Supplemental Materials for: "Representative Budgeting: Women Mayors and the Composition of Spending in Local Governments"

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This document contains supporting materials for "Representative Budgeting: Women Mayors and the Composition of Spending in Local Governments." See the abstract and the table of contents for details.

Abstract

One potential consequence of increasing women's numeric representation is that women elected officials will behave differently than their men counterparts and improve women's substantive representation. This study examines whether electing women to local offices changes how local government expenditures are allocated in ways that benefit women. Using compositional expenditure data from over 5,400 Brazilian municipalities over eight years, we find significant differences in the ways men and women mayors allocate government expenditures. Our findings indicate that women mayors spend more on traditionally feminine issues, and less on traditionally masculine issues, relative to men mayors. In regards to specific policy areas, we find that women spend more on women's issues, including education, healthcare, and social assistance, and less on masculine issues, including transportation and urban development, relative to men mayors. We further find that women's legislative representation significantly influences the allocation of expenditures as a larger percentage of women councilors increases spending on traditionally feminine issues, as well as education, healthcare, and social assistance, relative to other policy issues. These findings indicate that women local elected officials improve women's substantive representation by allocating a larger percentage of expenditures to issues that have historically and continue to concern women in Brazil.

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1 Data Sources

Our data come from multiple sources. Budget and expenditure data are from the Brazilian National Treasury (TSE): www.tesouro.fazenda.gov.br. Data on mayors are from the Brazilian Institute of Geography and Statistics (https://www.ibge.gov.br/) (IBGE MUNIC) surveys. Population and GDP data also are from from IBGE. Election data, the percent of women city councilors, the councilors' political party (for the % councilors from mayor's party), and mayor's previous occupation are from the TSE. The survey data we reference in the Supplemental Materials are from the AmericasBarometer (LAPOP) and World Values Survey. The development indicators and other controls are from the UN.

1.1 Classification of Brazilian Parties

In the main paper we use the variable *Left Party* to control for the partisan leanings of mayors. Our expectation is that mayors belonging to a left party will allocate more of their budget to women's policy areas—all else equal—since education, health, and social services typically lie at the core of progressive agendas. We use the classification from Power and Zucco (2009, 2012), which is based on surveys of national legislators. Their party classification is shown in Table S1.

2 Results for Individual Policy Areas

Table S2 shows the results for the individual policy areas (Education, Health, Social Assistance, Transportation, Administration, Urban Development, and Other unclassified expenditures). Results from this table were plotted in Figures 2 and 3 in the main paper.

3 Supporting Tables for Classifying Women's Policy Issues

Table S3 presents data on gender difference in employment. Tables S4 and S5 report difference of means tests for responses given by men and women to several questions from the Latin Amer-

Table S1: Classification of Brazilian Political Parties

Left Parties		
Worker's Party	Partido dos Trabalhadores	(PT)
Democratic Labor Party	Partido Democrático Trabalhista	(PDT)
United Socialist Workers' Party	Partido Socialista dos Trabalhadores Unificado	(PSTU)
Brazilian Communist Party	Partido Comunista Brasileiro	(PCB)
Socialist People's Party	Partido Popular Socialista	(PPS)
Brazilian Socialist Party	Partido Socialista Brasileiro	(PSB)
Green Party	Partido Verde	(PV)
Socialism and Freedom Party	Partido Socialismo e Liberdade	(PSOL)
Communist Party of Brazil	Partido Comunista do Brasil	(PC do B)
Center Parties		
Brazilian Democratic Movement Party	Partido do Movimento Democrático Brasileiro	(PMDB)
Brazilian Social Democracy Party	Partido da Social Democracia Brasileira	(PSDB)
Right Parties		
Progressive Party	Partido Progressista	(PP)
Brazilian Labor Party	Partido Trabalhista Brasileiro	(PTB)
Liberator Party	Partido Libertador	(PL)
Liberal Front Party	Partido da Frente Liberal	(PFL)
Democrats	Democratas	(DEM)
Not Classified		
Brazilian Republican Party	Partido Republicano Brasileiro	(PRB)
Social Liberal Party	Partido Social Liberal	(PSL)
National Labor Party	Partido Trabalhista Nacional	(PTN)
Socialist Christian Party	Partido Social Cristão	(PSC)
Christian Labor Party	Partido Trabalhista Cristão	(PTC)
Christian Social Democratic Party	Partido Social Democrata Cristão	(PSDC)
Brazilian Labor Renewal Party	Partido Renovador Trabalhista Brasileiro	(PRTB)
Party of National Mobilization	Partido da Mobilização Nacional	(PMN)
Humanist Party of Solidarity	Partido Humanista da Soliedariedade	(PHS)
Progressive Republican Party	Partido Republicano Progressista	(PRP)
Party of the Reconstruction of National Order	Partido da Reedificação da Ordem Nacional	(PRONA)
Labor Party of Brazil	Partido Trabalhista do Brasil	(PT do B)

Classification adapted from Power & Zucco (2009, 2012).

Table S2: Women Mayors Prioritize Spending on Women's Issues

	$ln\left(\frac{Education}{Other}\right)$	$ln\left(\frac{Health}{Other}\right)$	$ln\left(\frac{Soc.\ Assist.}{Other}\right)$	$ln\left(\frac{Transport.}{Other}\right)$	$ln\left(\frac{Admin}{Other}\right)$	$ln\left(\frac{Urban\ Dev.}{Other}\right)$
Woman Mayor	0.0481***	0.0144	0.0600***	-0.527***	0.0388*	-0.0505
	(0.0156)	(0.0217)	(0.0219)	(0.0925)	(0.0201)	(0.0460)
% Women Councilors	0.0018***	0.0014***	0.0017***	0.0019	0.00046	0.0015
	(0.0003)	(0.0005)	(0.0005)	(0.0020)	(0.0004)	(0.0010)
% Councilors Mayor's Party	-0.0006**	-0.0007*	-0.0019***	0.0027	-0.0013***	-0.0032***
	(0.0003)	(0.0004)	(0.0004)	(0.0017)	(0.0004)	(0.0008)
Left Party	0.0007	-0.0071	-0.0147	-0.411***	0.0467***	-0.196***
	(0.0103)	(0.0143)	(0.0144)	(0.0608)	(0.0132)	(0.0302)
Second Term	-0.0521***	-0.0545***	-0.0420***	-0.0132	-0.0721***	0.00600
	(0.0095)	(0.0132)	(0.0133)	(0.0561)	(0.0122)	(0.0279)
ln(Age)	0.0616***	0.0855***	0.0367	-0.0159	0.0452	0.0861
	(0.0223)	(0.0311)	(0.0313)	(0.132)	(0.0287)	(0.0658)
Schooling	-0.0104***	-0.0085**	-0.0123***	-0.0629***	-0.0111***	0.0141*
	(0.0028)	(0.0038)	(0.0039)	(0.0163)	(0.0035)	(0.00809)
Win Margin	0.0007**	-0.0002	0.0006	-0.0069***	-0.0003	0.0040***
	(0.0003)	(0.0004)	(0.0004)	(0.0018)	(0.0004)	(0.0009)
ln(Population)	0.130***	0.0828***	-0.0010	-0.480***	-0.0446***	0.230***
	(0.0061)	(0.0085)	(0.0086)	(0.0363)	(0.0079)	(0.0180)
Revenues per Capita	-0.00003***	-0.00003***	-0.00001***	-0.0002***	-0.000004	-0.00001
	(0.000004)	(0.000006)	(0.000006)	(0.00002)	(0.000005)	(0.00001)
% Transfers	0.0084***	0.0114***	0.0122***	0.0432***	0.0057***	0.0131***
	(0.0005)	(0.0008)	(0.0008)	(0.0032)	(0.0007)	(0.0016)
% Rural Population	-0.0001	-0.0020***	-0.0066***	0.0297***	-0.0015***	-0.0199***
	(0.0003)	(0.0004)	(0.0004)	(0.0018)	(0.0004)	(0.0009)
% Women Population.	-0.0404***	-0.0382***	-0.0516***	-0.165***	-0.0357***	-0.0505***
	(0.0036)	(0.0050)	(0.0050)	(0.0210)	(0.0046)	(0.0105)
Human Development Index	-0.0013	1.594***	2.652***	-9.652***	0.112	8.744***
	(0.285)	(0.397)	(0.400)	(1.688)	(0.367)	(0.839)
% Poverty	0.00243**	0.00341**	0.00380***	-0.0238***	0.00220*	0.00658**
	(0.000975)	(0.00136)	(0.00137)	(0.00578)	(0.00126)	(0.00287)
Life Expectancy	-0.0274***	-0.0226***	-0.0195***	0.243***	-0.0365***	-0.0518***
	(0.0035)	(0.0049)	(0.0049)	(0.0206)	(0.0045)	(0.0103)
Ave. Schooling	0.0364***	0.0219**	0.0918***	0.307***	-0.0124	-0.101***
	(0.0066)	(0.0092)	(0.0092)	(0.0390)	(0.0085)	(0.0194)
Income per Capita	-0.0004***	-0.0003***	-0.0005***	0.0022***	-0.0003***	-0.0014***
	(0.00005)	(0.00007)	(0.0001)	(0.0003)	(0.0001)	(0.0001)
% Clean Water	-0.0081***	-0.0044***	-0.0051***	-0.0018	-0.0051***	0.0020
	(0.0005)	(0.0007)	(0.0007)	(0.0028)	(0.0006)	(0.0014)
% Young Mothers	0.0140***	0.0088***	0.0233***	-0.0102	0.0160***	0.0039
	(0.0011)	(0.0015)	(0.0016)	(0.0066)	(0.0014)	(0.0033)
Illiteracy Rate	-0.0023**	-0.0003	0.0178***	-0.0433***	-0.0155***	0.0421***
	(0.0011)	(0.0015)	(0.0015)	(0.0064)	(0.0014)	(0.0032)
Constant	2.833***	1.029**	-1.038**	-9.421***	5.095***	-2.957***
	(0.317)	(0.441)	(0.445)	(1.877)	(0.408)	(0.933)
Obs.	41857	41857	41857	41857	41857	41857
R^2	0.19	0.04	0.08	0.09	0.06	0.05

