The Effect of Electing Female Candidates on Attitudes Towards Intimate Partner Violence

Nicholas Kuipers
University of California, Berkeley
nkuipers@berkeley.edu.

Short Title: Female Representation and Attitudes Towards IPV

Abstract

What can be done to encourage people to condemn intimate partner violence? Looking at Indonesia, I combine electoral data with a large scale health survey and find that the narrow victory of a female candidate—as opposed to a male candidate—in local council elections leads to a decrease in the share of female constituents who agree that a husband is justified in assaulting his wife. I observe similar results for male constituents, although some estimates are not statistically significant. These results improve our understanding of the role of descriptive representation as a cause, rather than simply a consequence, of changing attitudes.

Keywords: female empowerment; representation; violence against women; Indonesia

Supplementary material for this article is available in the online appendix. Replication files are available in the JOP Data Archive on Dataverse (http://thedata.harvard.edu/dvn/dv/jop)

For millions of women across the world, intimate partner violence (IPV) is a daily occurrence. A wave of new research has identified small scale interventions effective in changing individuals' attitudes towards IPV, with the ultimate aim of diminishing the incidence of such events in the first place. Scholars have found that changes in educational curricula, mass media campaigns, and structured dialogues between partners can all have significantly positive effects in changing participants' stated tolerance of IPV (Dhar, Jain and Jayachandran 2015; Green, Wilke and Cooper 2018; Gupta et al. 2013).

These studies are promising, but have led to a comparative neglect of the broader political forces that might affect attitudes towards IPV. A growing body of scholarship has identified institutional changes as influential in shaping individuals' attitudes and behaviors (c.f. Tankard and Paluck 2017). Hudson, Bowen and Nielsen (2011) present evidence in support of this hypothesis, finding that a country's legal codes are an important determinant of the incidence of violence against women. Perhaps most similar in design to the present study, Beaman et al. (2009) examine the effect of exposure to gender quotas in local elections in India and find that such policies durably reduced levels of gender-based bias among survey respondents.

Particularly relevant to this paper, a cross-national literature has theorized about the causal mechanisms through which an increase in female political representation might lead to changes in attitudes towards IPV. These studies have hypothesized that an increase in female representation will enable resources for programs aimed at the prevention of IPV, with downstream attitudinal consequences. Two recent studies have found evidence of this process. In India, Iyer et al. (2012) examine the implementation of gender quotas in local councils in India in the early 1990s. Following the implementation of gender quotas, the authors find that women are more likely to report incidents of IPV to the police. They attribute this finding to victims updating their attitudes about the acceptability of reporting IPV to the police, as they perceived officers held accountable by female politicians to be more amenable to hearing their claims. Looking at Rwanda, Burnet (2011) finds that a parliamentary gender quota increased female representation in the legislature and led to the passage of a law targeting gender-based violence in 2006. Drawing on qualitative evidence, the author argues this law encouraged constituents to update their attitudes towards these events.[1]

This paper seeks to extend these findings to the Indonesian context, by estimating the effect of

[1]Burnet (2011, 23) writes that "[t]hese reforms, as a whole, have changed perceptions about...women's roles."

electing women to local councils on attitudes towards IPV. Looking at a large scale health survey, I find that electing female politicians increases the proportion of constituents who condemn IPV. Specifically, the narrow victory of a female candidate in Indonesian local council elections—as opposed to a male candidate—leads to a significant *decrease* in the share of female constituents who agree that a husband is justified in assaulting his wife in the event of hypothetical perceived transgressions. I also observe similar results among male constituents, although the estimates of these additional tests are not always statistically significant.

Context

This research examines the case of Indonesia—the world's fourth most populous country. Studying the relationship between female political representation and attitudes towards IPV is particularly important in Indonesia for two reasons. First, IPV is endemic in Indonesia. Nearly 40% of women report having experienced such violence in the last 15 years—five percentage points higher than the global average. Second, Indonesia has recently undergone significant institutional transformations that make investigating the consequences of representation important. Following the return of democratic elections in 1999, the national parliament passed a law in 2003 implementing a gender quota for candidates on party lists.[2] Examining whether this institutional shift has had its intended effect with respect to constituents' attitudes in Indonesia is a pressing question.

I examine the effect of electing female candidates to the *Dewan Perwakilan Rakyat Daerah–II* (DPRD-II). The DPRD-II is the legislative body for the rural regency (*kabupaten*) level of government, as well as for urban municipalities (*kota*). Legislators are elected to five year terms in multi–member districts by a system of proportional representation known as the "hare quota." Starting in 2001, Indonesia underwent a process of extensive decentralization, with the number of districts growing from 292 in 1999 to 497 in 2012. The national decentralization law imbued these legislative bodies with significant new powers. By 2009, district legislatures were responsible for roughly 40% of all government spending in Indonesia.

These recent reforms make it likely that members of the DPRD-II are important players in

[2]This institutional change does not disturb the assumption at the core of the causal identification strategy used in this paper, since the new system does not create a quota for elected officials. Instead, the reform requires that political party lists include at least 30% female candidates.

changing attitudes towards IPV. With the 2001 decentralization law, the majority of policy portfolios were been handed over to the district-level of government, including the provision of healthcare and education. While laws explicitly targeting IPV are rare,[3] local council members have used their new authority to direct resources towards the mitigation of IPV by allocating funding from ongoing health programs. One such initiative has involved "service centers for empowering women and children" (*P2TP2A*), which, as of 2012, existed in 161 (out of 497) Indonesian districts. These centers are primarily intended as places of refuge for victims. But recent case study evidence suggests that these centers are also active in public engagement, frequently holding educational events in their communities (Asih and Yohana 2017). Other legislative initiatives have been more direct in their efforts to shift attitudes towards IPV, providing educational campaigns that target young Indonesians in school with lectures from health officials and religious leaders. Emblematic of these efforts, the DPRD-II in Kabupaten Madiun enacted *PERDA/No. 005/2008* that mandated "education promoting values against domestic violence towards women and children."

Empirical Strategy

I estimate the effect of electing an additional female legislator to the DPRD-II on stated tolerance of IPV among constituents. To do so, I leverage the particularities of the Indonesian electoral system whereby seats are allocated to legislators in multi–member districts through a system of proportional representation known as the "hare quota."[4] Seat allocation takes place in two rounds. First, for each constituency, an electoral quota is computed (total votes divided by the number of seats). Parties with vote totals in excess of the quota receive a proportional number of seats. Second, parties are then ranked according to leftover votes. Remaining seats are distributed in descending fashion.[5] I focus on the race for the last seat in the second round—i.e., the race between *the last winner and the first loser.*

The central identifying assumption of this paper is that the outcome of such races—if narrowly contested between a female and male candidate—is decided as if randomly. I define "narrowly

[3] Out of 15,804 local laws passed between 1990–2009, I detect only seven pieces of legislation that mention IPV in the title.

[4] See Section **??** of the online appendix for a more comprehensive explanation.

[5] "Leftover" votes are the total votes minus the number of first round seats multiplied by the electoral quota.

contested" as less than 1% of the total vote.[6] Consistent with the as-if random assumption, 49.8% of races in the main estimation sample were won by female candidates.[7] I exploit this plausible source of exogenous variation to compare outcomes in constituencies in which a female candidate narrowly defeats a male candidate in the race for the last allocated seat to constituencies where a male candidate narrowly defeats a female candidate. This strategy therefore exploits an increase in *the share of seats won by female candidates* in a given constituency. In constituencies where a female candidate narrowly won, 23.4% of the seats were won by female candidates, compared to 15.1% in constituencies where a male candidate won the last seat ($p < 0.0001, t = 5.3$). This corresponds to a 54.9% increase in the share of seats won by female candidates.[8]

To measure attitudes towards IPV in Indonesia, I draw on the USAID Demographic and Health Survey (DHS), which was conducted in 2012 as a nationally representative survey of women aged 18–49 ($N = 45,607$), along with a sub-sample of men aged 18–49 ($N = 9,306$).[9] Respondents were asked a series of questions about the acceptability of IPV as a form of punishment for perceived transgressions. Enumerators asked respondents whether or not they believe beating one's wife is acceptable if: (1) she goes out without telling her husband; (2) she neglects her children; (3) she argues with her husband; (4) she refuses to have sex with her husband; or (5) she burns the food.

I aggregate all outcomes to the electoral constituency (*daerah pemilihan*).[10] The analysis uses ordinary least squares (OLS) to compare constituency–level acceptance of IPV across places where a female candidate narrowly defeated a male candidate in the race for the last seat, to places where the reverse occurred. In terms of outcomes, I first examine the disaggregated measures. I also examine an index, which is an additive measure of all responses (Cronbach's $\alpha = 0.76$).

[6] As a sensitivity check, I also include additional analyses that look at larger bandwidths in Section **??** of the online appendix.

[7] A series of balance tests further bolster the plausibility of this assumption. See Section **??** of the online appendix.

[8] See Figure **??** in Section **??** of the online appendix.

[9] The sampling procedure randomly selected female respondents. Male respondents were surveyed in every third household.

[10] Constituencies are electoral creations. Administrative subdistricts (*kecamatan*) are perfectly nested within the constituencies.

Main Results and Placebo Tests

Table 1 summarizes the main effects, looking at female respondents interviewed in 2012, three years after the election in 2009.[11] Electing a female legislator leads a 6.4 percentage point drop in the proportion of women who say it is acceptable to beat one's wife if she goes out without telling her husband. Respondents were also less likely—by a margin of 3.6 percentage points—to say it is acceptable to beat one's wife if she argues with her husband. Under female incumbency, the proportion of female respondents stating that it is acceptable to beat one's wife if she burns the food drops by 3.2 percentage points. The effect of electing an additional female council member also appears to lead to a drop in the proportion of respondents who state it is acceptable to beat one's wife if she refuses sex (column 4) or if she neglects the children (2), although it is worth highlighting that these estimates are not always statistically significant and are sensitive to the selection of bandwidth (see Figure **??** of the online appendix). Finally, female incumbency leads to 0.20 drop in the additive index of all responses (column 6), corresponding to a 23 percent drop over counterfactual constituencies.

