Online Appendix for "Wolves in Sheep's Clothing: Assessing the Effect of Gender Norms on the Lethality of Female Suicide Terrorism" published in *International Organization*

Jakana L. Thomas
Michigan State University
thoma977@msu.edu

Contents

1 List of countries in sample

- Afghanistan
- Algeria
- Argentina
- Bangladesh
- Belgium
- Bolivia
- Cameroon
- Chad
- China
- Djibouti
- Egypt
- Finland
- France
- India
- Indonesia
- Iran
- Iraq
- Israel
- Jordan
- Kenya
- Kuwait
- Lebanon
- Libya
- Mali

- Mauritania
- Morocco
- Niger
- Nigeria
- Pakistan
- Palestinian Territory, Occupied
- Qatar
- Russia
- Saudi Arabia
- Somalia
- Sri Lanka
- Sweden
- Syria
- Tajikistan
- Tanzania
- Tunisia
- Turkey
- Ukraine
- United Kingdom
- United States
- Uzbekistan
- Yemen

2 List of countries in sample with female suicide terrorists

- Afghanistan
- Cameroon
- Chad
- China
- Djibouti
- India
- Iraq
- Israel
- Lebanon
- Nigeria
- Pakistan
- Palestinian Territory, Occupied
- Russia
- Somalia
- Sri Lanka
- Syria
- Turkey
- Uzbekistan

3 Outliers

This section examines whether outliers drive the main results in the manuscript. In almost all the tests described below, the exclusion of potentially influential observations appears to improve the results, while the substantive interpretation of the findings remains consistent.

3.1 Campaigns

There are 26 distinct campaigns represented in the sample, sixteen (62%) of which include attacks by female suicide bombers. Table 1 lists these campaigns. Most suicide attacks are classified as occurring within a discrete campaign. Only 29 attacks in the entire sample are coded as only "isolated attacks" and are thus, not associated with any campaign. I exclude these cases to ensure that the clustering is accurate, however the results are robust to including these attacks. These results can be found in Table 2.

The following shows that the results are not driven by a select number of campaigns. Figure 1 graphs the average number of fatalities by each campaign and demonstrates that three campaigns appear to have a greater average number of fatalities than other campaigns in the dataset. These campaigns are al Qaeda vs. US & Allies, Hezbollah vs. U.S. & France and Jundullah vs. Iran. As shown in Table 3 after excluding these campaigns from the analysis the results improve. Figure 2, displays the substantive effects of these results.

Table 1: **Women's Participation in Suicide Attack Campaigns**

Campaign Name	*Female Participants*
Afghan Rebels vs. U.S. & Allies	Yes
Al Qaeda vs. U.S. & Allies	No
Al-Qaida in Islamic North Africa	No
BKI vs. India	No
Chechen Separatists vs. Russia	Yes
Egyptian Rebels	No
Hezbollah vs. Israel	Yes
Hezbollah vs. U.S. & France	Yes
Indonesian Rebels vs. Indonesian Government & Allies	No
Iraqi Rebels vs. Iraqi Government & Allies	Yes
Iraqi Rebels vs. U.S. & Allies	Yes
Jundullah vs. Iran &	No
Kashmiri Rebels vs. India	Yes
Libyan Rebels	No
LTTE vs. Sri Lanka & India	Yes
Pakistani Rebels vs. Pakistan & U.S. Allies	Yes
Palestinian Resistance vs. Israel	Yes
PKK vs. Turkey	Yes
Rebels vs. Government of Mali & Allies	No
Rebels vs. Nigeria & Allies	Yes
Rebels vs. Saudi Arabia	No
Rebels vs. Syria & Allies	Yes
Rebels vs. Yemen	No
Somali Rebels vs. Ethiopia & Allies	Yes
Uzbek Rebels vs. U.S.	Yes
Xinjiang Rebels vs. Chinese Government	Yes

Figure 1: Average Lethality of Attacks By Campaign

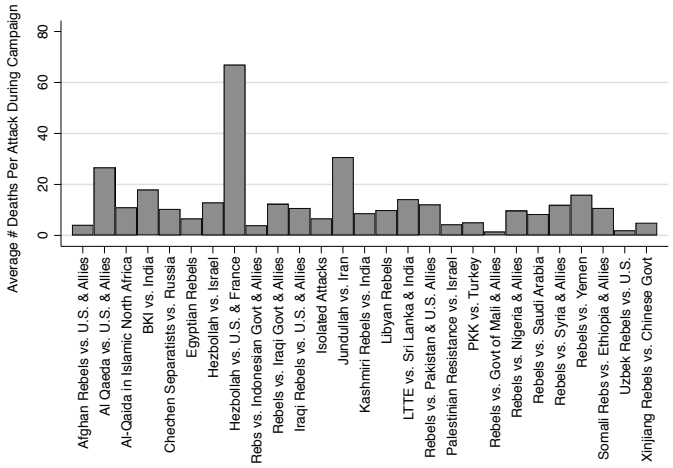
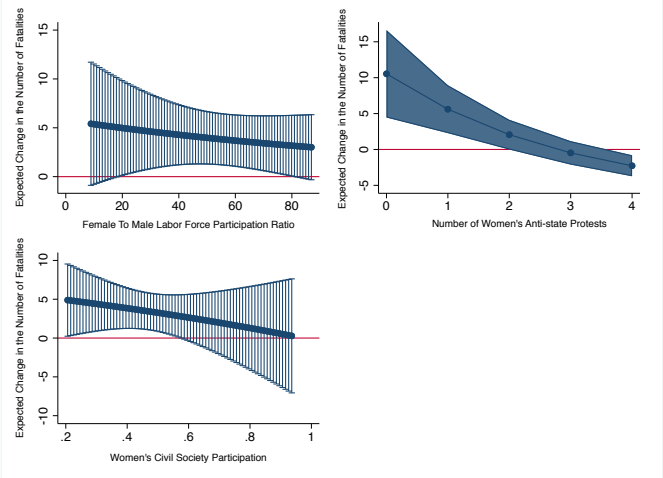


Figure 2: Expected Change in Lethality of Suicide Attack by Gender, Excluding Outlier Campaigns



3.2 High lethality attacks

The following demonstrate that the results are robust to excluding the most lethal attacks. I constrain the range of the lethality variable to analyze only attacks that yield under 100

fatalities. This coding decision is based on Figure 3, which graphs the number of fatalities in each attack. In this figure, each marker identifies the fatality of a particular attack and the country the attack occurred in. There are only 16 attacks that yield 100 or greater fatalities. I rerun the main analyses excluding these attacks. The results remain consistent, as depicted in Figure 4 and Table 4.

Figure 3: Lethality of Suicide Attack By Campaign

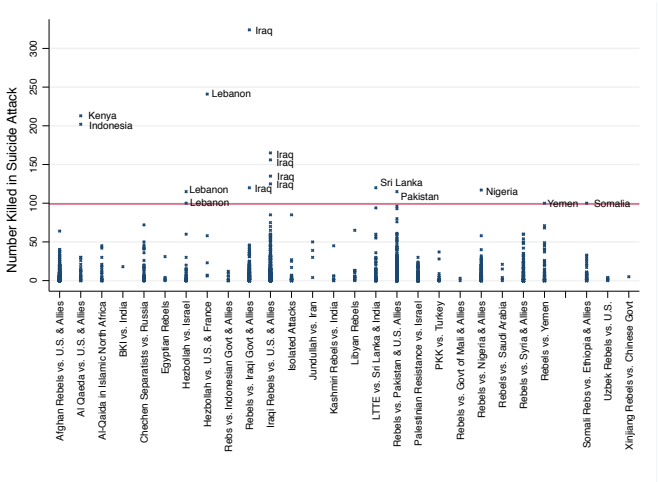


Figure 4: Expected Change in Lethality of Suicide Attack by Gender, Excluding Outlier Attacks ($\geq$100 fatalities)

Additionally, Figures 3 and 3 both show that these potential outlier attacks have occurred in a variety of countries (i.e., Afghanistan, Lebanon, Iran, Kenya, Indonesia, Iraq, Pakistan, Sri Lanka, Nigeria, Yemen and Somalia), rather than one or two.

3.3 Political attacks

To address the concern that the findings are driven by political attacks, I exclude all political attacks from the analysis to ensure that they are not unduly influential. The results are largely consistent with those reported in the manuscript, but are substantively stronger with the exclusion of political attacks for two of the explanatory variables. The interaction between women's civil society participation and female suicide attacker is slightly weaker

but still significant for some range of the civil society participation at the .10 significance level. These results are depicted in Figure 5.

Figure 5: Expected Change in Lethality of Suicide Attack by Gender, Excluding Political Attacks

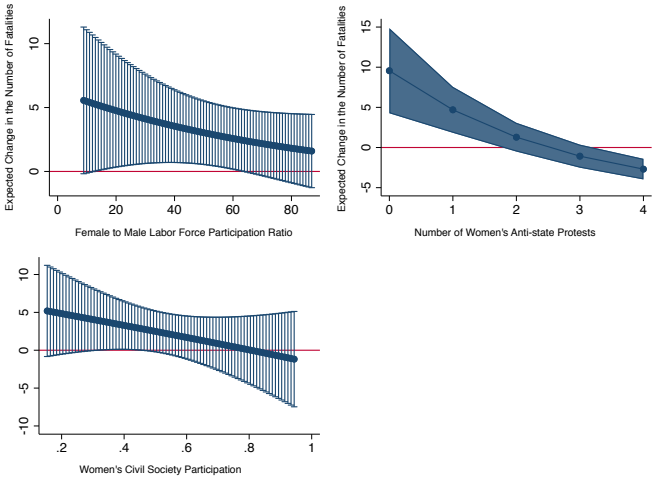


Table 2: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Including Isolated Attacks**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.219	0.442	0.701***	0.631
	(0.172)	(0.276)	(0.201)	(0.399)
Women's Labor Force Participation		-0.00354		
		(0.00523)		
Female × Women's Labor Force Participation		-0.00254		
		(0.00575)		
Number of Anti-state Women's Protests			-0.0359	
			(0.0294)	
Female × Number of Anti-state Women's Protests			-0.276***	
			(0.0621)	
Women's Civil Society Participation				0.609
				(0.986)
Female × Women's Civil Society Participation				-0.734
				(0.808)
Number Wounded (t-1)	-0.000108	-0.000201	-0.000198	-0.000115
	(0.000633)	(0.000623)	(0.000602)	(0.000647)
ln(Battle Deaths)	-0.0309	-0.0415	-0.0317	-0.0295
	(0.0390)	(0.0373)	(0.0374)	(0.0365)
Number Terrorists in Country (year)	0.0218	0.0235	0.0240	0.0212
	(0.0150)	(0.0173)	(0.0151)	(0.0140)
Number Killed (t-1)	0.00223	0.00239	0.00255	0.00222
	(0.00178)	(0.00180)	(0.00170)	(0.00176)
Religion Importance	0.00520	0.00205	0.00625	0.00722
	(0.00740)	(0.00660)	(0.00696)	(0.00643)
Many Attackers	0.435**	0.455**	0.353*	0.466**
	(0.212)	(0.227)	(0.186)	(0.214)
Weapon	0.0587*	0.0588*	0.0603*	0.0577*
	(0.0306)	(0.0310)	(0.0312)	(0.0334)
Assassination	-0.123	-0.131	-0.149	-0.123
	(0.115)	(0.107)	(0.109)	(0.108)
Political Target	-0.151	-0.180**	-0.183**	-0.125
	(0.0939)	(0.0794)	(0.0859)	(0.0994)
Security Target	-0.794***	-0.837***	-0.832***	-0.770***
	(0.0705)	(0.0569)	(0.0676)	(0.0790)
t^1	-0.00425	-0.0591**	-0.00248	-0.00504
	(0.00972)	(0.0274)	(0.00945)	(0.00893)
t^2	0.00000620	0.000220*	-0.0000135	0.0000152
	(0.0000561)	(0.000113)	(0.0000558)	(0.0000477)
t^3	6.43e-09	-0.000000259*	4.95e-08	-1.02e-08
	(8.96e-08)	(0.000000144)	(9.05e-08)	(7.29e-08)
Constant	1.886***	6.758***	1.988***	1.257
	(0.671)	(2.303)	(0.602)	(0.791)
ln(alpha)	0.478***	0.466***	0.467***	0.476***
	(0.118)	(0.117)	(0.119)	(0.116)
No. Observations	2395	2367	2395	2395

