

Corruption and Human Capital Supply for the State

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Abstract

I study the impact of corruption crackdown on human capital supply for the state, exploiting China's staggered anti-corruption inspections that have dampened perceived returns to rent-seeking. Using unique applicant data from state organizations, I find that reducing corruption returns induces positive selection for integrity and prosociality into the state sector, without significantly affecting overall ability. These shifts in supply result in enhanced performance. Changes in occupational preferences from a representative student-parent panel corroborate static talent allocation as the mechanism, with treated honest types showing higher preferences for state jobs – even when conditioned on ability and family background. I further document dynamic effects wherein households increase investment in human capital and the integrity of the next generation, which can reinforce the allocational effects and generate long-term dependence. Together, these findings highlight the endogenous supply of talent in response to reward structures as an important mechanism shaping state capacity.

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1 Introduction

Human capital is a key resource of the state sector, which determines the allocation of public resources and the quality of governance (Dal Bó, Finan and Rossi, 2013; Besley et al., 2021; Best, Hjort and Szakonyi, 2023). Attracting appropriate talent to state organizations is therefore of particular importance.¹ Yet, in a society in which corruption is widespread, the relative rewards of rent-seeking vs. productive activities (the reward structure) may distort talent allocation and accumulation (Baumol, 1990; Murphy, Shleifer and Vishny, 1991, 1993; Acemoglu, 1995; Ehrlich and Lui, 1999), affecting the quality of human resources for political/bureaucratic selection and thus the functioning of the state. Despite the conceptual significance, there is no established empirical analysis.

In this paper, I ask: how does a nationwide anti-corruption crackdown shape human capital supply for the state? I investigate this question in the context of China. Since 2013, the country has implemented staggered anti-corruption visits by dispatching independent inspection teams to local governments. These visits create a heightened awareness of potential corruption risks, thereby generating sharp variation in perceived returns to corruption across cities and time (Chen, 2023; Fang, 2023). This nationwide program with fine-grained variation allows me to provide a credible measure of how corruption opportunities affect career aspirations for different types of individuals across an entire country. Following the literature on public worker selection (e.g., Caselli and Morelli, 2004; Dal Bó, Finan and Rossi, 2013; Ashraf et al., 2020; Hanna and Wang, 2017; Barfort et al., 2019), I focus on integrity and ability – the two key talent traits that determine the quality of governance.² Corruption produces extra space for rent-seeking returns and thus lowers the relative values of private jobs for high-ability individuals, but it also generates disutility to honest and prosocial individuals. Accordingly, the impact of corruption returns on the incoming state workforce’s quality will depend on the relative utility returns and the correlation between each characteristic, which therefore necessitates empirical investigation.

I start with a sanity check that anti-corruption visits are associated with lower perceived returns to (or greater costs of) corruption in a staggered difference-in-differences framework. To confirm the validity of my empirical design, I demonstrate that a range of local socioe-

¹“Talent” (“human capital”) here can refer to cognitive skills that make individuals productive in all occupations, or non-cognitive traits that are particularly relevant to public jobs – e.g., propensity for dishonesty that yields a comparable advantage in rent-seeking (Caselli and Morelli, 2004). This definition is conceptually in line with the literature on political and bureaucratic selection (e.g., Francois, 2000; Delfgaauw and Dur, 2007; Dal Bó, Finan and Rossi, 2013; Hanna and Wang, 2017; Ashraf et al., 2020).

²As laid out by Caselli and Morelli (2004), ability and integrity constitute the two central dimensions of the quality of public officials: ability (competence) is the skill to identify the appropriate policy objectives and achieve them effectively, and integrity is the character that leads an official to perform their duties without stealing and harassing citizens for bribes.

conomic characteristics – including both their levels and growth rates – cannot consistently predict the timing of anti-corruption visits. Analyzing data from a representative survey conducted by the Chinese Academy of Social Sciences, I observe that residents perceive a greater punishment for corruption after their city has been inspected, with parallel trends in outcome variables prior to the treatment. Combining this observation with findings from placebo tests validates the staggered anti-corruption visit as the source of variation in corruption rewards.