Seemingly-unrelated regression with standard errors in parentheses. Year intercepts included but not shown.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ican Public Opinion Project (LAPOP) and World Values Survey (WVS), respectively. Table S6 shows gender differences in perceptions of the most important problem' facing Brazil and preferences for government spending based on LAPOP data.

Table S3: Employment in Brazil in 2010

Sector	Percent of Total Workforce	Percent of Employed Men	Percent of Employed Women
Education	2.34	1.21	4.34
Human Healthcare Activities	2.05	0.74	4.38
Health & Social Services	2.09	0.75	4.46

Notes: Data from *Instituto Brasileiro de Geografia e Estatísticas* (IBGE) *Demografia das Empresas*, available here: http://www.sidra.ibge.gov.br. Values are the percentage of salaried employees in each sector. Employment in the informal labor market not included.

4 Description of Expenditure Sub-Functions

1. Education: Fundamental education, intermediate education, professional education, higher education, early childhood education, youth and adult education, special education, other expenses

2. Healthcare: Primary care, hospital and ambulatory care, prophylactic and therapeutic support, sanitation supervision, epidemiological supervision, food and nutrition, other expenses

3. Social Assistance: Assistance to the elderly, assistance for persons with disabilities, assistance for children and adolescents, community assistance, other expenses

4. Culture: Historical, archeological, and artistic heritage; cultural diffusion, other expenses

5. Housing: Rural housing, urban housing, other expenses

6. Environmental Management: Environmental preservation and conservation, environmental regulation, recovery of degraded areas, water resources, meteorology, other expenses

Table S4: Difference of Means Tests for Public Opinion Data - LAPOP

Survey Question	Scale	Men	Women	P-value	Survey Years
Gov should offer less services like health and education to lower taxes	1=agree, 2=disagree	1.885	1.927	0.007	2008
Attend teacher-parent meetings	1=weekly 4=never	3.618	3.335	0.000	2007, 08, 10, 12, 14
University education more important for men than women	1=disagree 5=agree	1.858	1.533	0.000	2007
More taxes, spending for higher ed.	1=more 4=less	1.877	1.795	0.014	2010
More taxes, spending for high school	1=more 4=less	1.840	1.794	0.157	2010
Number of children	0-23	1.805	2.178	0.000	2008, 10, 12, 14
When there aren't enough jobs, men should have priority in hiring	1=disagree 7=agree	3.879	3.267	0.000	2014
Beneficiary of Bolsa Família	1=yes, 2=no	1.803	1.754	0.001	2012, 2014
Policy support for Bolsa Família	1=increase 4=eliminate	1.693	1.630	0.024	2010, 2014
Self-identified class membership	1=upper 5=lower	3.611	3.697	0.010	2012, 2014
How much does federal gov. work to combat poverty	1=none 7=a lot	4.213	4.052	0.001	2007, 08, 10, 12
Monthly household income	0=none 10=R$7,600+	2.940	2.548	0.000	2008, 2010
Personal monthly income	0=none 10=R$7,600+	8.280	6.498	0.000	2012, 2014

Notes: LAPOP = Latin American Public Opinion Project (AmericasBarometer). Please visit the website for LAPOP (http://www.vanderbilt.edu/lapop/) for more information about the surveys, including datasets, codebooks, and technical information. P-values from a two-tailed *t*-test.

Table S5: Difference of Means Tests for Public Opinion Data - WVS

Survey Question	Scale	Men	Women	P-value	Year
University is more important for boy than for girl	1=agree 4=disagree	3.032	3.228	0.000	2006
University is more important for boy than for girl	1=agree 4=disagree	3.159	3.230	0.042	2014
Worries about children receiving good education	1=very much 4=not at all	1.627	1.532	0.055	2014
Number of children	0-8+	1.804	2.075	0.007	2006
Number of children	0-8+	1.758	2.154	0.000	2014
Subjective state of health	1=very good 4=poor	1.938	2.066	0.002	2006
Subjective state of health	1=very good 4=poor	1.986	2.159	0.000	2014
Lacked needed medications in last 12 months	1=often 4=never	3.404	3.233	0.001	2014
Satisfaction with financial situation of household	1=dissatisfied 10=satisfied	6.154	5.667	0.000	2006
Self-identified income group	1=lower 10=upper	4.488	4.083	0.000	2006
Self-identified income group	1=lower 10=upper	4.517	4.329	0.094	2014
Subjective social class	1=upper 5=lower	3.780	3.876	0.041	2014

Notes: WVS = World Values Survey. Please visit the website for WVS (http://www.worldvaluessurvey.org) for more information about the surveys, including datasets, codebooks, and technical information. P-values from a two-tailed *t*-test.

Table S6: Most Important Problem and Preferences for Government Spending in Brazil, by Gender

Panel A: Most Important Problem	Pct. Men	Pct. Women
Poverty	3.13	3.57
Lack of or Poor Quality Education	3.92	4.31
Lack of Health Services	15.54	19.33
Slums	0.13	0.26
Hunger	0.69	1.10
No. Respondents	3,933	4,174

Panel B: Gov Spending Priorities	Pct. Men	Pct. Women
Education	35.71	35.64
Infrastructure Works	3.37	2.13
Housing	2.70	2.39
Retirement	3.37	3.32
Helping the Poor	4.04	6.52
Environment	0.81	1.06
Health	42.05	43.62
Security	7.95	5.32
No. Respondents (2012 only)	742	752

Source: Latin American Public Opinion Project, AmericasBarometer 2004-2014. Note: Pct. Men and Pct. Women are the percentage of respondents from each group who identify the issue as the most important.

7. Citizenship Rights: Corrections and social reintegration, collective and diffuse individual rights, assistance to indigenous peoples, other expenses
8. Urban Development: Urban infrastructure, urban services, urban collective transportation, other expenses
9. Transportation: Air transportation, roadway transportation, railroad transportation, waterway transportation, special transportation, other expenses
10. Agriculture: Promotion of plant production, promotion of animal production, plant health protection, animal health protection, supplies, rural expanse, irrigation, other expenses
11. Social Security: Basic pensions, welfare of statutory regime, complementary pensions, special pensions, other expenses
12. Sanitation: Basic rural sanitation, basic urban sanitation, other expenses
13. Sports & Leisure: Professional sports, community sports, leisure, other expenses
14. Energy & Natural Resources: Conservation of energy, electric energy, petroleum, ethanol, other expenses
15. Commerce & Services: Promotion of commerce, commercialization, foreign trade, financial services, tourism, other expenses
16. Public Safety: Policing, civil defense, information and intelligence, other expenses
17. Employment: Worker's protection and compensation, labor relations, employability, promotion of employment, other expenses
18. Industry: Promotion of industry, industrial production, mining, industrial property, standardization and quality, other expenses
19. National Defense: Air defense, naval defense, land defense, other expenses

20. Science & Technology: Scientific development, technological and engineering development, diffusion of scientific and technological knowledge, other expenses

21. Agrarian Economy: Agrarian reform, colonization, other expenses

22. International Relations: Diplomatic relations, international cooperation, other expenses

23. Administration: Planning and budgeting, general administration, financial administration, internal control, regulation and auditing, information technology, land use planning, formation of human resources, administration of revenues, administration of grants, social communication, other expenses

24. Legislative Functions: Legislative activities, external control, other expenses

25. Debt & Other Obligations: Refinancing of domestic debt, refinancing of foreign debt, domestic debt servicing, foreign debt servicing, transfers, other special obligations, other expenses

26. Judiciary Functions: Judiciary activities, defense of the public interest in judicial proceedings, other expenses

27. Communications: Postal communications, telecommunications, other expenses

28. Essential to Justice: Defense of the legal order, judicial and extrajudicial representation, other expenses

5 Alternating the Baseline Category for the 7-Category Results

Table S2 showed compositions where the baseline category was "other" expenditures. Although this choice is arbitrary, and makes no difference in terms of interpreting the untransformed results in the figures, readers may find it convenient to interpret tables of results where the baseline

categories are each of the feminine expenditures (education, health, and social assistance). With these results, a negative, statistically significant result suggests that the variable is associated with a (logged) increase in the feminine expenditure relative to the numerator category. This makes it a bit easier to see where the spending tradeoffs are occurring. These results are shown in Tables S7, S8, and S9, which show results with education, health, and social assistance as the baseline category, respectively.