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Excluding Outlier Campaigns**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.287*	0.445	0.766***	0.667*
	(0.172)	(0.326)	(0.208)	(0.396)
Women's Labor Force Participation		-0.00675		
		(0.00503)		
Female × Women's Labor Force Participation		-0.000270		
		(0.00615)		
Number of Anti-state Women's Protests			-0.0342	
			(0.0349)	
Female × Number of Anti-state Women's Protests			-0.275***	
			(0.0624)	
Women's Civil Society Participation				0.636
				(0.986)
Female × Women's Civil Society Participation				-0.687
				(0.794)
Number Wounded (t-1)	-0.0000298	-0.000122	-0.000104	-0.0000387
	(0.000600)	(0.000588)	(0.000575)	(0.000617)
ln(Battle Deaths)	-0.0183	-0.0289	-0.0191	-0.0174
	(0.0385)	(0.0364)	(0.0363)	(0.0372)
Number Terrorists in Country (year)	0.0243	0.0254	0.0264*	0.0239*
	(0.0149)	(0.0167)	(0.0149)	(0.0141)
Number Killed (t-1)	0.00219	0.00228	0.00249	0.00219
	(0.00177)	(0.00179)	(0.00170)	(0.00175)
Religion Importance	0.00344	-0.00205	0.00451	0.00563
	(0.00736)	(0.00607)	(0.00686)	(0.00648)
Many Attackers	0.451**	0.451**	0.368**	0.481**
	(0.207)	(0.217)	(0.183)	(0.208)
Weapon	0.0620*	0.0609*	0.0647**	0.0604*
	(0.0319)	(0.0319)	(0.0329)	(0.0351)
Assassination	-0.0838	-0.0856	-0.114	-0.0866
	(0.115)	(0.105)	(0.108)	(0.109)
Political Target	-0.149	-0.206***	-0.177**	-0.121
	(0.0939)	(0.0770)	(0.0829)	(0.102)
Security Target	-0.767***	-0.826***	-0.802***	-0.741***
	(0.0727)	(0.0606)	(0.0665)	(0.0829)
t^1	-0.0130	-0.0729***	-0.0110	-0.0135
	(0.00984)	(0.0247)	(0.00953)	(0.00931)
t^2	0.0000525	0.000285***	0.0000320	0.0000605
	(0.0000550)	(0.000100)	(0.0000570)	(0.0000473)
t^3	-6.09e-08	-0.000000348***	-1.73e-08	-7.66e-08
	(8.72e-08)	(0.000000127)	(9.44e-08)	(7.11e-08)
Constant	2.138***	7.756***	2.211***	1.459*
	(0.753)	(2.104)	(0.666)	(0.857)
ln(alpha)	0.460***	0.442***	0.448***	0.458***
	(0.118)	(0.117)	(0.118)	(0.115)
No. Observations	2344	2319	2344	2344

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Excluding suicide attacks with at least 100 deaths**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.273	0.520	0.771***	0.767*
	(0.179)	(0.323)	(0.193)	(0.399)
Women's Labor Force Participation		-0.00556		
		(0.00489)		
Female × Women's Labor Force Participation		-0.00234		
		(0.00605)		
Number of Anti-state Women's Protests			-0.0226	
			(0.0250)	
Female × Number of Anti-state Women's Protests			-0.289***	
			(0.0553)	
Women's Civil Society Participation				0.663
				(0.935)
Female × Women's Civil Society Participation				-0.869
				(0.808)
Number Wounded (t-1)	-0.000204	-0.000326	-0.000275	-0.000239
	(0.000517)	(0.000496)	(0.000489)	(0.000530)
ln(Battle Deaths)	-0.0153	-0.0290	-0.0170	-0.0143
	(0.0357)	(0.0356)	(0.0347)	(0.0335)
Number Terrorists in Country (year)	0.0200	0.0217	0.0215	0.0195
	(0.0140)	(0.0155)	(0.0138)	(0.0130)
Number Killed (t-1)	0.00241	0.00258*	0.00271*	0.00244
	(0.00150)	(0.00154)	(0.00145)	(0.00149)
Religion Importance	0.00159	-0.00341	0.00265	0.00389
	(0.00690)	(0.00569)	(0.00648)	(0.00615)
Many Attackers	0.465**	0.501**	0.390**	0.499**
	(0.205)	(0.223)	(0.179)	(0.210)
Weapon	0.0343	0.0322	0.0334	0.0327
	(0.0305)	(0.0303)	(0.0305)	(0.0327)
Assassination	-0.101	-0.108	-0.139	-0.100
	(0.114)	(0.106)	(0.105)	(0.110)
Political Target	-0.0959	-0.144**	-0.124**	-0.0726
	(0.0679)	(0.0569)	(0.0601)	(0.0684)
Security Target	-0.671***	-0.721***	-0.706***	-0.646***
	(0.0742)	(0.0722)	(0.0687)	(0.0840)
t^1	-0.0113	-0.0738***	-0.00986	-0.0116
	(0.0112)	(0.0224)	(0.0106)	(0.0106)
t^2	0.0000499	0.000296***	0.0000340	0.0000572
	(0.0000569)	(0.0000925)	(0.0000567)	(0.0000507)
t^3	-6.13e-08	-0.000000369***	-2.62e-08	-7.59e-08
	(8.69e-08)	(0.000000119)	(8.93e-08)	(7.39e-08)
Constant	2.095**	7.734***	2.185***	1.387
	(0.833)	(1.865)	(0.755)	(0.904)
ln(alpha)	0.420***	0.403***	0.408***	0.417***
	(0.127)	(0.126)	(0.128)	(0.125)
Observations	2360	2335	2360	2360

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Excluding Political Attacks**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.186	0.484*	0.710***	0.689*
	(0.174)	(0.291)	(0.200)	(0.405)
Women's Labor Force Participation		-0.00623		
		(0.00518)		
Female × Women's Labor Force Participation		-0.00280		
		(0.00539)		
Number of Anti-state Women's Protests			-0.0443	
			(0.0292)	
Female × Number of Anti-state Women's Protests			-0.284***	
			(0.0654)	
Women's Civil Society Participation				0.523
				(1.083)
Female × Women's Civil Society Participation				-0.855
				(0.756)
Number Wounded (t-1)	0.0000158	-0.000119	-0.0000754	0.00000901
	(0.000623)	(0.000617)	(0.000595)	(0.000630)
ln(Battle Deaths)	-0.0286	-0.0385	-0.0296	-0.0276
	(0.0396)	(0.0382)	(0.0369)	(0.0382)
Number Terrorists in Country (year)	0.0217	0.0220	0.0236	0.0210
	(0.0163)	(0.0179)	(0.0159)	(0.0155)
Number Killed (t-1)	0.00207	0.00225	0.00239	0.00206
	(0.00175)	(0.00174)	(0.00167)	(0.00173)
Religion Importance	0.00386	-0.000650	0.00489	0.00562
	(0.00774)	(0.00643)	(0.00719)	(0.00671)
Many Attackers	0.410**	0.415**	0.313**	0.433***
	(0.164)	(0.181)	(0.143)	(0.163)
Weapon	0.0478	0.0458	0.0495	0.0469
	(0.0326)	(0.0329)	(0.0330)	(0.0349)
Assassination	0.0463	0.0392	-0.00640	0.0507
	(0.137)	(0.126)	(0.139)	(0.134)
Security Target	-0.804***	-0.873***	-0.839***	-0.785***
	(0.0705)	(0.0648)	(0.0708)	(0.0785)
t^1	-0.00880	-0.0504*	-0.00639	-0.00936
	(0.0102)	(0.0298)	(0.00981)	(0.00934)
t^2	0.0000318	0.000189	0.00000659	0.0000391
	(0.0000594)	(0.000122)	(0.0000572)	(0.0000488)
t^3	-3.15e-08	-0.000000220	2.24e-08	-4.51e-08
	(9.48e-08)	(0.000000156)	(9.07e-08)	(7.31e-08)
Constant	2.167***	6.344***	2.314***	1.620*
	(0.667)	(2.381)	(0.607)	(0.903)
ln(alpha)	0.480***	0.464***	0.466***	0.478***
	(0.128)	(0.128)	(0.129)	(0.127)
No. Observations	2070	2044	2070	2070

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

3.4 Boko Haram Trends

Warner and Matfess (2017) suggest that Boko Haram's female bombers were relatively inefficient, which may suggest that Boko Haram is an outlier. Warner, Chapin and Matfess (2019), however, find that Boko Haram's all-female team attacks were more lethal than attacks perpetrated by all-male attackers and moreover, that Boko Haram's female suicide bombers were not significantly less likely to detonate than their male counterparts. Figure 6 shows that Boko Haram did see a significant boon in lethality from using women starting in early July 2015. Importantly, it also shows a relatively steep decline over time in female lethality as well. This largely mirrors the shape of the global trend, as can be seen in Figure 7(below) and Figure 4 in the manuscript, however, the learning process in Nigeria appears to have been sped up significantly. This is likely due to the unprecedented number of women Boko Haram used for suicide attacks. One challenge for assessing how well Boko Haram fits the argument articulated in the manuscript is that the dataset ends in the early stages of the group's suicide attack campaign. It is completely possible that over time, female suicide bombers performed more poorly relatively to men. This would not be picked up by the present analysis, however, it is also not supported by Warner, Chapin and Matfess' data.

Figure 6: Relative Lethality of Boko Haram Suicide Attackers by Gender, 2014–2015

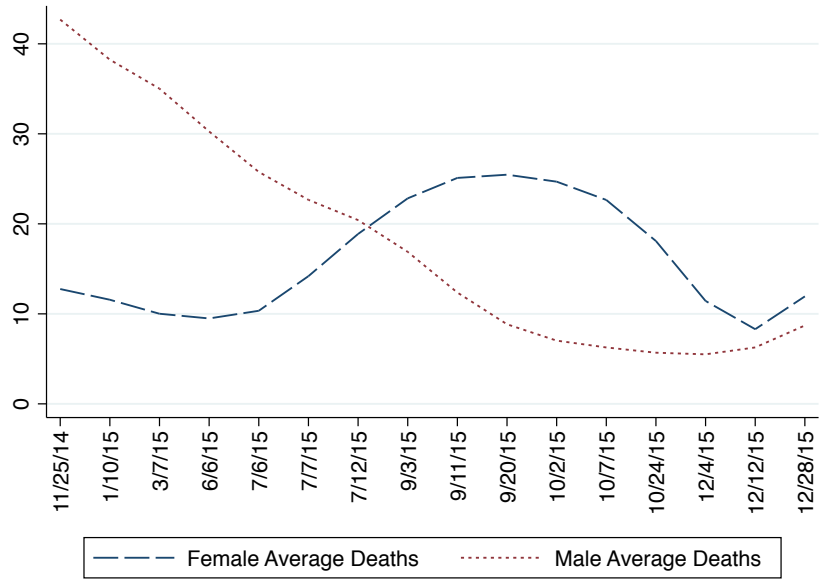
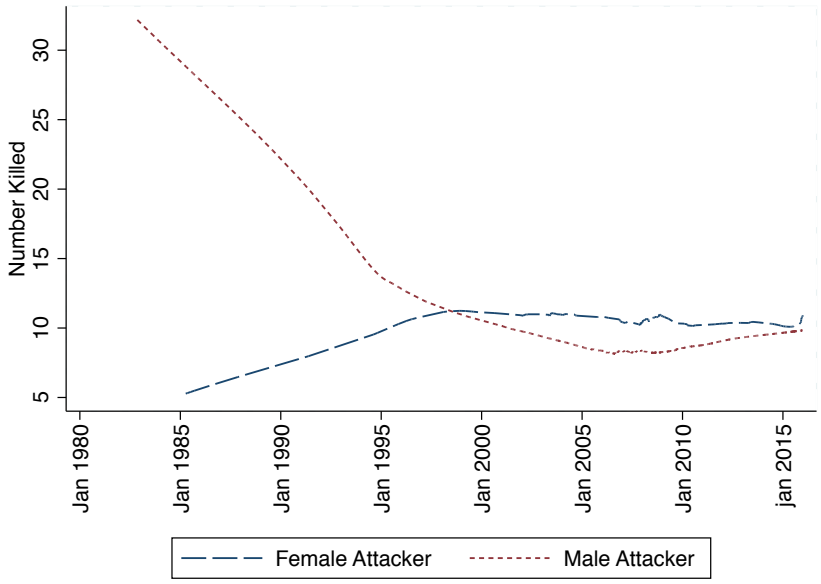


Figure 7: Relative Lethality of *Global* Suicide Attackers by Gender 1985–2015



4 Endogeneity

4.1 Fixed Effects

Table 6 and Figure 8 demonstrate that the results are consistent if time fixed-effects are employed in lieu of time polynomials.

Although unit fixed effects can also be useful for addressing concerns about omitted variable bias,[1] there are several reasons to believe that adding unit fixed effects will not improve the estimation or interpretation of these results.

First, if fixed effects were included in the models, the results would only examine within-unit variation over time[2] or explain how changes in the use of female suicide bombers and gender equality influence the lethality of a given attack within the same country, across time. Unit fixed effects restricts the variation and discards any inter-unit variation, leading to significant variance reduction.[3] As such, the inclusion of unit fixed-effects would not allow for cross-country comparisons. The reduction of variation is compounded when

[1] Allison, Paul D. 2009. *Fixed Effects Regression Models.* Vol. 160 *SAGE publications.*

[2] Wooldridge, Jeffrey M. 2010. *Econometric Analysis of Cross Section and Panel Data. MIT press.*

[3] Mummolo, Jonathan and Erik Peterson. 2018. "Improving the Interpretation of Fixed Effects Regression Results." *Political Science Research and Methods 6(4):829-835.*

treatments do not vary within countries, as inter-country variation will not factor into the coefficient estimate when fixed effects are applied. This would be problematic if most of the variation in the data is actually between countries and not within countries. In this case, the fixed effects estimator would render very imprecise estimates.[4] Below, I explain why this is particularly problematic for this analysis.

