NBER WORKING PAPER SERIES

GENDER AND BUREAUCRATIC CORRUPTION: EVIDENCE FROM TWO COUNTRIES

Francesco Decarolis Raymond Fisman Paolo Pinotti Silvia Vannutelli Yongxiang Wang

Working Paper 28397 http://www.nber.org/papers/w28397

NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138 January 2021

Decarolis gratefully acknowledges financial support from the European Research Council (ERC-2015-StG-679217). The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2021 by Francesco Decarolis, Raymond Fisman, Paolo Pinotti, Silvia Vannutelli, and Yongxiang Wang. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Gender and Bureaucratic Corruption: Evidence from Two Countries
Francesco Decarolis, Raymond Fisman, Paolo Pinotti, Silvia Vannutelli, and Yongxiang Wang
NBER Working Paper No. 28397
January 2021
JEL No. D73,J16

ABSTRACT

We examine the correlation between gender and bureaucratic corruption using two distinct datasets, one from Italy and a second from China. In each case, we find that women are far less likely to be investigated for corruption than men. In our Italian data, female procurement officials are 34 percent less likely than men to be investigated for corruption by enforcement authorities; in China, female prefectural leaders are as much as 75 percent less likely to be arrested for corruption than men. While these represent correlations (rather than definitive causal effects), both are very robust relationships, which survive the inclusion of fine-grained individual and geographic controls.

Francesco Decarolis
Bocconi University
Via Sarfatti 25
Milan, 20136
Italy
and EIEF

francesco.decarolis@unibocconi.it

Raymond Fisman
Department of Economics
Boston University
270 Bay State Road, 304A
Boston, MA 02215
and NBER
rfisman@bu.edu

Paolo Pinotti
Bocconi University
Via Rontgen 1
20136 Milan
ITALY
and fRDB
and also BAFFI-CAREFIN Centre
paolo.pinotti@unibocconi.it

Silvia Vannutelli 270 Bay State Road Boston, MA 02215 United States svann@bu.edu

Yongxiang Wang Marshall School of Business University of Southern California Los Angeles, CA 90089 Yongxiang.Wang@marshall.usc.edu

I Introduction

There exists a very long literature on the relative probity of women versus men, and a distinct body of work on whether women govern differently from men.¹ A natural – and important – point of intersection is whether women are more corrupt than men when put in a position of public trust.

In this paper we show that, for officials in two very distinct settings at two very different levels of government/bureaucracy, women are far less likely to be suspected of or arrested for corruption. We employ two very different datasets obtained for distinct research agendas to study the association between gender and corruption. Our first dataset includes the universe of Italian officials who presided over at least one procurement auction during 16 years. The second is a dataset of all Chinese bureaucrats who held the position of prefecture mayor or party secretary during 1979-2014 years. For our Italian data, we know whether the official has ever been flagged as suspected of corruption by any of the country's enforcement authorities. For our Chinese data, we observe whether an official has been arrested for corruption. Our data thus come from officials from distinct geographies, cultures, political systems and at very different levels in the bureaucracy.

In both cases, we find far lower corruption rates among women relative to their male counterparts. In our Italian data, for men and women working within the same procurement authority women are 34 percent less likely to be investigated for corruption by enforcement authorities. In our Chinese data, female prefecture leaders are as much as 75 percent less likely to have been arrested for corruption than men. In both cases, we include fine-grained fixed effects to account for regional or demographic differences.

While as we noted at the outset that gender and ethics is well-traveled ground (Rosenbaum et al., 2014; Kennedy et al., 2017), we bring what we believe to be some new and potentially important facts to the topic. Most notably, research on gender and honesty has tended to emphasize two fundamental explanations for gender differences in how individuals respond to ethical dilemmas: socialization versus social roles (Franke et al., 1997). According to the former view, gender-specific moral compasses develop due to differences in socialization during formative years, whereas the latter attributes gender differences to the distinct roles that men and women generally play in society. If social roles were the dominant explanation, one might expect gender differences to be muted for men and women working in the same field or occupation. Our results suggest that gender differences persist. Selection may similarly mute any gender differences in corruption for

¹See Rosenbaum et al. (2014) a survey of research on gender and honesty, and Jacobsen et al. (2018) for a summary of economics-focused work on the topic. For gender-based differences in how politicians govern, see Ferreira and Gyourko (2014) for a study of U.S. mayors, and Pande and Ford (2012) for a survey of studies based on gender quotas (including the classic work of Chattopadhyay and Duflo (2004))

individuals holding comparable positions, even if, as suggested by some prior work, men and women approach ethical questions differently on average.

