Gender, Corruption, and Bureaucracy: Experimental Evidence from Ghana*

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Abstract

More women in public institutions is correlated with lower levels of corruption. However, this relationship is thought to be context specific. Furthermore, the mechanism that leads to reduced corruption remains unclear. We conduct two survey experiments to investigate whether and why end-users expect women bureaucrats to be less corrupt in Ghana. Our results show that citizens do not expect women bureaucrats to be less likely to solicit bribes than men. This result holds across bureaucrats with different levels of experience in the public sector and respondents who have and have not paid a bribe. Our second experiment shows that men and women bureaucrats face equal pressure to share their salaries with their extended families. We argue that equality in financial pressures explains why bribe-taking rates may be similar across genders. Our results cast doubt on the idea that women bureaucrats will reduce petty corruption in countries where corruption is pervasive.

Keywords: Corruption, Bribe, Bureaucracy, Gender, Networks.

Word count: 3,141

^{*}We thank Elif Ozdemir and Samuel Kweku Yamoah for their assistance in fielding the survey. Funding for the survey was provided by the Adam Smith Institute. This study was approved under IRB #201708169, by Washington University in St Louis, 15 September 2017.

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One in four service users pays bribes each year globally, with higher rates among the poor (Fried, Lagunes and Venkataramani, 2010) and urbanites (Pring, 2017; Seligson, 2006). Some policymakers believe that increasing women's representation in bureaucracies is key to combating bribery. Prior studies suggest that women have inherent or socially induced traits that make them more law-abiding than men and thus less likely to condone or engage in corruption (Dollar, Fisman and Gatti, 2001; Esarey and Schwindt-Bayer, 2018). Women's lower rates of involvement in corruption may also result from relatively fewer opportunities to join existing networks (Goetz, 2007; Bjarnegård, 2013), or be an artifact of gender stereotypes that characterize women as more honest and trustworthy (Barnes and Beaulieu, 2014).

However, it remains unclear whether increased women's representation – beneficial for other reasons – will lower rates of petty corruption in the contexts where such a reduction would be most beneficial. Indeed, observational evidence suggests that the protective role of women officials, whether as politicians (Bauhr, Charron and Wängnerud, 2019; Dollar, Fisman and Gatti, 2001; Esarey and Schwindt-Bayer, 2018) or bureaucrats (Alhassan-Alolo, 2007; Swamy et al., 2001) is confined to high-income democracies (Sung, 2003). Despite the importance of understanding the relationship between gender and corruption, we have little experimental evidence on this topic in developing countries, especially outside of a laboratory setting. Furthermore, the mechanism that drives the relationship between gender and corruption within bureaucracies continues to be unclear.

Our study has two main goals. First, we assess the claim that women bureaucrats are expected to be *less likely* to extract bribes than their male counterparts. We do so in the context of Ghana, where corruption is understudied despite being a central obstacle to development (Gyimah-Boadi, 2015). Second, we investigate potential mechanisms that may explain a relationship (positive or negative) between gender and corruption. We focus on three mechanisms: (1) women have inherent or socially induced traits that make them less corrupt, (2) women are less corrupt because they have fewer opportunities to engage in corruption, and (3) women are less corrupt because they face less external financial pressure to support their extended families or kinship groups. So-

cial pressure to donate to group members is a well-established source of bureaucratic corruption in developing countries (Ekeh, 1975; Price, 1975).

We embedded two original studies – an audio experiment and a vignette experiment – into a survey of citizens in Ghana. Ghana has high rates of petty corruption, and society is maledominated (Pring and Vrushi, 2019; Conceição et al., 2019). To measure corruption, we rely on end-users' expectations of bureaucrats' behavior. As our data shows, these perceptions are often based on respondents' personal experience with bribes. We discuss our measurement approach in detail below.

In the audio experiment, respondents heard an exchange between a service user renewing their driving license and a bureaucrat. We randomized the gender of the bureaucrat and the length of time they have worked in the public sector. Varying the gender of the bureaucrat allows us to assess the hypothesis that women bureaucrats are perceived as less corrupt than male bureaucrats. Varying the length of time the bureaucrat has worked at the driving license office allows us to assess the role of opportunities on corruption. We use time in office to proxy for potential opportunities to join corrupt internal networks. Finally, we use a vignette experiment to assess the role of gendered financial expectations. Varying the gender of bureaucrats, we ask respondents what share of the public official's monthly salary they would expect them to donate to their extended family.