Although the question of within unit variation is interesting, gender norms are likely to vary most across units (countries). Therefore, the main question of interest is likely to be how differences in gender norms across countries influence the lethality of female suicide bombers. Additionally, in order to estimate within-unit variation, fixed effects estimators require significant variation within the unit across time.[5] That is, the main independent variables would need to vary sufficiently across time. However, there is unlikely to be much variation in gender norms within a given country from year to year. First, because I utilize an event dataset rather than time-series cross-sectional data, some countries do not have multiple years of data with which to compare changes over time. For example, in Argentina (1994), Djibouti (2014), France (2015), Mauritania (2009), Niger (2015), Ukraine (2013), and the United Kingdom (2005), all suicide attacks occurred in a single year. Other states such as Finland (1999, 2002) have a few years of data but do not exhibit significant changes in the main covariates of interest across that time period. Even countries with longer time-series may not see much variation in gender equality over time, which makes regression with unit fixed effects inappropriate. For example, Lebanon, the country for which there is the greatest number of yearly observations in this sample exhibits little variation on either the V-Dem civil society measure or labor force participation measures from year to year. In particular, between 1985 and 2015, the difference between the largest and smallest values of female civil society participation in Lebanon is 0.17 while the differences between the largest and smallest values of female to male labor force participation is only 2.8 percentage points. In the larger sample, these measures vary from .154 to .951 (0-1 in theory) and 8.91 to 96.8 (0-100 in theory). Moreover, the civil society measure does not vary at all between 1982 and 1989 or 1990 and 1999. The remaining changes are relatively small. Similarly, during the four-year temporal window during which Nigeria is in the sample (2011 to 2015), the scores on labor force participation vary only by 2.1 points, while civil society participation changes only by 0.049 points; both very small within-unit changes. Changes *across* units are quite substantial, however. Yemen, for example, has a labor force participation ratio of 8.9 (2015), while Tanzania has a ratio of 98.8 (1998). In Iran (1985), women's civil society participation score is .154, while it is .948 in Ukraine (2013). In 2015 alone, Saudi Arabia had a civil society score of .207, Somalia had a score of .315, Iraq had a score of .482, Cameroon had a score of .669 and France had a score of .937. Labor force trends varied similarly. Given these concerns, I do not utilize unit fixed effects in these analyses.

[4] Allison 2009.

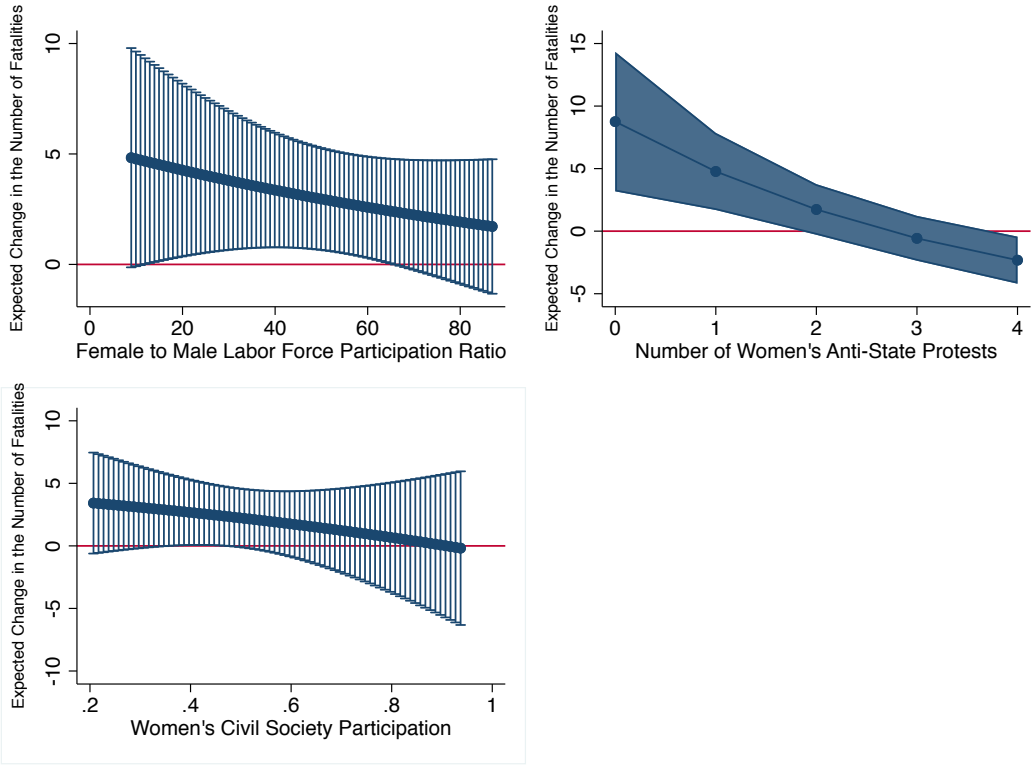
[5] Mummolo and Peterson 2018.

Table 6: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality, **Including Time Fixed Effects**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.219	0.439*	0.673***	0.501
	(0.140)	(0.264)	(0.189)	(0.341)
Women's Labor Force Participation		-0.00329		
		(0.00474)		
Female × Women's Labor Force Part.		-0.00260		
		(0.00484)		
Number of Anti-state Women's Protest			-0.0152	
			(0.0646)	
Female × Women's Protest			-0.247***	
			(0.0631)	
Women's Civil Society Participation				0.672
				(0.881)
Female × Wom. Civil Society Part.				-0.552
				(0.647)
Number Wounded (t-1)	-0.000421	-0.000530	-0.000428	-0.000420
	(0.000580)	(0.000603)	(0.000575)	(0.000583)
ln(Battle Deaths)	-0.0314	-0.0317	-0.0321	-0.0292
	(0.0381)	(0.0375)	(0.0380)	(0.0352)
Number Terrorists in Country	0.0245	0.0228	0.0248	0.0240
	(0.0158)	(0.0165)	(0.0163)	(0.0149)
Number Killed (t-1)	0.00299**	0.00320**	0.00305**	0.00294**
	(0.00147)	(0.00153)	(0.00149)	(0.00140)
Religion Importance	0.00461	0.00279	0.00579	0.00703
	(0.00690)	(0.00585)	(0.00676)	(0.00555)
Many Attackers	0.364	0.393	0.297	0.400
	(0.254)	(0.255)	(0.230)	(0.261)
Weapon Type	0.0568*	0.0568*	0.0579*	0.0548
	(0.0339)	(0.0339)	(0.0340)	(0.0368)
Assassination	-0.137	-0.125	-0.145	-0.143
	(0.0995)	(0.0945)	(0.0974)	(0.0895)
Political Target	-0.194*	-0.225**	-0.227**	-0.161
	(0.102)	(0.0903)	(0.0886)	(0.114)
Security Target	-0.858***	-0.893***	-0.890***	-0.828***
	(0.0614)	(0.0633)	(0.0592)	(0.0765)
Constant	1.804***	1.727***	1.862***	1.084
	(0.600)	(0.517)	(0.579)	(0.702)
lnalpha	0.448***	0.442***	0.439***	0.445***
	(0.116)	(0.117)	(0.116)	(0.113)

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Year Fixed Effects omitted.

Figure 8: Expected Change in Lethality of Suicide Attack by Gender, Time Fixed Effects



4.2 Selection

One interesting question is what drives selection into suicide bombing and how the decision to employ female attackers is related to the lethality of an attack. To explore these questions, I examine the correlates of suicide attacks by female perpetrators. In particular, I use logistic regression models to examine the determinants of a female attacker perpetrating a given attack. Here, the dependent variable is a dichotomous indicator of whether the attack is perpetrated by a female attacker. I include a number of covariates to test this relationship, including state-level indicators, group-level measures as well as those measuring characteristics of the attack itself. These results are displayed in Tables 7, 8 and 9, respectively. Among the state-level covariates, both female labor force participation and civil society participation are both positive and statistically significant, as evidenced in the first and second models in Tables 7. Of note, the positive coefficients on both covariates suggests that an attack is more likely to be perpetrated by a female suicide bomber in countries where women participate in the labor force and in civil society in greater numbers.

In other words, greater rates of gender inclusion and equality result in an increased likelihood of observing a suicide attack with a female perpetrator. The finding that states with greater income are more likely to experience attacks by female suicide attackers, may echo these findings. These finding are important because they suggest that the main results are unlikely to biased in favor of finding that attacks by women are more lethal in states with less gender equality simply because these are the contexts where female suicide bombers are more likely. There appears to be no relationship between women's participation in anti-government protests and the probability of an attack by a female bomber. This result suggests that women's participation in contentious politics is not likely to be the cause of their participation in suicide bombing, although female participation in protest activities can impact the lethality of such attacks.

Additionally, the degree of terrorist competition decreases the probability of a female attacker in one model, while civil war battle deaths increase the probability of a female perpetrator in two models. These contradictory findings are unable to reconcile whether groups utilize female suicide attackers to fill manpower shortages. Democracy has no bearing on whether a female suicide terrorist is likely to emerge in a country. The last model of Table 7 examines the effect of geographic region on the probability of an attack by a female bomber.The results show that suicide attacks in Africa, the Middle East, Asia and Europe are all more likely to be committed by female perpetrators than in the Americas, the reference category.

In Table 8, I examine group-level indicators to determine whether certain types of terrorist organizations are more inclined to use female suicide attackers. This analysis uses a severely restricted sample given that most attacks are not attributed to any particular organization and because group-level data is not available for all of the groups that are represented in the CPOST-SAD dataset. The group-level indicators are coded using information from Asal and Rethemeyer's Big Allied and Dangerous (BAAD) database, which provides data on a subset of 100 terrorist organizations.[6] Specifically, their database only includes information on terrorist organizations that are tied to the 50 largest and most deadly terrorist organizations, which does not produce an unbiased sample of terrorist groups. In fact, BAAD intentionally samples on the most lethal terrorist organizations at the exclusion of weaker groups that may be more likely to recruit female suicide bombers. Note that in Table 8, the size of an organization is negatively related to the probability of a female-led attack. Additionally, using a sample comprised of only the most lethal organizations is problematic given that the main response variable in the study is an attack's lethality. Thus, it ostensibly selects on the dependent variable. This concern is attenuated, however, given that these data are being used to examine the likelihood of observing an attack by a woman, not an attack's lethality. Regardless, these results should be interpreted with some caution. Interestingly, the only salient group-level predictors (at

[6] Asal, Victor and R. Karl Rethemeyer. 2008. " The Nature of The Beast: Organizational Structures and the Lethality of Terrorist Attacks." The Journal of Politics. 70 (2): 437-449.

the .10 confidence level) are whether a group espouses an ethnic-separatist ideology and the group's strength. The latter result suggests, on average, female attackers are more likely to be utilized by *less* capable organizations. This result appears to accord with the state-level analysis, which suggest that female suicide bombers are more likely to be used when domestic conflict is severe.

Finally, Table 9 reveals that few attack-level features contribute to the likelihood that an attack will include a female bomber. In fact, the weapon delivery system used in the attack is the only significant attack-level feature; attacks using vehicles as the delivery system are less likely to be perpetrated by women.

Women may not be assigned to different target types evenly. Terrorist organizations may utilize female recruits to attack specific types of targets in anticipation that women will be more effective against certain objectives. The data do not necessarily show this to be the case, however. The descriptive statistics displayed in Table 1 of the article demonstrate that women have been tasked with executing 16% of suicide attacks against civilian targets, 6% of the attacks against political targets and 7% of the attacks targeting security. Women have executed about 10% of the assassinations in the dataset. The fact that women are disproportionately assigned to civilian attacks rather than security or political attacks suggests that women are not necessarily deployed more often to the types of targets where they are most likely to see gains.