Table 1: Effect of Female Incumbency on Female Attitudes Towards IPV

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	-0.064^{*}	-0.058^{*}	-0.036^{*}	-0.023	-0.032^{**}	-0.203^{*}
	(0.031)	(0.029)	(0.015)	(0.018)	(0.011)	(0.084)
Constant	0.290^{**}	0.314^{**}	0.089^{**}	0.116^{**}	0.053^{**}	0.835^{**}
	(0.024)	(0.021)	(0.013)	(0.015)	(0.010)	(0.068)
Observations	128	128	128	128	128	128
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

Table 2 summarizes the results of the main analysis, looking at male respondents. The election of an additional female legislator appears to decrease the share of male respondents who say it is

[11] I conduct additional sensitivity analyses that implement the tests using less restrictive bandwidths in Section **??** of the online appendix. The results are substantively identical. I also conduct a graphical analysis of the main effect in Figure **??** of the online appendix.

acceptable to assault one's wife. For one of the six main outcomes, the point estimate is statistically significant. I find that the narrow election of an additional female legislator leads to a 3.3 percentage point drop in the share of male respondents who say it is acceptable to beat one's wife if she refuses sex. It also appears to lead to a drop in the additive index measuring broad-based support for IPV among male respondents, although this result is not statistically significant at conventional levels.

Table 2: Effect of Female Incumbency on Male Attitudes Towards IPV

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	−0.031	−0.031	−0.021	−0.033*	−0.014	−0.133
	(0.032)	(0.031)	(0.024)	(0.013)	(0.010)	(0.084)
Constant	0.144**	0.150**	0.057**	0.040**	0.017	0.406**
	(0.021)	(0.021)	(0.021)	(0.012)	(0.009)	(0.069)
Observations	128	128	128	128	128	128
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

One concern is that that these observed effects might be driven by an imbalance in pre–election differences in the distribution of outcomes. To examine this possibility, I conduct a series of placebo tests. Recall that the election took place in 2009. Thus I conduct the main analysis using pre–election outcomes from the 2007 USAID DHS survey. I look at both female and male respondents. Interviewers asked the same questions. The results of these tests are summarized in Table 3. For both male and female respondents, constituencies where female candidates narrowly win in 2009 appear statistically indistinguishable from those where female candidates narrowly lost.[12] Placebo tests for the additive index are provided in the online appendix in Table **??**. The results of these additional tests betray no signs of a pre-election imbalance.

[12]Although only marginally significant ($p = 0.059$), one exception is column 2, in which the proportion of male respondents who said beating one's wife if she goes out without telling her husband is roughly 7 percentage points lower in areas where female candidates won in 2009. Given the balance on all other lagged outcome variables, it is likely that this result is due to chance alone. However, to examine the extent to which this slight imbalance drives the main findings, I conduct the main analysis with the lagged (2007) dependent variable as a control. The results are presented in the appendix in Table **??** and Table **??** and are substantively identical to those results presented in the main analysis.

Table 3: Effect of Female Incumbency on Pre-treatment Attitudes Towards IPV (Placebo Test)

	Dependent variable:									
	Is it okay to beat one's wife if she:									
	Goes out		Neglects children		Argues		Refuses sex		Burns food	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Female	−0.037	−0.073	−0.004	−0.008	0.010	−0.032	0.012	0.010	0.006	0.020
	(0.036)	(0.038)	(0.036)	(0.043)	(0.018)	(0.030)	(0.022)	(0.027)	(0.015)	(0.020)
Constant	0.282**	0.168**	0.276**	0.172**	0.071**	0.086**	0.074**	0.058**	0.038**	0.017*
	(0.027)	(0.032)	(0.026)	(0.031)	(0.014)	(0.024)	(0.017)	(0.016)	(0.011)	(0.008)
Observations	115	115	115	115	115	115	115	115	115	115
Bandwidth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Gender	F	M	F	M	F	M	F	M	F	M

Note: *p<0.05; **p<0.01. Beta coefficients from OLS regression. Decimals rounded to two digits to maintain alignment. Standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

Discussion

While the design of this study cannot definitively isolate the mechanisms that drive the results, one possible explanation is that female politicians are more adept at allocating state resources to address the issue of IPV, with downstream attitudinal consequences. I provide three pieces of suggestive evidence in support of this mechanism. First, I draw on newly available data documenting over 240,000 candidate platforms for local parliamentary office in 2019. Looking at these DPRD-II candidate platforms, I find that female candidates are, on average, 28 times more likely than male competitors to mention women's issues in their platform (Figure **??**, 14.2% vs. 0.51%). These statements occasionally focus on IPV, indicating that female candidates are hopeful in their capacity to initiate change in this area. One candidate in Kabupaten Bangka Tengah, for instance, states in her platform that she is running to "fight for the interests of women in parliament so that domestic violence no longer happens."[13]

Second, I examine the effect of increased female political representation on funding for health initiatives. Recall that the main hypothesized lever through which local legislators have directed local resources towards mitigating IPV has been funding for programs under the broader umbrella of ongoing health initiatives.[14] I adopt a correlational approach to examine the relationship between

[13]Original text: "Untuk memperjuangkan kepentingan perempuan di parlemen supaya tidak terjadi lagi kekerasan pelecehan (KDRT)." https://bit.ly/2Bqa1A2.

[14]Legislation enacted in Kabupaten Madiun, for example, established crisis units *within extant health centers* for

the total share of seats held by female legislators in constituencies and district health budget allocations.[15] The results are presented in the online appendix in Table **??**. The relationship between the share of seats held by female representatives in constituencies and the share of district budgets dedicated to health is positive and highly significant across all specifications. The first differences estimate obtained from the naive regression is instructive: increasing the share of female representatives from 0% to 50% is consistent with a 3.3% increase in the share of the budget dedicated to health [95% CI: 0.94, 5.56].[16]

As a further test, I also investigate the effect of electing an additional female legislator on the allocation of resources *within* existing local health centers. Specifically, I draw on the 2014 IFLS survey of 964 local health centers to examine the amount of funding dedicated to public outreach initiatives—a category that includes awareness campaigns targeting IPV.[17] The results are presented in the online appendix in Table **??** and are consistent with the hypothesized mechanism: the narrow victory of female candidate over a male competitor leads, on average, to a doubling in funding for public outreach initiatives within health centers in their constituencies ($p = 0.073$).

Third, I examine heterogeneity in the effect of electing female legislators across districts with (and without) "service centers for empowering women and children" (*P2TP2A*). Qualitative evidence suggests that female legislators are active in channeling resources from health budgets towards *P2TP2A* centers, with the intent that these facilities provide shelter to victims and engage in community outreach to change attitudes towards IPV. If female legislators are active in funneling resources from health budgets to *P2TP2A* centers—and these centers are successful in achieving their stated goals—the observed effects of electing female candidates on attitudes towards IPV

victims of IPV.

[15]Budget allocations are decided at the district–level, rather than the constituency level, meaning the empirical strategy employed in the main analysis is inapplicable. For estimation, I regress the proportion of female legislators in the constituencies on the proportion of the budget dedicated to "health" in 2014. Column (1) is the naive regression; Column (2) includes the lagged (2008) dependent variable; Column (3) adds a number of conventional control variables; Column (4) includes a provincial fixed-effects term.

[16]This estimate is consistent with those obtained from the other models. In the full specification (Column (4)), the first differences estimate implies that going from 0% to 50% female representation in legislatures leads to a 3.1 percentage point increase in the share of the budget dedicated to health [95% CI: 1.03, 5.10].

[17]As a set of additional outcomes, I also examine (1) the total funding for the local health centers, (2) the proportion of female doctors, and (3) the number of public health officials

ought to be amplified in constituencies with such facilities in place. In Figure **??** of the online appendix, I conduct a split sample analysis. For all six outcomes, and consistent with this hypothesis, the effect of narrowly electing a female legislator on female respondents' attitudes towards IPV is larger in districts with a *P2TP2A* center. In Table **??** of the online appendix, I present the results from formal interaction tests. These tests reveal at least marginally statistically significant heterogeneity for three of the six outcomes.

Qualitative evidence suggests that female legislators expect these measures to shape attitudes towards IPV. A local law passed in 2012 in the Trenggalek regency allocated funds for the construction of a safe house for victims of IPV, which the sponsors hoped would also have "social impacts."[18] Another local law passed in 2013 in the Penajam Paser regency is illustrative. The law directed resources towards the protection of victims. It also provided resources to skill-based training programs for survivors of IPV. Sarifah Ainun Jariah, a female legislator in the DPRD-II and the sponsor of the law, said she hoped the resources would help combat the social stigma that constrains the mindset of survivors. "Oftentimes, [survivors] will temporarily hide at a family member's house in a neighboring district, but in the end they will move entirely or drop out of school," she told a local newspaper.[19] Jariah said she hoped this legislation would combat the culture of shame that motivates this sort of action.

Conclusion

The findings presented in this paper make at least two central contributions. First, it makes a clear contribution in terms of policy implications. Specifically, the increased election of female legislators would constitute a major push in the effort to empower people to condemn IPV. These results therefore offer at least partial support to those who advocate for gender quotas on the grounds that increases in descriptive representation might improve measures of substantive representation for female constituents (c.f., Franceschet, Krook and Piscopo 2012). More broadly, second, this research contributes to a growing literature that identifies the consequences of political representation for marginalized communities. The results suggest that increases in representation has an emboldening effect on the attitudes of ingroup members. This is consistent with the work of Chattopadhyay and

[18] "DPRD Trenggalek "Godok" Ranperda Perlindungan Perempuan Anak." *Antara News.* 5 February 2012.
[19] "DPRD PPU Ajukan Raperda Perlindungan Perempuan." *Antara News.* 22 March 2013.