We also observe that the literature is far from conclusive on the question of gender differences in ethics. While some surveys suggest that the preponderance of evidence indicates higher ethical standards for women, many papers do not find any gender difference. The difficulty in publishing null results certainly raises concerns of a file drawer problem. Furthermore, most findings on gender differences in probity tend to be based on laboratory experiments, often with student populations. From the perspective of understanding any relationship between gender and actual corruption (as opposed to behavior in the lab or survey responses) our paper focuses on highly relevant populations, and looks at the ultimate outcome of interest, the actual abuse of public office for private gain.

There does exist a small literature on gender and government corruption. Some prior work studies whether country-level differences of female representation in government correlate with corruption perception indices (Dollar et al., 2001; Swamy et al., 2001), though these findings have the natural concern of omitted country-level attributes. A second body of work shows that in surveys, women are more likely to express disapproval of bribery and less likely to respond that they had engaged in bribery themselves. Given that the surveys have no payoff consequences, these findings may be explained by social desirability bias, which plausibly differs between men and women.

Finally, two papers look at the corruption of male versus female political leaders exploiting random assignment from quotas in India (Afridi et al., 2017) and quasi-experimental assignment exploiting close elections in Brazil (Brollo and Troiano, 2016). The evidence from India uses the same variation as the classic study of Chattopadhyay and Duflo (2004) based on the requirement in West Bengal that villages have a female leader. This requirement was done at random, rotating among villages with a third treated at a time. In treated villages, survey respondents reported lower corruption. Once again, these findings rely on survey responses; furthermore, the study's design necessarily conflates turnover with gender. Brollo and Troiano (2016) combines data from Brazil's random municipal audits (Ferraz and Finan, 2008) with election results from close mixed-gender races, and reports a lower number of corruption cases for female-led municipalities. However, once one limits the sample to mixed-gender close elections, the sample size is very small (161 observations), and sensitive to the choice of specification.

We bring a number of key contributions to this literature. First, we show that for two large and diverse populations of bureaucrats, there is a far lower rate of observed corruption among women. As with Brollo and Troiano (2016), we use real measures of corruption, which are detailed in the next section, sidestepping at least some concerns of response bias. And in contrast to the sizeable collection of lab experiments, we capture gender differences which combine the effects of selection and any underlying gender difference in values; this combined effect may be most relevant for policy, to understand whether, conditional on reaching a particular position, women behave more or less corruptly than men. The populations we examine are also of note, as they involve very different cultural and political environments, and officials at vastly different positions in their respective hierarchies. While our data were chosen opportunistically as a result of data availability, the fact that we find a clear gender gap in corruption in both datasets suggests that we may be able to generalize from the patterns that we observe to other settings.

It is also important to note the limitations of our analysis upfront. We do not offer any causal identification on whether a randomly selected woman is more dishonest/corrupt than a randomly selected man. As noted previously, however, that may not be the most relevant policy question, since we may be interested in the combined effects of selection and underlying differences.² And in this paper we are unable to comment on why women are less corrupt. We do not, for example, distinguish between underlying preferences for corruption versus opportunities to accept bribes (for example, because women are less connected to networks of exchange, as in Fang and Huang (2017)). The magnitude of our effects suggests, at a minimum, that the topic deserves deeper consideration.

Throughout the rest of the paper we will proceed with two parallel sets of analyses. We describe our Chinese and Italian datasets in Section II and in Section III we provide regression results for both settings. Section IV concludes.