We find no overall differences in respondents' expectations regarding men versus women bureaucrats. We also find no evidence that respondents expect men or women bureaucrats who have worked longer in the public sector to be more likely to solicit a bribe. These results hold for the full sample and for the subset of respondents who have direct experience paying bribes. The results from our second experiment reveal no gender differences in financial expectations. We use these results to explain the null findings in the audio experiment. We argue that a key explanation for why women bureaucrats might be likely to solicit bribes at the same rates as men is because they face the same level of external pressure to contribute to their extended families.

Our results make two significant contributions to the study of corruption. First, we join a

handful of studies that employ experimental methods to study petty corruption. This literature has assessed which citizen attributes or behaviors make them more likely to become victims of bribery (Fried, Lagunes and Venkataramani, 2010; Robinson and Seim, 2018), as well as characteristics of the bribe (Klašnja, Lupu and Tucker, 2020) and bribe environment (Armantier and Boly, 2011). To our knowledge, our study is the first to manipulate bureaucrats' characteristics to assess bribe solicitation experimentally. Second, our focus on mechanisms contributes to the study of gender and corruption. We explain the symmetry in bribe solicitation rates between men and women with reference to the equality in the social pressures faced by bureaucrats.

Theory: gender and corruption

The presence of more women in public office has been associated with lower levels of corruption (Bauhr, Charron and Wängnerud, 2019; Dollar, Fisman and Gatti, 2001; Swamy et al., 2001), particularly in high-accountability contexts (Esarey and Schwindt-Bayer, 2018). This relationship is not explained by social and economic development, civic freedom, ethnic fractionalization, or education levels. Two dominant explanations for this relationship are gender differences in risk aversion and access to corruption networks.

Behavioral research shows that women tend to be more risk averse than men (Croson and Gneezy, 2009; Eckel and Grossman, 2008; Seguino, Stevens and Lutz, 1996). Accordingly, women officials may be less likely to engage in corruption due to the risks of being caught or punished (Esarey and Schwindt-Bayer, 2018). Consistent with this argument, Rivas (2013) shows that female laboratory subjects who play the role of a public official are less likely to accept bribes than their male counterparts. Considering perceptions, Barnes and Beaulieu (2019) find that voters perceive women politicians as more risk averse. Further, Barnes, Beaulieu and Saxton (2018) show that respondents who are told that women are more risk averse believe that hiring more women in the public sector will reduce corruption.

Differential risk-aversion implies a causal effect between gender and misconduct in public

office. To assess the extent to which gender alone determines public officials' behavior and related perceptions of citizens, our first hypothesis is that *women bureaucrats are expected to be less corrupt than male bureaucrats* (H1).

The negative relationship between women participation and corruption has also been explained by opportunities: differential access to corrupt networks (Alhassan-Alolo, 2007; Bauhr and Charron, 2021; Bjarnegård, 2013; Goetz, 2007). Joining or developing a network of accomplices takes time, and there is evidence that public officials become more corrupt the longer they spend in office (Klašnja, 2015). Because women often constitute a minority in public institutions, they may find it challenging to penetrate established corrupt systems. If gender mediates opportunities for corruption, then women, on average, will engage in fewer corrupt practices than men (Goetz, 2007). This argument implies that voters perceive more experienced public officials—those with greater exposure to corrupt networks—as more likely to engage in corruption, relative to newcomers. However, it could be the case that to engage in petty corruption bureaucrats do not rely on network membership, especially in contexts of endemic corruption (Esarey and Schwindt-Bayer, 2018). In this case, we may not see a relationship between experience and corruption. To assess the role of opportunities, we hypothesize that *experienced bureaucrats will be expected to be more corrupt than their less experienced counterparts* (H2).

A less explored mechanism that may also explain a negative relationship between women bureaucratic presence and corruption is differential pressures that men and women face to provide for their kinship groups. Well-educated members of kinship groups often experience positive and negative social pressures to supply benefits – often financial – to group members (Ekeh, 1975; Price, 1975). Bureaucrats who provide financial assistance often enjoy increased prestige within the group (Bates, 1974), while those who do not may be socially ostracized. Social expectations exert significant pressures on bureaucrats (Alhassan-Alolo, 2007).

If group pressures incentivize corruption, then any difference between genders in the extent of social pressure may also affect individual bureaucrats' propensity to engage in corrupt practices. For example, in male-dominant societies, male civil servants may face more pressure to distribute

more or higher-value benefits than their female counterparts. If this is the case, voters may expect men to be more corrupt than women in the same position. To test this mechanism, our third hypothesis is that *voters expect men bureaucrats to face greater financial pressure to provide for kinship groups than women bureaucrats* (H3).