Duflo (2004) and Iyer et al. (2012).

This paper adds to these findings in three respects. First, I extend these insights to the Indonesian context. To my knowledge, this is the first study examining the consequences of increased female political representation on attitudes towards IPV in the world's fourth most populous country. The institutional context makes this case a hard test. The effects of female representation in multi-member districts should be diluted and thus bias away from observing effects on constituents' attitudes. Instead, I find that even a modest increase in the share of seats held by female council members can have substantively large consequences. Second, I examine the effect of electing female legislators on male attitudes and present evidence that the salutary effect of increased female representation partially carries over to this population, despite a smaller sample size. This is a normatively promising conclusion—and one that cuts against the expectation of those who argue that such increases in representation might lead to a "backlash effect" among privileged outgroups (e.g., Sidanius et al. 2004). Third, by documenting more foundational attitudinal shifts, this study underscores an important mechanism through which descriptive representation moves relevant outcomes. Namely, increases in female political representation might embolden female constituents to make greater demands in accordance with their self–interest.

Acknowledgments

I would like to thank Gareth Nellis and Michael Weaver for their help on this project. For comments on earlier drafts, I would like to thank Katie Beall, Thad Dunning, Rachel Fisher, Josh Kalla, Neil O'Brian, Alison Post, and Bhumi Purohit. Thank you to the three anonymous reviewers for their generous feedback and thoughtful suggestions. I also thank Putri Wahyudewi for excellent research assistance.

References

Asih, Liany Wulan and Nova Yohana. 2017. "Kota Pekanbaru dalam Pedampingan Anak Korban Kekerasan Seksual." *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Sosial dan Ilmu Politik* 4(2):1–10.

Beaman, Lori, Raghabendra Chattopadhyay, Esther Duflo, Rohini Pande and Petia Topalova. 2009.

"Powerful women: does exposure reduce bias?" *The Quarterly journal of economics* 124(4):1497–1540.

Burnet, Jennie E. 2011. "Women have found respect: Gender quotas, symbolic representation, and female empowerment in Rwanda." *Politics & Gender* 7(3):303–334.

Chattopadhyay, Raghabendra and Esther Duflo. 2004. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica* 72(5):1409–1443.

Dhar, Diva, Tarun Jain and Seema Jayachandran. 2015. Intergenerational Transmission of Gender Attitudes: Evidence from India. Technical report National Bureau of Economic Research.

Franceschet, Susan, Mona Lena Krook and Jennifer M Piscopo. 2012. "Conceptualizing the impact of gender quotas." *The impact of gender quotas* pp. 3–26.

Green, Donald P, Anna Wilke and Jasper Cooper. 2018. "Silence Begets Violence: A mass media experiment to prevent violence against women in rural Uganda.".

Gupta, Jhumka, Kathryn L Falb, Heidi Lehmann, Denise Kpebo, Ziming Xuan, Mazeda Hossain, Cathy Zimmerman, Charlotte Watts and Jeannie Annan. 2013. "Gender norms and economic empowerment intervention to reduce intimate partner violence against women in rural Cote d'Ivoire: a randomized controlled pilot study." *BMC international health and human rights* 13(1):46.

Hudson, Valerie M, Donna Lee Bowen and Perpetua Lynne Nielsen. 2011. "What is the relationship between inequity in family law and violence against women? Approaching the issue of legal enclaves." *Politics & Gender* 7(4):453–492.

Iyer, Lakshmi, Anandi Mani, Prachi Mishra and Petia Topalova. 2012. "The power of political voice: women's political representation and crime in India." *American Economic Journal: Applied Economics* 4(4):165–193.

Sidanius, Jim, Felicia Pratto, Colette Van Laar and Shana Levin. 2004. "Social dominance theory: Its agenda and method." *Political Psychology* 25(6):845–880.

Tankard, Margaret E and Elizabeth Levy Paluck. 2017. "The effect of a Supreme Court decision

regarding gay marriage on social norms and personal attitudes." *Psychological science* 28(9):1334–1344.

Biographical statement: Nicholas Kuipers is a PhD student at the University of California, Berkeley, Berkeley, CA, 94720.

Online Appendix

A Data **2**
A.1 Independent Variable . . . 2
A.2 Dependent Variables . . . 3
A.3 Descriptive Statistics . . . 4
A.3.1 Dependent Variables . . . 4
A.3.2 Balance Test Variables . . . 5

B Identification and Balance Tests **6**
B.1 Identification . . . 6
B.2 Balance Tests . . . 8
B.2.1 Demographic Characteristics . . . 8
B.2.2 Election Characteristics . . . 9
B.3 Smoothness . . . 10
B.4 Health Laws, 1995–2009 . . . 11
B.5 Additional Placebo Tests . . . 12
B.5.1 Effect of Female Incumbency on Attitudes Towards HIV Patients (Irrelevant Placebo) . . . 12
B.5.2 Parallel Constituency Subset . . . 13
B.5.3 Full Set of Outcomes, Including Index . . . 14

C Supplementary Analyses **15**
C.1 Individual Level Analysis . . . 15
C.2 Graphical Presentation of Main Results . . . 16
C.3 Sensitivity Analysis . . . 17
C.4 Main Analysis, Lagged Dependent Variable . . . 18
C.4.1 Effect of Female Incumbency on Female Support for IPV, Lagged DV . . . 18
C.4.2 Effect of Female Incumbency on Male Support for IPV, Lagged DV . . . 19
C.5 Mechanism Analysis . . . 20
C.5.1 Health Budgets . . . 20
C.5.2 Candidate Platforms . . . 21
C.5.3 Health Center Budgets . . . 22
C.5.4 Heterogeneous Treatment Effects, by P2TP2A Centers . . . 23

A Data

A.1 Independent Variable

In terms of explanatory variables, I gathered electoral data from the General Election Commission (KPU) in Jakarta. Election data included the names of the candidates, from which research assistants hand coded the gender. With a team of trained research assistants in Jakarta, candidates were coded by gender, based on their name. Troublingly, there were over 300,000 candidates for the DPRD-II across Indonesia in 2009, making hand coding an expensive task. To minimize costs, the coding of candidate gender proceeded in two steps. First, in November of 2017, only those candidates contesting the last seat in electoral constituencies ($N = 3,012$)—the races in which I am interested—were coded by gender, following the procedure described below. Second, in July 2018, using the results of this initial coding, the gender of all the victorious candidates from constituencies in the estimation sample were then coded by gender. This second step was taken to conduct the tests that are described in Appendix B.

Many Indonesian names unambiguously identify the gender of the individual: Mohammad for men or Sri for women, for instance. Even in unclear instances, there are often syllabic cues. Names ending in "i" are typically female, while names ending in "o" are often male. However, in cases where the gender of the name was unknown, research assistants were instructed to search the relevant parliamentary directory for biographical information. In cases where the gender of the candidate could not be determined, the candidate's gender was coded as "unclear" and the observation was dropped from the estimation sample. In total, research assistants coded 3,012 candidates (1,506 candidate pairs). Of these candidates, 12% were women, 83% were men, and 5% were classified as unclear.

A.2 Dependent Variables

The outcome data come from the demographic and health surveys (DHS), conducted by USAID. These surveys pose questions to 45,607 randomly selected female respondents between the ages of 18-49. The surveys also surveyed every third household for male respondents ($N = 9,307$). For both sets of respondents, I look at a battery of questions regarding the acceptability of intimate partner violence as a form of punishment for various perceived transgressions. These surveys were conducted in 2012—roughly three years after the election in which I am interested.[1] Enumerators asked respondents whether or not they believe beating one's wife is acceptable under given circumstances. I create an additive index as a sixth measure.

1. "Is it acceptable to beat one's wife if she goes out without telling her husband?"

$$Y_i = \begin{cases} 1 & \text{if "yes"} \\ 0 & \text{if "otherwise"} \end{cases}$$

2. "Is it acceptable to beat one's wife if she neglects her children?"

$$Y_i = \begin{cases} 1 & \text{if "yes"} \\ 0 & \text{if "otherwise"} \end{cases}$$

3. "Is it acceptable to beat one's wife if she argues with her husband?"

$$Y_i = \begin{cases} 1 & \text{if "yes"} \\ 0 & \text{if "otherwise"} \end{cases}$$

4. "Is it acceptable to beat one's wife if she refuses to have sex with her husband?"

$$Y_i = \begin{cases} 1 & \text{if "yes"} \\ 0 & \text{if "otherwise"} \end{cases}$$

5. "Is it acceptable to beat one's wife if she burns the food?"

$$Y_i = \begin{cases} 1 & \text{if "yes"} \\ 0 & \text{if "otherwise"} \end{cases}$$

[1] I also draw on the same survey from 2007 for pre-election placebo tests

A.3 Descriptive Statistics

A.3.1 Dependent Variables

Table A.3i: Descriptive Statistics (Female Respondent Outcomes)

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Goes out	156	0.259	0.168	0.000	0.129	0.360	0.733
Neglects children	156	0.292	0.164	0.000	0.161	0.417	0.720
Argues	156	0.069	0.084	0.000	0.000	0.091	0.421
Refuses sex	156	0.101	0.100	0.000	0.037	0.150	0.536
Burns food	156	0.034	0.062	0.000	0.000	0.040	0.316
Additive index	156	0.735	0.471	0.045	0.379	1.013	2.315

Table A.3i shows descriptive statistics for the main outcomes among female respondents.

Table A.3ii: Descriptive Statistics (Male Respondent Outcomes)

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Goes out	156	0.125	0.178	0.000	0.000	0.200	1.000
Neglects children	156	0.141	0.192	0.000	0.000	0.250	1.000
Argues	156	0.049	0.138	0.000	0.000	0.000	1.000
Refuses sex	156	0.028	0.079	0.000	0.000	0.000	0.500
Burns food	156	0.013	0.068	0.000	0.000	0.000	0.500
Additive index	156	0.353	0.485	0.000	0.000	0.500	2.500

Table A.3ii shows descriptive statistics for the main outcomes for male respondents.