II Data

II.A Data on Chinese prefectural leaders

Our sample of Chinese officials takes the data of Fisman and Wang (2017) as its starting point. This dataset includes the identities and characteristics (based on officials' resumes) of mayors and prefecture-level party secretaries who started their posts during the years 1979-2014. The identities were originally extracted from provincial year-

²The results we report suggest that, all else equal on observables, women may be better suited to tasks that involve a risk of corruption or malfeasance. We would not be the first to reach this conclusion. In 1999 the newly installed Mexico City police chief handed over ticket-writing authority to female officers because, "I trust them" not to take bribes. See, for example, Joseph Treaster, "The World: Equal Opportunity in Mexico City; Counting on Women to Be More Honest Than Men," *The New York Times*, August 15, 1999.

books and the official website of the *People's Daily*, People.cn; additional information on politicians' qualifications and career trajectories was derived from resumes accessed via baike.Baidu.com, which is similar to Wikipedia for China (see Fisman and Wang (2017) for more details). We use the cutoff of 1979 as it is the year of transition from Mao to Deng. The sample includes a total of 3133 officials across 289 prefectures. In addition to information on gender, the data also include information on education and, for approximately 84 percent of officials, their place of birth.

For this sample, we identify politicians that are publicly investigated for corruption. Note that investigation, arrest, and conviction are essentially synonymous in the Chinese context and we use the terms somewhat interchangeably; this is very different from the Italian setting we describe below. The vast majority of the cases in our data were launched under the anti-corruption crackdown of Party Secretary Xi Jinping, which was initiated at the beginning of 2013. Almost our entire sample had already reached the position of mayor or higher by the time the anticorruption campaign was launched. Thus, the officials we study were already quite high up in the hierarchy – with opportunities for bribe extraction. And since the campaign was entirely unanticipated, officials likely felt they could act with greater impunity during most of the period we study.

The list of officials targeted with investigation comes from http://www.ccdi.gov.cn/scdc/, the official website of the Central Commission for Discipline Inspection, China's top anti-corruption authority. Of the 3133 officials in our initial sample, 235 (7.5 percent) have been investigated for corruption. That vast majority of these investigations – 209 of the 235 total – took place under Xi Jinping's anti-corruption campaign. In some specifications we will focus exclusively on these 209 post-2013 investigations as our measure of corruption. Finally, in some specifications we will limit our analysis to the 1878 officials who started a new position as mayor or party secretary 1998 or later. This year is a natural cutoff, as it is the beginning of the 5-year Central Committee term, and because the anticorruption crackdown targeted recently active officials. In practice, 208 of the 209 individuals targeted by Xi's campaign are included in this post-1998 subsample (results are identical if we use an earlier or later cutoff).

In Table 1, Panel A we show summary statistics for the full sample, while panel B provides summary statistics for the set of leaders that held positions starting 1998 or later (and thus were vulnerable to Xi's anti-corruption campaign). As expected, the fraction of women leaders is higher for the more recent sample (5.3 versus 3.8 percent); corruption investigations are also far higher (11.7 versus 7.5 percent) – as noted earlier, all but one of Xi's arrests in our sample are from individuals starting positions 1998 or later.

The Table also provides the differences in means for male versus female leaders (the p-values in the final column are calculated using heteroskedasticity-robust standard

errors). In the full sample, men are more than twice as likely as women to have been arrested (significant at the 10 percent level). However, this may understate the difference, as women are represented at a much higher rate in the post-1998 sample when corruption arrests primarily took place. When we limit the sample to this later period, the male-female gap widens to a three-fold difference (significant at the 5 percent level). It is also of note that in the post-1998 sample men and women are better balanced on other basic observables – in particular age is quite similar in the post-1998 sample; women are still more educated than their male counterparts, which may suggest a higher bar for promotion for women.

II.B Data on Italian Procurement Officials

Our data draw on the same sources as Decarolis et al. (2019), a study of corruption in Italian procurement. These data include all road and building procurement auctions in Italy between 2000 and 2016, with a value of at least €40,000. These data include the identity of the contracting officer overseeing each contract (the "Responsabile Unico del Procedimento", or RUP) and her social security record, from which we can identify gender, municipality of birth and age. Crucially, we are also able to link these individuals to the Sistema D'Indagine Interforze (SDI) archive, which is a primary source of information that police officers and intelligence agencies use to identify potential targets for further investigation. The SDI is managed by Italy's internal intelligence and security agency, AISI, and contains reports of all individuals investigated by any of the Italian police forces: state police (Polizia di Stato), finance police (Guardia di Finanza), military police (Carabinieri), and environmental police (Guardia Forestale).