Table 7: Logistic Regression Models Examining the Probability of an Attack Including Female Suicide Attacker; State-level Factors

	Model 1	Model 2	Model 3	Model 4
Female Labor Force Participation	0.0518***			
	(0.0114)			
Women's Civil Society Participation		7.844***		
		(1.921)		
Number of Women's Anti-State Protests			0.130	
			(0.225)	
Number Terrorists in Country (year)	-0.0597	-0.0945**	-0.0713	
	(0.0534)	(0.0436)	(0.0461)	
GDP (constant 2010 US)	3.41e-13	5.95e-13*	1.22e-12***	
	(3.76e-13)	(3.19e-13)	(4.01e-13)	
Democracy	-0.00549	-0.00885	0.0132	
	(0.0144)	(0.0124)	(0.0144)	
Civil War Battle Deaths	0.281*	0.329***	0.125	
	(0.148)	(0.127)	(0.0826)	
Africa				13.68***
				(1.200)
Middle East				11.64***
				(1.047)
Asia				11.10***
				(1.315)
Europe				13.69***
				(1.027)
Constant	-6.283***	-8.830***	-2.861***	-14.23***
Number of Observations	2252	2256	2256	2410

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Logistic Regression Models Examining the Probability of an Attack Including Female Suicide Attacker; Group-level Factors

	Model 1
Leftist	-1.212
	(0.799)
Religious	-0.779
	(0.529)
Ethnic-Separatist	1.630*
	(0.890)
Group Strength	-0.411*
	(0.218)
Number Terrorists in Country (year)	-0.0706
	(0.0506)
Constant	-0.853
Number of Observations	926

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Logistic Regression Models Examining the Probability of an Attack Including Female Suicide Attacker; Attack-level Factors

	Model 1
Political Attack	-0.795
	(0.642)
Security Attack	-0.479
	(0.575)
Assassination	0.0468
	(0.513)
Vehicle Borne IED	-2.294***
	(0.451)
Body Borne IED	-0.0137
	(0.210)
Many Attackers	1.125*
	(0.592)
Constant	-2.434***
	(0.871)
Observations	2380

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.3 Paired Attacks

In order to limit the potential for factors outside of an attacker's gender to influence the main results, I examine the lethality of paired attacks. Here, paired attacks are those where at least two attacks occurred in a country on the same day and where both a woman and a man were identified as taking part in separate attacks.[7] This test is useful because it controls for country characteristics and holds constant the specific date of an attack. This is especially important if we are concerned that variations in countries explain lethality or if specific dates (e.g., religious holidays) are important predictors of lethality.[8] In the dataset, there are 47 attacks where both men and women are recorded as conducting separate attacks in the same country on the same day. In this sample, attacks where women are indicated as the perpetrators yielded 7.74 fatalities (24 attacks), on average, while attacks perpetrated by male bombers killed 6.67 individuals (23 attacks) on average. Men wounded on average 17.25 people, while women wounded an average of 21.1 people. In sum, women tend to register only slightly higher casualty counts than male attackers, when attacks are paired. Most paired attacks occur in Iraq (57%), yet the relationship is much stronger when these cases are excluded. In the 20 remaining cases, women kill 3 more people on average (8.8) than men (5.9), while wounding nearly 10 more people on

[7] This excludes paired attacks where multiple all-female attacks were executed and those where multiple all-male attacks were executed in the same state, on the same day. Given the small-N, I do not attempt to match on the perpetrator group.

[8] As previously noted, I forgo country fixed effects to control for variation across countries. This analysis should partially alleviate concerns that the results are driven solely by state characteristics, however.

average.[9]

Below, I describe two different paired attacks to illuminate how fatalities can better elucidate the argument articulated in the theory.

- On September 18, 2012, Afghanistan experienced two suicide attacks. In one attack, a 22 year-old female suicide attacker named Fatima rammed a car into a minibus right in a heavily fortified part of Kabul International Airport.[10] According to CPOST, this attack killed 9 people but wounded 0.[11] Police have suggested that a woman was likely used in this instance to avoid detection because there was heightened security at the airport due to intense rioting in the area. On the same day, another suicide attack in Afghanistan yielded 2 fatalities and five injuries. A male suicide bomber, Hafiz Matiullah, attempted to ram a vehicle laced with explosives into the entrance of an Afghan National Army base.[12] Both attackers used cars to conduct attacks in secured locations. However, the female attacker likely generated a greater number of fatalities because of her ability to permeate security undetected. The male bomber wounded a greater number of individuals, but his attack was ultimately not as successful because of his inability to gain proximity to his target.

- In another paired incident, two suicide attacks were executed within an hour of each other in Iraq on March 10, 2008. One male suicide bomber attempted to approach Iraqi security forces and blew himself up as they began shooting at him. Two civilian fatalities and more than 20 injuries were reported. The second bombing involved an 18-year old female suicide bomber who attacked a sheik working with U.S security forces to undermine the insurgency in Iraq. After the attack, the victim's brother noted that the attacker was actually invited into the house and was not checked by security upon entering. Despite the presence of security, the attacker was able to detonate her bomb, killing four–including the sheik and two of his security guards. No injuries were reported.[13] Following this attack, the U.S. military opined that the woman might have been utilized in this attack specifically because she was less likely to be searched.[14] Again, this case demonstrates the ability of female attackers to evade detection, which can help boost the fatality count of an attack. This also demonstrates that a successful attack may lead to fatalities, even if few injuries are recorded. Moreover, these illustrations demonstrate that an aggregate count of

[9] These remaining attacks take place in Afghanistan, Cameroon, Lebanon, Russia and Nigeria

[10] Hamid Shalizi and Mirwais Haroomi. "Afghan Militants Say Bomb Revenge for Film; 12 Dead." *Reuters*. September 17, 2012. Andrew Carey and Masoud Popalzai; "Suicide Attacks Kill 13 in Afghanistan." *CNN*. September 18, 2012.

[11] Media accounts from that day log a slightly higher fatality count

[12] "ANA Soldier, Civilian Killed in Helmand Suicide Bombing." *Afghan Islamic Press*, September 18, 2012.

[13] "Police Say a Female Suicide Bomber Hits Iraq's Diyala Province, Killing Sheik, 2 others." *Associated Press*. March 10, 2008

[14] "Two Blasts in Iraq Kill Eight U.S. Troops." *CNN*. March 11, 2008

casualties including both deaths and injuries is unable to capture the degree to which a mission is a success. In the latter case, the male bomber was able to log a greater number of casualties (22 vs. 4), yet it was not as devastating. Therefore, a lethality measure excluding injuries is likely to be more precise and measure effectiveness or operational success more accurately.

5 Effect of Coercion on Female Lethality

In the conclusion I allude to the idea that the coercive recruitment may affect the lethality of suicide terrorism. It is possible that forced female bombers are less lethal than other recruits given their reluctance to participate in the first place. If this is true, it would bias the results away from finding that attacks including female suicide bombers are more lethal. That is, if women tend to attempt to sabotage missions more often when they are forcefully recruited, women who are compelled might systematically be less lethal. The difficulty with this argument, however, is that men and boys are also sometimes conscripted. Therefore, one might expect groups that conscript their suicide bombers to execute less lethal attacks in general, regardless of the gender of the perpetrator of a specific attack. This idea should be explored further. However, barring better data, this question can only be addressed crudely here.

There are several data issues that prevent a full analysis of this question. To date, no data have been collected on the recruitment strategies of a full sample of terrorist organizations. Moreover, since many suicide attacks are not attributed to a particular group, it is particularly difficult to assess the manner in which attackers are recruited. However, the Women in Armed Rebellion Dataset,[15] which focuses on gender inclusion in rebel organizations, provides some data that could be useful for generating a preliminary answer to this question. These data record information on rebel groups' recruitment tactics as well as their use of female suicide bombers. However, since these data are centered on rebel organizations operating in civil conflicts and only a small subset of the groups in the WARD dataset use suicide terrorism, it only provides coverage of a minority of the groups in the present dataset; only 28 (13.2%) of the rebel groups in WARD engage in suicide terrorism and only 12 of those groups utilize women for suicide attacks. After accounting for missing data on either the use of suicide bombing or a group's recruitment practices, the data show that 70% (7/10) of the groups that utilize women in suicide attacks also engage in forceful recruitment. It is important to note that this statistic does not reflect whether female suicide bombers were actually recruited forcefully, given that WARDs recruitment data measure only whether forceful recruitment was ever utilized by that organization but not the characteristics of those recruited forcefully or the timing.

This sample of groups that both forcefully recruit and use women for suicide bombing

[15] Thomas, Jakana L and Reed M Wood. 2018. "The Social Origins of Female Combatants." *Conflict Management and Peace Science* 35(3):215-232.

includes Hizb-i Islami-yi Afghanistan (Afghanistan), Palestinian Islamic Jihad (Israel), Hamas (Israel), Al-Aqsa Martyrs Brigade (Israel), Boko Haram (Nigeria), Tehrik-i-Taliban Pakistan (Pakistan) and Al Shabaab (Somalia). Using this subsample, the data show that female suicide bombers in rebel groups that forcefully recruit kill, on average, 9.64 people, while male attackers in those same groups kill 8.06 people, on average (Change: 1.58 deaths). On the other hand, excluding groups that utilize forced recruitment strategies from the larger analysis does not alter the trends. After excluding groups from WARD that recruit forcefully, female attackers still generate more fatalities, on average, than their male counterparts. In particular, attacks with female bombers kill 10.47 victims, while male attacks kill 9.30, on average (Change: 1.17). These very preliminary results, which are not intended to be generalizable, appear to suggest that forceful recruitment practices do not appear to attenuate the boon in lethality from utilizing a female attacker, at least in groups engaged in civil war.

6 Failure

In the manuscript, I examine statistics on failed attacks to examine whether female attackers are more likely to give up than their male counterparts. While women may be more lethal because society allows them to be, they may also be less effective if they have higher rates of desertion. Since the CPOST data can only speak to an attack's lethality if a terrorist detonates their bomb, the analyses in the manuscript only allow us to assess whether women are more lethal conditional on their willingness to detonate in the first place. In order to conclude that women are advantageous to organizations, it needs to first be established that they are not liabilities in terms of defection or preemption by security forces. Given the limitations of CPOST, I use the Global Terrorism Database (GTD) to code a sample of failed attacks to determine whether female suicide attackers are more likely to execute attacks with zero fatalities, including their own, than male attackers. The GTD data are helpful because there is no requirement that the attacker is killed to be included. If an attacker is not killed, they likely surrendered or were captured. Although the data do not distinguish between these two outcomes, they are still a useful way to gauge whether women are less likely to detonate their explosives.

I cull all of the suicide attacks from the GTD dataset between 1985 and 2015 to match the temporal domain of the main analyses in the manuscript. Next, I restrict the dataset to include attacks where no one was killed or injured, which yields 177 completely failed suicide attacks. These attacks constitute about 4% of the suicide terror attacks coded in the GTD during that time frame. Including cases where no one is killed or injured ensures that the attacker is not killed or harmed in the attack, giving them the potential to defect or be apprehended before launching an attack. By excluding injuries, we can also be sure that these are not cases where the bomber actually did execute the attack, but just did not

kill anyone else. [16] After selecting the sample, I first consult the sources used by GTD. I search for the specific news article(s) that describe the incident by name using Nexis Uni or Google to determine the gender of the perpetrator. If the article could not be located or if the gender of the perpetrator is not disclosed, I search for additional sources on the incident until I am able to ascertain the gender of the perpetrator or I am sure that the identity of the perpetrator is unknown. In a number of cases, the source that GTD used to code the attack could not be located and no other source could be located either. This largely happened when the GTD used proprietary sources to code the data. These cases would be coded missing. Overall, I was able to code the gender of the perpetrator in 75% of the attacks listed in GTD (134). Based on these data, women perpetrate a little fewer than 10% of the failed suicide attacks, while men are responsible for 90% of the failed attacks in these data. As noted in the manuscript, this is significantly less than estimates of their participation in terrorism from previous research but a similar rate to their participation in the CPOST dataset. Based on either of these estimates, women are no more likely to perpetrate failing suicide terror attacks than male attackers.

An alternative way to examine the question of failure is to utilize a two-stage zero-inflated negative binomial model. This model is useful in cases where we believe two different processes generate zero and non-zero counts. In one world, there is the potential for higher counts and in the other world, some factor systematically inclines some cases to never yield positive death counts. In this particular case, if women are more likely to detonate away from crowds or to attempt to sabotage their missions, we might expect attacks with female bombers to be systematically more likely to generate zero counts than those involving male bombers. The zero inflated model first models the likelihood of experiencing a count of zero with a logistic regression (inflation equation). After accounting for what makes one likely to experience a non-zero count, it models the count of fatalities with a negative binomial model (count model). Table 10 shows the results of these equations. The inflation equation shows that women are significantly **less** likely to end up in the definite zero's category. This can be interpreted as women are much more likely to receive positive, non-zero counts of fatalities, and therefore, less likely to participate in failing attacks. After accounting for this stage, the count model maintains the same results that appear in the manuscript. These results can be seen in Figure 9. Importantly, these results show that female suicide bombers *are not* less likely to cause fatal detonations than male attackers.

With the GTD analysis, these results show that in no way are women linked to higher rates of failure than men. Additionally, the second stage analysis shows that even after accounting for the probability of killing at least themselves, there is still a significant and positive relationship between different markers of gender equality, female attackers and mission lethality.

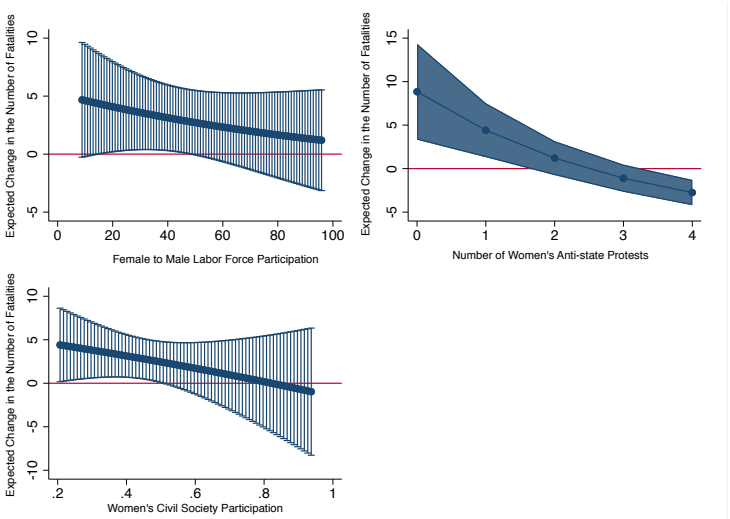
[16] Such cases would be included in the CPOST dataset if the attacker killed only him/herself.