Gender, corruption, and bureaucracy in Ghana

To examine the impact of bureaucrats' gender on perceptions of petty corruption, we conduct two survey experiments in Ghana. Like in many lower-income countries, both grand and petty corruption remains endemic. Ghanaians' main experiences with corruption occur through their everyday interactions with civil servants. Ghana ranks above the continental average in terms of the share of citizens who pay bribes: one-third of citizens paid a bribe to access public services in 2019 (Pring and Vrushi, 2019). Petty corruption remains high in Ghana partly because of its unreliable administration of public services (Gyimah-Boadi, 2008). In this study, we focus on citizens being asked for bribes when renewing a driving license. Agencies that issue IDs and police departments are the two most corrupt public sector organizations in the country (Pring and Vrushi, 2019).

Sample, Measurement and Experimental Design

To test our hypotheses, we constructed a random sample of 1,268 citizens and conducted a face-to-face survey in three southern regions of Ghana: Greater Accra, Central, and Eastern. We stratified districts to ensure a mix of respondents living in urban and rural communities. Within districts, we randomly sampled polling stations (N=139), from which we began a random-walk strategy to identify households before randomly selecting respondents. Our sample is representative of the sampled regions and broadly representative of the country. Randomization was performed by the survey software. The balance tests in Appendix Section 2 demonstrate that the randomization

¹Appendix Section 1 describes our sampling procedure and provides details on the representativeness of the sample.

process was successful.

Audio experiment: officials' gender, experience, and bribery

In the audio experiment, we manipulated two variables. First, we varied the gender of the public official. Second, we randomized the bureaucrat's years of experience. The result is a 2×2 full factorial design. We cued the bureaucrat's gender through their name and voice. To signal experience, we indicated how long they had worked at the institution. High-experience bureaucrats said they had worked in the agency for 12 years.² This information was included in a 40-second conversation between a civil servant working at the country's driving license authority and a citizen renewing their driving license. Respondents heard the conversation in their preferred language: English or Akan.³ Respondents wore headphones to reduce potential response bias.

The audio design has three advantages relative to more conventional text-based survey experiments. First, it allowed us to more accurately recreate the type of interactions that usually take place in public agencies, using separate voices for the citizen and the bureaucrat providing the service. Second, the audio intervention facilitates comprehension, relative to text(Vadas et al., 2006). This is particularly relevant in settings where literacy rates are relatively lower. Third, the audio provides a more unobtrusive method to cue the bureaucrat's gender, reducing the risks of social desirability bias or demand effects.

Measuring corruption

We measure bureaucratic engagement in petty corruption using responses from citizens – end users of public services. Specifically, after listening to the audio, enumerators asked respondents how likely they thought it was that the civil servant would solicit a bribe. Responses were recorded on a 7-point Likert scale. Our measurement approach relies on citizens being reliable

²The control group did not hear information about the bureaucrat's length of service; this gave us a clean baseline to compare with the "high" category. Our design is a reliable test of H2 as long as we assume that, on average, respondents exposed to the baseline category think the bureaucrat has spent fewer years working in the public sector than those exposed to the high-experience category.

³Akan is the dominant local language in the regions we study.

sources of information on bureaucratic bribe taking. Citizen surveys are widely used to measure corruption and can provide a more objective measure of corruption compared to expert-based perceptions (Treisman, 2007).⁴ Citizens are particularly well suited to measuring petty corruption because of their direct experiences paying bribes. Our survey shows that one third of our respondents had paid a bribe in the last year.⁵

Alternative ways to measure corruption include using bureaucrats' self-reports or secretly recording bureaucrats while they work. These two methods present methodological and ethical challenges. Considering the former, corruption has been shown to be a sensitive topic and subject to under-reporting (Agerberg, 2020). Bureaucrats have strong incentives to deny individual engagement with corruption. Our concern was that response bias might be gendered, which would invalidate the measure. In turn, secret recordings may risk bureaucrats losing their jobs. To avoid these issues, we use direct questions of end-users, and take steps to reduce response bias.

Vignette experiment: gender and financial pressures on bureaucrats

In the vignette experiment, we randomly varied the bureaucrat's gender and asked respondents how much of the public servant's monthly salary they should give to their extended family each month. The vignettes included identical information across the two treatment conditions regarding experience in office, salary, and a description of current tasks. To mirror the audio experience, in all cases, the bureaucrat worked at the driving license office. After reading the vignette, we asked respondents what contribution they thought was reasonable. We convert this amount into the share of the civil servant's monthly salary.

