Supplementary Appendix

Gender Stereotypes and Petty Corruption among Street-level Bureaucrats: Evidence from a Conjoint Experiment

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Appendix A: Sample Design

Between July 13 and August 29, 2021, we commissioned Offerwise, a marketing company with ample experience in Latin America, to conduct an online survey experiment in Paraguay. Offerwise has a dedicated consumer panel in Paraguay, which it has established and maintained through social media and TV advertisements. It sent out 6,556 invitations via email to individuals in Paraguay aged 18 or older. The invitations provided information about the survey's duration and the number of points respondents could earn, which could later be converted into local currency. A total of 4,042 individuals responded to the invitations, and 3,107 successfully completed the survey. Upon giving their consent, respondents were directed to an online survey; they answered demographics and public opinion questions before participating in our conjoint experiment. This study did not involve any deception, and the identities of all participants were kept confidential. All research procedures received thorough review and approval from the Institutional Review Boards of the authors' institutions.

Appendix B: Survey Sample Representativeness

Table A1 presents a comparison between the sample and population distributions based on available data related to age, gender, and education. We assess the representativeness of our sample by comparing it to two population benchmarks: the nationally representative in-person sample of the 2018 Paraguayan Household Survey (2018 *Encuesta Permanente de Hogares*, EPH) and the nationally representative survey conducted via telephone as part of the 2021 AmericasBarometer (2021 Latin American Public Opinion Project, LAPOP).

The gender composition of our sample closely resembles that of the national population. However, our respondents were slightly younger than those in the 2018 EPH and 2021 LAPOP surveys. The most significant disparity between our sample and the national population is in education: our sample overrepresents individuals with a secondary education or higher and underrepresents those with only a primary education.

Table A1. Comparison of Sample and Population Distributions: Age, Sex, and Education

Demographic	Subgroup	EPH	LAPOP	Sample
Age	18–24 years	0.20	0.22	0.39
	25–34 years	0.23	0.24	0.36
	35–44 years	0.21	0.19	0.16
	45–54 years	0.15	0.15	0.06
	55 years and over	0.21	0.19	0.02
Sex	Female	0.50	0.50	0.50
	Male	0.50	0.50	0.50
Education	None	0.01	0.03	0.00
	Primary	0.41	0.31	0.06
	Secondary	0.33	0.46	0.48
	Post-secondary or more	0.25	0.20	0.46

Appendix C: Conjoint Attributes

Table A2. List of public officials' attributes

Attributes	Values
Speed Corruption	Has NOT received bribes to speed up the processing of documents. Has received bribes to speed up the processing of documents.
Theft Corruption	Has NOT diverted public funds to his/her bank account. Has diverted public funds to his/her bank account.
Gender	Man Woman
Party ID	Partido Colorado Partido Liberal Radical Auténtico No party affiliation
Age	30 years old 40 years old 50 years old
Education	Primary education Secondary education College education

Appendix D: Full Results

Tables A2–A4 report the full results (point estimates, standard errors, and 95% confidence intervals) for the average marginal component effect (AMCE) estimations displayed in Figure 1 in the main manuscript.

Table A3. AMCE for Men Bureaucrats

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.19	0.01	-0.21	-0.18
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.31	0.01	-0.33	-0.29
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.07	0.01	-0.08	-0.05
Partisanship	Colorado Party	-0.06	0.01	-0.08	-0.05
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	0.02	0.01	0.00	0.04
Age	50 years old	0.02	0.01	0.00	0.04
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.05	0.01	0.03	0.07
Education	College education	0.10	0.01	0.08	0.11

Note: 31,070 profiles.

Table A4. AMCE for Women Bureaucrats

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.19	0.01	-0.20	-0.17
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.31	0.01	-0.33	-0.29
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.07	0.01	-0.09	-0.05
Partisanship	Colorado Party	-0.06	0.01	-0.07	-0.04
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	0.01	0.01	0.00	0.03
Age	50 years old	0.03	0.01	0.02	0.05
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.06	0.01	0.04	0.07
Education	College education	0.10	0.01	0.08	0.12

Note: 31,070 profiles.