A.3.2 Balance Test Variables

Table A.3iii: Descriptive Statistics (Balance Tests)

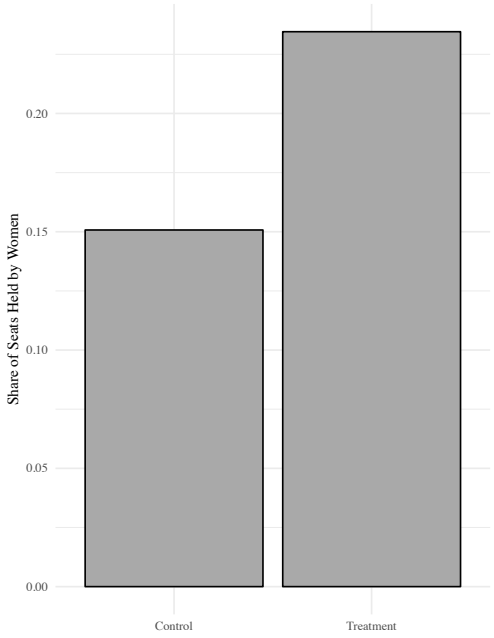
Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
(Resp) Age	156	31.459	2.132	24.200	30.209	32.690	38.842
(Resp) Education	156	0.640	0.230	0.087	0.500	0.829	1.000
(Resp) Owns motorcycle (%)	156	0.719	0.215	0.000	0.629	0.864	1.000
Number of Villages (#)	265	35.374	23.938	3.000	16.000	49.000	128.000
Population (x 10,000)	265	14.554	12.098	1.207	5.662	19.538	82.092
Schools(#)	265	75.623	52.741	4.000	36.000	106.000	412.000
Male Doctors (#)	265	17.426	26.018	0.000	4.000	20.000	202.000
Female Doctors (#)	265	10.713	15.115	0.000	3.000	12.000	144.000
Mosques(#)	265	145.000	155.157	0.000	43.000	190.000	984.000
Pubs(#)	265	0.857	1.560	0.000	0.000	1.000	10.000
Gambling Institutions (#)	265	0.287	0.652	0.000	0.000	0.000	4.000
Civil Defense Forces(#)	265	755.298	682.036	0.000	226.000	1,238.000	2,880.000

B Identification and Balance Tests

B.1 Identification

The causal identification strategy of this paper hinges on the peculiarities of the Indonesian electoral system. Seats in Indonesian local parliaments are apportioned to multi-member districts and then allocated to individual candidates through a system of semi-open list proportional representation using the hare quota. The process is outlined in Table B.1i. Under the hare quota, voters cast ballots for parties and individuals. Seats are apportioned to parties, but the candidate order is ranked by the voters. Each constituency then calculates an electoral threshold— the total number of votes divided by the total number of seats. There are then two stages of seat allocation. First, parties with vote totals in excess of the threshold receive seats proportional to their total vote share. Party vote expenditures are then subtracted from their vote totals and a "remainder" is calculated for each party. Second, parties are ordered according to their remainder vote totals. Excess seats (those not apportioned in the first round) are then allocated in descending fashion.

Figure B.1i: Share of Seats Won by Women in Treatment and Control Constituencies



The causal identification strategy outlined in this paper focuses on the race for the last seat to be allocated in electoral constituencies—between the last winner and the first loser. The core assumption of the identification strategy is that the race for the last seat—if closely contested between a female and male candidate—is decided as-if randomly. This strategy therefore exploits an increase in *the share of seats won by female candidates* in a given constituency. Additional tests confirm that this strategy identifies a large source of exogenous variation. In treatment constituencies, 23.4% of seats were won by female candidates, compared to 15.1% in control constituencies ($p < 0.0001, t = 5.3$), corresponding to a 54.9% increase in the share of seats won by female candidates. Figure B.1i plots the share of seats won by female candidates in treatment versus control constituencies.

Table B.1i: Hare Quota System Example (Five Seat District)

	First round:			*Second round:*			
Party	Total Votes	1^{st} Round Seats	Remainder	Remainder Rank	2^{nd} Round Seat	Candidate Gender	% Difference
A	105	0	105	1	✓	M	N/A
B	100	0	100	2	✓	F	0.5%
C	95	0	95	3	✗	M	0.5%
D	480	2	80	4	✗	M	1.5%
E	220	1	20	5	✗	M	6.0%
Threshold:	1000 / 5 = 200						

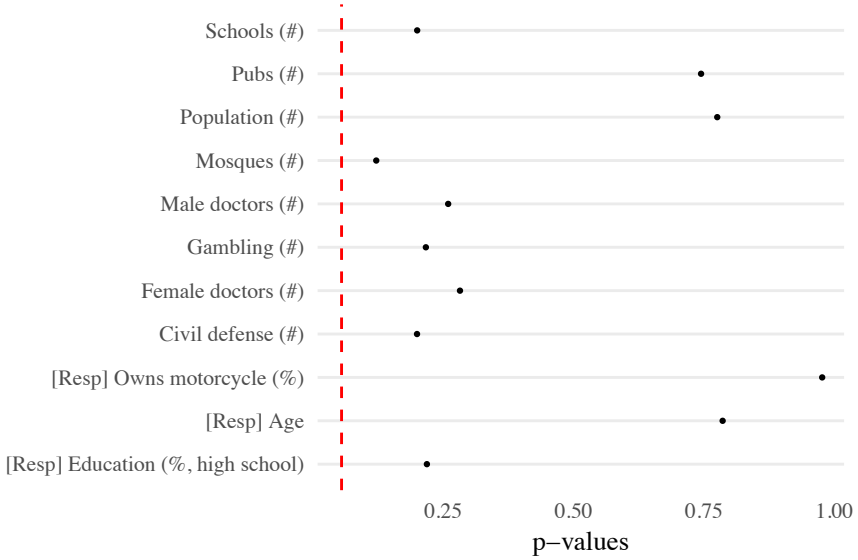
Seats in Indonesian local parliaments are apportioned to multi-member districts and then allocated to individual candidates through a system of semi-open list proportional representation using the hare quota. The process is outlined in Table B.1i. Under the hare quota, voters cast ballots for parties and individuals. Seats are apportioned to parties, but the candidate order is ranked by the voters. Each constituency then calculates an electoral threshold— the total number of votes divided by the total number of seats. There are then two stages of seat allocation. First, parties with vote totals in excess of the threshold receive seats proportional to their total vote share. Party vote expenditures are then subtracted from their vote totals and a "remainder" is calculated for each party. Second, parties are ordered according to their remainder vote totals. Excess seats (those not apportioned in the first round) are then allocated in descending fashion. The causal identification strategy outlined in this paper focuses on the race for the last seat to be allocated in electoral constituencies (shaded in grey)—between the last winner and the first loser.

B.2 Balance Tests

B.2.1 Demographic Characteristics

The central assumption of this paper is that the outcomes of narrowly contested elections between male and female candidates are decided as-if randomly. An empirically observable implication of this assumption is that constituencies in which women win—compared to those in which they lose—will appear statistically identical along a host of pre-outcome variables. To test this proposition, I select a number of pre-treatment variables that, *a priori*, concerned readers might believe to have influenced the outcome of the election. These variables include the gender ratio, the number of schools, the number of churches, among others. Figure B.2i reveals the p-values of difference-in-means tests across both sets of constituencies. I conduct these tests using ordinary least squares regression to imitate the main analysis. In Figure B.2ii I conduct similar balance tests that examine the dynamics of the elections across both sets of constituencies.

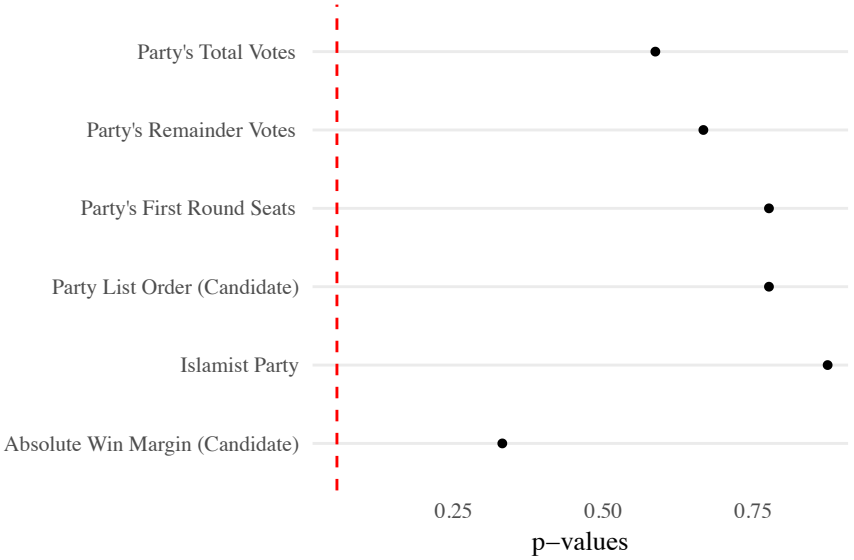
Figure B.2i: Balance Plot of Pre-Treatment Covariates (OLS)



Note: The outcomes preceded by [resp] are drawn from the 2012 USAID DHS Survey of Women in Indonesia and are cotemporaneous covariates of the respondents. All other outcomes are drawn from the 2008 Village Potential Statistics Survey (PODES). All p-values are calculated imitating the main analysis form, with heteroskedastic consistent standard errors.

