector Index* is an unweighted average of preferences for federal government, regional government, or budget sector employment, on a 1 to 7 scale where higher values indicate a stronger preference. *Private Sector Index* is an unweighted average of preferences for employment in the corporate sector, finance sector, consulting, the small business sector, or as a business owner, where higher values indicate a stronger preference. *Public Sector Preference*, *Public Sector Employment*, *Male*, *Relative in Pub. Sector*, and *Religious* are dichotomous variables. *Risk aversion* scores between 4 and 5 indicate that participants on average switched from preferring guaranteed money somewhere between the fourth lottery choice (50% chance of 2.5 times the guaranteed money, 50% chance of 0) and the fifth lottery choice (50% chance of 3 times the guaranteed money, 50% chance of 0). *GPA* at the Moscow university is measured on a 5-point scale representing the categories: below 4.0, 4.0-5.9, 6.0-7.9, 8.0-9.0 and above 9.0. *GPA* at the regional university is measured on a 5-point scale representing the categories: 2.5-2.9, 3.0-3.4, 3.5-3.9, 4.0-4.4, and above 4.5. The *family income* sample mean between 4 and 5 for the Moscow study represents an average response between the fourth category (80,000-120,000 rubles per month) and the fifth (120,000-160,000) income categories; the sample mean between 3 and 4 for the regional study represents an average response between the third (40,000-80,000) and the fourth (80,000-120,000) income categories.

### Other measures

We collected a wide variety of data on demographic and attitudinal indicators that have been shown or hypothesized to influence career preferences. To measure risk aversion, we used a series of incentivized lottery choices in which participants selected between a series of fixed payoffs and lotteries with a 50% chance of receiving no payment and a 50% chance of receiving a higher payment (see Holt and Laury 2002).<sup>14</sup> The indicator of interest is the number of certain payoffs an individual chooses before switching to a riskier – though potentially higher paying – lottery. We also collected data on gender, age, class year (i.e., first-year, second-year, MA student), field of study, home region, relatives' occupations, religiosity, family income, and ability (measured with self-reported GPA and Unified State Exam (EGE) scores). Table 1 provides an overview of all variables used in the analyses below.

## Results

### Analysis of attraction-selection effects

We now turn to our analyses of attraction-selection effects and examine the relationships between PSM and career preferences as well as PSM and post-graduation sectoral employment. We expect that higher PSM will be associated with a stronger pre-graduation preference for public sector employment (H1) and with a higher post-graduation probability of public sector employment (H2).

Table 2 presents results from the Moscow study. We show results both from the 2016 study's full sample (columns 1 through 3) and results for the subset of respondents from the 2016 study

**Table 2.** Attraction-selection effects (Moscow study): PSM as predictor of sectoral career preferences & post-graduation sectoral employment.