The main analysis explores how reducing corruption affects the quality of individuals sorting into the state sector. To this end, I cooperate with a provincial human resource service center and obtain unique applicant data from 45 sampled state organizations between 2011 and 2019. In particular, the data provide a credible indirect integrity measure, as well as cognitive ability and other personality traits of applicants by their hometown and college cities each year. To identify the impact on talent supply net of demand-side changes, I exploit the variation generated by anti-corruption visits to applicant hometowns and cities of college attendance. Specifically, I estimate the difference-of-differences by comparing the traits of individuals applying *before* their hometown/college cities have been inspected to those of individuals applying *after* their hometown/college cities have been inspected, holding the recruitment margin constant (i.e., only comparing those who apply to the same organization in the same year).³ I find that individuals from city-year cells that experienced an anti-corruption visit but still preferred state jobs score significantly higher on integrity and public service motivation, with positive but insignificant differences in cognitive ability. Given the immediate jump in estimated effects in the short run, the result appears to be most easily reconciled with the static talent allocation mechanism – individuals with greater *ex-ante* integrity are more attracted to state positions after the anti-corruption.

Moreover, the changed supply has likely translated into real performance outcomes. I present suggestive evidence by digitizing the evaluation reports for all bureaucratic employees recruited by one of the sampled provincial state enterprises since 2007, which comprise comparable performance assessments in the fiscal year 2019. The estimates indicate an increase in treated entrants' overall performance in the workplace, speaking to the role of personnel quality in shaping state effectiveness (Best, Hjort and Szakonyi, 2023).

To better underpin the talent allocation mechanism, the second set of analyses complements by investigating occupational preferences in relation to *ex-ante* individual traits. I use a representative panel of middle-school student-parent pairs since 2013, which offers both direct and indirect ways to measure student integrity for cross-validation. The data also include

³The identification strategy here – exploring variation in “origins” instead of “destinations” – is to some extent in the spirit of cultural economic literature, which can help eliminate confounders induced by the external environment and demand-side changes (e.g., changes in wages, recruitment criteria, and departmental shocks).

pre-packed measures of *ex-ante* student cognitive ability and household socioeconomic status to explore the ability dimension. I can therefore hold traits constant and explore the types of households that self-select into state jobs in response to the corruption crackdown, by comparing changes in public job preferences among households with different types of students. The results suggest no significant impact of anti-corruption on the average preference for state jobs. However, I find substantial differences as a function of student integrity, consistent with the findings from the applicant data: households with children featuring relatively high integrity and prosocial scores reveal a greater preference for public jobs following anti-corruption inspections, compared to relatively dishonest types. The result is unaffected by the inclusion of controls for student ability and family background, and I do not find that anti-corruption is associated with differential selection on ability on average. These findings corroborate the role of the talent allocation mechanism. Moreover, they also speak to the notion that screening on ability may not necessarily alter the selection problem in the state sector (Hanna and Wang, 2017). Instead, my results suggest that a shift in reward structures – reducing perceived corruption returns and reshaping social norms surrounding corruption – may play a useful role.

To establish the broader implications, the final set of main analyses incorporates the notion of endogenous growth models, allowing talent traits to be non-static in response to changes in corruption returns in the long term (Ehrlich and Lui, 1999).⁴ I document that reducing corruption induces greater intergenerational human capital and integrity accumulation. Anti-corruption visits are associated with an average 0.3-year increase in desired educational attainment, plausibly featuring increased expected returns to productive human capital. I also observe behavioral changes: households increase human capital investment and focus more attention on the conduct and wrongdoing of the next generation. These results suggest a dynamic effect on the future talent pool (in terms of both ability and integrity), which can further augment the static allocational margin and create path dependence in the long run.

I conclude by discussing alternative explanations unrelated to corruption and the role of spillover effects. First, I present qualitative and quantitative evidence that the results are not likely to be driven by changes in career uncertainty or fear of purges, which may generate opposite empirical predictions on selection for integrity. Second, I demonstrate my estimates remain robust when controlling for changes in a wide range of city-year socioeconomic characteristics in response to the corruption crackdown. The talent allocation pattern also

⁴Households can have less incentive to invest in productive talent traits when corruption is rampant (Pecorino, 1992; Murphy, Shleifer and Vishny, 1993; Gulino and Masera, 2022). This notion may not only apply to the accumulation of cognitive skills but also other traits (e.g., propensity for dishonesty) that would be malleable over the long term: when a certain generation is known to be corrupt and thus “being corrupt” is a useful trait, this can change the desire of future generations to bear integrity (Tirole, 1996). These traits developed during one’s formative years can have a significant impact on future behavior (Cruces, Rossi and Schargrodsky, 2023).