6 Robustness Check: Collapsing by Municipality-Mayoral Term

In the main paper, the unit of analysis was a municipality-year. To account for unobservable differences across years, we included year fixed effects. In this section, we probe the robustness of our results by averaging across a mayoral term. Instead of presenting a table of results, we simply show the figures from the main paper using the mayoral term averages.

Figure S1 shows the aggregate category results with the term-averaged data. It is clear that the results remain substantively similar to the main paper; women mayors spend more on feminine categories at the expense of masculine ones (as a proportion of the budget), while unclassified categories remain relatively similar across the gender of the mayor.

In Figure S2 we present the result of the first three expenditures of the seven-category regressions, again averaging across mayoral term. Once again the results are very similar to those in the main paper. Women mayors devote a larger proportion of their budget to education and social assistance (although the latter is not statistically significant) than do men mayors. In contrast, they allocate a very similar proportion of the budget to health as do men mayors.

In Figure S3 we show the results of the last four categories of the seven-category analysis. As with the results in the main paper, women mayors appear to spend less on transportation, urban development, and "other" (the rest of the budget) relative to men mayors, although this difference does not appear statistically significant for urban development and the other category

Table S7: Seven Category Results: Education as Baseline Category

	$ln\left(\frac{Health}{Education}\right)$	$ln\left(\frac{Soc.\ Assist.}{Education}\right)$	$ln\left(\frac{Transport.}{Education}\right)$	$ln\left(\frac{Admin}{Education}\right)$	$ln\left(\frac{Urban\ Dev.}{Education}\right)$	$ln\left(\frac{Other}{Education}\right)$
Woman Mayor	-0.0337*	0.0120	-0.575***	-0.00929	-0.0986**	-0.0481***
	(0.0191)	(0.0202)	(0.0936)	(0.0186)	(0.0457)	(0.0156)
% Women Councilors	-0.000353	-0.0000708	0.000154	-0.00132***	-0.000299	-0.00178***
	(0.000421)	(0.000446)	(0.00207)	(0.000412)	(0.00101)	(0.000345)
% Councilors Mayor's Party	-0.000114	-0.00133***	0.00328*	-0.000788**	-0.00263***	0.000555**
	(0.000345)	(0.000365)	(0.00169)	(0.000337)	(0.000826)	(0.000282)
Left Party	-0.00782	-0.0154	-0.412***	0.0459***	-0.197***	-0.000748
	(0.0125)	(0.0133)	(0.0615)	(0.0122)	(0.0300)	(0.0103)
Second Term	-0.00245	0.0100	0.0389	-0.0200*	0.0581**	0.0521***
	(0.0116)	(0.0123)	(0.0568)	(0.0113)	(0.0277)	(0.00947)
ln(Age)	0.0239	-0.0249	-0.0776	-0.0164	0.0245	-0.0616***
	(0.0273)	(0.0289)	(0.134)	(0.0267)	(0.0653)	(0.0223)
Schooling	0.00191	-0.00186	-0.0525***	-0.000692	0.0245***	0.0104***
	(0.00335)	(0.00356)	(0.0165)	(0.00328)	(0.00804)	(0.00275)
Win Margin	-0.000918**	-0.0000921	-0.00764***	-0.000975***	0.00328***	-0.000724**
	(0.000362)	(0.000384)	(0.00178)	(0.000355)	(0.000869)	(0.000297)
ln(Population)	-0.0471***	-0.131***	-0.610***	-0.174***	0.100***	-0.130***
	(0.00748)	(0.00793)	(0.0367)	(0.00731)	(0.0179)	(0.00612)
Revenues per Capita	0.00000816*	0.0000198***	-0.000170***	0.0000308***	0.0000231**	0.0000346***
	(0.00000490)	(0.00000520)	(0.0000241)	(0.00000480)	(0.0000118)	(0.00000401)
% Transfers	0.00299***	0.00381***	0.0349***	-0.00270***	0.00466***	-0.00839***
	(0.000667)	(0.000707)	(0.00327)	(0.000652)	(0.00160)	(0.000546)
% Rural Population	-0.00185***	-0.00650***	0.0298***	-0.00143***	-0.0198***	0.000106
	(0.000375)	(0.000397)	(0.00184)	(0.000367)	(0.000899)	(0.000307)
% Women Population	0.00220	-0.0112**	-0.125***	0.00468	-0.0101	0.0404***
	(0.00434)	(0.00460)	(0.0213)	(0.00424)	(0.0104)	(0.00355)
Human Development Index	1.596***	2.653***	-9.650***	0.113	8.745***	0.00126
	(0.348)	(0.369)	(1.708)	(0.340)	(0.833)	(0.285)
% Poverty	0.000981	0.00137	-0.0262***	-0.000229	0.00415	-0.00243**
	(0.00119)	(0.00126)	(0.00585)	(0.00117)	(0.00286)	(0.000975)
Life Expectancy	0.00477	0.00793*	0.270***	-0.00905**	-0.0244**	0.0274***
	(0.00425)	(0.00451)	(0.0209)	(0.00416)	(0.0102)	(0.00348)
Ave. Schooling	-0.0145*	0.0554***	0.271***	-0.0488***	-0.137***	-0.0364***
	(0.00804)	(0.00852)	(0.0395)	(0.00786)	(0.0193)	(0.00658)
Income per Capita	0.0000681	-0.0000823	0.00260***	0.000116**	-0.000964***	0.000413***
	(0.0000586)	(0.0000622)	(0.000288)	(0.0000573)	(0.000141)	(0.0000480)
% Clean Water	0.00367***	0.00302***	0.00629**	0.00293***	0.0100***	0.00806***
	(0.000570)	(0.000604)	(0.00280)	(0.000557)	(0.00137)	(0.000466)
% Young Mothers	-0.00525***	0.00930***	-0.0242***	0.00197	-0.0101***	-0.0140***
	(0.00135)	(0.00143)	(0.00664)	(0.00132)	(0.00324)	(0.00111)
Illiteracy Rate	0.00200	0.0202***	-0.0410***	-0.0132***	0.0444***	0.00232**
	(0.00132)	(0.00140)	(0.00650)	(0.00129)	(0.00317)	(0.00108)
Constant	-1.804***	-3.871***	-12.25***	2.261***	-5.791***	-2.833***
	(0.387)	(0.410)	(1.900)	(0.378)	(0.927)	(0.317)
Obs.	41857	41857	41857	41857	41857	41857
R^2	0.0363	0.0542	0.107	0.0589	0.0574	0.186

Seemingly-unrelated regression with standard errors in parentheses. Year intercepts included but not shown.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S8: Seven Category Results: Health as Baseline Category