Dependent Variable	Career Preferences (Full Sample)			Career Preferences (Panel Participants Only)			Post-Grad.
	Public Sector Preference (1)	Public Sector Index (2)	Private Sector Index (3)	Public Sector Preference (4)	Public Sector Index (5)	Private Sector Index (6)	Public Sector Employment (7)
PSM	0.076** (0.024)	0.504*** (0.084)	-0.078 (0.071)	0.099** (0.037)	0.599*** (0.114)	-0.102 (0.102)	0.047 (0.035)
Male	0.028 (0.029)	0.309** (0.099)	0.260*** (0.071)	0.042 (0.044)	0.397** (0.142)	0.250* (0.104)	0.041 (0.045)
Risk Aversion	0.035** (0.011)	0.002 (0.036)	-0.037 (0.032)	0.041* (0.016)	0.009 (0.053)	-0.056 (0.051)	0.028 <sup>†</sup> (0.015)
Relative in Pub. Sect.	0.046 (0.031)	0.048 (0.108)	-0.085 (0.081)	0.030 (0.047)	-0.049 (0.158)	-0.016 (0.114)	-0.017 (0.047)
Religious	0.121*** (0.028)	0.308** (0.094)	0.141* (0.071)	0.152*** (0.041)	0.331* (0.137)	0.060 (0.103)	0.048 (0.040)
GPA	-0.004 (0.020)	0.040 (0.066)	0.052 (0.053)	-0.000 (0.028)	-0.005 (0.098)	-0.022 (0.074)	0.010 (0.030)
Family Income	-0.008 (0.008)	-0.033 (0.027)	0.034 <sup>†</sup> (0.019)	-0.011 (0.012)	-0.053 (0.037)	0.049 <sup>†</sup> (0.029)	-0.011 (0.011)
<i>Department relative to Public Admin.</i>							
Business	-0.374*** (0.044)	-0.689*** (0.109)	0.045 (0.118)	-0.391*** (0.063)	-0.742*** (0.134)	-0.018 (0.168)	-0.222*** (0.061)
Economics	-0.357*** (0.044)	-0.805*** (0.115)	0.137 (0.112)	-0.341*** (0.057)	-0.746*** (0.156)	0.055 (0.153)	-0.235*** (0.052)
Political Science	-0.163** (0.062)	0.080 (0.125)	-0.327* (0.138)	-0.220** (0.077)	-0.023 (0.167)	-0.400* (0.181)	-0.186** (0.071)
Sociology	-0.265*** (0.051)	-0.503*** (0.117)	-0.185 (0.124)	-0.252*** (0.072)	-0.774*** (0.175)	-0.280 (0.176)	-0.192** (0.063)
Communications	-0.413*** (0.058)	-0.643*** (0.157)	-0.562*** (0.156)	-0.197 (0.160)	-0.641 <sup>†</sup> (0.371)	-0.899** (0.332)	-0.250*** (0.064)
Other	-0.229*** (0.048)	-0.529*** (0.105)	-0.287** (0.109)	-0.207** (0.065)	-0.516*** (0.147)	-0.242 (0.157)	-0.210*** (0.060)
<i>Home region relative to Moscow</i>							
Regions	0.034 (0.030)	0.020 (0.107)	0.048 (0.076)	-0.003 (0.043)	-0.018 (0.147)	0.109 (0.103)	-0.057 (0.044)
Foreign	0.069 (0.058)	0.065 (0.178)	0.151 (0.131)	-0.008 (0.097)	-0.178 (0.271)	0.041 (0.220)	-0.173* (0.073)
Constant	-0.048 (0.139)	2.138*** (0.489)	5.066*** (0.391)	0.556* (0.232)	4.657*** (0.754)	5.362*** (0.697)	-0.203 (0.251)
Class Year FE	yes	yes	yes	yes	yes	yes	yes
Observations	787	787	787	381	381	381	333
R <sup>2</sup>	0.217	0.203	0.094	0.278	0.270	0.090	0.173

Robust standard errors in parentheses. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , <sup>†</sup> $p < 0.10$ . Columns 1, 4, and 7 present results from linear probability models; columns 2-3 and 5-6 from OLS. The *Public Sector Preference* and *Public Sector Employment* dependent variables are dichotomous. For the *Public Sector Index* and *Private Sector Index*, higher values indicate stronger preference for a public or private sector career, respectively. For description of control variables, see the note to Table 1.

who participated in the later survey waves (columns 4 through 6). All analyses control for a wide range of factors including gender, risk aversion, religiosity, ability (measured by GPA), family connections, family income, class year, academic specialization, and home region.

The dependent variables in columns 1 and 4 are dichotomous – a preference for a public or a private sector career – and so we employ a linear probability model (results are robust using logit models). The coefficients can be interpreted as the average percentage point change in respondents' probability of preferring a public sector career associated with a one-point change on the

five-point PSM index. The results are substantively and statistically significant. A one-point change in the PSM index is associated with an approximately 8 percentage point increase (column 1) in the probability of preferring the public sector in the full sample and a 10 percentage point increase (column 4) in the subset of respondents who participated in later survey waves.