Table A5. AMCE for difference men-women bureaucrats

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Age	40 years old	-0.01	0.01	-0.04	0.01
Age	50 years old	0.01	0.01	-0.02	0.03
Education	College education	0.00	0.01	-0.03	0.02
Education	Secondary education	0.00	0.01	-0.03	0.02
Partisanship	Colorado Party	-0.01	0.01	-0.03	0.02
Partisanship	Liberal Radical Auténtico Party	0.00	0.01	-0.02	0.03
Speed corruption	Has received bribes	0.00	0.01	-0.02	0.02
Theft corruption	Has diverted public funds	0.00	0.01	-0.02	0.02

Note: 31,070 profiles.

Appendix E: Conjoint Diagnostics

As a diagnostic, we used a covariate as the outcome as evidence of the randomization of attributes. Table A5 shows that no attribute predicts the gender of the respondents (binary indicator of self-identified as female).

<div align="center">Table A6. Balance Test (Respondent's Gender as the outcome)</div>

	Outcome
	Age
Speed corruption: Has received bribes	-0.001
	(0.049)
Theft corruption: Has diverted public funds	-0.088
	(0.050)
Gender: Woman	-0.033
	(0.051)
Partisanship: Radical Auténtico Party	0.076
	(0.073)
Partisanship: Colorado Party	0.066
	(0.059)
Age: 40 years old	0.065
	(0.070)
Age: 50 years old	0.025
	(0.061)
Education: Secondary education	0.005
	(0.072)
Education: College education	0.061
	(0.059)
Note:	$^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$
31,070 profiles.	

Appendix F: Representative Matching

As mentioned in Appendix A, our sample differs from recent nationally representative samples, specifically in education. To mitigate this disparity, we employ a matching approach that allows us to generate a matched sample that resembles our target population on key observed characteristics. We use the nationally representative household survey conducted in 2018 as a benchmark for this matching process. The matched sample we generate therefore closely resembles this nationally representative sample.

Since 50% of the respondents to the 2018 household survey were women, matching on gender produces a gender-equal matched sample. Additionally, we constrain the balance procedure, so the matched sample looks like the nationally representative survey (i.e., the benchmark) on education and age, too.

As illustrated in Table A6, in the nationally representative sample, 25% of the respondents have beyond a high school education and 50% are women, and the average age is 28. In the matched sample, 27% of the respondents have more than a high school education and 50% are women, and the average age is 27. The matched sample thus resembles the benchmark on three key characteristics: age, gender, and education.

Table A7. Covariate Balance after Representative Matching

Covariate	Mean representative sample	Mean matched sample
Education	0.25	0.27
Women	0.5	0.5
Age	28	27

Note: Before matching: 31,070 observations. After matching: 23,384

Figure A1 replicates the analysis presented in Figure 1 utilizing this matched sample. The main results remain consistent. Bureaucrats' gender is not a significant factor in explaining preferences related to theft or speed corruption.
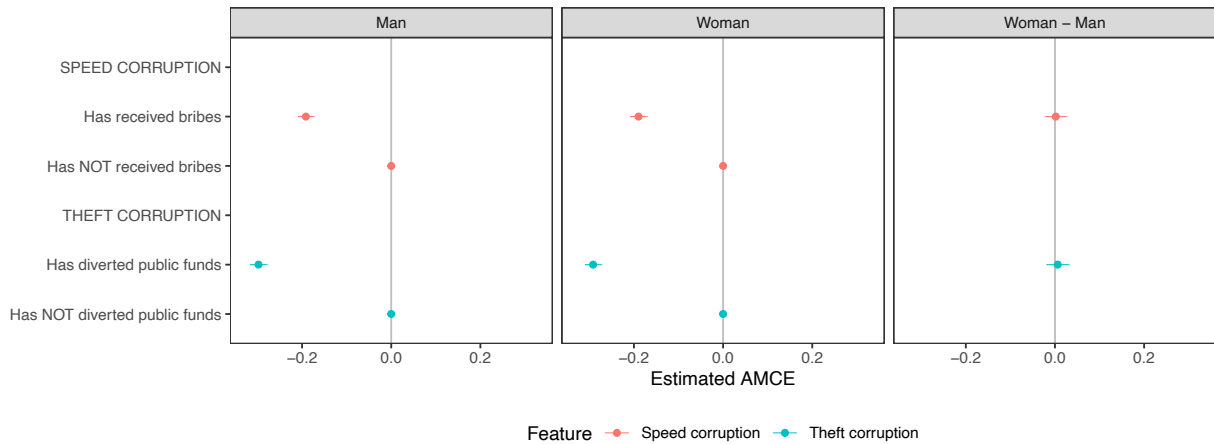
Figure A1: Citizens' evaluation of speed and theft corruption by bureaucrat gender using a matched sample. 23,384 profiles. Full results in table format available in Table A7-A9.