	$ln\left(\frac{Education}{Health}\right)$	$ln\left(\frac{Soc.\ Assist.}{Health}\right)$	$ln\left(\frac{Transport.}{Health}\right)$	$ln\left(\frac{Admin}{Health}\right)$	$ln\left(\frac{Urban\ Dev.}{Health}\right)$	$ln\left(\frac{Other}{Health}\right)$
Woman Mayor	0.0337*	0.0457**	-0.542***	0.0245	-0.0649	-0.0144
	(0.0191)	(0.0223)	(0.0943)	(0.0244)	(0.0483)	(0.0217)
% Women Councilors	0.000353	0.000282	0.000506	-0.000967*	0.0000540	-0.00143***
	(0.000421)	(0.000492)	(0.00208)	(0.000540)	(0.00107)	(0.000480)
% Councilors Mayor's Party	0.000114	-0.00121***	0.00339**	-0.000673	-0.00252***	0.000670*
	(0.000345)	(0.000403)	(0.00171)	(0.000442)	(0.000874)	(0.000393)
Left Party	0.00782	-0.00760	-0.404***	0.0537***	-0.189***	0.00707
	(0.0125)	(0.0147)	(0.0620)	(0.0161)	(0.0318)	(0.0143)
Second Term	0.00245	0.0125	0.0413	-0.0175	0.0605**	0.0545***
	(0.0116)	(0.0135)	(0.0573)	(0.0148)	(0.0293)	(0.0132)
ln(Age)	-0.0239	-0.0488	-0.101	-0.0403	0.000581	-0.0855***
	(0.0273)	(0.0319)	(0.135)	(0.0349)	(0.0691)	(0.0311)
Schooling	-0.00191	-0.00377	-0.0544***	-0.00260	0.0226***	0.00850**
	(0.00335)	(0.00392)	(0.0166)	(0.00430)	(0.00850)	(0.00383)
Win Margin	0.000918**	0.000826*	-0.00673***	-0.0000578	0.00420***	0.000194
	(0.000362)	(0.000424)	(0.00179)	(0.000465)	(0.000919)	(0.000413)
ln(Population)	0.0471***	-0.0838***	-0.563***	-0.127***	0.147***	-0.0828***
	(0.00748)	(0.00874)	(0.0370)	(0.00958)	(0.0190)	(0.00853)
Revenues per Capita	-0.00000816*	0.0000117**	-0.000178***	0.0000226***	0.0000149	0.0000265***
	(0.00000490)	(0.00000574)	(0.0000243)	(0.00000629)	(0.0000124)	(0.00000559)
% Transfers	-0.00299***	0.000826	0.0319***	-0.00569***	0.00167	-0.0114***
	(0.000667)	(0.000780)	(0.00330)	(0.000855)	(0.00169)	(0.000760)
% Rural Population	0.00185***	-0.00464***	0.0316***	0.000424	-0.0180***	0.00196***
	(0.000375)	(0.000439)	(0.00186)	(0.000481)	(0.000950)	(0.000428)
% Women Population	-0.00220	-0.0134***	-0.127***	0.00247	-0.0123	0.0382***
	(0.00434)	(0.00507)	(0.0215)	(0.00556)	(0.0110)	(0.00495)
Human Development Index	-1.596***	1.057***	-11.25***	-1.483***	7.149***	-1.594***
	(0.348)	(0.407)	(1.722)	(0.446)	(0.881)	(0.397)
% Poverty	-0.000981	0.000385	-0.0272***	-0.00121	0.00316	-0.00341**
	(0.00119)	(0.00139)	(0.00590)	(0.00153)	(0.00302)	(0.00136)
Life Expectancy	-0.00477	0.00316	0.266***	-0.0138**	-0.0292***	0.0226***
	(0.00425)	(0.00498)	(0.0211)	(0.00545)	(0.0108)	(0.00485)
Ave. Schooling	0.0145*	0.0699***	0.285***	-0.0343***	-0.123***	-0.0219**
	(0.00804)	(0.00940)	(0.0398)	(0.0103)	(0.0204)	(0.00917)
Income per Capita	-0.0000681	-0.000150**	0.00253***	0.0000484	-0.00103***	0.000345***
	(0.0000586)	(0.0000686)	(0.000290)	(0.0000752)	(0.000149)	(0.0000669)
% Clean Water	-0.00367***	-0.000650	0.00262	-0.000739	0.00636***	0.00440***
	(0.000570)	(0.000667)	(0.00282)	(0.000730)	(0.00144)	(0.000650)
% Young Mothers	0.00525***	0.0145***	-0.0189***	0.00722***	-0.00490	-0.00879***
	(0.00135)	(0.00158)	(0.00669)	(0.00173)	(0.00343)	(0.00154)
Illiteracy Rate	-0.00200	0.0181***	-0.0430***	-0.0152***	0.0424***	0.000316
	(0.00132)	(0.00155)	(0.00655)	(0.00170)	(0.00335)	(0.00151)
Constant	1.804***	-2.067***	-10.45***	4.065***	-3.987***	-1.029**
	(0.387)	(0.452)	(1.915)	(0.496)	(0.980)	(0.441)
Obs.	41857	41857	41857	41857	41857	41857
R^2	0.0363	0.0235	0.0945	0.0141	0.0414	0.0385

Seemingly-unrelated regression with standard errors in parentheses. Year intercepts included but not shown.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S9: Seven Category Results: Social Assistance as Baseline Category

	$ln\left(\frac{Education}{Soc.\ Assist.}\right)$	$ln\left(\frac{Health}{Soc.\ Assist.}\right)$	$ln\left(\frac{Transport.}{Soc.\ Assist.}\right)$	$ln\left(\frac{Admin}{Soc.\ Assist.}\right)$	$ln\left(\frac{Urban\ Dev.}{Soc.\ Assist.}\right)$	$ln\left(\frac{Other}{Soc.\ Assist.}\right)$
Woman Mayor	-0.0120	-0.0457**	-0.587***	-0.0212	-0.111**	-0.0600***
	(0.0202)	(0.0223)	(0.0941)	(0.0248)	(0.0478)	(0.0219)
% Women Councilors	0.0000708	-0.000282	0.000225	-0.00125**	-0.000228	-0.00171***
	(0.000446)	(0.000492)	(0.00208)	(0.000548)	(0.00106)	(0.000484)
% Councilors Mayor's Party	0.00133***	0.00121***	0.00461***	0.000540	-0.00130	0.00188***
	(0.000365)	(0.000403)	(0.00170)	(0.000449)	(0.000864)	(0.000396)
Left Party	0.0154	0.00760	-0.396***	0.0613***	-0.181***	0.0147
	(0.0133)	(0.0147)	(0.0619)	(0.0163)	(0.0314)	(0.0144)
Second Term	-0.0100	-0.0125	0.0288	-0.0300**	0.0480*	0.0420***
	(0.0123)	(0.0135)	(0.0571)	(0.0151)	(0.0290)	(0.0133)
ln(Age)	0.0249	0.0488	-0.0527	0.00849	0.0493	-0.0367
	(0.0289)	(0.0319)	(0.135)	(0.0355)	(0.0684)	(0.0313)
Schooling	0.00186	0.00377	-0.0506***	0.00117	0.0264***	0.0123***
	(0.00356)	(0.00392)	(0.0166)	(0.00437)	(0.00841)	(0.00386)
Win Margin	0.0000921	-0.000826*	-0.00755***	-0.000883*	0.00337***	-0.000632
	(0.000384)	(0.000424)	(0.00179)	(0.000472)	(0.000909)	(0.000417)
ln(Population)	0.131***	0.0838***	-0.479***	-0.0435***	0.231***	0.00104
	(0.00793)	(0.00874)	(0.0369)	(0.00974)	(0.0187)	(0.00859)
Revenues per Capita	-0.0000198***	-0.0000117**	-0.000190***	0.0000110*	0.00000322	0.0000148***
	(0.00000520)	(0.00000574)	(0.0000242)	(0.00000639)	(0.0000123)	(0.00000564)
% Transfers	-0.00381***	-0.000826	0.0310***	-0.00651***	0.000847	-0.0122***
	(0.000707)	(0.000780)	(0.00329)	(0.000868)	(0.00167)	(0.000766)
% Rural Population	0.00650***	0.00464***	0.0363***	0.00507***	-0.0133***	0.00660***
	(0.000397)	(0.000439)	(0.00185)	(0.000488)	(0.000940)	(0.000431)
% Women Population	0.0112**	0.0134***	-0.114***	0.0159***	0.00116	0.0516***
	(0.00460)	(0.00507)	(0.0214)	(0.00565)	(0.0109)	(0.00499)
Human Development Index	-2.653***	-1.057***	-12.30***	-2.540***	6.092***	-2.652***
	(0.369)	(0.407)	(1.717)	(0.453)	(0.872)	(0.400)
% Poverty	-0.00137	-0.000385	-0.0276***	-0.00160	0.00278	-0.00380***
	(0.00126)	(0.00139)	(0.00589)	(0.00155)	(0.00299)	(0.00137)
Life Expectancy	-0.00793*	-0.00316	0.262***	-0.0170***	-0.0323***	0.0195***
	(0.00451)	(0.00498)	(0.0210)	(0.00554)	(0.0107)	(0.00489)
Ave. Schooling	-0.0554***	-0.0699***	0.215***	-0.104***	-0.192***	-0.0918***
	(0.00852)	(0.00940)	(0.0397)	(0.0105)	(0.0202)	(0.00924)
Income per Capita	0.0000823	0.000150**	0.00268***	0.000199***	-0.000882***	0.000496***
	(0.0000622)	(0.0000686)	(0.000290)	(0.0000764)	(0.000147)	(0.0000674)
% Clean Water	-0.00302***	0.000650	0.00327	-0.0000895	0.00701***	0.00505***
	(0.000604)	(0.000667)	(0.00281)	(0.000742)	(0.00143)	(0.000655)
% Young Mothers	-0.00930***	-0.0145***	-0.0335***	-0.00733***	-0.0194***	-0.0233***
	(0.00143)	(0.00158)	(0.00668)	(0.00176)	(0.00339)	(0.00155)
Illiteracy Rate	-0.0202***	-0.0181***	-0.0612***	-0.0333***	0.0243***	-0.0178***
	(0.00140)	(0.00155)	(0.00653)	(0.00172)	(0.00332)	(0.00152)
Constant	3.871***	2.067***	-8.384***	6.132***	-1.920**	1.038**
	(0.410)	(0.452)	(1.910)	(0.504)	(0.970)	(0.445)
Obs.	41857	41857	41857	41857	41857	41857
R^2	0.0542	0.0235	0.0982	0.0317	0.0410	0.0802

Seemingly-unrelated regression with standard errors in parentheses. Year intercepts included but not shown.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure S1: Feminine, Masculine, and Unclassified Expenditures: Collapsing by Municipality-Mayoral Term