The dependent variables in the OLS regressions presented in columns 2-3 and 5-6 are the public and private sector indices introduced in the preceding section, where higher values indicate stronger preference. PSM is again positively associated with a stronger preference for public sector employment and the effect is again statistically significant and substantively large: a one-unit change in the PSM scale is associated with approximately a 0.50 increase in the public sector index (0.35 standard deviations of the index's 7-point scale) in the full sample (see column 2) and a 0.60 increase (0.42 standard deviations) among respondents who participated in follow up surveys (see column 5). By contrast, PSM is negatively correlated with the private sector index, although this correlation is not statistically significant once control variables are included in the analyses (see columns 3 and 6). The analyses also show that individuals who are more risk averse, who consider themselves to be religious, or who are studying public administration are more likely to prefer public sector employment. There is suggestive evidence that students from wealthier families are more likely to prefer employment in the private sector. Gender, family connections to the public sector, and GPA all are uncorrelated with career preferences.<sup>15</sup>

Our panel data allows us to examine not only whether high-PSM individuals prefer public sector employment but also whether they end up employed in the public sector following graduation. The dependent variable for column 7 in Table 2 is a dichotomous measure of sectoral employment where 1 represents public and 0 represents private, and the coefficients of the linear probability model in this column can be interpreted as the percentage point change in the probability of being employed in the public sector associated with a one-unit change in the PSM scale. There is a clear positive correlation between PSM and public sector employment, but the results are less robust than with career preferences. In a bivariate regression (not shown in Table 2) each unit change in the PSM scale is associated with approximately a 6 percentage point increase in the probability of public sector employment and this is statistically significant at  $p < 0.10$ . However, in the specification with control variables the estimate drops to around 5 percentage points and is no longer statistically significant. Of the control variables, only risk aversion is associated with likeliness of post-graduation public sector employment.

A potential concern is that rates of participation in the later survey waves differ across high and low-PSM individuals and that such differential attrition could lead to biased estimates. These concerns are mitigated in part by the very similar findings in Table 2 when using the full sample and the sample of panel participants. To further address potential concerns related to attrition bias, in Section C of the Online Appendix we show that all results in Table 2 remain nearly identical when reweighting the regression analyses to account for the probability that a respondent participated in later survey waves.

As discussed in the Theory section, there are good reasons to expect PSM not to be associated with public sector employment in Russia. An important question therefore is the extent to which findings at our initial research site – a highly selective university located in the Russian capital – generalize to other universities. To examine this issue, we replicated our study at a regional university. Given the smaller sample size and that many students in the sample have yet to graduate, we were not able to construct a panel data set. But the data do facilitate analysis of the attraction hypothesis.

Results at the second research site, shown in Table 3, were strikingly similar to those from the Moscow university. Using the dichotomous public-private sector choice dependent variable, each additional unit on the PSM scale is associated – as in the Moscow study – with approximately an 8 percentage point increase in the probability of preferring a public sector career (column 1). A one-unit increase in the PSM scale is similarly associated with a 0.47 increase (0.32 standard

**Table 3.** Attraction effects (regional study): PSM as predictor of sectoral career preferences.

Dependent Variable	Public Sector Preference (1)	Public Sector Index (2)	Private Sector Index (3)
PSM	0.082 <sup>†</sup> (0.044)	0.466*** (0.125)	0.086 (0.090)
Male	-0.022 (0.052)	-0.019 (0.164)	0.170 <sup>†</sup> (0.103)
Risk Aversion	0.002 (0.017)	-0.054 (0.055)	-0.090** (0.034)
Relative in Pub. Sect.	0.044 (0.052)	0.210 (0.170)	0.019 (0.109)
Religious	0.093 <sup>†</sup> (0.051)	0.307* (0.146)	0.012 (0.100)
GPA	-0.002 (0.035)	0.228* (0.099)	0.210*** (0.069)
Family Income	-0.023 (0.015)	0.004 (0.048)	0.012 (0.032)
<i>Department relative to Inst. of Public Admin. &amp; Entrepreneurship</i>			
Inst. of Econ. & Management	-0.114* (0.057)	-0.489** (0.171)	0.243* (0.119)
Other	-0.001 (0.089)	-0.016 (0.273)	-0.201 (0.206)
<i>Home region relative to regional capital</i>			
Ural Region (minus capital)	0.059 (0.068)	0.235 (0.201)	0.171 (0.129)
Other Regions	-0.017 (0.061)	-0.196 (0.199)	-0.082 (0.124)
Constant	0.086 (0.246)	1.842* (0.761)	4.138*** (0.508)
Class Year FE	yes	yes	yes
Observations	365	365	365
R <sup>2</sup>	0.075	0.141	0.100

Robust standard errors in parentheses. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , <sup>†</sup> $p < 0.10$ . Column 1 present results from a linear probability model; columns 2-3 from OLS. The *Public Sector Preference* and *Public Sector Employment* dependent variables are dichotomous. For the *Public Sector Index* and *Private Sector Index*, higher values indicate stronger preference for a public or private sector career, respectively. For description of control variables, see the note to Table 1.

deviations) on the public sector index (column 2), while PSM is uncorrelated with the private sector index. As at the Moscow research site, religiosity is positively correlated with a preference for the public sector and risk aversion is negatively correlated with a private sector preference. Other covariates are uncorrelated with sectoral career preferences.