Tables A7–A9 report the full results (point estimates, standard errors, and 95% confidence intervals) for the average marginal component effect (AMCE) estimations displayed in Figure A1 in the appendix.

Table A8. AMCE for Men Bureaucrats (matched sample)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.19	0.01	-0.21	-0.17
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.30	0.01	-0.32	-0.28
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.06	0.01	-0.08	-0.04
Partisanship	Colorado Party	-0.06	0.01	-0.08	-0.05
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	0.00	0.01	-0.03	0.02
Age	50 years old	-0.03	0.01	-0.05	-0.01
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.06	0.01	0.03	0.08
Education	College education	0.10	0.01	0.08	0.12

Note: 23,384 profiles.

Table A9. AMCE for Women Bureaucrats (matched sample)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.19	0.01	-0.21	-0.17
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.29	0.01	-0.31	-0.27
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.06	0.01	-0.08	-0.04
Partisanship	Colorado Party	-0.06	0.01	-0.08	-0.04
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	-0.02	0.01	-0.04	0.00
Age	50 years old	-0.04	0.01	-0.06	-0.02
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.06	0.01	0.04	0.08
Education	College education	0.10	0.01	0.08	0.11

Note: 23,384 profiles.

Table A10. AMCE for difference women-men bureaucrats (matched sample)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Age	40 years old	-0.01	0.02	-0.05	0.02
Age	50 years old	-0.01	0.01	-0.03	0.02
Education	College education	0.00	0.01	-0.03	0.03
Education	Secondary education	0.00	0.02	-0.03	0.03
Partisanship	Colorado Party	0.01	0.01	-0.02	0.04
Partisanship	Liberal Radical Auténtico Party	0.00	0.02	-0.03	0.03
Speed corruption	Has received bribes	0.00	0.01	-0.02	0.03
Theft corruption	Has diverted public funds	0.01	0.01	-0.02	0.03

Note: 23,384 profiles.