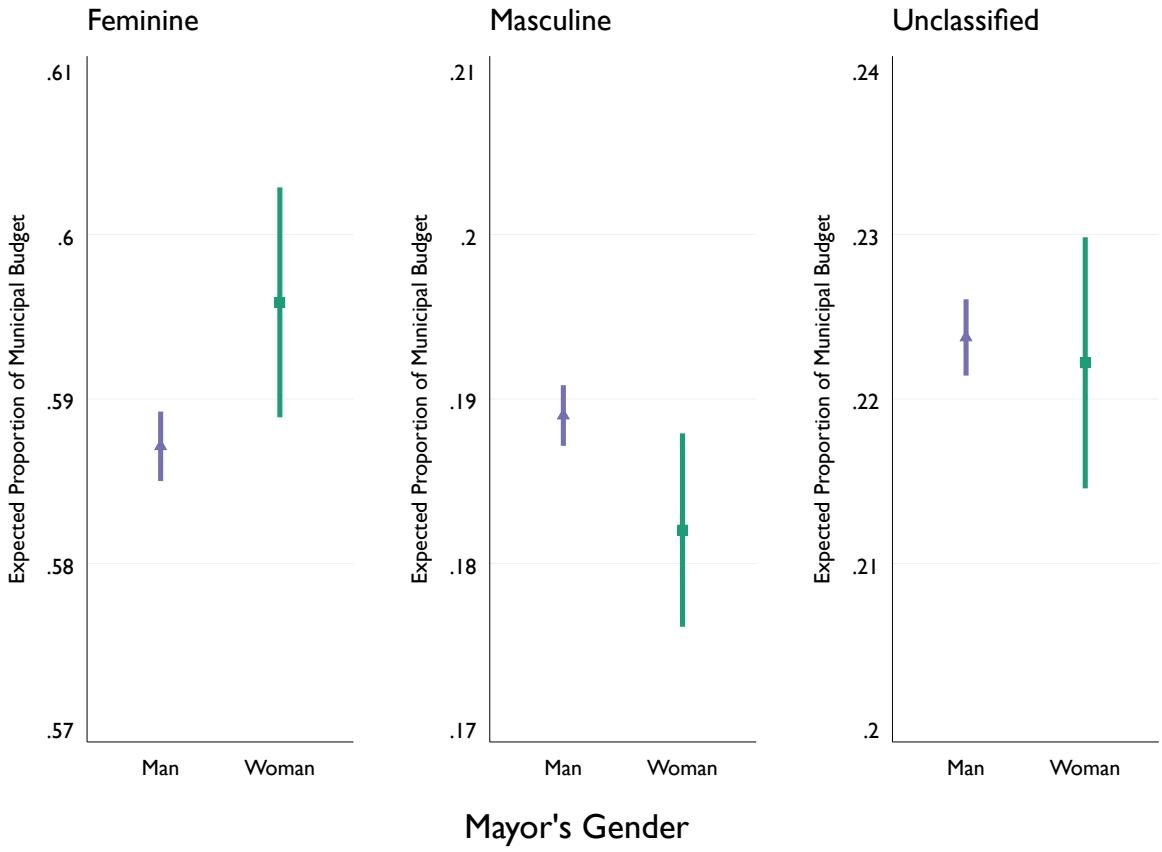
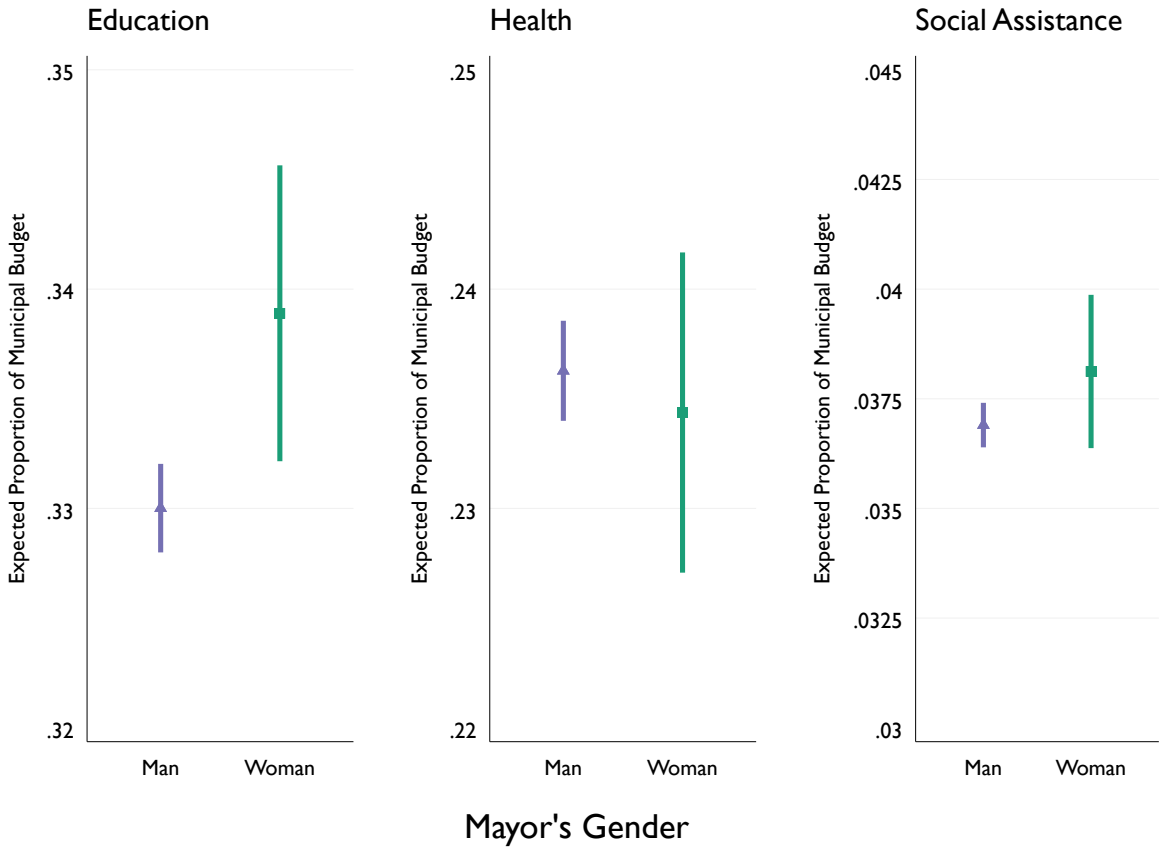
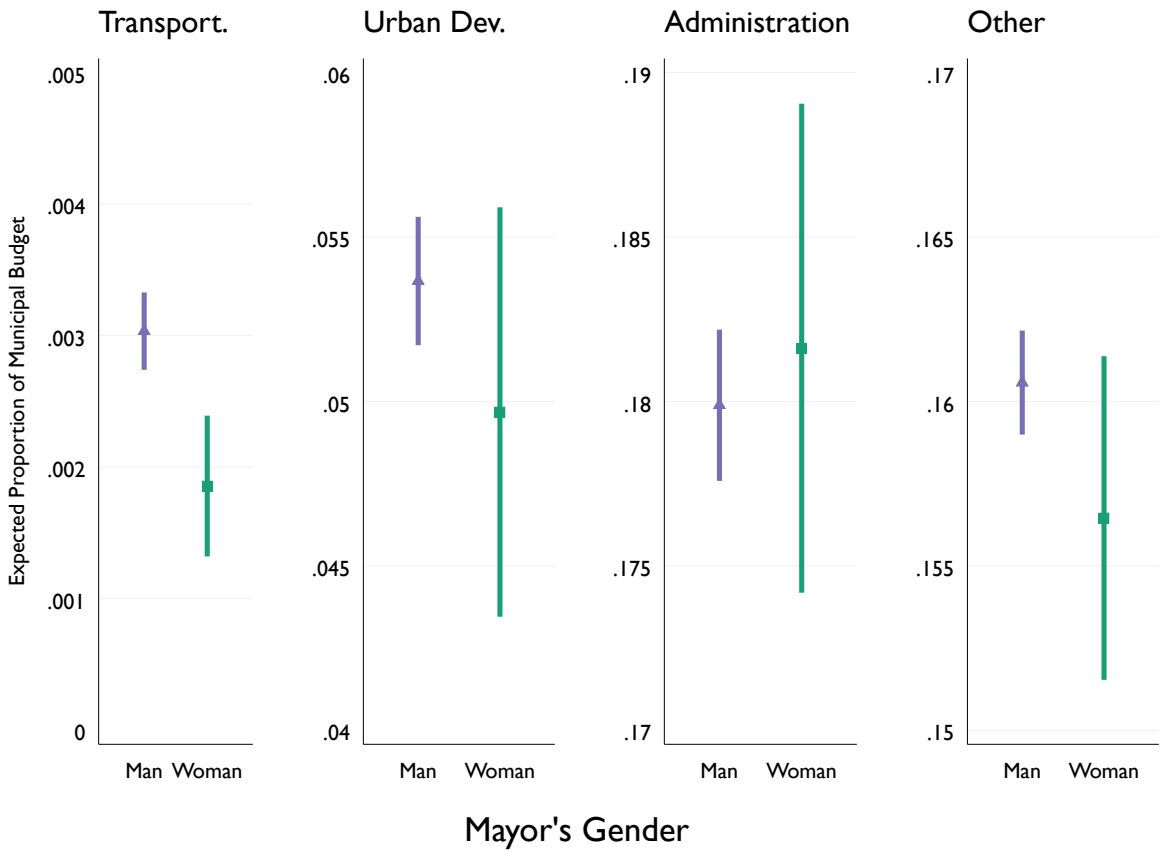


Figure S2: Three Feminine Expenditure Categories: Collapsing by Municipality-Mayoral Term



using the term-averaged data. In contrast, women mayors spend slightly—though not statistically significantly—more on administrative expenditures, expressed as a proportion of the budget.