⁴Citizen perceptions have also been shown to explain a significant proportion of the variation in three leading corruption measures (CPI, WGI and ICRG) (Charron, 2016).

⁵Citizen perceptions may be less accurate in estimating less observable forms of middle- and low-level corruption. For example, while Olken (2009) finds that citizens' perceptions of corruption are correlated with actual corruption in road projects, citizens were unable to detect corruption via inflated quantities of materials.

Results

The first hypothesis predicts that women bureaucrats are perceived as less corrupt than men. The top estimate in Figure 1 shows the average treatment effect of the bureaucrat's gender in the audio experiment.⁶ The results do not provide evidence that citizens expect female bureaucrats to behave differently from their male counterparts. Although the results show that women bureaucrats are expected to be slightly less likely than men to solicit a bribe, the difference is substantively small and indistinguishable from zero (-0.12 on a seven point scale; s.e. = 0.09).⁷ In short, our data shows that citizens expect similar behavior from men and women bureaucrats. We re-estimate this effect among respondents with direct experience of paying bribes. Respondents who recently paid a bribe may be more likely to base responses on actual experiences and to rely less on any gender stereotypes. One-third of survey respondents (33.1%) reported having previously paid a bribe in exchange for a public service.⁸ Our results are robust to this analysis.⁹

To assess our second hypothesis, we first pool the treatment conditions by level of experience in office, irrespective of gender. The causal effect of experience is shown in the bottom estimate in Figure 1. According to the opportunities hypothesis, officials who have been in office longer should be perceived to be more likely to engage in corruption. On average, respondents perceive bureaucrats with high experience levels (12 years) to be slightly more likely to solicit a bribe than less experienced bureaucrats. However, this difference is substantively small and indistinguishable from zero (0.14; p-value = 0.13).

We also assess the second hypothesis by comparing perceived rates of corruption between women and men with average levels of experience and high levels of experience. Figure 2 displays these results. We do not find evidence that women with less experience in the public sector are less likely to take bribes than similarly placed men (difference in means = -0.07; s.e. = 0.14). Likewise, we find no evidence that experienced male bureaucrats are more likely to take bribes

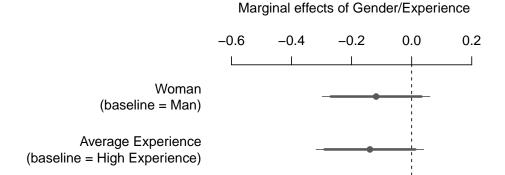
⁶Estimates obtained from simple linear regressions. See Appendix Section 3 for corresponding regression table.

⁷This corresponds to a 2.0% change in the outcome, relative to the sample mean (-0.12/5.9 = 0.02).

⁸This figure is similar to the results reported in the Afrobarometer (34.7%.

⁹See Appendix Section 4.

Figure 1: The causal effects of (a) gender and (b) years of experience on petty corruption



Note: Points are estimates of the average treatment effect of official's gender (top) and experience (bottom) on the perceived likelihood that the bureaucrat will ask for a bribe according. Wider/thinner bars are 90/95% confidence intervals from linear regressions, with each treatment as the predictor.

than experienced female bureaucrats (difference in means = -0.16; s.e. = 0.13). Overall, these result suggests that women are just as able as men to navigate corrupt networks, and suggest that it does not take bureaucrats of either gender too long to do so.¹⁰ Again, our results are robust to subsetting to respondents with direct experience with petty corruption.¹¹

Results from the vignette experiment

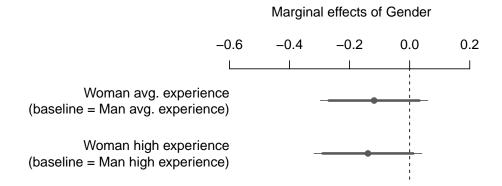
The final mechanism we assess is whether men bureaucrats face higher financial pressure to provide for kinship groups than women bureaucrats. The results show that our respondents expect street-level bureaucrats to pay a significant share (22.4%) of their monthly salary to family members. Furthermore, our results reveal that the financial expectations are similar for men and women bureaucrats (23.1%) and 21.7%, respectively); the difference of 1.4 percentage points (s.e. = 1.1) is not statistically significant at conventional levels.