Appendix G: Differences by Respondents' Gender

To determine whether women and men respondents evaluate women and men bureaucrats differently, Figure A2 summarizes the AMCE of the attributes of interest on two subsets: women and men respondents. The results show almost identical preferences in both subsets, which illustrates that participants' gender does not affect their evaluation of public officials.
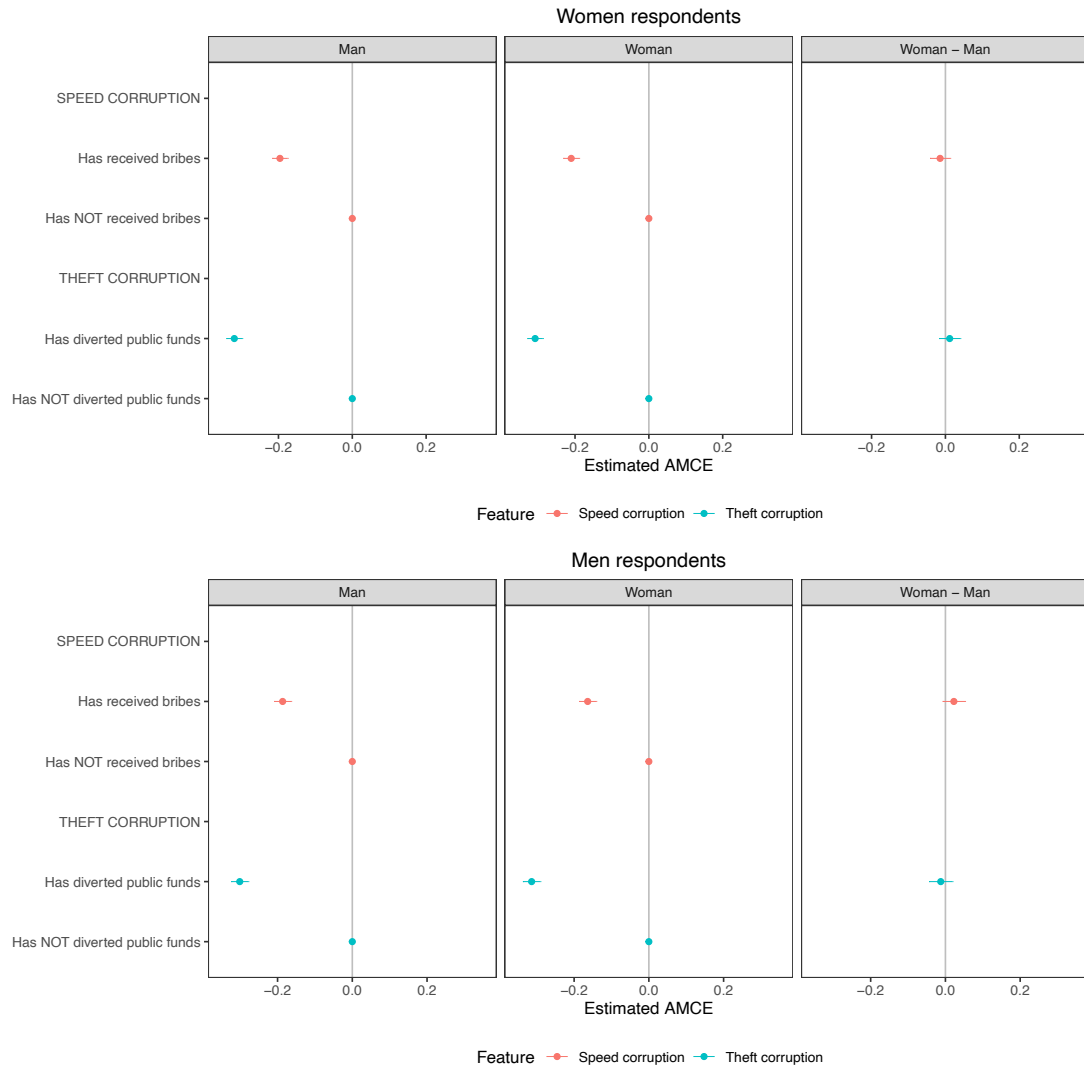

Figure A2: Citizens' evaluation of speed and theft corruption by bureaucrat gender and respondent gender. 16,400 profiles for women respondents and 14,670 profiles for men respondents. Full results in table format available in Table A10-A14.

Tables A11–A16 report the full results (point estimates, standard errors, and 95% confidence intervals) for the average marginal component effect (AMCE) estimations displayed in Figure A2 in the appendix.

Table A11. AMCE for Men Bureaucrats (only women respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.20	0.01	-0.22	-0.18
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.32	0.01	-0.34	-0.30
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.06	0.01	-0.09	-0.04
Partisanship	Colorado Party	-0.06	0.01	-0.08	-0.04
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	-0.01	0.01	-0.03	0.02
Age	50 years old	-0.03	0.01	-0.05	0.00
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.07	0.01	0.05	0.10
Education	College education	0.09	0.01	0.06	0.11

Note: 16,400 profiles.

Table A12. AMCE for Women Bureaucrats (only women respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.21	0.01	-0.23	-0.19
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.31	0.01	-0.33	-0.29
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.07	0.01	-0.10	-0.04
Partisanship	Colorado Party	-0.06	0.01	-0.08	-0.04
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	-0.02	0.01	-0.04	0.01
Age	50 years old	-0.02	0.01	-0.04	0.00
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.07	0.01	0.05	0.09
Education	College education	0.11	0.01	0.09	0.13

Note: 16,400 profiles.