B.2.2 Election Characteristics

Figure B.2ii: Balance Plot of Contemporaneous Election Covariates (OLS)



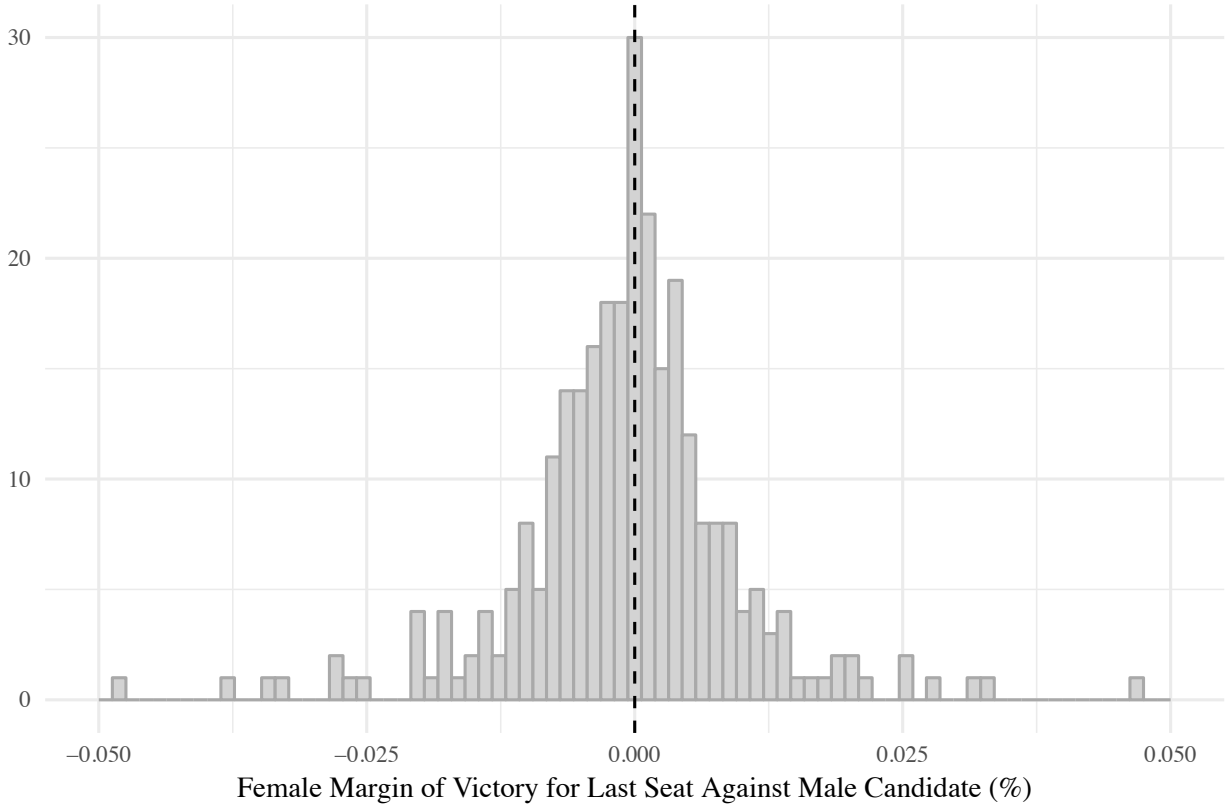
Note: The outcomes preceded by (candidate) refer to candidate level variables; all other variables pertain to the party performance. All p-values are calculated imitating the main analysis form, with heteroskedastic consistent standard errors.

B.3 Smoothness

A common concern with regression discontinuity designs is that there is sorting at the cutpoint. In other words, if substantial benefit comes from being on one side of the cutpoint, there is often good reason to suspect that observations will sort themselves to one side of the cutpoint in a manner that is correlated with unobservable characteristics. With sorting, then, the observed effects inferred from the design could plausibly be confounded by the unobserved characteristics of the observations.

I conduct two tests to rule out the possibility of "sorting" at the cutpoint. First, I plot the distribution of margins of victory of female candidates in Figure B.3i. Visually, this figure shows that there appears to be no sorting along the cutpoint. For a more formal test of this, however, I implement a McCrary sorting test. The results of this test betray no signs of discontinuous sorting at the cutpoint ($p = 0.34$).

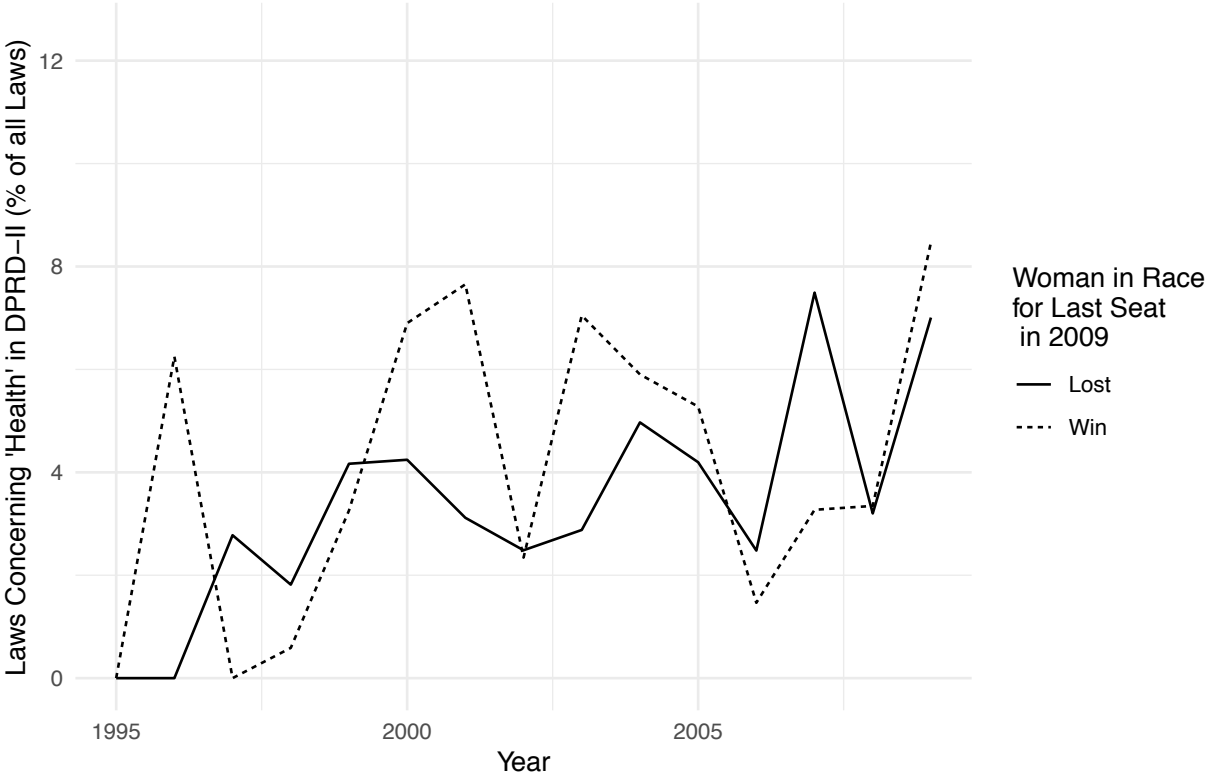
Figure B.3i: Distribution of Margins of Victory for Female Candidates



B.4 Health Laws, 1995–2009

I also examine the proportion of legislation focused on "health," passed in districts prior to the 2009 election. To examine such legislation, I obtained a dataset of local laws, including variables on (1) district, (2) year of passage, and (3) title of the law. I coded laws as pertaining to "health" if the title included one of two words: "health" (*kesehatan*) or "health center" (*puskesmas*). One concern is that increases in such legislation could influence both the likelihood of female candidates winning *and* the attitudes of constituents towards IPV. Laws are passed at the district level, rather than the constituency level, meaning I cannot conduct a conventional balance test of pre-election legislation. Instead, I adopt a graphical approach in which I plot the share of laws dedicated to health between 1995–2009, subsetting on those districts in which there was *one narrowly contested race between a female and male candidate.* I then disaggregate by those districts in which the female candidate won, versus lost, and present the differential rates of health legislation in Figure B.4i. Visually, both sets of districts report similar rates of health legislation prior to the 2009 election.

Figure B.4i: Proportion of Health Laws Passed, 1995–2009, by Outcome of Narrow 2009 Election



Note: Proportion of laws with titles pertaining to "health." For clarity of presentation, the data are subset to those districts in which there was a *single* narrow race for the last seat between a female and a male candidate, among all constituencies. 136 districts are included (out of 163) unique districts in the main estimation sample.

B.5 Additional Placebo Tests

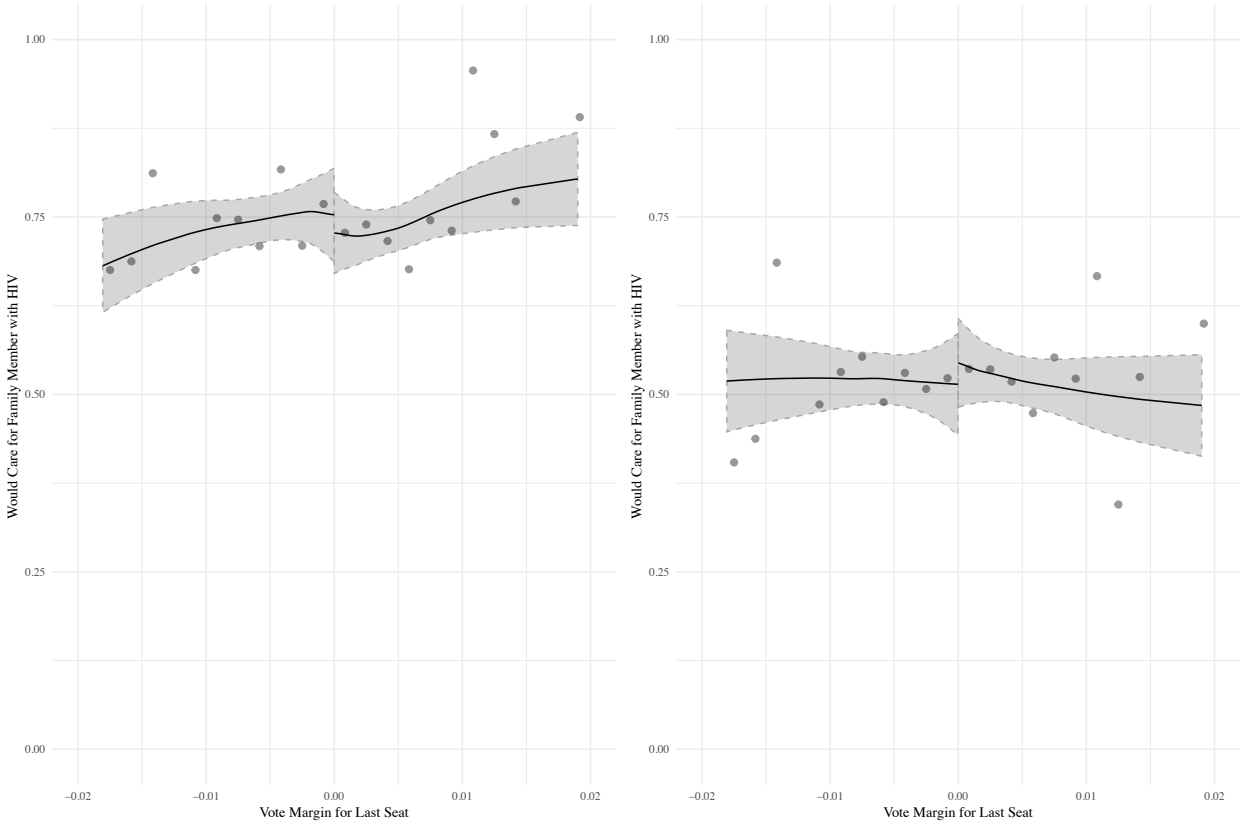
B.5.1 Effect of Female Incumbency on Attitudes Towards HIV Patients (Irrelevant Placebo)