Figure S3: Three Alternative Expenditure Categories: Collapsing by Municipality-Mayoral Term



7 Do Women Municipal Councilors Condition the Effect of Women Mayors?

As discussed in the main paper, we find that increasing the percentage of women on a municipal council is associated with an increase in expenditures on feminine issues relative to masculine ones. A logical extension of this would be to see if the effects of a woman mayor are conditioned by the percentage of women councilors. In other words, we expect that the effects of a woman mayor are more muted when there are few women councilors, but that this effect grows stronger

as more women are represented on the municipal council.[1]

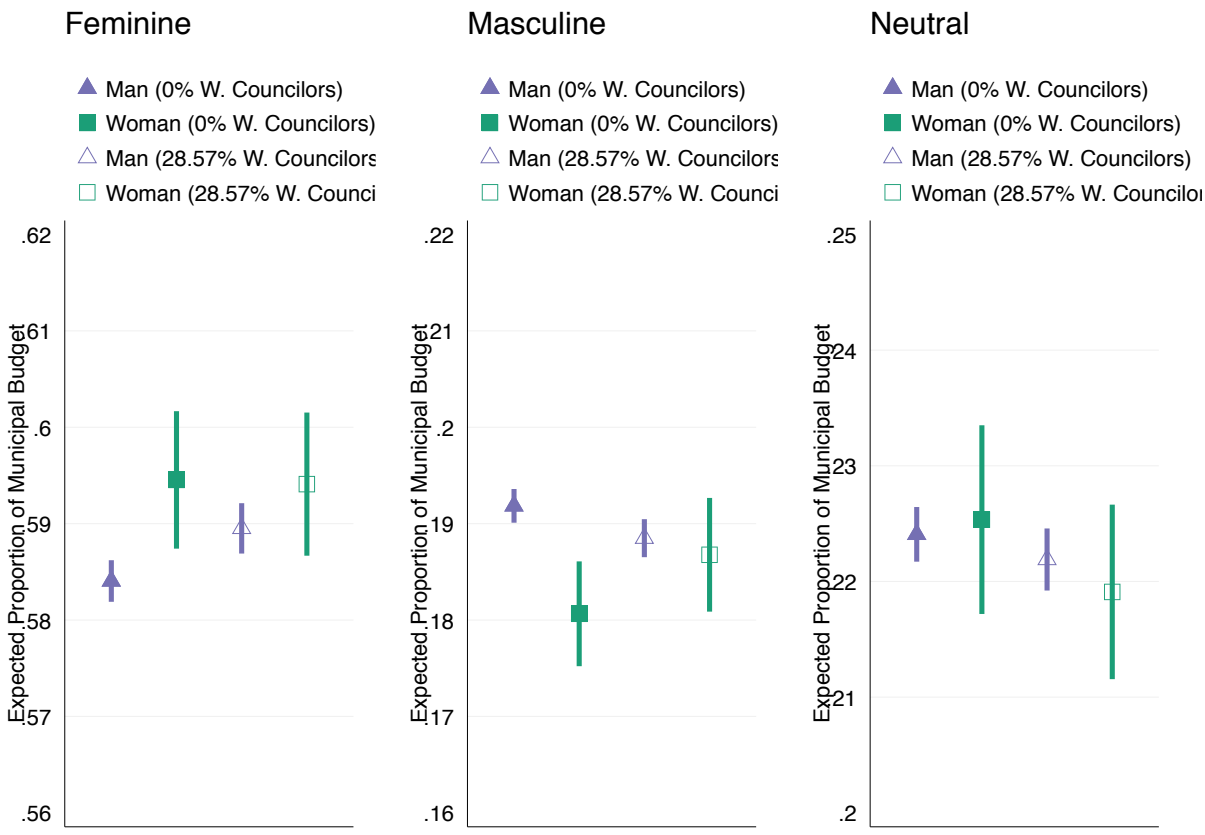
To test whether or not the composition of the municipal council conditions the effect of women mayors, we introduce an interaction between the percentage of women councilors and the dichotomous women mayor variable. As before, we turn to substantively meaningful predictions of expenditure compositions graphically, rather than relying on a table of complex non-linear results. We first estimated our model, and—using simulations as before—examine the expected proportion of the budget under four scenarios: (1) man mayor with the percent female councilors set at the 10th percentile value of the sample (zero percent women councilors), (2) man mayor with the percent female councilors set at the 90th percentile (about 28.57 percent), (3) woman mayor with female councilors set at the 10th percentile, (4) woman mayor with female councilors set at the 90th percentile.

As shown in Figure S4, which shows the interactions for feminine, masculine, and neutral categories of the budget, the number of women councilors does not appear to affect the amount a woman mayor spends on the budget; feminine expenditures remain nearly identical regardless of whether there are 0 or 29 percent women on the city council. While masculine expenditures appear to increase and neutral expenditures decrease as more women are put on the city council under a woman mayor, this effect is not statistically significantly different. In contrast, men mayors appear to be affected by women councilors. They spend statistically significantly more on feminine expenditures when there are 29 percent women on the council. This appears to come at the cost of less masculine and neutral spending.

We also show the results for the disaggregated expenditure categories. As shown in Figure S5, which shows the expected proportions for the three feminine expenditure categories—education, health, and social assistance—conditioning by the percentage of women municipal councilors does not seem to affect women mayors. The only substantive change in Figure S5 is that man mayors who govern in a municipality with a substantial female presence on the municipal council tend to spend statistically significantly more on education than man mayors who

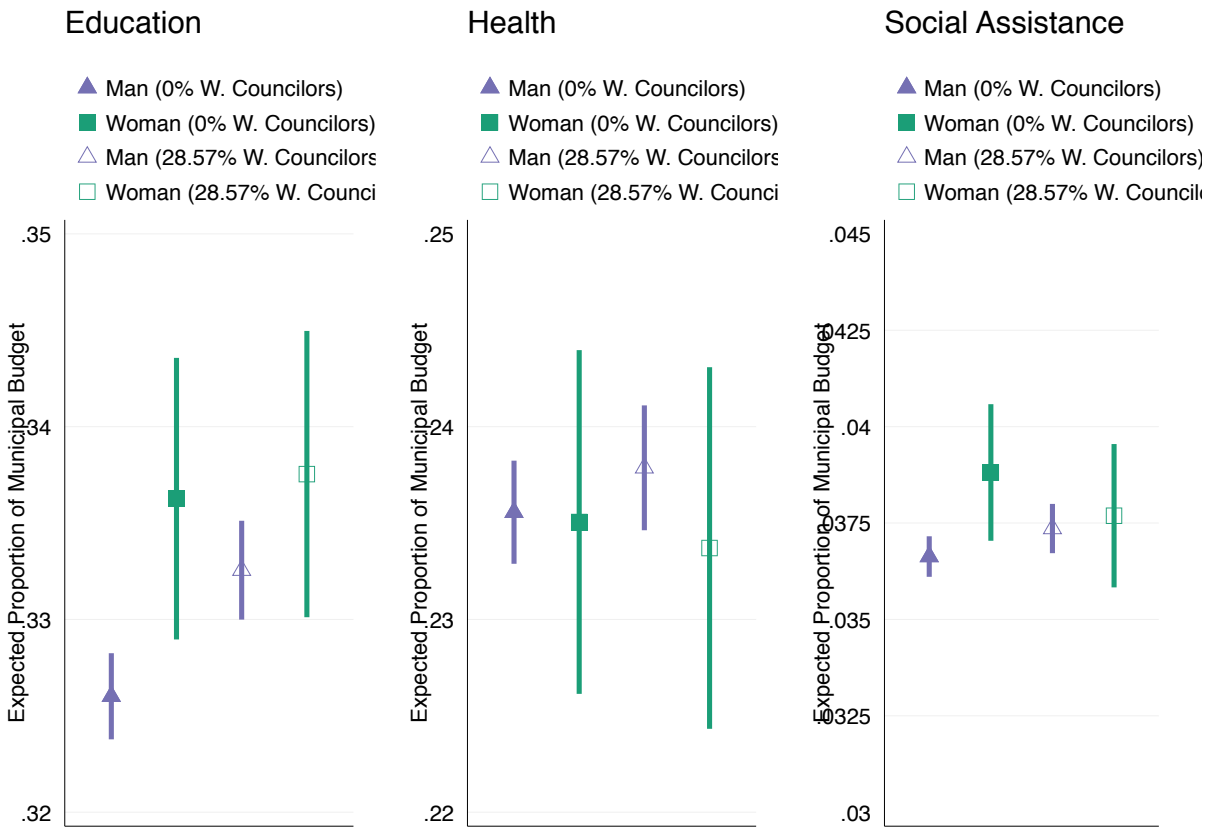
[1]We thank a reviewer for suggesting this.