Table A13. AMCE for difference women-men bureaucrats (only women respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Age	40 years old	-0.01	0.02	-0.05	0.02
Age	50 years old	0.01	0.02	-0.02	0.04
Education	College education	0.02	0.02	-0.01	0.06
Education	Secondary education	0.00	0.02	-0.04	0.03
Partisanship	Colorado Party	0.00	0.02	-0.04	0.03
Partisanship	Liberal Radical Auténtico Party	-0.01	0.02	-0.04	0.03
Speed corruption	Has received bribes	-0.01	0.01	-0.04	0.01
Theft corruption	Has diverted public funds	0.01	0.01	-0.02	0.04

Note: 16,400 profiles.

Table A14. AMCE for Men Bureaucrats (only men respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.19	0.01	-0.21	-0.16
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.30	0.01	-0.32	-0.28
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.07	0.01	-0.10	-0.04
Partisanship	Colorado Party	-0.07	0.01	-0.10	-0.05
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	0.00	0.01	-0.02	0.03
Age	50 years old	-0.01	0.01	-0.04	0.01
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.03	0.01	0.00	0.06
Education	College education	0.11	0.01	0.08	0.13

Note: 14,670 profiles.

Table A15. AMCE for Women Bureaucrats (only men respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Speed corruption	Has NOT received bribes	0.00	NA	NA	NA
Speed corruption	Has received bribes	-0.16	0.01	-0.19	-0.14
Theft corruption	Has NOT diverted public funds	0.00	NA	NA	NA
Theft corruption	Has diverted public funds	-0.31	0.01	-0.34	-0.29
Partisanship	No party affiliation	0.00	NA	NA	NA
Partisanship	Liberal Radical Auténtico Party	-0.07	0.01	-0.10	-0.04
Partisanship	Colorado Party	-0.05	0.01	-0.08	-0.03
Age	30 years old	0.00	NA	NA	NA
Age	40 years old	-0.02	0.01	-0.05	0.00
Age	50 years old	-0.05	0.01	-0.08	-0.03
Education	Primary education	0.00	NA	NA	NA
Education	Secondary education	0.04	0.01	0.01	0.07
Education	College education	0.09	0.01	0.07	0.12

Note: 14,670 profiles.

Table A16. AMCE for difference women-men bureaucrats (only men respondents)

Attribute	Level	Estimate	Std. error	Lower 95% CI	Upper 95% CI
Age	40 years old	-0.03	0.02	-0.07	0.01
Age	50 years old	-0.04	0.02	-0.07	0.00
Education	College education	-0.02	0.02	-0.05	0.02
Education	Secondary education	0.01	0.02	-0.03	0.05
Partisanship	Colorado Party	0.02	0.02	-0.01	0.05
Partisanship	Liberal Radical Auténtico Party	0.00	0.02	-0.04	0.04
Speed corruption	Has received bribes	0.02	0.02	-0.01	0.05
Theft corruption	Has diverted public funds	-0.01	0.02	-0.04	0.02

Note: 14,670 profiles.