An entry in the SDI database typically occurs after a police force, based on a preliminary investigation, determines that there is sufficient evidence to open a formal investigation. This investigation might or might not lead to a court case and, if so, to a conviction. Therefore, court cases are a strict subset of the entries in the SDI database. The resulting sample of suspect offenders thus includes individuals that were convicted, acquitted, or never charged. The latter two groups plausibly comprise a large number of offenders whose guilt could not be proven in court. Indeed, corruption cases are generally complex, and convictions relatively rare, particularly in Italy.³ Thus our Italian database is far more conclusive than standard measures of corruption based on convictions. For each RUP in our dataset, AISI searched the SDI database for any investigation in the following crime categories: corruption, malfeasance and embezzlement; abuse of power and undue influence; and violations in public auctions.

³A court case can only be initiated if there is direct proof of a kickback received by an official (either monetary or some other form of benefit such as hiring of a relative.)

The interested reader may consult the data section of Decarolis et al. (2019) for more details on the SDI database.

In Table 2, we show summary statistics for the full sample of analysis as well as a comparison of the characteristics of female versus male RUPs. The first thing to note is that men are almost twice as likely as women to have been investigated. In contrast to what we observed in our Chinese data, here we do note substantial gender differences on a number of characteristics: women are on average 6 years younger, they are more prevalent in the North and they are less likely to be RUP in the same region or same municipality of birth, relative to males. Because of these differences, we will present some saturated specifications that include fixed effects for municipality, year of birth, and number of contracts managed by a RUP in our dataset.

III Results

III.A Evidence from arrests of Chinese prefectural leaders

In this section we study whether gender is correlated with top municipal leaders' arrests for corruption, primarily under Xi Jinping's anticorruption campaign. We employ variants on the following specification:

$$Investigated_i = \beta_1 * Female_i + \beta_2 * EducationControls_i + \gamma_{p(i)} + StartCohort_i + \epsilon_i$$

for politician i, where $\gamma_{p(i)}$ is a set of fixed effects for the province p that the official first appeared as a public official in our data, $StartCohort_i$ is a set of 7 fixed effects for each 5 years starting in 1979 to capture the first date that a politician appears in our dataset, $EducationControls_i$ is a set of indicator variables for bachelor's, master's, and doctoral degrees (no college is the omitted category), and ϵ_i is the error term (we use robust standard errors throughout).

In column (1) we present results including only start year fixed effects, to account for the fact that women are vastly under-represented in the earlier part of the sample when few corruption arrests took place (Table 1 includes the simple difference in means for the full sample). The coefficient of -0.068 (significant at the 1 percent level) indicates that, after accounting for the start date, women are 6.8 percentage points less likely to be arrested for corruption than males who started during the same 5-year period. The

⁴Given that a RUP might hold positions in different municipalities, an observation in our dataset is a RUP-by-procurement authority; in practice, moving across municipalities is relatively rare.

inclusion of province fixed effects in column (2) has no appreciable impact on the estimate; the inclusion of individual controls increases the magnitude of the female effect to -0.078. (The correlation with age is near-mechanical, and results from the fact that more recent cohorts of officials were more likely to have been targeted by Xi's anticorruption campaign.)

In the remaining columns we limit the sample to officials who started a new position as a municipal leader in 1998 or later. As observed earlier, the arrest rate for these newer politicians is much higher (12 percent). In this subsample the coefficient on *Female* increases in magnitude, to -0.091. Given a mean arrest rate among males in this sample of 12.1 percent, our point estimate implies that men are four times more likely to have been arrested than women. In column (4) we add fixed effects for five year age cohorts (based on age in 2018); the point estimate on *Female* is largely unchanged. In Appendix Table A.1 we repeat these analyses focusing on arrests that occurred as part of Xi's post-2013 anti-corruption crackdown. The coefficients on *Female* are essentially unchanged.

III.B Evidence from investigations of Italian procurement officials

We proceed in much the same manner as in the preceding subsection, subject to differences in the data structure and availability of covariates. Most importantly, the dataset on Italian procurement officials is vastly larger than that of the preceding section, and the fact that we observe multiple procurement officials per contracting authority (generally municipalities) means that we may have fine-grained fixed effects to compare the conduct of women and men within a relatively narrow geography (the median municipality has a population of 7000).