Table 10: Zero Inflated Negative Binomial Examining the Lethality of A Suicide Terror Attack

Variables	Model 1	Model 2	Model 3
Female Attacker	0.428	0.663***	0.629
	(0.266)	(0.209)	(0.384)
Women's Labor Force Participation	-0.00362		
	(0.00512)		
Female Attacker × Women's Labor Force Participation	-0.00279		
	(0.00554)		
Number of Anti-state Women's Protest		-0.0327	
		(0.0290)	
Female Attacker × Number of Anti-state Women's Protests		-0.267***	
		(0.0634)	
Women's Civil Society Participation			0.608
			(1.011)
Female Attacker × Women's Civil Society Participation			-0.766
			(0.791)
Civil War Battle Deaths	-0.0433	-0.0330	-0.0309
	(0.0379)	(0.0380)	(0.0376)
Number Terrorists in Country (year)	0.0191	0.0195	0.0173
	(0.0160)	(0.0141)	(0.0132)
Number Killed (t-1)	0.00224	0.00236	0.00206
	(0.00178)	(0.00168)	(0.00175)
Number Wounded (t-1)	-0.000212	-0.000198	-0.000125
	(0.000631)	(0.000604)	(0.000652)
Religion Important	0.00244	0.00658	0.00750
	(0.00677)	(0.00707)	(0.00666)
Multiple Attackers	0.534**	0.427**	0.538***
	(0.219)	(0.172)	(0.197)
Assasination	-0.168*	-0.183*	-0.156
	(0.0990)	(0.102)	(0.102)
Weapon	0.0570**	0.0585**	0.0557*
	(0.0275)	(0.0277)	(0.0301)
Political Attack	-0.175**	-0.171*	-0.111
	(0.0809)	(0.0896)	(0.0978)
Security Attack	-0.828***	-0.821***	-0.759***
	(0.0536)	(0.0661)	(0.0764)
Constant	6.407***	1.995***	1.263
	(2.312)	(0.647)	(0.836)
Logistic Regression Examining the Probability of a Non-fatal Suicide Attack			
Female Attacker	-2.195**	-2.307***	-2.379***
	(0.908)	(0.815)	(0.842)
Number Terrorists in Country (year)	-0.452***	-0.452***	-0.466***
	(0.0863)	(0.0886)	(0.0902)
Weapon	-0.0474	-0.0555	-0.0731
	(0.199)	(0.208)	(0.214)
Assassination	-19.17***	-19.72***	-19.59***
	(1.223)	(1.143)	(1.117)
Multiple Attackers	1.482*	1.506	1.559*
	(0.899)	(0.926)	(0.907)
Constant	-1.968*	-1.948*	-1.911*
	(1.107)	(1.095)	(1.135)
lnalpha	0.407***	0.409***	0.422***
Number of Observations	2347	2373	2373

Standard errors in parentheses; (pj0.10, ** $p < 0.05$, *** $p < 0.01$

Figure 9: Expected Change in Lethality of Suicide Attack by Gender, After Accounting for Zero Inflation (ZINB Model)



7 Explanatory Variables

7.1 Alternate Measures of V-DEM Gender Equality

One might wonder about the relationship between women's political empowerment and the lethality of female suicide bombers. Unfortunately, there is no significant relationship between V-dem's measures of women's political participation, the gender of an attacker and an attack's lethality. This may be because a component of this score is descriptive representation and quota systems likely have an undue influence on some state's scores. Some very unequal societies have gender quotas ensuring that women participate in politics on paper, even if that participation is only symbolic. This can create misleading statistics.

Most countries have similar scores on V-Dem's civil society participation and political empowerment measures. This is unsurprising given that civil society participation factors into the political empowerment index. However, several cases are outliers. I examined these cases where the country's political empowerment score was significantly larger than the civil society score and found that the countries with the largest disparities were Bangladesh, Pakistan, Djibouti, Afghanistan, Iraq and India. According to the International Institute for Democracy and Electoral Assistance's (IDEA) Gender Quota Database, all but one of these countries (India) has a gender quota to ensure women's political participation.[17]

[17] https://www.idea.int/data-tools/data/gender-quotas/database

The concern here is that most of these are otherwise gender unequal countries. The World Economic Forum's 2018 Global Gender Gap report ranks 149 countries on gender equality, and ranked these countries as follows: Pakistan (149th), Iraq (147th), Afghanistan (NR), Bangladesh (48), Djibouti (NR), India (108). An alternative indicator, United Nations Development Program's Gender Inequality Index ranks Afghanistan (168/189) and Djibouti (172/189) among the lowest scorers on gender equality.

Overall, this suggests that V-Dem's political empowerment index is not necessarily in step with other measures of gender equality.

Figure 10: Distribution of Women's Labor Force Participation

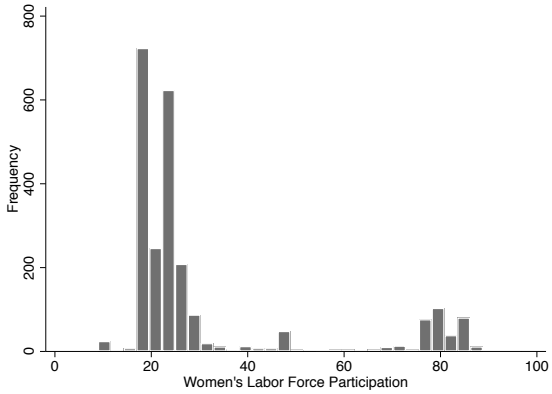


Figure 11: Distribution of Women's Civil Society Participation

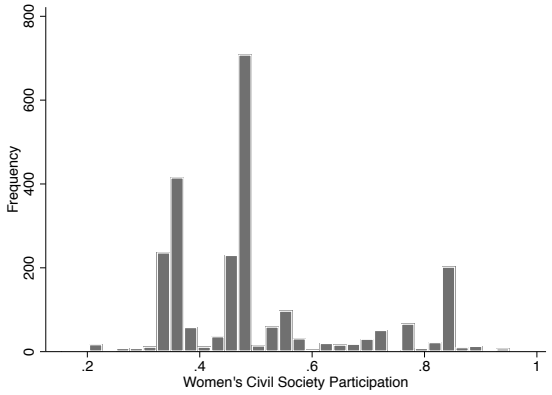
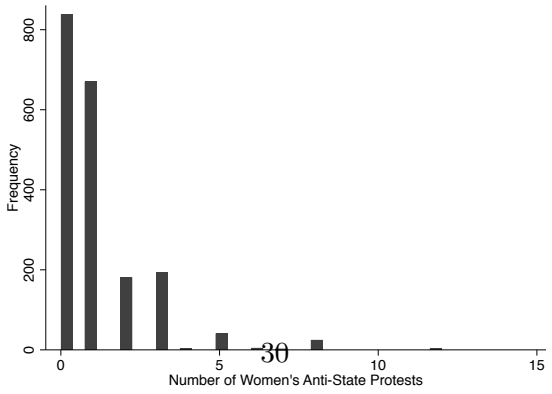


Figure 12: Distribution of Women's Protests



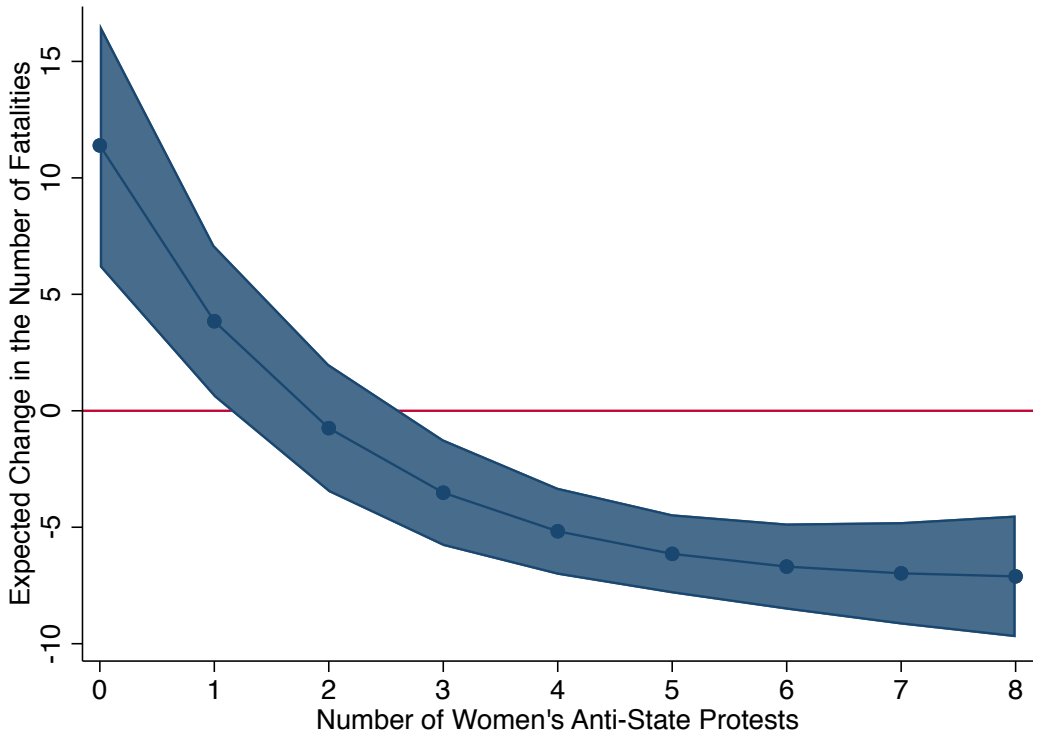
7.2 Distribution of Independent Variables

7.3 Replication using full range of women's protest variable

Table 11: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Full Range Women's Protest Variable**

Variables	Model 1
Female Attacker(s)	0.845***
	(0.205)
Number of Anti-state Women's Protest	-0.0165
	(0.0347)
Female Attacker(s) × # Anti-state Wom. Protests	-0.469***
	(0.0953)
Number Killed (t-1)	0.00233
	(0.00150)
Number Wounded (t-1)	-0.0000606
	(0.000533)
ln(Battle Deaths)	-0.0737
	(0.0495)
Number Terrorists in Country	0.0330*
	(0.0184)
Religion Importance	0.00773
	(0.00731)
Many Attackers	0.602**
	(0.285)
Weapon	0.0480
	(0.0425)
Assassination	-0.133
	(0.102)
Political Target	-0.228***
	(0.0702)
Security Target	-0.891***
	(0.0622)
t^1	-0.0419
	(0.0536)
t^2	0.000139
	(0.000248)
t^3	-0.000000136
	(0.000000360)
Constant	5.057
	(3.874)
ln(alpha)	0.468***
	(0.131)
No. Observations	1906
Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$	

Figure 13: Expected Change in Lethality of Suicide Attack by Gender, Full Range of Women's Protest Variable



8 Weapon type

8.1 Coding for weapon type variable

Weapon is a fourteen-category variable coded as follows:

1. Airplane
2. Animal bomb
3. Backpack bomb
4. Belt bomb
5. Boat bomb
6. Car bomb

7. Motorcycle bomb
8. Other person borne IED
9. Scuba bomb
10. Truck bomb
11. Turban bomb
12. Mixed/ unspecified
13. Cart bomb
14. Other vehicle borne IED

8.2 Testing for post-treatment effects of including weapon type

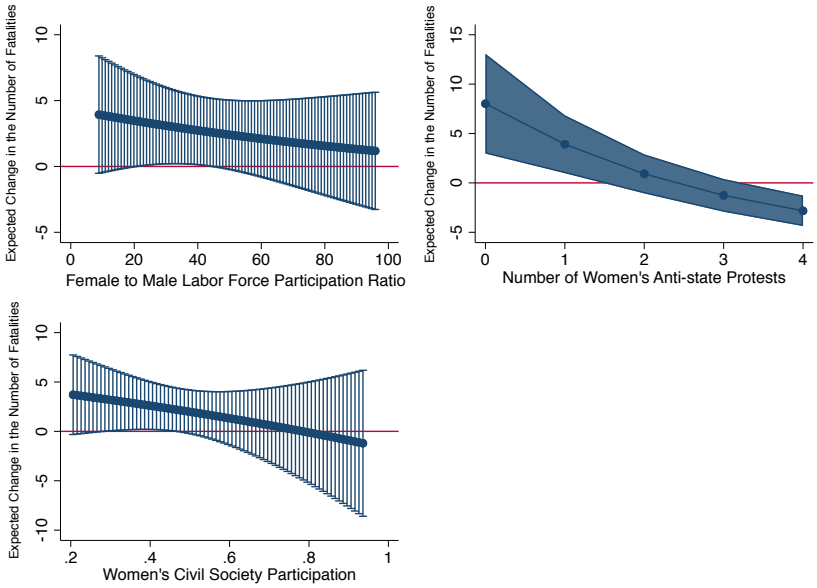
The following analyses are conducted excluding the *Weapon* variable. It is possible that women are more likely to commit attacks with specific types of weapons (e.g., person borne IED's) and those weapons may prove to be more lethal. More specifically, if women are used by organizations for stealth, they may be more likely to utilize weapons that can be concealed easily, such as belt bombs. If women are systematically more prone to use specific types of weapons that yield greater casualties, post-treatment bias could affect the results. To rule out this possibility, I re-estimate all of the models excluding the weapon type. The results in Table 12 and Figure 14 demonstrate that the exclusion of this control variable does not affect the substance of the results, although it does attenuate the significance.