In this section, I conduct a second placebo test in which I examine whether the election of an additional female legislator affects a theoretically unrelated attitudinal outcome, but one which might be affected by a generalized shift in liberalizing attitudes. Specifically, I recreate the main analysis and examine the effect of electing an additional female legislator on the proportion of female constituents' answering "yes" to the following questions:

- "If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?"
- "If a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?"

I detect no signs that the election of an additional female legislator affects either outcome ($p = 0.34$ & $p = 0.86$). I also include a graphical representation of this additional analysis in Figure B.5i.

Figure B.5i: Effect of Female Incumbency on Attitudes Towards HIV Patients (Placebo)



Note: Graphical illustration of RD design with binned means and local linear smoothing function. 90% confidence intervals are plotted. The outcome is the proportion of female respondents' answering "yes" to the following questions: (1) "If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?" (right panel) and (2) " if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?" (left panel)

B.5.2 Parallel Constituency Subset

For the main placebo test, I use the 2007 DHS survey and aggregate responses up to the constituencies of the 2009 legislative elections. The sample was different than those surveyed in 2012. One concern might be that the main placebo test does not test the distribution of pre-election outcome variables in the same constituencies examined for the post-election outcomes. In this supplementary placebo test, I restrict the 2007 DHS sample to those constituencies for which I also have outcome data in 2012. The results are presented in Table B.5i. The results of these placebo tests betray no signs of an imbalance in pre-election distribution of outcome variables.

Table B.5i: Effect of Female Incumbency on Pre-treatment Female Attitudes Towards IPV (Placebo Test + Same Constituencies)

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	0.016	0.042	0.015	0.031	0.008	0.110
	(0.047)	(0.046)	(0.025)	(0.031)	(0.021)	(0.146)
Constant	0.262**	0.269**	0.076**	0.077**	0.045**	0.716**
	(0.034)	(0.034)	(0.019)	(0.024)	(0.015)	(0.110)
Observations	74	74	74	74	74	74
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

B.5.3 Full Set of Outcomes, Including Index

Table B.5ii: Effect of Female Incumbency on Pre-treatment Female Support for IPV (Placebo Test)

	Dependent variable:											
	Is it okay to beat one's wife if she:											
	Goes out		Neglects children		Argues		Refuses sex		Burns food		Index	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female	−0.037	−0.073	−0.004	−0.008	0.010	−0.032	0.012	0.010	0.006	0.020	−0.012	−0.083
	(0.036)	(0.038)	(0.036)	(0.043)	(0.018)	(0.030)	(0.022)	(0.027)	(0.015)	(0.020)	(0.107)	(0.120)
Constant	0.282**	0.168**	0.276**	0.172**	0.071**	0.086**	0.074**	0.058**	0.038**	0.017*	0.729**	0.499**
	(0.027)	(0.032)	(0.026)	(0.031)	(0.014)	(0.024)	(0.017)	(0.016)	(0.011)	(0.008)	(0.080)	(0.091)
Observations	115	115	115	115	115	115	115	115	115	115	115	115
Bandwidth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Gender	F	M	F	M	F	M	F	M	F	M	F	M

Note: *p<0.05; **p<0.01. Beta coefficients from OLS regression. Decimals rounded to two digits to maintain alignment. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

C Supplementary Analyses

C.1 Individual Level Analysis

The main estimation strategy of this paper involves aggregating all outcomes to the constituency level. The outcomes are therefore the proportion of respondents in a given constituency stating that beating one's wife is acceptable under the proposed circumstances. An alternative estimation approach involves maintaining the individual respondent as the unit of analysis, and instead clustering the standard errors at the constituency level. I present the results of this alternative specification here.

Table C.1i: Effect of Female Incumbency on Female Attitudes Towards IPV (Individual Level)

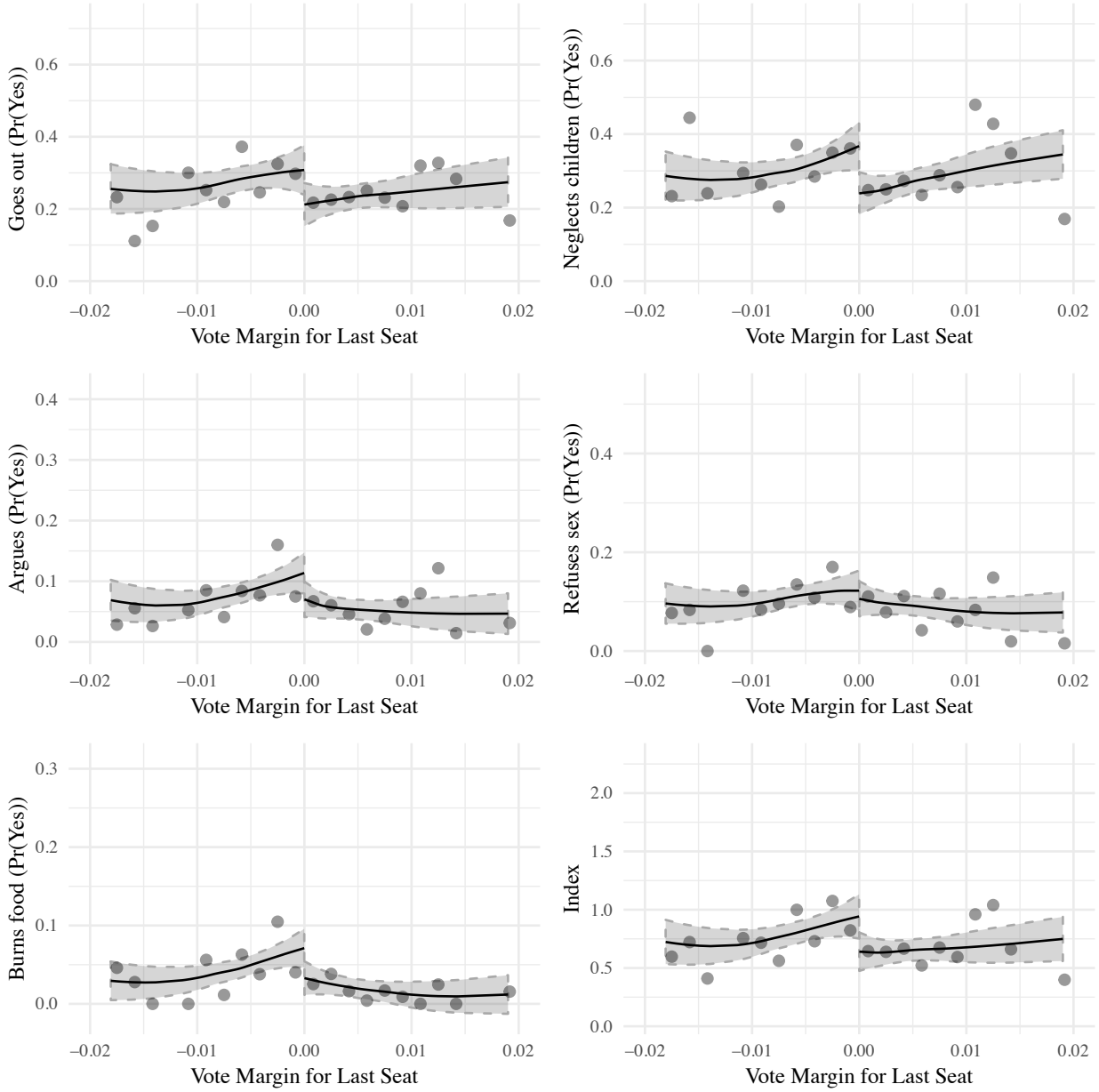
	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	−0.062	−0.048	−0.032	−0.026	−0.025*	−0.190
	(0.037)	(0.035)	(0.017)	(0.020)	(0.011)	(0.106)
Constant	0.288**	0.309**	0.089**	0.118**	0.048**	0.844**
	(0.031)	(0.027)	(0.016)	(0.017)	(0.009)	(0.091)
Observations	4207	4175	4148	4089	4178	4207
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

The results of these tests broadly affirm the validity of the main estimation strategy—the point estimates closely mirror the ones presented in the main analysis. All of the original results hold at the 10% level. However, it is worth underscoring that the alternative strategy presented here yields more imprecise estimates, with wider confidence intervals.