Our main specification takes the form:

$$Investigated RUP_i = \beta Female_i + RUPControls_i + PAControls_{pa(i)} + \alpha_{reg(i,t)} + \alpha_{pa(i)} + \varepsilon_i$$

for RUP i working in procurement authority pa(i). The year t captures the year a RUP first appears in our dataset, and in the first column, we provide results that include 340 region-year fixed-effects $\alpha_{reg(i,t)}$ to account non-parametrically for time-varying geographic differences in corruption as well as female representation in procurement positions. The point estimate on Female is -0.036 (significant at the 1 percent level), indicating that female RUPs are about half as likely to be investigated for corruption as their male counterparts. The inclusion of PA and individual RUP controls in columns (2) and (3) reduces the Female coefficient to -0.030 and -0.027 respectively, and adding

PA fixed effects in column (4) further reduces it to -0.021 (still significant at the 1 percent level). The point estimate on age is positive; while on the face of it this appears to contrast with the pattern in China its interpretation here is also straightforward – an older official will have had more time and opportunities to have been investigated for corruption or other crimes. In column (5) we provide a saturated regression that includes fixed effects for birth year and also for number of contracts overseen by i. These further controls do not affect the point estimate on Female. In the final column, we repeat the specification from column (4), limiting the sample to municipalities, which serves to exclude administrations that do not map to a specific local geography such as educational institutions, hospitals, and public companies dealing with the management of motorway sections under concession. The point estimate is very similar to the full sample results.

IV Conclusion

The goal of this paper is straightforward: to document a very sizeable and robust difference in rates of corruption investigations between men and women, for two very different populations of public officials. We cannot, with the data available to us, delve into the underlying reasons for these differences, but the very large effect sizes we document suggest that it is well worthwhile delving into the underlying mechanisms that generate the gender gap in bureaucratic corruption.

As we observe in the introduction, part of the explanation may lie in differences in socialization of men versus women, and resultant differences in probity. We observe, however, that findings in this literature are mixed. Some prior work also argues that even in the presence of gender differences in the population overall, men and women in comparable roles should exhibit similar behaviors; our findings would seem to argue against that view.

There are various candidate explanations – none mutually exclusive from one another – that warrant further study. The most basic explanations are based on gender differences in preferences. Women may have a greater taste for probity, as we emphasized at the outset, or a greater aversion to risk (e.g., Borghans et al. (2009)). Differential enforcement may also play a role. Though we are skeptical that leniency toward female bureaucrats could explain the very large differences we observe. Differential selection may also offer an explanation. It is easier to see how this could play a role in our Italian data, where the position of municipal procurement officer is relatively desirable for women versus men (given their outside options), and thus may attract higher-quality female candidates. We note, however, that earlier work finds no correlation between mental acuity and honesty (Hanna and Wang, 2017), so selection based on quality is not immediately obvious. The

same argument may suggest gender differences in incentives: given their lesser outside opportunities, efficiency wage arguments may explain why women behave more honestly. One challenge to both incentive- and selection-based explanations is the consistent finding across both datasets – the officials we study in China are already high level officials, and if anything incentives for good behavior would be stronger for male city leaders, as they plausibly have stronger chances for promotion. Finally, men may simply have more opportunities for promotion, to the extent that corruption involves favor exchange that requires a network of co-conspirators. If women are less connected to such networks Fang and Huang (2017), they may have fewer opportunities for corruption.

We leave for future work the much larger enterprise of explaining the large gender differences in corruption that we document in this paper.