Figure S4: Percentage of Women Councilors has no Effect on Women Mayors, Does Affect Men Mayors



govern in a municipality with zero female councilors. In fact, they become statistically indistinguishable from a woman mayor, in terms of education spending.

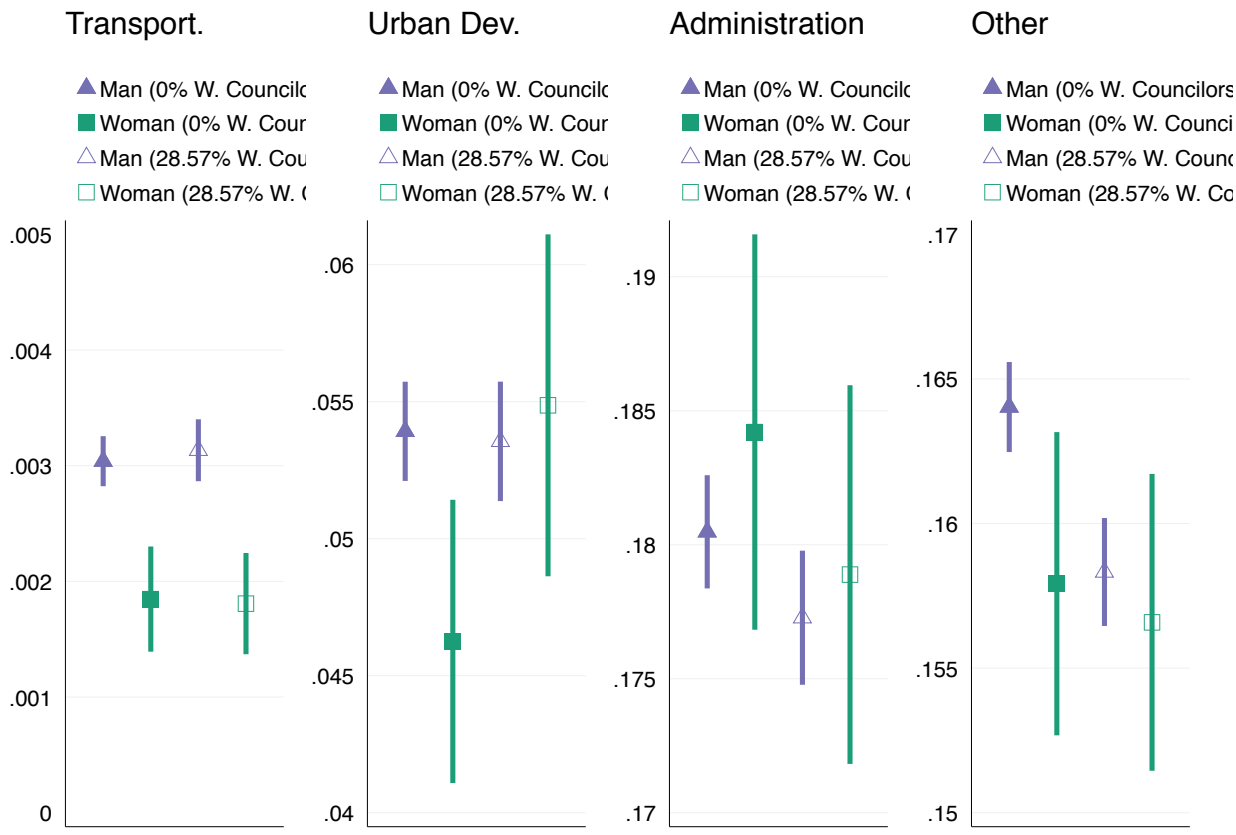
Figure S5: Percentage of Women Councilors has Only Slight Conditioning Effects on Women Mayors



In Figure S6, which shows the expected proportion of the budget allocated to four non-feminine categories, there are once again some substantively, though not statistically, significant effects caused by the percentage of women councilors. For one, men mayors spend statistically significantly more on urban development than women mayors, but only when the percentage of women councilors is zero. When the percentage of women councilors is at the 90th percentile, both men and women mayors allocate slightly less than 5.5 percent of their budget to urban development. A similar effect can be seen in "Other" expenditures; women mayors tend to spend less than men mayors when there are no women councilors, but at the number of women coun-

cilors increase the gender differences tend to disappear. The proportion allocated to transportation tends not to differ based on the percent of women municipal councilors, while increasing the percent of women councilors leads to less spending, regardless of gender, on administration, although these differences are not statistically significant.

Figure S6: Percentage of Women Councilors has Only Slight Conditioning Effects on Women Mayors (Other Expenditure Categories)



To conclude, we find some evidence that the percentage of women council members in a municipality may condition the effect of mayor gender.

8 Does Employment Background Condition the Effect of Women Mayors?

Our main findings indicated that women mayors allocate more spending to feminine categories of the budget at the cost of masculine ones. Of course, this simply takes the average effect of being a woman, after controlling for other factors in our model. Due to their position in a gender-structured society (Htun and Power 2006), women often experience similar life and socialization experiences, which shape their policy preferences and behaviors. However, women are a heterogeneous group and their willingness to act on behalf of women's interests varies across subgroups of women. One possible source of heterogeneity across women mayors may be their background. Women executives with certain characteristics, such as occupational backgrounds in a traditionally feminine sector or a high level of education, may be more likely to support gender equality (Inglehart and Norris 2003), and thus more likely to fund policy areas that women care about. In other words, does the background of a mayor condition the effect of being a woman mayor?[2]

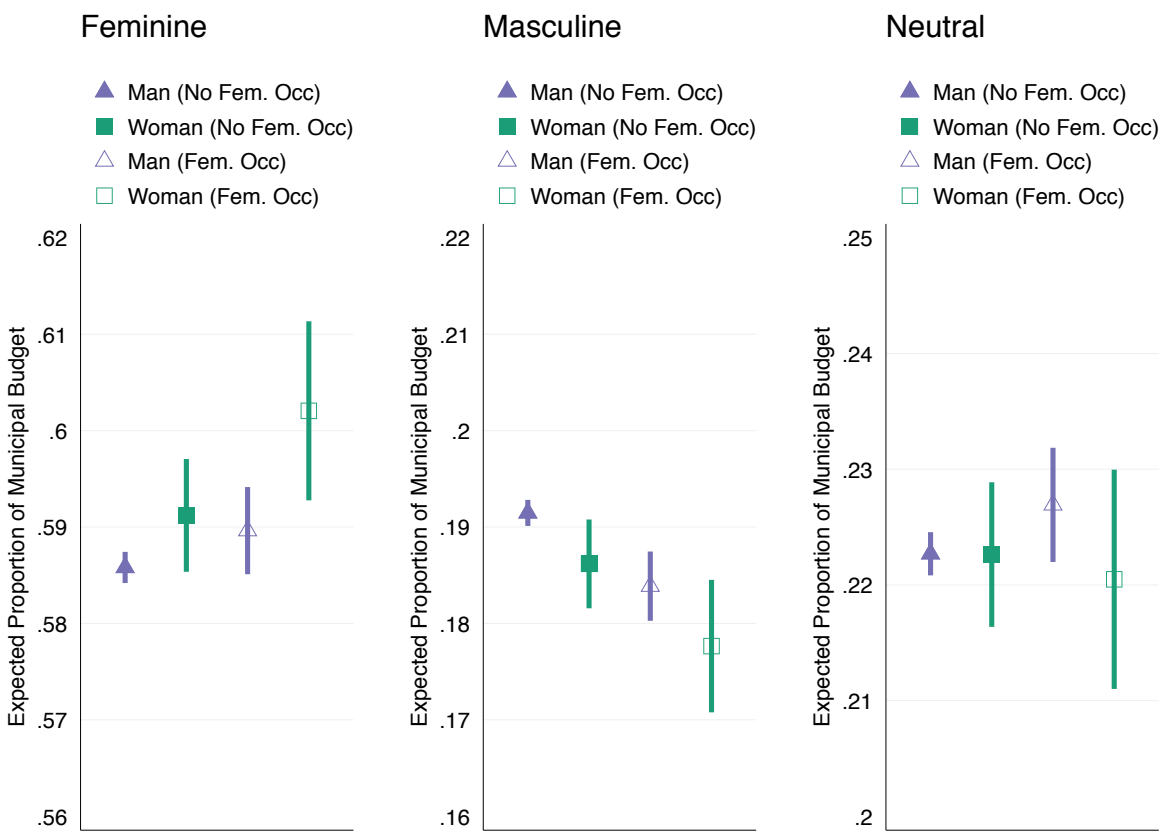
To test this possibility, we include a dichotomous variable equal to one if the mayor worked in a traditionally feminine field prior to becoming mayor—either in education, health care, or social work—and zero otherwise. This was interacted with the women mayor variable to test whether these conditional effects are taking place. As with our other results, we present figures, this time showing four scenarios: (1) man mayor with no feminine occupation background, (2) man mayor with a feminine occupation background, (3) woman mayor with no feminine occupation background, (4) woman mayor with a feminine occupation background. Our expectation is that women mayors may spend even more on feminine categories if they come from a background classified as a traditionally feminine field.