The findings from the vignette experiment have two important implications. First, they suggest that bureaucrats face pressure to redistribute a significant share of their salaries to their kinship networks. Given that many bureaucrats in Ghana do not feel that their salary is adequate

¹⁰We do find a statistically significant difference between experienced men and less experienced women. The difference-in-means is 0.25 and represents a 4.3% change in the outcome variable relative to its mean. This effect size is substantively small.

¹¹See Appendix Section 4.

Figure 2: The causal effects of gender among bureaucrats with different levels of experience



Note: Points are estimates of the average treatment effect of gender when officials have average experience (top) and 25 years of experience (bottom) on the perceived likelihood that the bureaucrat will ask for a bribe according. Wider/thinner bars are 90/95% confidence intervals from linear regressions, with each treatment as the predictor. Table OA.6 presents the full model results.

and take out loans to cover their living costs (Luna, 2019), this represents an incentive to solicit bribes. Second, the findings reveal an important mechanism to explain why women and men bureaucrats behave similarly: they face equal pressures to provide for their kin.

Conclusion

Prior studies reveal a negative correlation between the presence of women in public agencies and corruption (Dollar, Fisman and Gatti, 2001; Swamy et al., 2001). These findings inspired several policy initiatives around the world. Our results suggest that in a context of endemic corruption men and women bureaucrats may be equally corrupt. Thus, while efforts to recruit women to public office are essential for numerous reasons (e.g., O'Brien and Rickne, 2016), recruiting additional women into the public sector may do little to reduce everyday graft.

We propose two potentially important scope conditions to our findings. First, our results may be confined to contexts where petty corruption is routine and civil servants are unlikely to be punished for it. In such contexts, corruption bears minimal risks to the perpetrator, which makes gender differences in risk aversion less relevant. This is consistent with evidence from Latin America where citizens expect men and women politicians to be equally corrupt (Le Foulon and

Reyes-Housholder, 2021; Schwindt-Bayer, Esarey and Schumacher, 2018). The expectation that women officials – either politicians or bureaucrats – are less corrupt than men may be confined to richer democracies (Barnes and Beaulieu, 2014, 2019). Along these lines, prior work on gender and corruption among politicians shows that women legislators reduce corruption, and are used by executives as anti-corruption symbols, only in high-accountability environments (Esarey and Schwindt-Bayer, 2018; Armstrong et al., 2022).

Second, our results suggest that men and women bureaucrats face similar expectations to financially support their extended families. This mechanism may operate differently in more culturally conservative societies where women are expected to contribute less to the family budget. In these contexts, women bureaucrats may feel less pressure to engage in petty corruption.

Our experimental designs have the advantage of estimating the effect of gender on petty corruption while minimizing social desirability bias. Similar experimental methods can easily be adapted to other contexts. Future studies can use this approach to assess whether our results travel to different settings or across types of public officials.

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Online Appendix (Supporting Information) for "Gender, Corruption, and Bureaucracy: Experimental Evidence from Ghana"

Contents

1	Survey Descriptives	2
2	Balance Tests	4
3	Supporting Analyses	5
4	Robustness Checks	7

1 Survey Descriptives

Table OA.1 displays the distribution of districts across regions within each category. We randomly sample one district from each of the nine categories. In the case of the Greater Accra region, where only one district is rural, we sample this district. Table OA.2 displays the nine districts in the sample. Finally, Table OA.3 describes the demographic characteristics of the sample.

Table OA.1: Distribution of districts within regions

	Rural	Peri-urban	Urban
Greater Accra	1	3	6
Central	3	10	4
Eastern	8	11	2

Notes: Urban districts are those in which over 70 percent of the population lives in communities defined as urban. Rural districts are those in which less than 32 percent of the population lives in communities defined as urban. Peri-urban districts are those inbetween. Source: Ghana 2010 Population and Housing Census, accessed on IPUMS International.

Table OA.2: Sampled districts within regions

	Rural	Peri-urban	Urban
Greater Accra	Dangme East	Ga West	Ashiaman
Central	Upper Denkyira West	Assin North	Effutu
Eastern	Kwahu North	East Akim	Lower Manya Krobo

Table OA.3: Demographic characteristics of survey respondents, by region

		Regions		
	All	Central Ghana	Eastern Ghana	Greater Accra
Age (years)	36.7	37.7	37.8	34.9
Female (%)	50.2	49.9	50.4	50.4
Primary completed or higher (%)	73.3	69.8	76.0	73.8
Married (%)	58.8	64.6	62.6	50.2
Christian (%)	89.8	91.8	92.9	85.4
Main ethnic groups (%)				
Akan	25.8	44.6	22.3	12.9
Ewe	14.1	4.4	21.8	15.7
Ga-Dangme	7.0	1.0	7.3	11.9
Northern	3.6	1.5	2.1	6.7

Note: Entries are percentages or average values for the 1,412 respondents.