References

- Afridi, Farzana, Vegard Iversen, and MR Sharan, "Women political leaders, corruption, and learning: Evidence from a large public program in India," *Economic Development and Cultural Change*, 2017, 66 (1), 1–30.
- Borghans, Lex, James J Heckman, Bart HH Golsteyn, and Huub Meijers, "Gender differences in risk aversion and ambiguity aversion," *Journal of the European Economic Association*, 2009, 7 (2-3), 649–658.
- Brollo, Fernanda and Ugo Troiano, "What happens when a woman wins an election? Evidence from close races in Brazil," *Journal of Development Economics*, 2016, 122, 28–45.
- Chattopadhyay, Raghabendra and Esther Duflo, "Women as policy makers: Evidence from a randomized policy experiment in India," *Econometrica*, 2004, 72 (5), 1409–1443.
- **Decarolis, Francesco, Paolo Pinotti, and Silvia Vannutelli**, "Rules, Discretion, and Corruption in Procurement: Evidence from Italian Government Contracting," *Available at SSRN 3533368*, 2019.
- **Dollar, David, Raymond Fisman, and Roberta Gatti**, "Are women really the "fairer" sex? Corruption and women in government," *Journal of Economic Behavior & Organization*, 2001, 46 (4), 423–429.
- Fang, Lily Hua and Sterling Huang, "Gender and connections among Wall Street analysts," The Review of Financial Studies, 2017, 30 (9), 3305–3335.
- **Ferraz, Claudio and Frederico Finan**, "Exposing corrupt politicians: the effects of Brazil's publicly released audits on electoral outcomes," *The Quarterly journal of economics*, 2008, 123 (2), 703–745.
- Ferreira, Fernando and Joseph Gyourko, "Does gender matter for political leadership? The case of US mayors," *Journal of Public Economics*, 2014, 112, 24–39.
- **Fisman, Raymond and Yongxiang Wang**, "The distortionary effects of incentives in government: Evidence from China's" death ceiling" program," *American Economic Journal:* Applied Economics, 2017, 9 (2), 202–18.
- Franke, George R, Deborah F Crown, and Deborah F Spake, "Gender differences in ethical perceptions of business practices: A social role theory perspective.," *Journal of applied psychology*, 1997, 82 (6), 920.
- Hanna, Rema and Shing-Yi Wang, "Dishonesty and selection into public service: Evidence from India," *American Economic Journal: Economic Policy*, 2017, 9 (3), 262–90.

- Jacobsen, Catrine, Toke Reinholt Fosgaard, and David Pascual-Ezama, "Why do we lie? A practical guide to the dishonesty literature," *Journal of Economic Surveys*, 2018, 32 (2), 357–387.
- Kennedy, Jessica A, Laura J Kray, and Gillian Ku, "A social-cognitive approach to understanding gender differences in negotiator ethics: The role of moral identity," *Organizational Behavior and Human Decision Processes*, 2017, 138, 28–44.
- Pande, Rohini and Deanna Ford, "Gender quotas and female leadership," 2012.
- Rosenbaum, Stephen Mark, Stephan Billinger, and Nils Stieglitz, "Let's be honest: A review of experimental evidence of honesty and truth-telling," *Journal of Economic Psychology*, 2014, 45, 181–196.
- Swamy, Anand, Stephen Knack, Young Lee, and Omar Azfar, "Gender and corruption," Journal of development economics, 2001, 64 (1), 25–55.

Table 1: Summary statistics for the Chinese data

	All	Male	Female	Difference	
	(1)	(2)	$\overline{(3)}$	(3)- (2)	
		Panel A: Full Sample			
Female	0.04				
	(0.19)				
Investigated for Corruption	0.08	0.08	0.03	-0.04 **	
	(0.26)	(0.27)	(0.18)	0.011	
Masters	0.32	0.30	0.59	0.29 ***	
	(0.46)	(0.46)	(0.49)	0.000	
Doctor	0.10	0.10	0.12	0.03	
	(0.30)	(0.30)	(0.33)	0.360	
Year of First Appointment	1997.56	1997.34	2003.13	5.80 ***	
	(9.83)	(9.80)	(8.83)	0.000	
Age	56.98	56.85	60.09	3.24 **	
	(27.40)	(27.77)	(15.28)	0.029	
Observations	3133	3013	120	3133	
	Panel B: Started post ≥ 1998				
Female	0.05				
	(0.22)				
Investigated for Corruption	0.12	0.12	0.04	-0.08 ***	
	(0.32)	(0.33)	(0.20)	[0.000]	
Masters	0.48	0.47	0.64	0.17 ***	
	(0.50)	(0.50)	(0.48)	[0.001]	
Doctor	0.16	0.16	0.15	-0.01	
	(0.37)	(0.37)	(0.36)	[0.756]	
Year of First Appointment	2004.11	2004.00	2006.18	2.18 ***	
	(5.90)	(5.90)	(5.59)	[0.000]	
Age	59.59	59.69	57.79	-1.90 *	
	(13.19)	(13.32)	(10.39)	[0.079]	
Observations	1878	1778	100	1878	