As with the mayor-women councilor interaction, we first show the results from the three main categories before disaggregating expenditures into seven categories. As shown in Figure S7, both women and men mayors spend more on traditionally feminine expenditures when they come

[2]We thank an anonymous reviewer for suggesting this possibility.

from an educational, healthcare, or social work background, although this increase is not statistically significant. This appears to be coming at the cost of traditionally masculine expenditures.

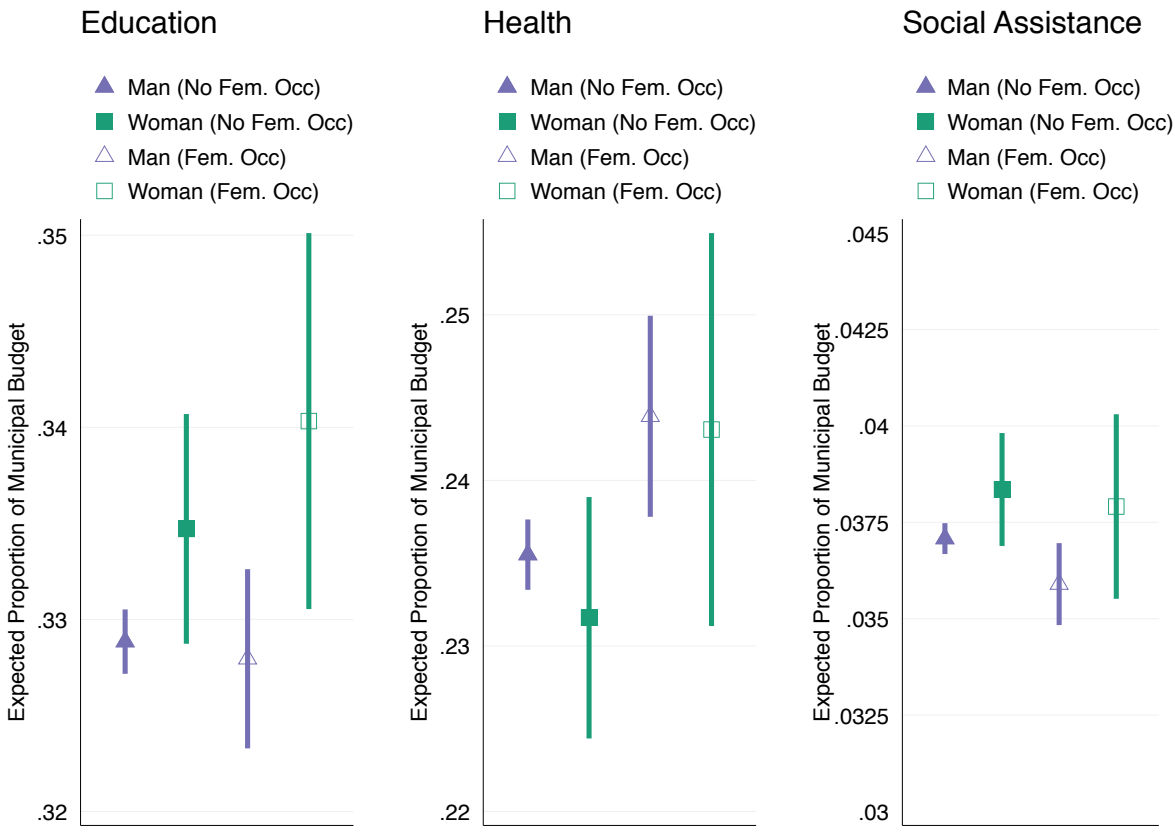
Figure S7: Feminine Occupational Background has Only Slight Conditioning Effects on Women Mayors



Moving to the disaggregated categories, the results of the interaction for the three feminine expenditure categories are shown in Figure S8. The results lend substantive, though not statistically significant support for our theoretical expectations; women mayors who come from a feminine occupational background spend more on education and health than those who do not, although this effect is not statistically significant. Interestingly, women from feminine occupational backgrounds tend to spend slightly less on social assistance. The effects of feminine occupation for men mayors also provides mixed support. Men mayors spend about the same on education, regardless of their occupational background. In contrast, they spend more on health and less on

social assistance when they came from a feminine occupation background than when they do not.

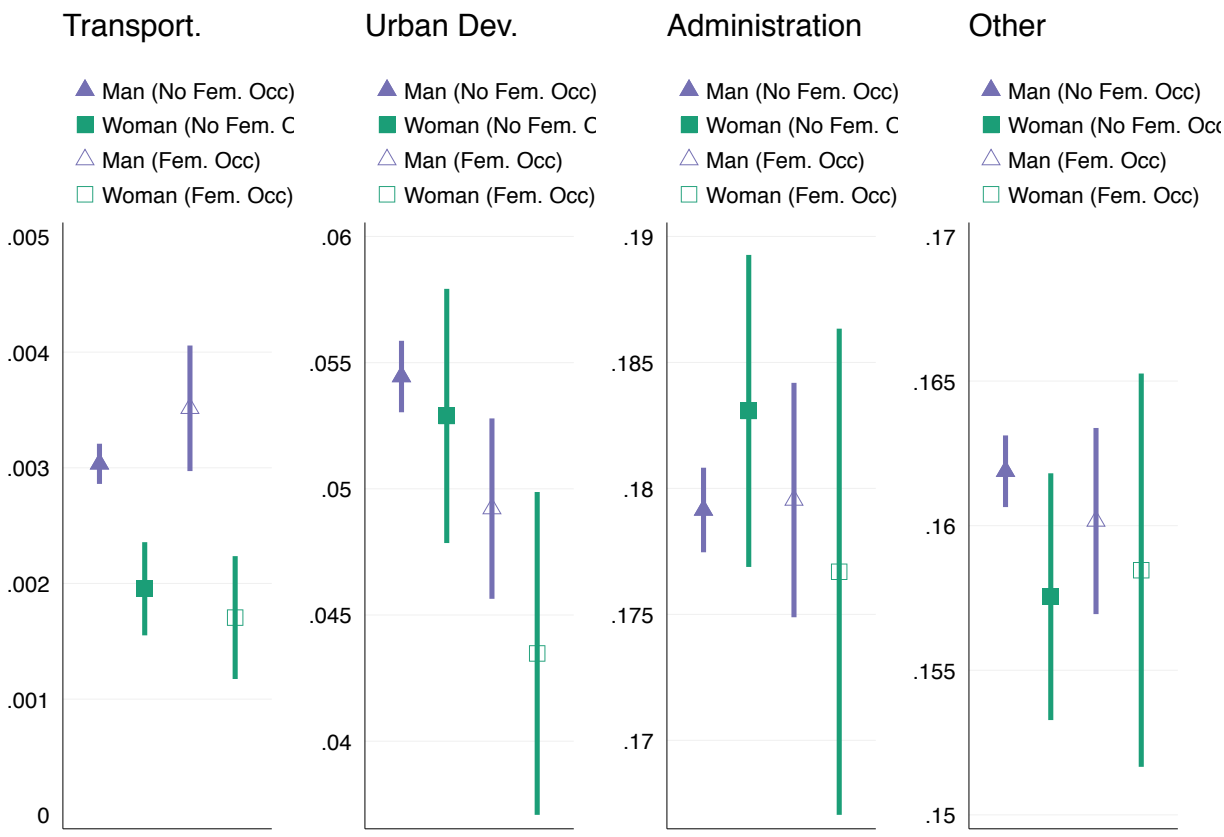
Figure S8: Feminine Occupational Background has Only Slight Conditioning Effects on Women Mayors



In Figure S9 we show the results for the four non-feminine expenditure categories. Once again there are substantive differences between mayors that worked in a previously feminine field and those that did not, although the effects are seldom statistically significant. Women who worked in a feminine occupation prior to becoming mayor spend less on transportation, urban development, and administration, as a proportion of the budget, relative to women mayors who did not (as well as men mayors, regardless of their background).

To conclude, we find evidence of small conditioning effects of previous occupation on the effect of a mayor's gender. Although the results point in the expected direction, for the most part these differences are not statistically significant.

Figure S9: Feminine Occupational Background has Only Slight Conditioning Effects on Women Mayors (Other Expenditure Categories)



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