C.2 Graphical Presentation of Main Results

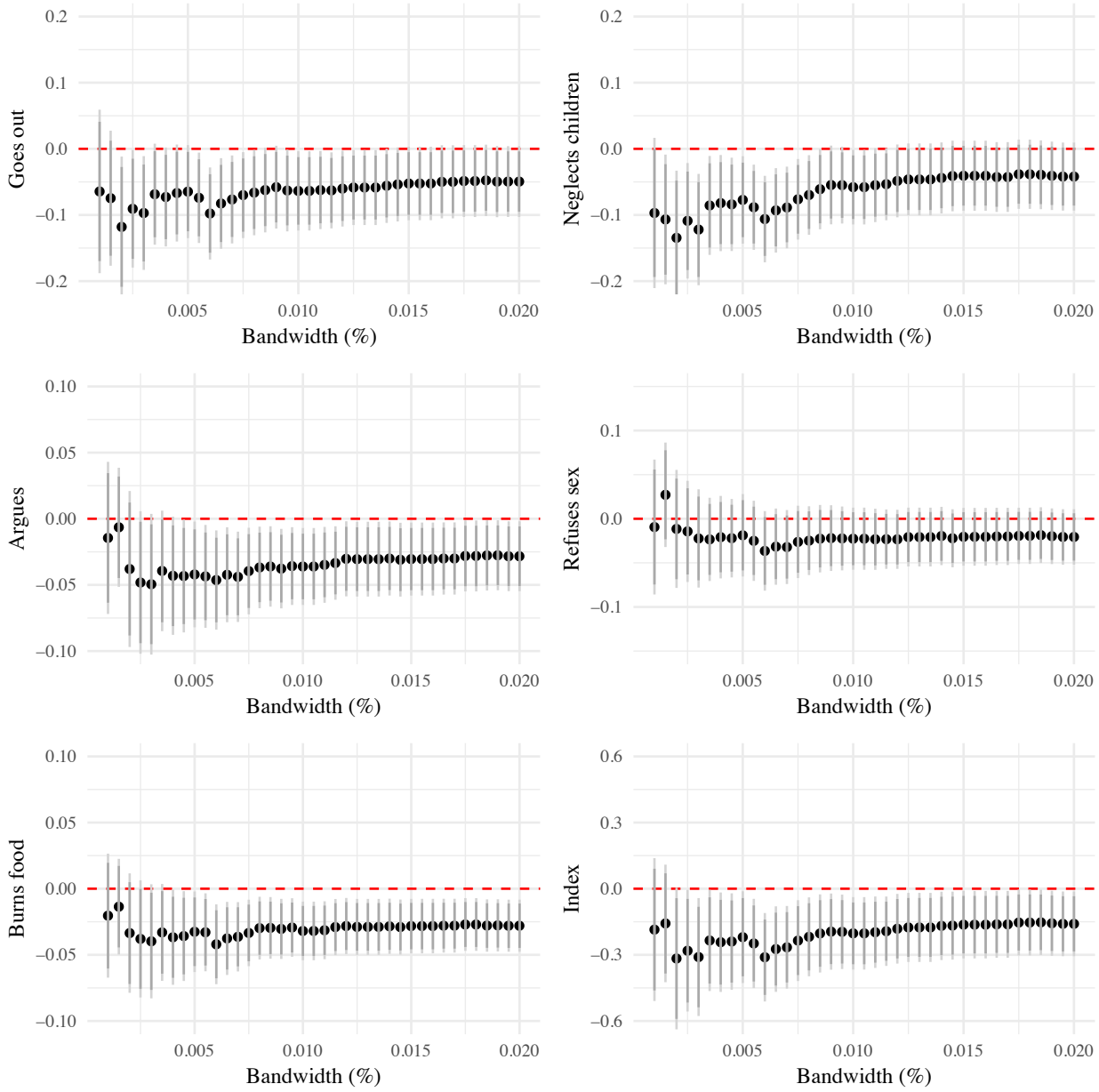
Figure C.2i: Graphical Representation of Effect of Female Incumbency on Attitudes Towards IPV



Note: Graphical illustration of RD design with binned means and local linear smoothing function. 90% confidence intervals are plotted. The outcomes with numerical indicators are post-treatment outcomes drawn from the 2012 USAID DHS Survey. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food; (6) additive index.

C.3 Sensitivity Analysis

Figure C.3i: Sensitivity Analysis of Effect of Female Incumbency on Attitudes Towards IPV



Note Beta coefficients from OLS regression. Bandwidths range from 0.1% to 2% margins of victory, at intervals of 0.05%. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

C.4 Main Analysis, Lagged Dependent Variable

C.4.1 Effect of Female Incumbency on Female Support for IPV, Lagged DV

Table C.4i: Effect of Female Incumbency on Female Attitudes Towards IPV, Lagged DV

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	−0.102**	−0.086*	−0.043*	−0.051*	−0.037*	−0.311**
	(0.038)	(0.036)	(0.019)	(0.024)	(0.015)	(0.107)
Goes Out (2007)	0.430**					
	(0.096)					
Neglects children (2007)		0.352**				
		(0.099)				
Argues (2007)			0.302**			
			(0.073)			
Refuses sex (2007)				0.246**		
				(0.063)		
Burns food (2007)					−0.014	
					(0.064)	
Index (2007)						0.334**
						(0.078)
Constant	0.206**	0.239**	0.075**	0.118**	0.060**	0.676**
	(0.041)	(0.037)	(0.019)	(0.022)	(0.015)	(0.114)
Observations	74	74	74	74	74	74
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression with lagged (2007) dependent variable. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

C.4.2 Effect of Female Incumbency on Male Support for IPV, Lagged DV

Table C.4ii: Effect of Female Incumbency on Male Attitudes Towards IPV, Lagged DV

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	−0.018	−0.003	−0.025	−0.032*	−0.008	−0.088
	(0.046)	(0.043)	(0.027)	(0.015)	(0.009)	(0.107)
Goes Out (2007)	0.067					
	(0.104)					
Neglects children (2007)		0.096				
		(0.107)				
Argues (2007)			0.239			
			(0.218)			
Refuses sex (2007)				−0.012		
				(0.033)		
Burns food (2007)					0.084	
					(0.105)	
Index (2007)						0.152
						(0.137)
Constant	0.124**	0.134**	0.042*	0.038*	0.010	0.319**
	(0.035)	(0.034)	(0.018)	(0.014)	(0.006)	(0.077)
Observations	74	74	74	74	74	74
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression with lagged (2007) dependentvariable. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

C.5 Mechanism Analysis

C.5.1 Health Budgets

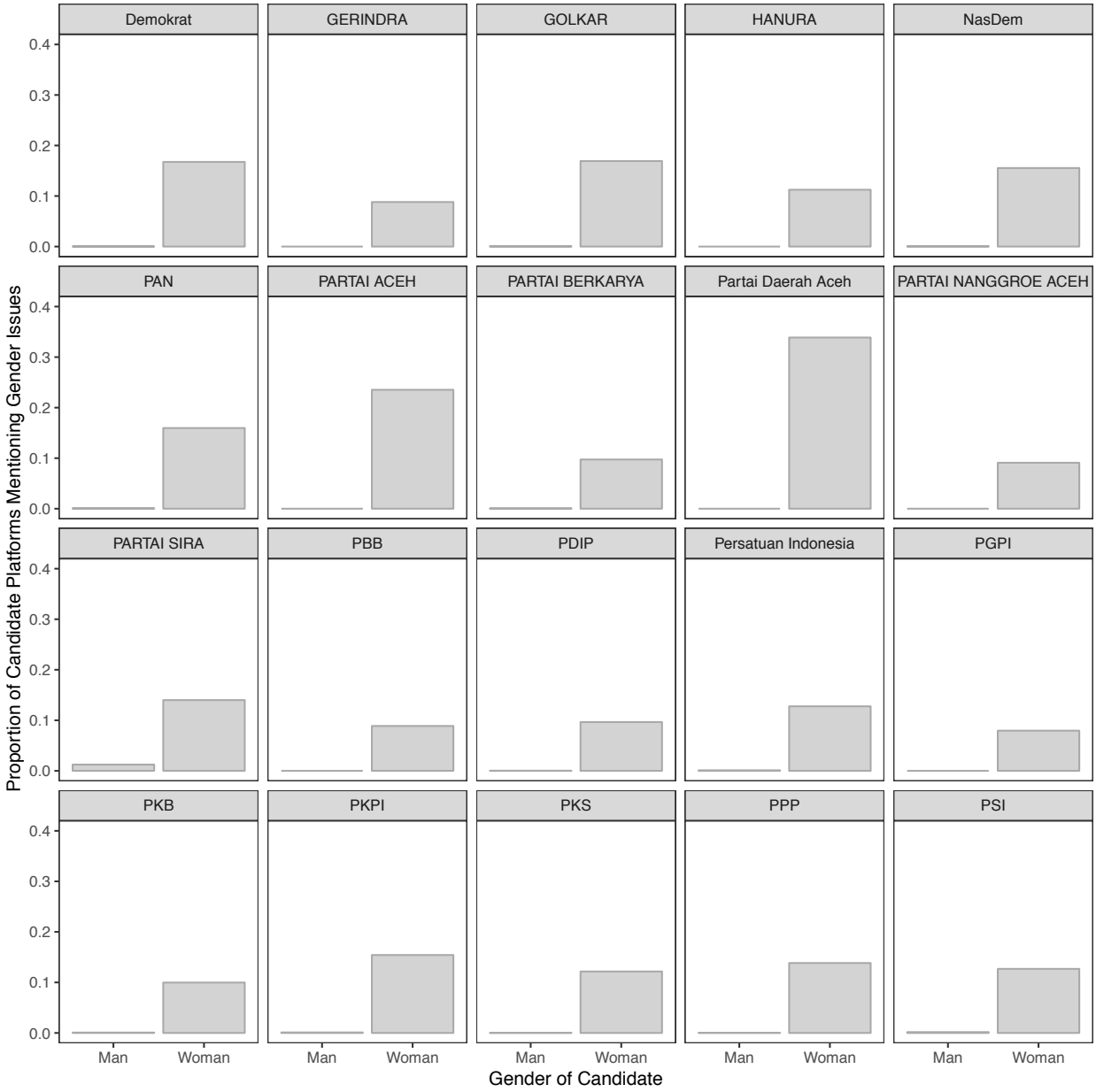
Table C.5i: Effect of Female Representation on District Health Budget

	Dependent variable:			
	Share of District Budget Spent on Health (%, 2014)			
	(1)	(2)	(3)	(4)
Proportion Female (2009–2014)	0.066*	0.076***	0.075***	0.062**
	(0.038)	(0.023)	(0.024)	(0.024)
Constant	0.099***	0.026**	0.028**	0.051***
	(0.008)	(0.011)	(0.011)	(0.017)
Observations	140	138	138	138
Lagged DV?	No	Yes	Yes	Yes
Controls?	No	No	Yes	Yes
Province FE?	No	No	No	Yes

Note: *p<0.1; **p<0.05; ***p<0.01.Beta coefficients from OLS regression. Heteroskedastic consistent standard errors were calculated using the huber-white (HC1) correction. Controls are pre–treatment levels of (1) schools, (2) number of female doctors, (3) number of clinics, (4) population.