Notes: The sample in Panel A is the set of Chinese officials who held the position of prefecture mayor or party secretary duing 1979-2014. In Panel B the sample is limited to individuals who started such a position 1998 or later. Investigated is an indicator variable denoting that the official was investigated for corruption. Year of First Appointment is the year the official first held a position of prefecture mayor or party secretary. See text for further details. Standard deviations in parentheses. P-values in squared brackets. Significance: * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 2: Summary statistics for the Italian data

	All	Male	Female	Difference
	$\overline{\qquad \qquad }(1)$	(2)	$\overline{(3)}$	(3)- (2)
Female	0.18			
	(0.38)			
Investigated	0.08	0.09	0.05	-0.04 ***
	(0.27)	(0.28)	(0.21)	[0.000]
Tot. Auctions managed by RUP	6.50	6.67	5.68	-0.99 ***
	(9.96)	(10.13)	(9.08)	[0.000]
Tot. Auctions managed by PA	233.18	235.00	224.70	-10.30
	(1029.04)	(1039.77)	(977.44)	[0.500]
Tot. RUP in PA	20.97	20.99	20.90	-0.09
	(57.90)	(57.22)	(61.00)	[0.925]
Age RUP (in 2018)	58.29	59.37	53.22	-6.16 ***
	(9.40)	(9.18)	(8.71)	[0.000]
RUP born in same Region	0.85	0.86	0.82	-0.04 ***
	(0.35)	(0.35)	(0.38)	[0.000]
RUP born in same Municipality	0.21	0.22	0.13	-0.09 ***
	(0.40)	(0.42)	(0.34)	[0.000]
Area==North	0.46	0.44	0.56	0.13 ***
	(0.50)	(0.50)	(0.50)	[0.000]
Area==Center	0.19	0.20	0.18	-0.02 ***
	(0.40)	(0.40)	(0.38)	[0.002]
Area==South	0.35	0.37	0.26	-0.11 ***
	(0.48)	(0.48)	(0.44)	[0.000]
Population (log)	9.07	9.08	9.04	-0.04
	(1.89)	(1.89)	(1.91)	[0.207]
Observations	28,826	23,741	5,085	28,8826

Notes: Investigated is an indicator variable equal to 1 if the contracting officer overseeing each contract (the "Responsabile Unico del Procedimento", or RUP) has been investigated for corruption. The sample include the universe of RUP-PA unique pairs. PA stands for procurement authority. See text for further details. Standard deviations in parentheses. P-values in squared brackets. Significance: p < 0.1, p < 0.05, p < 0.01.

Table 3: Probability of Chinese officials' investigation as a function of gender

	Dependent variable: Investigated					
		Full Sample	Started post ≥ 1998			
	(1)	(2)	(3)	(4)	(5)	
Female	-0.069***	-0.067***	-0.081***	-0.095***	-0.088***	
	[0.0175]	[0.0174]	[0.0176]	[0.0212]	[0.0214]	
Doctor			0.058*	0.052	0.035	
			[0.0251]	[0.0275]	[0.0267]	
Masters			0.044**	0.045*	0.033	
			[0.0151]	[0.0187]	[0.0190]	
No Degree			0.003	-0.003	0.013	
			[0.0125]	[0.0275]	[0.0286]	
Age (log)			-0.202**	-0.236		
			[0.0681]	[0.126]		
Age Missing			-0.915**	-1.070*		
			[0.302]	[0.538]		
Province FE	No	Yes	Yes	Yes	Yes	
Start date cohort FE	Yes	Yes	Yes	Yes	Yes	
Age Cohort FE	No	No	No	No	Yes	
Dep. Var. Mean	0.075	0.075	0.075	0.117	0.120	
Observations	3133	3133	3133	1878	1810	
Adjusted R-sq	0.039	0.040	0.053	0.019	0.021	

Notes: The sample in columns (1)-(3) is the set of Chinese officials who held the position of prefecture mayor or party secretary during 1979-2014; in columns (4) and (5) the sample is limited to individuals who started such a position 1998 or later. The outcome in all columns is an indicator variable denoting that the official was investigated for corruption. Please see text for further details. Robust standard errors in parentheses. Significance: *p < 0.1, **p < 0.05, ***p < 0.01.