In summary, at multiple sites we find robust evidence in support of H1 that PSM predicts public sector career preferences. We also find suggestive evidence in support of H2 that PSM predicts post-graduation employment sector.

### **Analysis of socialization effects**

This section addresses our second set of hypotheses regarding how PSM evolves upon entry into the labor market. We expect the initial shock of labor market entry to lead to a decrease in PSM (H3) but for PSM to remain higher in the public sector (H4).

Table 4 offers support for H4 but not for H3: Contrary to the expected “reality shock” discussed in the Theory section above, PSM *increases* among both public and private sector

**Table 4.** Changes in average PSM levels by sector.

Employment Sector (2019)	PSM Avg. (2016) (1)	PSM Avg. (2019) (2)	Change in PSM (2019 - 2016) (3)
Public Sector (n = 35)	3.83 (0.09)	3.97 (0.07)	0.15 <sup>†</sup> (0.08)
Private Sector (n = 188)	3.66 (0.04)	3.75 (0.04)	0.10* (0.04)
Sectoral Difference (Public - Private)	0.16 <sup>†</sup> (0.10)	0.22* (0.09)	0.05 (0.10)

Two-tailed t-tests with standard errors in parentheses. \* $p < 0.05$ , <sup>†</sup> $p < 0.10$ . PSM measured on 1 to 5 scale.

employees following graduation – a change of 0.15 among public sector employees and 0.10 among private sector employees, increases of 3% and 2% of the 1 to 5 PSM scale, respectively. These changes are statistically significant but smaller in magnitude than the declines of 5% and 7% of the PSM scale reported by Kjeldsen and Jacobsen (2013).<sup>16</sup>

Among those who entered the public sector after graduation, PSM was 0.16 units (approximately one-third of a standard deviation) higher in 2016, the time of the initial survey, than that of respondents who embarked on a private sector career. By 2019 this difference had risen to 0.22 units (approximately a two-fifths of a standard deviation), and this difference in PSM levels across sectors is statistically significant at both points in time. However, the difference in the *rate of change* across sectors – which is approximately 0.05 units higher in the public sector on the 1 to 5 PSM scale – is substantively small and statistically insignificant.

The regression analyses shown in Table 5 attest to the robustness of these sectoral differences in PSM levels even accounting for the wide range of control variables employed in the previous section. The coefficient measuring the difference in PSM levels across the public and private sectors in column 1 is nearly identical to the difference in sectoral means for 2019 in column 2 of Table 4. Column 2, meanwhile, confirms the lack of sectoral differences in the rate of PSM change.

Our research design also allows us to consider the amount of time a respondent has been employed, for participants in the research were in different years of study at the time of the initial survey. Consequently, by 2019, fourth-year and MA students at the time of the initial study had been employed for as many as three years; third year students, for up to two years; and second year students, for no more than one year. (Students in their first year in 2016 had yet to graduate at the time of the 2019 survey). In column 3 we regress change in PSM on the number of post-graduation years prior to the survey. The analyses offers suggestive evidence that longer employment is associated with a larger change.

Further analysis shows that this relationship between employment tenure and change in PSM reflects a trend exclusive to private sector employees. In column 4 we interact the sectoral employment variable with the variable measuring potential years of employment to examine whether longer employment has different socialization effects across sectors. In these specifications the coefficient on the *Years in Labor Force* variable represents the correlation between years of employment and change in PSM among private sector employees and the coefficient on the interaction term *Public\*Years* represents the extent to which this correlation differs across the public and private sectors. The analyses indicate that additional labor market experience may be associated with larger PSM changes in the private sector but is uncorrelated with PSM changes in the public sector.<sup>17</sup> To be clear, this is not to say that PSM increases more in the private sector than in the public sector upon labor market entry; the data shows, if anything, the opposite to be true. Rather, the analysis in column 4 shows that whereas the PSM “bump” among public sector workers seems to be independent of how many years the respondent has worked, in the private sector the increase in PSM appears to be larger among those who have been employed for a longer period of time.