2 Balance Tests

Table OA.4 provides a series of covariate balance tests. The results suggest that the randomization worked properly on these relevant observables. The likelihood ratio tests reported in the bottom panel show that including all seven covariates as predictors of treatment assignment does not improve fit relative to a null model.

Table OA.4: Covariate balance across treatment groups

	Male	Female	Male	Female	
	↑ Experience	↑ Experience	Av. Experience	Av. Experience	<i>p</i> -value
Age (years)	37.6	36.5	35.5	37.2	0.25
Female (%)	55.1	44.1	51.2	50.6	0.05
Primary $+$ (%)	72.3	75.5	71.0	74.2	0.59
Married (%)	59.7	56.2	57.4	61.6	0.52
Christian (%)	86.8	90.4	92.1	90.3	0.16
Greater Accra (%)	37.5	39.8	33.7	33.3	0.26
Akan (%)	34.5	40.1	38.9	40.6	0.40
Likelihood Ratio Tests	:				
Male - Female bureau	ıcrat	$\chi^2(7) = 7.8$	$Pr(>\chi^2) = 0.35$	5	
High Experience - Av	. Experience	$\chi^2(7) = 7.7$	$Pr(>\chi^2) = 0.36$		

Note: Entries in the top panel are means of covariates across treatment conditions and p-values correspond to F tests of difference in means. The model fit of logistic regressions with treatment assignments as a function of all covariates was compared with the respective null model. The likelihood ratio tests described in the bottom panel do not reject the null models.

Supporting Analyses 3

Table OA.5: The effects of (1) gender and (2) experience on petty corruption. Complement to Figure 1

	Likelihood of asking bribe	
	(1)	(2)
Female bureaucrat	-0.118	
	(0.091)	
Average experience		-0.139
-		(0.091)
Constant	5.981	5.989
	(0.065)	(0.064)
Observations	1,268	1,268
\mathbb{R}^2	0.001	0.002
Adjusted R ²	0.001	0.001
Residual Std. Error (df = 1266)	1.629	1.628
F Statistic (df = 1; 1266)	1.675	2.307
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table OA.6: The effects of gender and experience on petty corruption. Complement to Figure 2 $\,$

	Likelihood of asking bribe		
	(1)	(2)	
Female bureaucrat with average experience	-0.067		
	(0.136)		
Female bureaucrat with high experience		-0.164	
		(0.122)	
Constant	5.884	6.071	
	(0.098)	(0.086)	
Observations	621	647	
\mathbb{R}^2	0.0004	0.003	
Adjusted R ²	-0.001	0.001	
Residual Std. Error	1.700 (df = 619)	1.556 (df = 645)	
F Statistic	0.240 (df = 1; 619)	1.794 (df = 1; 645)	
Note:	*p<0.1; **p<0.05; ***p<0.01		

6

4 Robustness Checks

Table OA.7: The effects of (1) gender and (2) experience on petty corruption. Subset to respondents with direct petty corruption experience

	Likelihood of asking bribe	
	(1)	(2)
Female bureaucrat	-0.150	
	(0.135)	
Female bureaucrat with high experience		0.078
		(0.135)
Constant	6.278	6.167
	(0.094)	(0.094)
Observations	420	420
\mathbb{R}^2	0.003	0.001
Adjusted R ²	0.001	-0.002
Residual Std. Error ($df = 418$)	1.383	1.385
F Statistic (df = 1; 418)	1.239	0.336
Note:	*p<0.1; **p	<0.05; ***p<0.0

Table OA.8: The effects of gender and experience on petty corruption. Subset to respondents with direct petty corruption experience

	Likelihood of asking bribe		
	(1)	(2)	
Female bureaucrat with average experience	-0.245		
	(0.182)		
Female bureaucrat with high experience		-0.062	
		(0.199)	
Constant	6.365	6.196	
	(0.128)	(0.138)	
Observations	204	216	
\mathbb{R}^2	0.009	0.0005	
Adjusted R ²	0.004	-0.004	
Residual Std. Error	1.302 (df = 202)	1.459 (df = 214)	
F Statistic	1.810 (df = 1; 202)	0.097 (df = 1; 214)	
Note:	*p<0.1; **p<0.05; ***p<0.01		