Table 4: Probability of Italian RUP investigation as a function of gender

	Dependent variable: Investigated						
	(1)	(2)	(3)	(4)	(5)	(6)	
Female	-0.0359*** [0.00456]	-0.0331*** [0.00463]	-0.0272*** [0.00458]	-0.0194*** [0.00523]	-0.0195*** [0.00530]	-0.0207*** [0.00650]	
Age (log)		0.0311*** [0.0116]	0.0720*** [0.0118]	0.0836*** [0.0136]		0.0885*** [0.0175]	
RUP born in same Municipality		$0.000661 \\ [0.00440]$	-0.0123** [0.00484]	-0.0163*** [0.00583]	-0.0171*** [0.00585]	-0.0161*** [0.00609]	
Tot. Auctions managed by RUP (log)			0.0289*** [0.00173]	0.0303*** [0.00189]		0.0335*** [0.00246]	
RegionXYear FE	Yes	Yes	Yes	Yes	Yes	Yes	
PA Controls	No	No	Yes	No	No	No	
RUP Controls	No	Yes	Yes	Yes	Yes	Yes	
PA FE	No	No	No	Yes	Yes	Yes	
Age & N.Contracts FE	No	No	No	No	Yes	No	
Muni only	No	No	No	No	No	Yes	
Dep. Var. Mean	0.0786	0.0786	0.0786	0.0736	0.0737	0.0819	
Observations	28828	28828	28828	24389	24381	17026	
Adjusted R-sq	0.0533	0.0552	0.0761	0.337	0.347	0.364	

Notes:The dependent variable, Investigated is an indicator equal to 1 is the public official in charge of the auction (the RUP) has been investigated. The analysis is conducted on a panel of RUP-PA observations. PA Controls include a set of dummies for the type of PA (Central, Region and other local authority, Hospitals and Universities, Transportations), the total number of auctions done by the PA (in log) during the sample period, the total number of RUPs observed in the PA (in log) during the sample period, and the total number of auctions managed by the RUP (in log). Individual Controls include the age (in log), an indicator for whether the RUPwas born in the same city where she operates as RUP, and a set of dummies for the region of birth of the RUP. Robust standard errors clustered at the RUP level are in parentheses. Significance: p < 0.1, p < 0.05, p < 0.01

A Appendix

Table A.1: Probability of Chinese officials' investigation under the 2013 anticorruption crackdown, as a function of gender

	Dependent variable: Investigated					
		Full Sample	Started post $\geqslant 1998$			
	(1)	(2)	(3)	(4)	(5)	
Female	-0.062***	-0.061***	-0.073***	-0.088***	-0.081***	
	[0.0174]	[0.0173]	[0.0175]	[0.0211]	[0.0213]	
Doctor			0.067***	0.062**	0.047^{*}	
			[0.0243]	[0.0271]	[0.0261]	
Masters			0.050***	0.052***	0.040**	
			[0.0142]	[0.0177]	[0.0179]	
No Degree			-0.001	-0.013	0.001	
			[0.00959]	[0.0242]	[0.0250]	
Age (log)			-0.156**	-0.227*		
			[0.0637]	[0.124]		
Age Missing			-0.697**	-1.018*		
			[0.281]	[0.529]		
Province FE	No	Yes	Yes	Yes	Yes	
Start date cohort FE	Yes	Yes	Yes	Yes	Yes	
Age Cohort FE	No	No	No	No	Yes	
Dep. Var. Mean	0.066	0.066	0.066	0.109	0.113	
Observations	3133	3133	3133	1878	1810	
Adjusted R-sq	0.048	0.049	0.063	0.024	0.025	

Notes: The sample in columns (1)-(3) is the set of Chinese officials who held the position of prefecture mayor or party secretary during 1979-2014; in columns (4) and (5) the sample is limited to individuals who started such a position 1998 or later. The outcome in all columns is an indicator variable denoting that the official was investigated for corruption. Please see text for further details. Robust standard errors in parentheses. Significance: ${}^*p < 0.1, {}^{**}p < 0.05, {}^{***}p < 0.01$.