C.5.2 Candidate Platforms

Figure C.5i: Proportion of Candidates Mentioning Gender Issues in Platform, by Party and Gender



Note: Proportion of candidates mentioning gender issues in their campaign platform, by party and gender. The figures were calculated by examining the proportion of candidates, among candidates who submitted a platform, that mention the word "perempuan" within their campaign platform.

C.5.3 Health Center Budgets

For a more granular analysis of the effect of an additional female legislator on the activities of local health centers, I draw on data from the 2014 Indonesian Family Life Survey (IFLS), conducted by the RAND corporation. As part of the survey, enumerators conducted a survey of administrators local health centers (*puskemas*) that fell within the enumeration area. In total, the sample included 964 local health centers. Enumerators asked a broad range of questions pertaining to the revenue, expenditures, staffing, and activities of the local health centers. The survey did not directly ask about public health initiatives directed against intimate partner violence—the main hypothesized channel through which increased female legislative representation might affect attitudes towards such events. But it did ask about the amount of funding dedicated to public "outreach initiatives," a category under which awareness campaigns would likely fall. It also asks about the number of female doctors and the number of public health officials—staff members who are tasked with raising awareness about intimate partner violence in their respective communities.

I conduct the main analysis on these outcomes. As usual, I subset to legislative contests where a female candidate narrowly defeated a male candidate in the race for the last seat. The results are presented in Table C.5ii and are broadly consistent with the main hypothesis of this paper. Although the sample size is small, the results suggest that an additional female legislator leads, on average, to a doubling in both (1) funding for public outreach initiatives ($p = 0.073$) and (2) the number of public health officials working in local health clinics ($p = 0.041$).

Table C.5ii: Effect of Female Incumbency on Local Health Clinics

	Dependent variable:			
	Total Funding	Outreach Initiatives	Female Doctors	Public Health Officials
	(1)	(2)	(3)	(4)
Female Incumbency	467.093	11.951*	0.082	2.456**
	(296.736)	(6.450)	(0.063)	(1.155)
Constant	777.033***	9.385***	0.687***	2.211***
	(114.644)	(2.665)	(0.034)	(0.456)
Observations	34	34	34	34
Bandwidth	1%	1%	1%	1%
Outcome	IDR (million)	IDR (million)	%	#

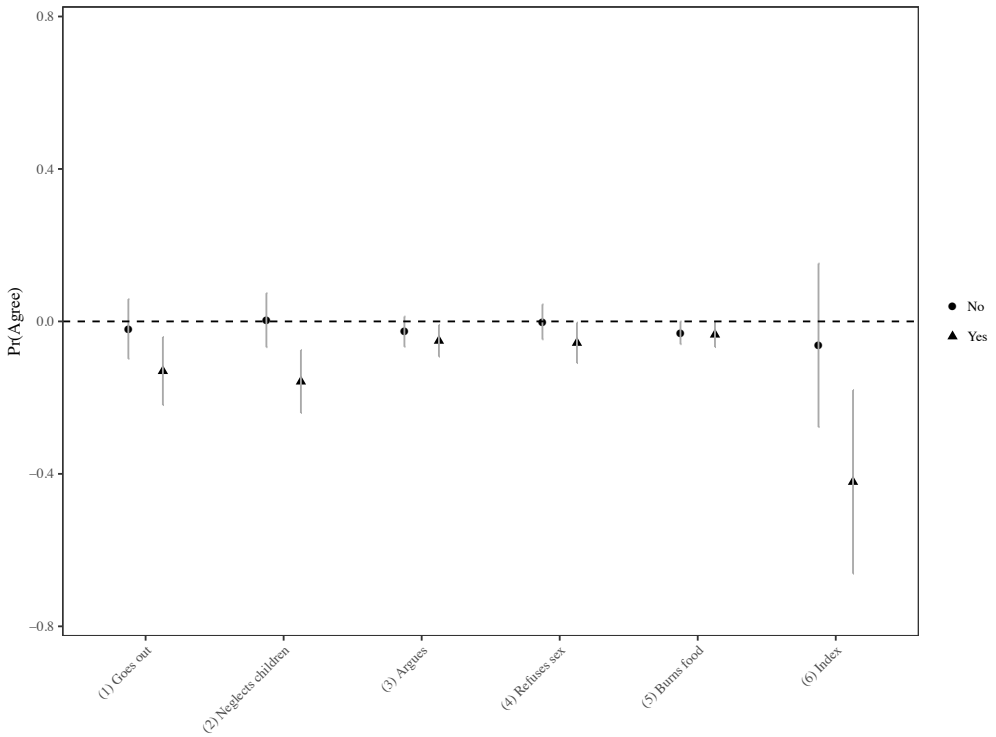
Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from the 2014 Indonesian Family Life Survey (IFLS), which surveyed administrators at health clinics in enumeration areas.

C.5.4 Heterogeneous Treatment Effects, by P2TP2A Centers

In this section, I examine whether there is heterogeneity in the effect of electing female legislators, across districts with (and without) "service centers for empowering women and children" (*P2TP2A*). The primary mandate of these centers is to provide shelter to victims of domestic violence; however, qualitative evidence suggests they frequently engage in community outreach with educational initiatives. It thus seems plausible that the effect of electing female candidates on attitudes towards domestic violence would be amplified in districts with such resources in place.

Graphical Results, Split Sample: First, I split the sample according to whether female respondents in 2012 resided in district with a *P2TP2A center*. The results of these additional tests are presented in Figure C.5ii. For all six outcomes, the effect of narrowly electing a female legislator on attitudes towards intimate partner violence is larger in districts with a P2TP2A center.

Figure C.5ii: Heterogeneous Treatment Effects, by P2TP2A Centers



Note: Beta coefficients from OLS regression conducted on split samples—constituencies with ("yes") and without ("no") *P2TP2A* centers. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure

Tabular Results, with Interaction Effect Second, for a more formal investigation of heterogeneous treatment effects, I also conduct the main analysis with the main independent variable interacted with the new *P2TP2A variable*. I present the results in Table C.5iii. Again, consistent with the main hypothesis of this paper, the interaction term is negative for all six outcomes. For three of the six outcome variables, the difference is at least marginally statistically significant (columns 1, 2 and 6). Specifically,

- The effect of electing an additional female council member on the proportion of female respondents who state it is acceptable to beat one's wife if she goes out without telling her husband is 11.0 percentage points larger in constituencies with P2PT2A center ($p = 0.071$).
- The effect of electing an additional female council member on the proportion of female respondents who state it is acceptable to beat one's wife if she neglects the children (column 2) is 16.1 percentage points larger in constituencies with P2PT2A center ($p = 0.004$).
- The effect of electing an additional female council member on the additive index gauging tolerance of IPV is 0.35 points larger in constituencies with P2PT2A center ($p = 0.031$).

Table C.5iii: Heterogeneous Effect of Female Incumbency on Female Attitudes Towards IPV, by Presence of P2TP2A Center

	Dependent variable:					
	Is it okay to beat one's wife if she:					
	Goes out	Neglects children	Argues	Refuses sex	Burns food	Index
	(1)	(2)	(3)	(4)	(5)	(6)
Female Incumbency	−0.020	0.003	−0.027	−0.001	−0.030	−0.063
	(0.040)	(0.036)	(0.020)	(0.023)	(0.015)	(0.109)
P2PT2A Center	0.061	0.059	0.010	0.026	0.005	0.172
	(0.047)	(0.042)	(0.027)	(0.029)	(0.020)	(0.136)
Female*P2PT2A	−0.110	−0.161**	−0.024	−0.055	−0.005	−0.358*
	(0.061)	(0.056)	(0.029)	(0.036)	(0.023)	(0.165)
Constant	0.264**	0.289**	0.084**	0.104**	0.051**	0.760**
	(0.032)	(0.026)	(0.019)	(0.019)	(0.014)	(0.090)
Observations	128	128	128	128	128	128
Bandwidth	1%	1%	1%	1%	1%	1%

Note: *p<0.05; **p<0.01.Beta coefficients from OLS regression. Heteroskedastic consistent standard errors were calculated using the huber-white (HC0) correction. The outcomes are drawn from a battery of questions that asked respondents if it was acceptable to beat one's wife if she: (1) goes out without telling her husband; (2) neglects her children; (3) argues with her husband; (4) refuses sex; (5) burns the food. The index is an additive measure.

These tests thus offer suggestive evidence—consistent with the main hypothesis of this paper—that the effect of electing female legislators on attitudes towards intimate partner violence operates through the additional resources newly empowered female legislators offer to institutions specifically geared toward combatting domestic violence.