Table 12: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality, **Excluding Weapon**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.164	0.367	0.613***	0.559
	(0.168)	(0.265)	(0.205)	(0.430)
Women's Labor Force Participation		-0.00343		
		(0.00557)		
Female × Women's Labor Force Part.		-0.00221		
		(0.00570)		
Number of Anti-state Women's Protest			-0.0334	
			(0.0295)	
Female × Women's Protest			-0.257***	
			(0.0633)	
Women's Civil Society Participation				0.660
				(1.041)
Female × Wom. Civil Society Part.				-0.713
				(0.834)
Number Wounded (t-1)	-0.0000670	-0.000169	-0.000152	-0.0000748
	(0.000658)	(0.000655)	(0.000632)	(0.000673)
ln(Battle Deaths)	-0.0295	-0.0407	-0.0309	-0.0281
	(0.0424)	(0.0411)	(0.0410)	(0.0396)
Number Terrorists in Country	0.0200	0.0215	0.0220	0.0196
	(0.0160)	(0.0183)	(0.0161)	(0.0149)
Number Killed (t-1)	0.00227	0.00246	0.00259	0.00225
	(0.00183)	(0.00185)	(0.00177)	(0.00181)
Religion Importance	0.00453	0.00165	0.00554	0.00672
	(0.00789)	(0.00703)	(0.00752)	(0.00681)
Many Attackers	0.499**	0.532**	0.421**	0.529**
	(0.232)	(0.247)	(0.198)	(0.228)
Assassination	-0.186	-0.195	-0.211	-0.186
	(0.131)	(0.123)	(0.132)	(0.128)
Political Target	-0.0696	-0.101	-0.101	-0.0439
	(0.116)	(0.0996)	(0.106)	(0.106)
Security Target	-0.753***	-0.793***	-0.788***	-0.728***
	(0.0792)	(0.0482)	(0.0692)	(0.0749)
t^1	-0.00505	-0.0484	-0.00322	-0.00580
	(0.0107)	(0.0305)	(0.0105)	(0.00996)
t^2	0.00000665	0.000174	-0.0000128	0.0000162
	(0.0000610)	(0.000126)	(0.0000619)	(0.0000528)
t^3	9.26e-09	-0.000000197	5.12e-08	-8.86e-09
	(9.69e-08)	(0.000000161)	(0.000000100)	(8.03e-08)
Constant	2.297***	6.248**	2.398***	1.597*
	(0.704)	(2.518)	(0.657)	(0.929)
lnalpha	0.483***	0.472***	0.473***	0.481***
Observations	2375	2349	2375	2375

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 14: Expected Change in Lethality of Suicide Attack by Gender, Excluding Weapon



9 Missing Data

It is difficult to tell whether the data are missing at random. Although one can assume that since female suicide attackers generally garner more attention, missing cases are more likely to have been executed by male terrorists, it is also possible that since female attackers are expected to be more stealth, they would be able to complete their missions without being identified or preempted. Either of these scenarios are equally plausible, which makes it difficult to tell whether the data are biased against or toward the inclusion of female attacks or more importantly, lethal attacks conducted by female operatives. A difference of means test does show, however, that there is not a statistically significant difference between the two samples in terms of lethality. On average, cases without information on gender yield 9 deaths, while cases where information on the gender of the perpetrator(s) was recorded yield 9.7 deaths. The results of a t-test suggests there is insignificant evidence to reject the null hypothesis that the sample means are the same at the 0.05 level of significance.

9.1 9/11

CPOST-SAD codes the gender of the perpetrators for the 9/11 attacks missing although that information is generally well-known. As a result, these data are excluded from the

analysis in the analysis in the manuscript because I was unable to double check all of the data to verify if this was the only mistake in coding the gender. Below, I replicate the results including the three attacks on the United States in September 2001. Figure 15 demonstrates that the results do not vary in substance from those reported in the manuscript, however the results are much weaker after including these outliers to the models presented in Table 2 (manuscript). This is the by far the weakest specification for these analyses. However, when the are results are replicated using other specifications, including a poisson estimator or including time fixed effects in lieu of time polynomials, the results are consistent with those reported in the manuscript. These results are displayed in Figure 17 and Figure 16, respectively. Additionally, I examined a random sample of cases where the gender of the perpetrator was unknown and I did not discover glaring inconsistencies.

Figure 15: Expected Change in Lethality of Suicide Attack by Gender, **Including 9/11 attacks**

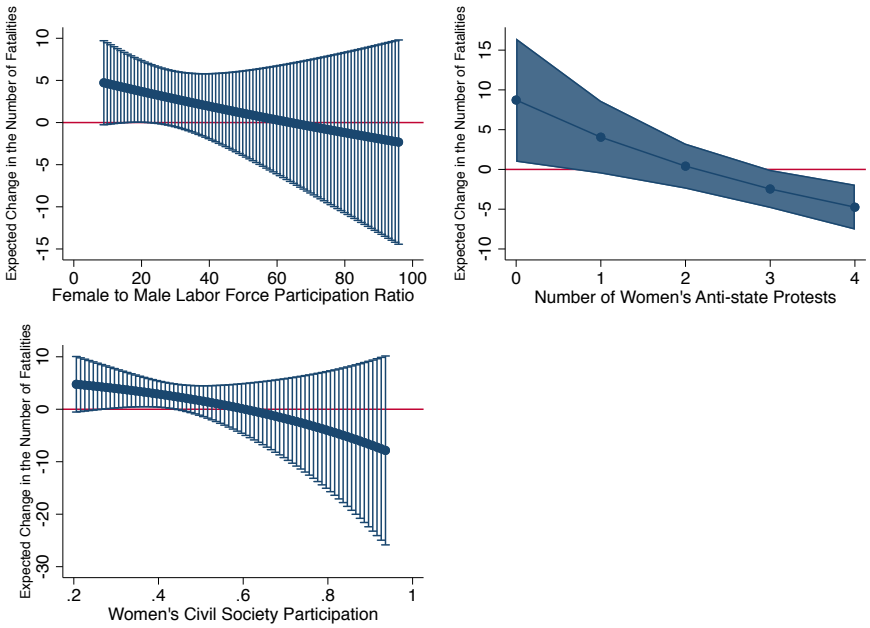


Figure 16: Expected Change in Lethality of Suicide Attack by Gender, **Including 9/11 attacks with time fixed effects instead of time polynomials**

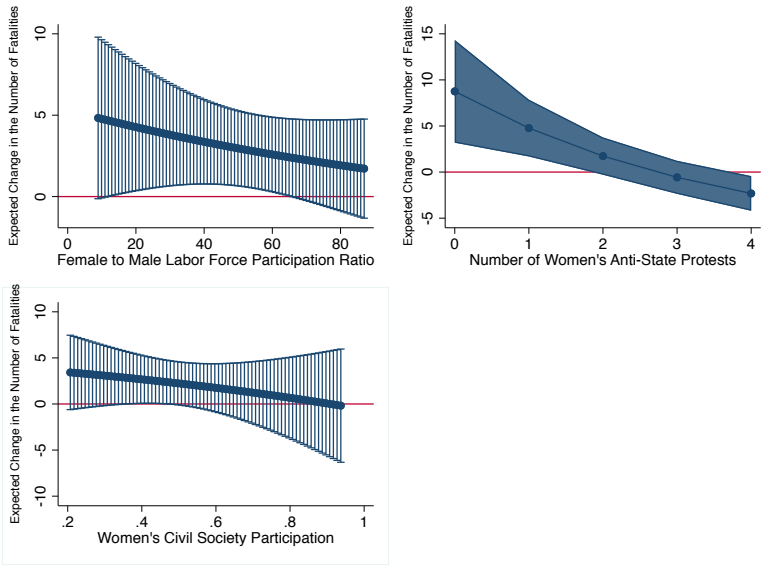


Figure 17: Expected Change in Lethality of Suicide Attack by Gender, **Including 9/11 attacks with poisson estimator**

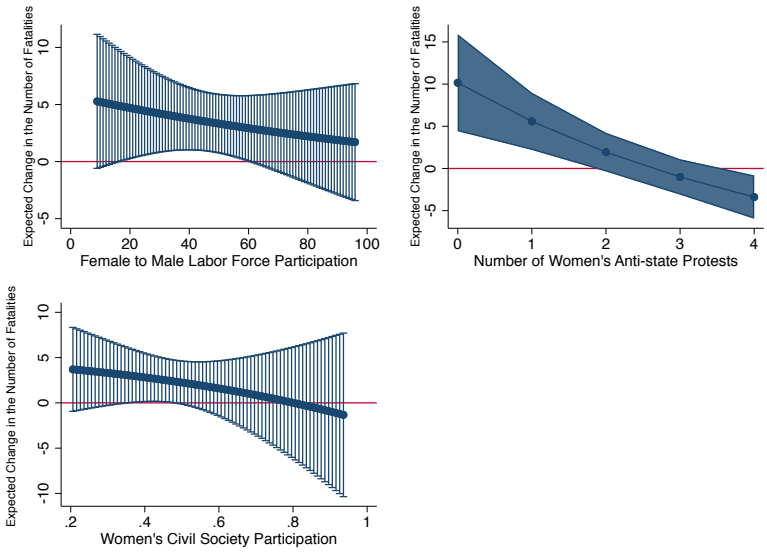


Table 13: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Including 911 attacks**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.0878	0.480	0.673**	0.921
	(0.229)	(0.309)	(0.317)	(0.573)
Women's Labor Force Participation		0.00192		
		(0.00866)		
Female × Women's Labor Force Participation		-0.00750		
		(0.00983)		
Number of Anti-state Women's Protest			0.0395	
			(0.0441)	
Female× Number of Anti-state Women's Protest			-0.316***	
			(0.0979)	
Women's Civil Society Participation				1.703
				(1.167)
Female× Women's Civil Society Participation				-1.525
				(1.295)
Number Wounded (t-1)	-0.000432	-0.000521	-0.000384	-0.000403
	(0.000841)	(0.000859)	(0.000745)	(0.000856)
ln(Battle Deaths)	-0.00539	-0.00804	-0.00759	-0.00907
	(0.0447)	(0.0463)	(0.0429)	(0.0419)
Number Terrorists in Country (year)	0.0114	0.0132	0.0119	0.0116
	(0.0163)	(0.0198)	(0.0163)	(0.0143)
Number Killed (t-1)	0.00240	0.00266	0.00244	0.00230
	(0.00208)	(0.00214)	(0.00195)	(0.00202)
Religion Importance	0.00215	0.00184	0.00429	0.00816
	(0.00992)	(0.00874)	(0.00987)	(0.00878)
Many Attackers	-0.655*	-0.642*	-0.684**	-0.480
	(0.335)	(0.336)	(0.320)	(0.370)
Weapon	0.00567	0.00831	0.0119	0.0118
	(0.0370)	(0.0341)	(0.0376)	(0.0346)
Assassination	-0.216*	-0.217*	-0.228*	-0.213*
	(0.125)	(0.114)	(0.121)	(0.127)
Political Target	-0.207**	-0.214***	-0.258***	-0.116
	(0.0991)	(0.0784)	(0.0857)	(0.0997)
Security Target	-0.887***	-0.891***	-0.942***	-0.804***
	(0.0936)	(0.0556)	(0.0926)	(0.0771)
t^1	0.00772	-0.0114	0.00613	0.00362
	(0.0137)	(0.0409)	(0.0134)	(0.0115)
t^2	-0.0000695	0.00000807	-0.0000587	-0.0000304
	(0.0000837)	(0.000172)	(0.0000808)	(0.0000643)
t^3	0.000000124	2.55e-08	0.000000107	5.50e-08
	(0.000000134)	(0.000000225)	(0.000000129)	(9.75e-08)
Constant	3.590***	4.993	3.361***	1.622
	(0.781)	(3.111)	(0.791)	(1.036)
lnalpha	0.559***	0.554***	0.548***	0.544***
	(0.135)	(0.136)	(0.133)	(0.130)
Observations	2376	2350	2376	2376