**Table 5.** Socialization effects (Moscow study): Post-graduation PSM and PSM changes.

Dependent Variable	<i>Post-Grad PSM (2019)</i>		<i>Change in PSM (2016-2019)</i>	
	(1)	(2)	(3)	(4)
Public Employment	0.219* (0.091)	0.063 (0.103)		0.282 (0.251)
Years in Labor Force			0.075 <sup>†</sup> (0.038)	0.087* (0.043)
Public*Years				-0.103 (0.105)
Male	-0.097 (0.072)	0.144 <sup>†</sup> (0.073)	0.138 <sup>†</sup> (0.073)	0.147* (0.073)
Risk Aversion	-0.035 (0.024)	0.004 (0.023)	0.007 (0.023)	0.005 (0.023)
Relative in Pub. Sector	0.022 (0.080)	0.022 (0.086)	0.012 (0.088)	0.014 (0.087)
Religious	0.042 (0.069)	-0.086 (0.070)	-0.078 (0.070)	-0.080 (0.071)
GPA	0.021 (0.052)	-0.024 (0.054)	-0.019 (0.053)	-0.014 (0.054)
Family Income	0.023 (0.022)	0.029 (0.026)	0.032 (0.026)	0.032 (0.027)
<i>Department relative to Public Admin.</i>				
Business	-0.004 (0.100)	-0.173 (0.144)	-0.173 (0.139)	-0.165 (0.143)
Economics	-0.081 (0.113)	0.051 (0.103)	0.026 (0.097)	0.028 (0.106)
Political Science	0.203* (0.095)	0.056 (0.102)	0.076 (0.098)	0.087 (0.103)
Sociology	-0.047 (0.118)	0.025 (0.107)	0.012 (0.104)	0.023 (0.108)
Communications	1.011*** (0.201)	0.404 (0.416)	0.407 (0.378)	0.422 (0.390)
Other	0.130 (0.094)	0.065 (0.104)	0.068 (0.104)	0.065 (0.108)
<i>Home region relative to Moscow</i>				
Regions	-0.020 (0.068)	0.041 (0.076)	0.030 (0.072)	0.033 (0.073)
Foreign	0.207 <sup>†</sup> (0.118)	-0.023 (0.128)	-0.053 (0.114)	-0.042 (0.117)
Constant	3.678*** (0.259)	-0.132 (0.272)	-0.201 (0.278)	-0.250 (0.278)
Class Year FE	yes	yes	no	no
Observations	221	221	221	221
R-squared	0.125	0.091	0.080	0.084

OLS regressions with robust standard errors in parentheses. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , <sup>†</sup> $p < 0.10$ . For description of control variables, see the note to Table 1.

The analyses additionally show that few control variables are associated with post-graduation PSM levels or changes in PSM, with the exception that males seem to have experienced a larger change in PSM than females. This may, however, reflect lower levels among male students at the time of the initial study.

In summary, we find no evidence in favor of H3 that a sharp decline in PSM occurs upon labor market entry. To the contrary, PSM in the Russian context appears to increase in early career stages. In the concluding discussion section, we discuss possible interpretations of this finding



in greater detail. We do find strong evidence in support of H4 that PSM will remain higher among students who enter the public sector relative to private sector peers.

## Discussion

Drawing on unique panel data from Russian university students, our analyses offer insights into longstanding debates about the roles of attraction versus socialization in sectoral employment. We find clear evidence that students with higher PSM levels are more likely to prefer public sector employment prior to graduation. We additionally find suggestive evidence that high-PSM individuals are more likely to be employed in the public sector following graduation. In short, our findings support the hypothesis that the widely observed correlation between PSM and public sector employment results at least in part from an attraction-selection effect. Meanwhile, in contrast to previous studies such as Kjeldsen and Jacobsen (2013), we find no evidence of a sharp decline in PSM upon entry into the labor market, which researchers have suggested may result from the “reality shock” of young employees’ experiences with daily on-the-job realities clashing with more idealistic norms. In both the public and private sectors, PSM increases among participants in our study following labor market entry. Three years after the initial study, PSM is therefore higher among public sector employees, but this appears to reflect initial pre-graduation levels of PSM rather than socialization in the workplace.