Appendix H: Alternative Outcomes

We use two alternative outcomes that assess how people evaluate public officials: "Which of these public officials should be promoted to a higher position in the Civil Registry? and "Which of these public officials should represent Paraguay in an international conference of public officials?" The main conclusions do not change when using these alternative outcomes to measure respondents's preferences for bureaucrats.
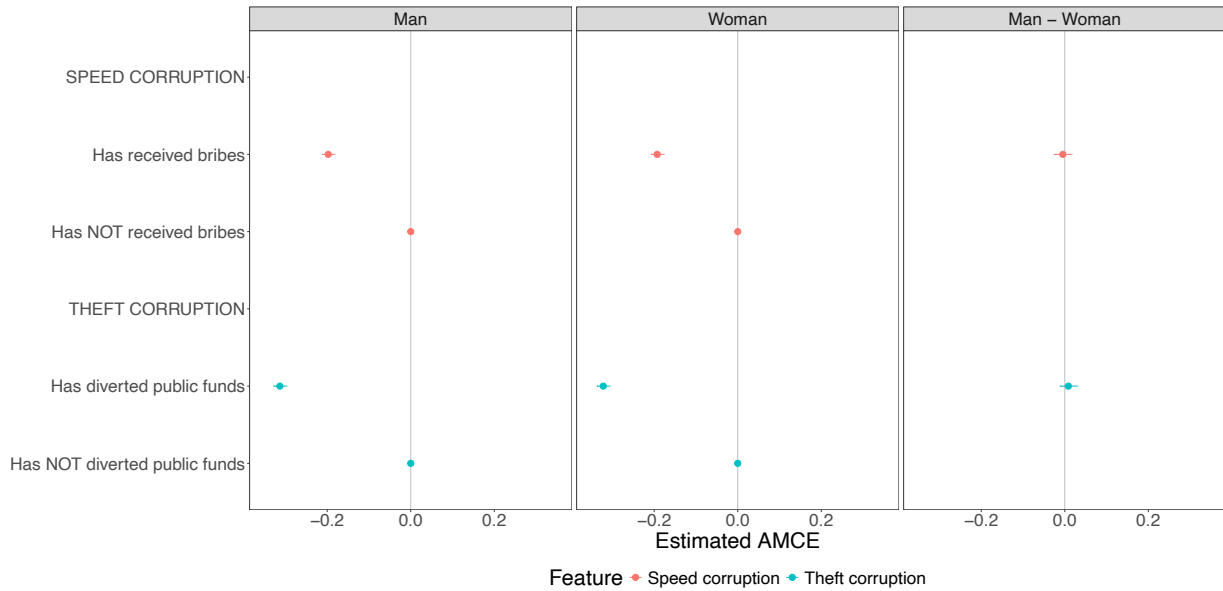

Figure A3: Alternative measure of citizens' evaluation of speed and theft corruption by bureaucrat gender: Which of these public officials should be promoted to a higher position in the Civil Registry?
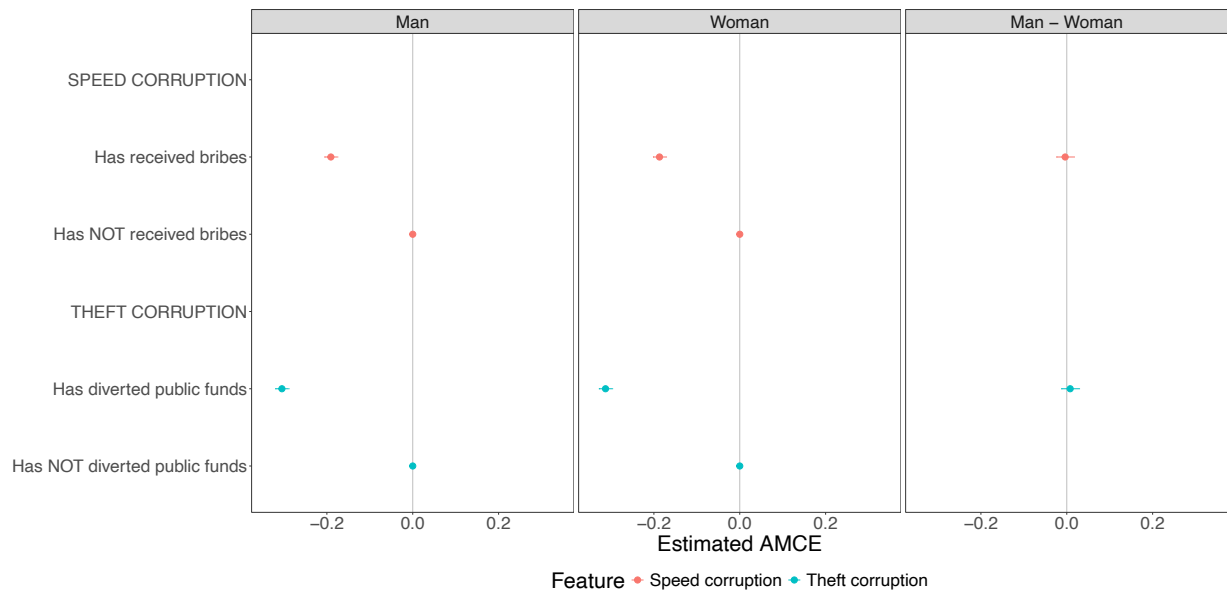
Figure A4: Alternative measure of citizens' evaluation of speed and theft corruption by bureaucrat gender: Which of these public officials should represent Paraguay in an international conference of public officials?