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 14: **Poisson Regressions** Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Including 911 attacks**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.0256	0.489**	0.595***	0.997**
	(0.183)	(0.231)	(0.191)	(0.430)
Women's Labor Force Participation		0.00136		
		(0.00604)		
Female × Women's Labor Force Participation		-0.00791		
		(0.00652)		
Number of Anti-state Women's Protest			0.0311	
			(0.0364)	
Female× Number of Anti-state Women's Protests			-0.275***	
			(0.0584)	
Women's Civil Society Participation				1.223
				(0.753)
Female × Women's Civil Society Participation				-1.664**
				(0.790)
Number Wounded (t-1)	-0.000379	-0.000386	-0.000327	-0.000353
	(0.00101)	(0.00101)	(0.000952)	(0.000980)
ln(Battle Deaths)	0.00853	-0.000354	0.00841	0.0117
	(0.0422)	(0.0416)	(0.0400)	(0.0444)
Number Terrorists in Country (year)	0.00190	0.00355	0.00200	0.00264
	(0.0140)	(0.0144)	(0.0135)	(0.0131)
Number Killed (t-1)	0.00260	0.00276	0.00263	0.00248
	(0.00245)	(0.00250)	(0.00237)	(0.00224)
Religion Importance	0.0101	0.0107	0.0112	0.0154
	(0.0113)	(0.0122)	(0.0105)	(0.0119)
Many Attackers	-3.632***	-3.843***	-3.595***	-3.394***
	(0.386)	(0.292)	(0.401)	(0.405)
Weapon	-0.00256	0.0156	-0.00106	0.00904
	(0.0366)	(0.0328)	(0.0367)	(0.0309)
Assassination	-0.243	-0.241	-0.280*	-0.239
	(0.148)	(0.148)	(0.147)	(0.154)
Political Target	-0.337	-0.352	-0.363	-0.308
	(0.250)	(0.240)	(0.241)	(0.262)
Security Target	-0.929***	-0.932***	-0.966***	-0.888***
	(0.137)	(0.110)	(0.135)	(0.132)
t^1	0.0202*	-0.00542	0.0198*	0.0160
	(0.0118)	(0.0219)	(0.0117)	(0.0111)
t^2	-0.000119*	-0.0000128	-0.000118*	-0.0000870
	(0.0000647)	(0.0000972)	(0.0000639)	(0.0000583)
t^3	0.000000181*	4.47e-08	0.000000181*	0.000000126
	(9.92e-08)	(0.000000131)	(9.81e-08)	(8.66e-08)
Constant	5.078***	6.987***	4.919***	3.573***
	(0.783)	(1.858)	(0.784)	(1.124)
No. Observations	2376	2350	2376	2376

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 15: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality; **Including 911 attacks with Time Fixed Effects**

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)=1	0.218	0.425	0.737***	0.563
	(0.153)	(0.277)	(0.259)	(0.392)
Women's Labor Force Participation		-0.00278		
		(0.00510)		
Female × Women's Labor Force Participation		-0.00250		
		(0.00592)		
Number of Anti-state Women's Protest			0.0334	
			(0.0819)	
Female × Number of Anti-state Women's Protestt			-0.280***	
			(0.0913)	
Women's Civil Society Participation				0.990
				(0.934)
Female× Women's Civil Society Participation				-0.703
				(0.791)
Number Wounded (t-1)	-0.000533	-0.000639	-0.000529	-0.000531
	(0.000647)	(0.000673)	(0.000629)	(0.000656)
ln(Battle Deaths)	-0.0185	-0.0186	-0.0180	-0.0161
	(0.0441)	(0.0432)	(0.0451)	(0.0406)
Number Terrorists in Country (year)	0.0170	0.0157	0.0167	0.0164
	(0.0178)	(0.0190)	(0.0184)	(0.0159)
Number Killed (t-1)	0.00332*	0.00353**	0.00350**	0.00324**
	(0.00171)	(0.00175)	(0.00177)	(0.00164)
Religion Importance	0.00515	0.00360	0.00666	0.00864
	(0.00803)	(0.00674)	(0.00825)	(0.00702)
Many Attackers	-0.187	-0.183	-0.237	-0.142
	(0.327)	(0.350)	(0.330)	(0.342)
Weapon	0.0407	0.0414	0.0448	0.0377
	(0.0302)	(0.0305)	(0.0314)	(0.0339)
Assassination	-0.165	-0.153*	-0.176*	-0.176*
	(0.100)	(0.0928)	(0.0997)	(0.0908)
Political Target	-0.219**	-0.246***	-0.263***	-0.169
	(0.102)	(0.0861)	(0.0860)	(0.111)
Security Target	-0.875***	-0.905***	-0.918***	-0.832***
	(0.0626)	(0.0567)	(0.0633)	(0.0677)
Constant	2.501***	2.271***	2.331***	1.454*
	(0.292)	(0.410)	(0.542)	(0.833)
lnalpha	0.503***	0.500***	0.494***	0.498***
	(0.127)	(0.129)	(0.126)	(0.125)
Observations	2376	2350	2376	2376

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Year Fixed Effects Omitted

10 Over time effects

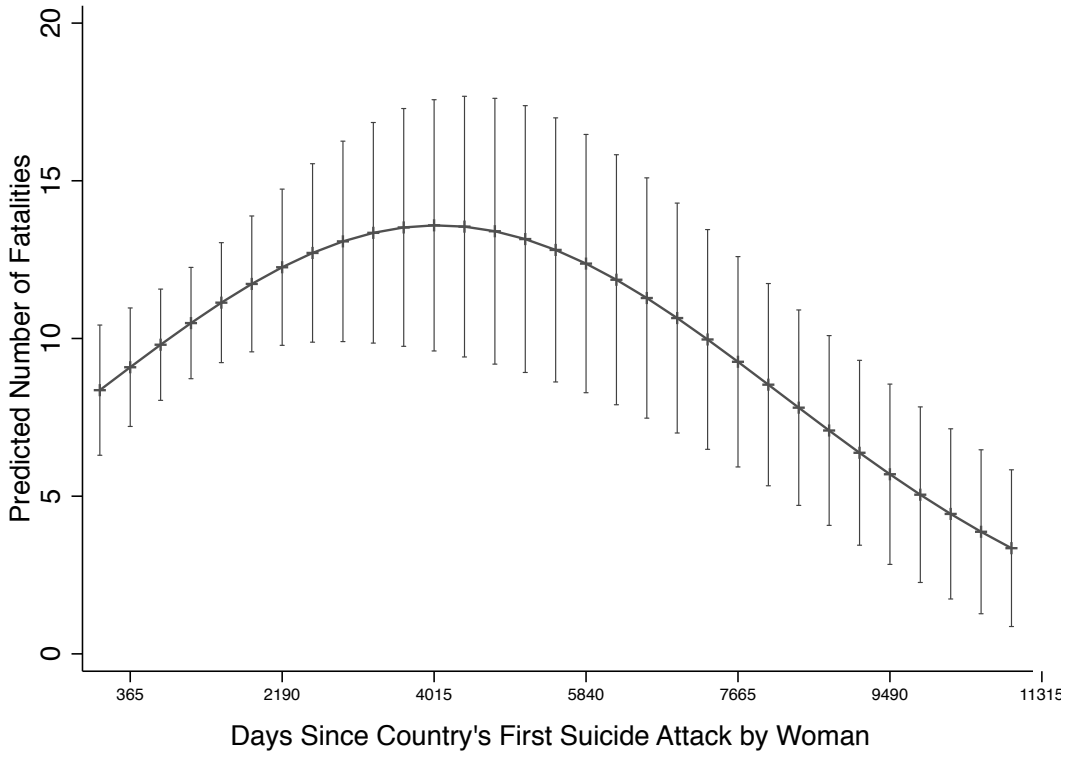
Table 16: Negative Binomial Regressions Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality

Variables	Model 1
Female Attacker(s)	0.272**
	(0.114)
Years Since First Woman Attacker	0.103***
	(0.0374)
Years Since First Woman Attacker ^{2}	-0.00469***
	(0.00153)
Number Wounded (t-1)	0.000174
	(0.000529)
ln(Civil War Battle Deaths)	0.0298
	(0.0392)
Number of Terrorist Groups in Country	0.0246*
	(0.0146)
Number Killed (t-1)	0.00128
	(0.00144)
Religion Importance	0.00487
	(0.00650)
Multiple Attackers	0.429*
	(0.221)
Weapon	0.0567
	(0.0356)
Assassination	-0.0858
	(0.111)
Political Target	-0.146*
	(0.0815)
Security Target	-0.808***
	(0.0653)
Constant	1.952***
	(0.696)
ln(alpha)	0.415***
	(0.114)
No. Observations	2253

Standard errors clustered on campaign in parentheses; $^*p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Time polynomial omitted from table for brevity.

Figure 18 shows that the overtime effects examined in Figure 4 in the manuscript are consistent if days are utilized instead of years.

Figure 18: Expected Change in Lethality of Female Terror Attacks Across Time; calculated in days since attack.



11 Alternative Model Specification–Poisson

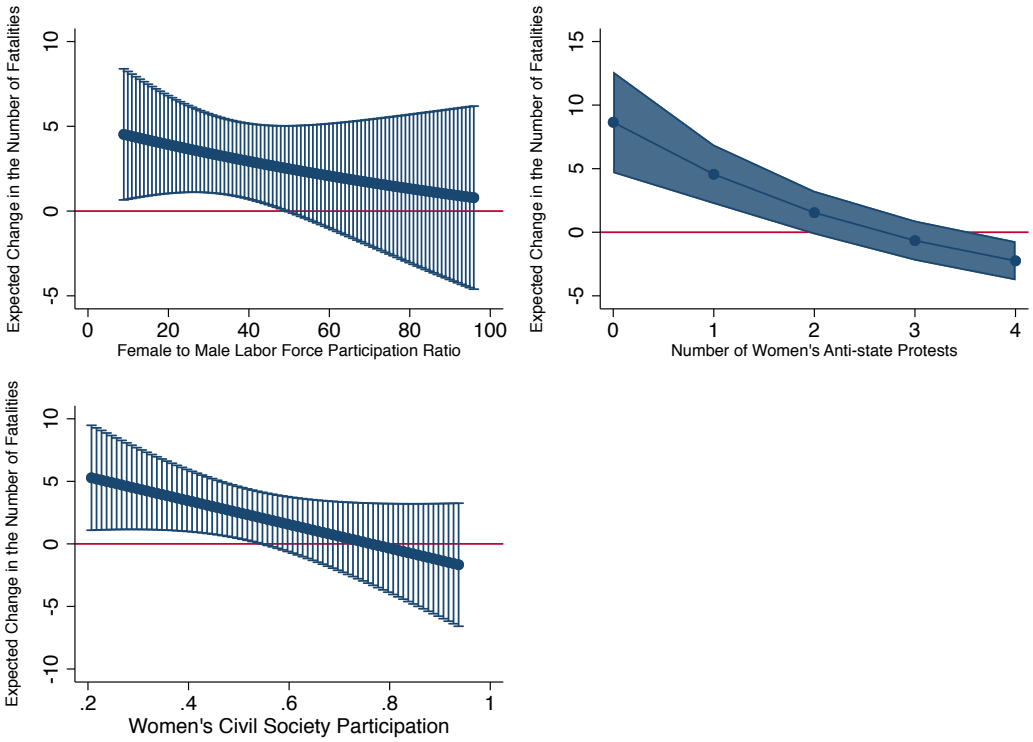
Table 19 following shows that the results are substantively similar if a poisson distribution is used instead of a negative binomial model.

Table 17: **Poisson Regressions** Examining the Effect of Female Suicide Bombers on Suicide Attack Lethality

Variables	Model 1	Model 2	Model 3	Model 4
Female Attacker(s)	0.156	0.436*	0.652***	0.725**
	(0.142)	(0.232)	(0.161)	(0.336)
Women's Labor Force Participation		-0.00184		
		(0.00621)		
Female × Women's Labor Force Part.		-0.00353		
		(0.00616)		
Number of Anti-state Women's Protest			-0.0381	
			(0.0293)	
Female × Women's Protest			-0.244***	
			(0.0509)	
Women's Civil Society Participation				0.503
				(0.667)
Female × Wom. Civil Society Part.				-0.950
				(0.616)
Number Wounded (t-1)	0.000304	0.000227	0.000274	0.000292
	(0.000549)	(0.000561)	(0.000517)	(0.000554)
ln(Battle Deaths)	-0.0239	-0.0319	-0.0259	-0.0226
	(0.0381)	(0.0358)	(0.0351)	(0.0380)
Number Terrorists in Country	0.0148	0.0156	0.0155	0.0143
	(0.0118)	(0.0120)	(0.0113)	(0.0113)
Number Killed (t-1)	0.00144	0.00165	0.00170	0.00144
	(0.00161)	(0.00168)	(0.00155)	(0.00156)
Religion Importance	0.00636	0.00440	0.00711	0.00857
	(0.00806)	(0.00873)	(0.00718)	(0.00839)
Many Attackers	0.428**	0.417**	0.350*	0.446**
	(0.189)	(0.192)	(0.188)	(0.190)
Weapon Type	0.0717***	0.0724***	0.0725**	0.0747***
	(0.0278)	(0.0275)	(0.0283)	(0.0261)
Assassination	-0.246**	-0.267**	-0.289**	-0.249**
	(0.122)	(0.115)	(0.121)	(0.118)
Political Target	-0.0951	-0.123	-0.126	-0.0814
	(0.108)	(0.102)	(0.0952)	(0.105)
Security Target	-0.800***	-0.831***	-0.831***	-0.789***
	(0.0750)	(0.0564)	(0.0670)	(0.0740)
t^1	0.000118	-0.0344	0.00152	-0.000544
	(0.0111)	(0.0215)	(0.0102)	(0.0102)
t^2	-0.0000146	0.000121	-0.0000356	-0.00000772
	(0.0000672)	(0.0000968)	(0.0000628)	(0.0000598)
t^3	3.20e-08	-0.000000137	7.91e-08	1.93e-08
	(0.000000107)	(0.000000132)	(0.000000102)	(9.32e-08)
Constant	1.607**	4.641**	1.861***	1.051
	(0.653)	(1.849)	(0.588)	(0.893)
Observations	2373	2347	2373	2373