Our finding of a link between PSM and sectoral employment is particularly noteworthy in the Russian context and suggests that theories of PSM developed in the western context may indeed generalize to contexts even where corruption is prevalent and bureaucratic traditions may seem to be at odds with PSM. Several potential limitations of our data, however, should be considered. One possible concern pertains to the non-representativeness of our sampling. Although nonrandom samples are common in studies of PSM among students, we cannot rule out the possibility that students at these universities who did not participate in our study differ from those in the sample. It is important to recognize, however, that our results are not contingent on *levels* of PSM and career preference ratings, but on the *correlations* between these two. It seems unlikely that at each of two distinct research sites we sampled two clusters of students – one with high PSM and preferences for the public sector and the other with low PSM and preferences for the private sector – without such trends being present in the broader student population at these universities.

A related concern is that our sites themselves are outliers. In a country as large as Russia, it would be reasonable to expect trends to differ across regions and universities. But even findings pertaining uniquely to our research sites merit attention. Our first site is a prestigious educational institution whose graduates regularly go on to influential positions within the government. As of July 2018, alumni included two current ministers and three deputy ministers.<sup>18</sup> Findings pertaining to students from this university offer substantively important insights into the functioning of Russia’s bureaucracies. Additionally, determining that our sites are outliers would also have important theoretical implications, providing grounds for a promising research agenda to examine the question of why aspiring civil servants at some universities are motivated by public service ideals even as other motivations, such as self-enrichment, guide future civil servants at other institutions. This all said, the highly similar results at our second research site, a regional university, indicate that our findings represent trends that extend beyond elite Moscow-based universities.

Our panel data provides unique insights into the relationships between PSM and sectoral employment pre- and post- labor market entry, and our finding of a PSM “bump” upon entering the workforce – a finding at odds with earlier research – may offer a starting point for a fruitful future research agenda. From the perspective of organizational socialization, one possible interpretation is that there is strong congruence in organizational and personal values among individuals entering the public sector in Russia. However, as classic work on motivations for public

service makes clear (see, e.g., Coles 1993), a wide variety of emotions underlie idealism and the different types of satisfaction individuals receive from service. With this in mind, it is noteworthy that PSM increased among participants in the study regardless of whether they entered the public or private sector, indicating that future research may need to investigate trends that affect labor market entrants joining both public and private organizations. It also is important to recognize that our analysis covers only the earliest stages of these students' career paths, and our finding of an initial increase in PSM upon entering the labor market may be a temporary phenomenon. Our research design does not, for example, allow us to rule out the possibility that young public servants enter the civil service for idealistic reasons and initially find the public sector to fulfill their public service aspirations, but then become less idealistic over time, either because they lose optimism about the prospects of improving society, or because they are indoctrinated on the job to practices of corruption or other tendencies at odds with PSM. Overall, more research on the evolution of bureaucrats' attitudes and behavior over time in both Russia and elsewhere would undoubtedly be of value.

Ultimately, our findings suggest that scholars and practitioners seeking to develop best practices for recruiting and retaining high quality civil servants should not underestimate the importance of public service motivation even in contexts that may appear inhospitable to individuals seeking to serve the public interest and promote the public good.