holds when considering household-specific socioeconomic status. Lastly, following the spirit of [Colonnelli and Prem \(2022\)](#), I re-estimate the effects by using a “cleaner” control group of cities that are not adjacent to an inspected one to account for spillovers. While the coefficients for the student-parent sample remain largely comparable, the state applicant sample reveals a limited but noticeable spillover effect of curbing corruption on realized labor supply, possibly due to their sensitivity to labor market information.

This article relates to three main strands of literature. To my knowledge, it provides the first empirical analysis of how changes in rewards for corruption shape the quality of state-sector labor supply, thereby linking the canonical theories of talent allocation to the flourishing empirical work on the personnel economics of the state ([Finan, Olken and Pande, 2017](#); [Besley et al., 2021](#)). Although the thesis has received attention from cross-sectional studies,⁵ causality remains hard to ascertain due to the observational equivalence problem, the difficulty of identifying supply-side changes, and the challenge of measuring applicant quality. The rich micro-level data and sharp *within-society* variation allow me to overcome these challenges and integrate the existing cross-sectional findings. By investigating the endogenous changes in entrant pools, this study also adds to the limited work on the supply of public workers (e.g., [Dal Bó, Finan and Rossi, 2013](#); [Hanna and Wang, 2017](#); [Deserranno, 2019](#); [Ashraf et al., 2020](#)). Different from existing literature that exploits experimental shocks, this article draws on an empirical context that creates a societal change in reward structures. Relatedly, the results on state employee performance suggest that changes in the pool of applicants can translate into differences in hired bureaucrats’ performance, highlighting a less explored aspect through which corruption shapes state capacity.

More broadly, this study also contributes to the literature on the consequences of corruption for human capital. A well-documented empirical channel through which corruption affects human capital is the indirect course – distorted incentives of politicians and bureaucrats impair the delivery of education and health services.⁶ In contrast, I concentrate on the more direct channel via which corruption alters incentives for individuals to accumulate and allocate their talent. Additionally, I delve into a micro-level scenario in which productivity has not yet been realized, by examining corruption’s dynamic role in shaping occupational pref-

⁵[Banerjee, Baul and Rosenblat \(2015\)](#), [Hanna and Wang \(2017\)](#), [Gans-Morse \(2021\)](#), and [Cruces, Rossi and Schargrodsky \(2023\)](#) show a negative selection of dishonest types into public service in Indian, Argentinian, and Ukrainian contexts respectively, in which corruption is pervasive. In contrast, [Barfort et al. \(2019\)](#) document honest students are more likely to prefer public jobs in Denmark, one of the world’s least corrupt countries. There is also no significant correlation between ability and preference for public jobs in any of these studies. All of these studies hold the reward structure (i.e., corruption returns) constant. One related exception is [Brassiolo et al. \(2021\)](#), where the authors experimentally manipulate corruption opportunities among college students in a lab, and they observe a sorting of dishonesty into high-graft jobs.

⁶See for example [Mauro \(1998\)](#), [Gupta, Davoodi and Tiongson \(2001\)](#), [Gatti, Gray-Molina and Klugman \(2003\)](#), [Tanzi \(2004\)](#), [Reinikka and Svensson \(2005\)](#), [Olken \(2006\)](#), [Ferraz, Finan and Moreira \(2012\)](#), [Lichand, Lopes and Medeiros \(2016\)](#), and [Zamboni and Litschig \(2018\)](#)

erences and the human capital of youngsters – which constitutes the future talent pool and thus an important determinant of long-run growth (Reinikka and Svensson, 2005; Ajzenman, 2021). The results are empirically novel and consistent with the large body of theoretical work.

Finally, this paper echoes the recent work in labor economics linking perceived returns to actual economic outcomes (Arcidiacono et al., 2020; Gong, Stinebrickner and Stinebrickner, 2020; Kuka, Shenhav and Shih, 2020; Wiswall and Zafar, 2021). I find that household expected returns to corruption and human capital indeed translate into behavioral changes, reshaping talent investment.