Standard errors clustered on campaign in parentheses; $^{*}p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 19: Expected Change in Lethality of Suicide Attack by Gender, Poisson Estimator



12 First Differences for Figures 1, 2 and 3 in the manuscript

12.1 First differences for Figure 1: Effect of changing from a male to a female attacker by labor force participation ratio

at	dy/dx	Std. Err.	z	P>|z|	[90\% Conf.	Interval]
1	5.183743	3.21296	1.61	0.107	-.101106	10.46859
2	5.122066	3.142309	1.63	0.103	-.0465729	10.2907
3	5.060878	3.073066	1.65	0.100	.0061344	10.11562
4	5.000177	3.00525	1.66	0.096	.0569808	9.943373
5	4.939959	2.938881	1.68	0.093	.105929	9.773988
6	4.88022	2.873983	1.70	0.089	.1529392	9.607501
7	4.820958	2.810577	1.72	0.086	.1979693	9.443946
8	4.762168	2.74869	1.73	0.083	.2409748	9.283361
9	4.703848	2.688348	1.75	0.080	.2819089	9.125786
10	4.645994	2.629578	1.77	0.077	.320722	8.971265
11	4.588602	2.572411	1.78	0.074	.3573626	8.819842
12	4.531671	2.516877	1.80	0.072	.3917768	8.671565
13	4.475196	2.463008	1.82	0.069	.4239087	8.526483
14	4.419174	2.410837	1.83	0.067	.4537002	8.384647
15	4.363601	2.360398	1.85	0.065	.4810917	8.246111
16	4.308476	2.311728	1.86	0.062	.5060221	8.11093

17	4.253794	2.264861	1.88	0.060	.5284292	7.979159
18	4.199553	2.219834	1.89	0.059	.5482501	7.850855
19	4.145749	2.176684	1.90	0.057	.5654216	7.726076
20	4.092379	2.135447	1.92	0.055	.5798811	7.604876
21	4.03944	2.096158	1.93	0.054	.5915668	7.487313
22	3.986929	2.058852	1.94	0.053	.6004186	7.37344
23	3.934844	2.023563	1.94	0.052	.6063788	7.263309
24	3.88318	1.990321	1.95	0.051	.6093931	7.156967
25	3.831936	1.959156	1.96	0.050	.6094115	7.05446
26	3.781107	1.930092	1.96	0.050	.6063887	6.955825
27	3.730692	1.903152	1.96	0.050	.6002858	6.861097
28	3.680686	1.878353	1.96	0.050	.5910706	6.770302
29	3.631088	1.855709	1.96	0.050	.5787191	6.683458
30	3.581895	1.835227	1.95	0.051	.5632155	6.600574
31	3.533102	1.816909	1.94	0.052	.5445539	6.521651
32	3.484709	1.80075	1.94	0.053	.522738	6.44668
33	3.436711	1.786742	1.92	0.054	.4977825	6.37564
34	3.389106	1.774865	1.91	0.056	.4697127	6.3085
35	3.341892	1.765097	1.89	0.058	.4385648	6.245218
36	3.295064	1.757407	1.87	0.061	.4043863	6.185742
37	3.248622	1.751759	1.85	0.064	.3672352	6.130008
38	3.202561	1.748108	1.83	0.067	.3271798	6.077942
39	3.156879	1.746405	1.81	0.071	.284298	6.02946
40	3.111574	1.746597	1.78	0.075	.2386769	5.984471
41	3.066642	1.748624	1.75	0.079	.1904114	5.942873
42	3.022082	1.752423	1.72	0.085	.1396034	5.904561
43	2.97789	1.757925	1.69	0.090	.086361	5.869419
44	2.934064	1.765061	1.66	0.096	.0307969	5.837331
45	2.890601	1.773758	1.63	0.103	-.0269723	5.808174
46	2.847498	1.783943	1.60	0.110	-.0868274	5.781824
47	2.804754	1.795541	1.56	0.118	-.1486476	5.758155
48	2.762365	1.808475	1.53	0.127	-.2123116	5.737041
49	2.720329	1.822671	1.49	0.136	-.2776982	5.718356
50	2.678643	1.838054	1.46	0.145	-.3446877	5.701973
51	2.637305	1.854552	1.42	0.155	-.4131618	5.687772
52	2.596312	1.872092	1.39	0.165	-.4830052	5.67563
53	2.555662	1.890605	1.35	0.176	-.5541053	5.66543
54	2.515353	1.910022	1.32	0.188	-.626353	5.657059
55	2.475382	1.930278	1.28	0.200	-.6996431	5.650406
56	2.435746	1.951311	1.25	0.212	-.7738744	5.645366
57	2.396443	1.973059	1.21	0.225	-.8489504	5.641836
58	2.357471	1.995465	1.18	0.237	-.9247778	5.639719
59	2.318827	2.018475	1.15	0.251	-1.001269	5.638923
60	2.280509	2.042035	1.12	0.264	-1.07834	5.639358
61	2.242515	2.066097	1.09	0.278	-1.155911	5.640942
62	2.204842	2.090612	1.05	0.292	-1.233909	5.643593
63	2.167488	2.115537	1.02	0.306	-1.312261	5.647238
64	2.130451	2.14083	1.00	0.320	-1.390901	5.651804
65	2.093728	2.166452	0.97	0.334	-1.469767	5.657224
66	2.057318	2.192364	0.94	0.348	-1.548801	5.663436
67	2.021217	2.218533	0.91	0.362	-1.627945	5.670379
68	1.985424	2.244926	0.88	0.376	-1.70715	5.677998
69	1.949936	2.271511	0.86	0.391	-1.786367	5.686239
70	1.914751	2.29826	0.83	0.405	-1.86555	5.695053
71	1.879868	2.325147	0.81	0.419	-1.944658	5.704394
72	1.845283	2.352145	0.78	0.433	-2.023652	5.714217
73	1.810995	2.379232	0.76	0.447	-2.102493	5.724483
74	1.777001	2.406385	0.74	0.460	-2.18115	5.735152
75	1.7433	2.433584	0.72	0.474	-2.259589	5.746189
76	1.709889	2.460809	0.69	0.487	-2.337782	5.75756
77	1.676766	2.488043	0.67	0.500	-2.4157	5.769233
78	1.643929	2.515269	0.65	0.513	-2.49332	5.781179
79	1.611377	2.542471	0.63	0.526	-2.570617	5.79337
80	1.579106	2.569636	0.61	0.539	-2.647569	5.80578
81	1.547115	2.596749	0.60	0.551	-2.724157	5.818386
82	1.515401	2.623797	0.58	0.564	-2.800361	5.831164
83	1.483964	2.65077	0.56	0.576	-2.876165	5.844093
84	1.4528	2.677657	0.54	0.587	-2.951553	5.857154
85	1.421909	2.704447	0.53	0.599	-3.02651	5.870327
86	1.391287	2.73113	0.51	0.610	-3.101023	5.883596
87	1.360933	2.757699	0.49	0.622	-3.175079	5.896944
88	1.330844	2.784146	0.48	0.633	-3.248668	5.910356

12.2 First differences for Figure 2

at	dy/dx	Std. Err.	z	P>|z|	[90\% Conf.	Interval]
1	4.74778	2.723466	1.74	0.081	.2680758	9.227483
2	4.683703	2.644182	1.77	0.077	.3344099	9.032995
3	4.619384	2.56618	1.80	0.072	.398394	8.840374
4	4.554822	2.489526	1.83	0.067	.4599168	8.649727
5	4.490015	2.414294	1.86	0.063	.5188539	8.461175
6	4.42496	2.340569	1.89	0.059	.5750668	8.274854
7	4.359658	2.268443	1.92	0.055	.6284013	8.090914
8	4.294104	2.198018	1.95	0.051	.6786863	7.909523
9	4.228299	2.12941	1.99	0.047	.7257318	7.730866
10	4.16224	2.062745	2.02	0.044	.7693266	7.555153
11	4.095925	1.998163	2.05	0.040	.8092382	7.382611
12	4.029352	1.935821	2.08	0.037	.84521	7.213494
13	3.96252	1.875887	2.11	0.035	.8769604	7.048079
14	3.895427	1.818547	2.14	0.032	.9041826	6.886671
15	3.828071	1.764003	2.17	0.030	.926544	6.729598
16	3.76045	1.71247	2.20	0.028	.9436871	6.577212
17	3.692562	1.664179	2.22	0.026	.9552316	6.429893
18	3.624406	1.619371	2.24	0.025	.9607781	6.288034
19	3.555979	1.578296	2.25	0.024	.9599137	6.152045
20	3.487281	1.541208	2.26	0.024	.9522189	6.022342
21	3.418308	1.508359	2.27	0.023	.9372783	5.899337
22	3.349059	1.47999	2.26	0.024	.9146915	5.783426
23	3.279531	1.456327	2.25	0.024	.8840874	5.674976
24	3.209725	1.437566	2.23	0.026	.8451382	5.574311
25	3.139635	1.423872	2.20	0.027	.797574	5.481697
26	3.069263	1.415364	2.17	0.030	.7411962	5.397329
27	2.998604	1.412112	2.12	0.034	.6758876	5.321321
28	2.927658	1.414132	2.07	0.038	.6016186	5.253697
29	2.856422	1.421386	2.01	0.044	.5184504	5.194394
30	2.784894	1.433783	1.94	0.052	.4265305	5.143258
31	2.713073	1.451185	1.87	0.062	.3260857	5.10006
32	2.640956	1.473411	1.79	0.073	.2174107	5.064501
33	2.56854	1.500247	1.71	0.087	.1008538	5.036227
34	2.495825	1.531456	1.63	0.103	-.0231953	5.014846
35	2.422809	1.566786	1.55	0.122	-.1543242	4.999942
36	2.349488	1.605977	1.46	0.143	-.2921089	4.991085
37	2.275861	1.648771	1.38	0.167	-.4361257	4.987848
38	2.201926	1.694915	1.30	0.194	-.5859607	4.989813
39	2.127681	1.744167	1.22	0.223	-.7412183	4.99658
40	2.053123	1.796297	1.14	0.253	-.9015222	5.007769
41	1.978251	1.851092	1.07	0.285	-1.066524	5.023027
42	1.903062	1.908356	1.00	0.319	-1.235903	5.042028
43	1.827555	1.967908	0.93	0.353	-1.409365	5.064475
44	1.751727	2.029585	0.86	0.388	-1.586644	5.090097
45	1.675574	2.093241	0.80	0.423	-1.7675	5.118649
46	1.599097	2.158743	0.74	0.459	-1.951718	5.149913
47	1.522293	2.225974	0.68	0.494	-2.139108	5.183694
48	1.445159	2.294829	0.63	0.529	-2.3295	5.219817
49	1.367692	2.365218	0.58	0.563	-2.522745	5.25813
50	1.289892	2.437059	0.53	0.597	-2.718714	5.298498
51	1.211755	2.510282	0.48	0.629	-2.917291	5.340801
52	1.133278	2.584825	0.44	0.661	-3.118381	5.384937
53	1.054461	2.660635	0.40	0.692	-3.321894	5.430817
54	.9753011	2.737666	0.36	0.722	-3.527759	5.478362
55	.8957951	2.81588	0.32	0.750	-3.735916	5.527506
56	.815941	2.895244	0.28	0.778	-3.946311	5.578193
57	.7357366	2.97573	0.25	0.805	-4.158903	5.630376
58	.6551789	3.057316	0.21	0.830	-4.373659	5.684017
59	.5742667	3.139984	0.18	0.855	-4.590548	5.739081
60	.4929969	3.223721	0.15	0.878	-4.809552	5.795545
61	.4113673	3.308515	0.12	0.901	-5.030655	5.85339
62	.3293753	3.39436	0.10	0.923	-5.25385	5.912601
63	.2470187	3.481252	0.07	0.943	-5.479131	5.973168
64	.1642944	3.56919	0.05	0.963	-5.7065	6.035089
65	.0812009	3.658173	0.02	0.982	-5.935959	6.098361
66	-.0022646	3.748207	-0.00	1.000	-6.167516	6.162987
67	-.0861047	3.839295	-0.02	0.982	-6.401183	6.228974
68	-.1703219	3.931445	-0.04	0.965	-6.636974	6.29633
69	-.2549187	4.024666	-0.06	0.949	-6.874906	6.365068
70	-.3398982	4.118969	-0.08	0.934	-7.114999	6.435202
71	-.4252618	4.214363	-0.10	0.920	-7.357272	6.506748
72	-.5110126	4.310862	-0.12	0.906	-7.60175	6.579725
73	-.5971533	4.408481	-0.14	0.892	-7.848459	6.654153
74	-.6836863	4.507234	-0.15	0.879	-8.097427	6.730054

12.3 First differences for Figure 3: Effect of changing from a male to a female attacker by Women's Protests

	Delta-method dy/dx	Std. Err.	z	P>|z|	[90\% Conf.	Interval]
1	9.44708	3.379522	2.80	0.005	3.88826	15.0059
2	4.816235	1.894752	2.54	0.011	1.699645	7.932825
3	1.459202	1.195705	1.22	0.222	-.5075578	3.425962
4	-.9584316	.9545308	-1.00	0.315	-2.528495	.6116318
5	-2.683742	.8787354	-3.05	0.002	-4.129133	-1.238351