## Notes

1. Important studies by Wright and Christensen (2010) and Ward (2014), considered in more detail in later sections, both employ panel data to track changes in PSM over time, but neither utilize data that facilitates comparisons of PSM both pre- and post- labor market entry.
2. As discussed below, we utilize the PSM scale developed by Kim et al. (2013).
3. Wright and Christensen's (2010) analysis of panel data finds that US lawyers with high PSM did not necessarily select public sector employment for their first job, but were more likely to later be employed in the public sector in subsequent jobs. However, Wright and Christensen employ a measure of PSM from a survey wave that occurred only after respondents had entered the labor market.
4. Although we focus here on organizational socialization, other theoretical frameworks also provide foundations for understanding how such "reality shocks" could lead to a decline in PSM. For example, from the perspective of Self-Determination Theory, the failure of public sector organizations to fulfill individuals' needs for autonomy, competence, or relatedness could potentially lead employees to seek motivation from extrinsic rather than intrinsic factors. Alternatively, from the perspective of other needs satisfaction models, if an individual pursues public service to satisfy a particular set of needs, then the motivational value of PSM may decrease as these needs are fulfilled (Deci and Ryan 2000, 230–231).
5. See Van der Wal (2015) for a review of studies focusing on PSM in non-western contexts, which shows that these works have focused primarily on Asia.
6. From 2016 through 2018, Russia ranked between 131<sup>st</sup> and 138<sup>th</sup> out of 180 countries evaluated by the anti-corruption watchdog Transparency International's Corruption Perception Index (CPI). See [www.transparency.org/research/cpi/overview](http://www.transparency.org/research/cpi/overview).
7. We adopted this recruiting approach because of concerns about the feasibility of recruiting a sufficient number of students, given that studies using student subject pools are relatively novel in Russia. For the same reason, we did not initially filter out students from non-social science departments. Once it became clear that we would easily meet our pre-registered recruitment targets, we limited 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.
8. Seventy-one participants responded to both the 2017 and 2018 waves, 146 to both the 2018 and 2019 waves, and 53 to all three follow-up surveys. When we received multiple responses, our analyses code employment using the latest data received. For analysis of sectoral employment, these coding decisions have minimal impact: only 5 respondents switched sectors between 2017 and 2018, only 9 between 2018 and 2019, and only 6 between 2017 and 2019. Our findings are robust to exclusion of these respondents from the analyses.
9. For the largest subgroup, the public administration students, the Moscow sample also appears relatively representative. Thirty-three percent of public administration students at the time of the study were male,

compared to 32 percent of our sample. Forty-four percent of the public administration students were from regions outside of Moscow, compared to 42 percent in our sample.

10. Subjects also participated in experimental games designed for other studies, which we report in Gans-Morse et al. (2019) and Gans-Morse et al. (forthcoming). The experimental games employed incentive payments. On average participants in the Moscow study received the equivalent of approximately 14 USD and participants in the regional study received the equivalent of approximately 9 USD.
11. For both samples, the fit is improved if the COM dimension is excluded, but for the sake of comprehensively evaluating the relationship between PSM and sectoral employment preferences we retain all dimensions in our analyses. Our findings are qualitatively and quantitatively similar if we exclude the COM dimension.
12. The budget sector (*budzhetniy sector*) in Russia refers to positions that are not part of the civil service (*gosudarstvennaya sluzhba*) but are financed and managed by the state.
13. As a robustness check, we also asked respondents to consider the distinction between the job they would prefer to have and the job they are most likely to have upon graduating. They were then asked to rate the likelihood of near-term employment in each of the previously stated career paths, again on a 1 to 7 scale. Results using this career *expectations* indicator are nearly identical to the results we present below using the career *preferences* indicator.
14. As with the other experimental games (see footnote 10), participants' choices in the risk aversion exercise affected actual compensation for participation in the research.
15. The lack of findings related to gender in part reflects gender differences in preferences for different types of public sector careers. Male students in our study are more likely than females to seek federal or regional government jobs, but less likely to pursue budget sector jobs. Accordingly, these gender preferences appear to cancel out in the aggregated or dichotomous career preference measures. With respect to ability, when scores from the United State Exam (EGE), a standardized university entry test, are used in place of GPA, then higher scores are negatively correlated with a preference for the public sector. We use GPA in our primary analyses because not all students take the EGE, leading to a number of missing observations. Our results concerning PSM are robust regardless of which ability measure is employed.
16. A limitation of our data is that not all respondents in the 2019 survey wave took the time to complete the PSM index questions and, due largely to post-graduate studies, not all respondents were employed at the time of the follow-up survey. Accordingly, we are left with 223 observations for analyses comparing PSM levels in 2019 across sectors of employment. We show in Section C of the Online Appendix that results in Tables 5 are robust when reweighting the regression analyses to account for the probability that a respondent participated in later survey waves and answered the battery of survey items used to measure PSM.
17. The correlation in the public sector is the sum of the coefficients on the *Years in Labor Market* and the interaction term *Public\*Years*:  $0.087 - 0.103 = -0.016$ .
18. These figures are based on authors' calculations using publicly available biographical data about top Russian officials.

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