

Violence and Risk Preferences: Experimental Evidence from Afghanistan

Michael Callen, Mohammad Isaqzadeh, James D. Long, Charles Sprenger

Online Appendix

# A Online Appendix

## A.A Task Translations



## A.B Additional Tables

Table A1: Correlates of the Certainty Premium

<i>Dependent Variable:</i>	$v(150)_c - v(150)_u$					
	(1)	(2)	(3)	(4)	(5)	(6)
Formal Savings (1,000 AFs)	0.004 (0.003)	0.006** (0.003)				
Total Savings (1,000 AFs)	-0.002 (0.002)	-0.001 (0.002)				
Loan from Any Source (=1)			-0.004 (0.019)	-0.001 (0.019)		
Ever Failed to Make Loan Payment (=1)					-0.030** (0.013)	-0.032** (0.013)
Age	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Log Income	0.005*** (0.002)	0.005** (0.002)	0.005*** (0.002)	0.005*** (0.002)	0.005** (0.002)	0.005*** (0.002)
Female (=1)	-0.013 (0.012)	-0.015 (0.013)	-0.012 (0.012)	-0.012 (0.013)	-0.008 (0.013)	-0.007 (0.013)
Shia (=1)	-0.011 (0.020)	-0.007 (0.020)	-0.012 (0.020)	-0.011 (0.020)	-0.014 (0.020)	-0.013 (0.020)
Education (Years)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Reporting Ins. Act. Important	0.005 (0.011)	0.004 (0.011)	0.005 (0.011)	0.005 (0.011)	0.004 (0.011)	0.004 (0.011)
Police Resolve Dispute	0.019 (0.015)	0.019 (0.015)	0.019 (0.015)	0.019 (0.015)	0.016 (0.015)	0.016 (0.015)
Courts Resolve Disputes	0.006 (0.015)	0.006 (0.015)	0.005 (0.015)	0.004 (0.015)	0.006 (0.015)	0.004 (0.015)
Respondent Born Locally	-0.017 (0.013)	-0.017 (0.013)	-0.015 (0.013)	-0.016 (0.013)	-0.018 (0.013)	-0.019 (0.013)
Baseline Risk (0-10)	-0.010*** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)
Constant	0.477*** (0.065)	0.482*** (0.065)	0.478*** (0.065)	0.473*** (0.065)	0.485*** (0.065)	0.482*** (0.066)
Trimmed at 99th percentile of savings	No	Yes	No	Yes	No	Yes
# Observations	718	710	718	710	718	710
Log-Likelihood	-326.373	-321.097	-327.388	-323.414	-324.576	-320.255

*Notes:* Estimates from interval regressions (Stewart, 1983). Standard errors in parentheses. All regressions include polling center fixed effects and the following covariates: pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income). Sample: 716 individuals with monotonic utility and no multiple switching and responding to all questions used to construct covariates.  $v(150)_C$  refers to elicited utility under certainty while  $v(150)_U$  refers to elicited utility under uncertainty. The difference  $v(150)_C - v(150)_U$  is the measured Certainty Premium.

Table A2: Robustness - Intensity and Time Period of Violence

<i>Panel A - Effects by Intensity of Violence</i>						
<i>Dependent Variable:</i>	$v(150)_u$		$v(150)_c$		$v(150)_c - v(150)_u$	
	(1)	(2)	(3)	(4)	(5)	(6)
FEAR (=1)	-0.040** (0.019)	-0.056*** (0.019)	-0.013 (0.010)	-0.018* (0.010)	0.027** (0.012)	0.037*** (0.012)
Violence Intensity (0-1)	0.094* (0.056)	0.043 (0.058)	0.040 (0.033)	0.019 (0.033)	-0.054 (0.039)	-0.025 (0.036)
FEAR x Violence Intens.	-0.448** (0.190)	-0.447** (0.189)	-0.188* (0.105)	-0.205** (0.101)	0.262*** (0.094)	0.247*** (0.093)
Constant	0.254*** (0.012)	0.065 (0.049)	0.622*** (0.005)	0.515*** (0.026)	0.368*** (0.009)	0.445*** (0.032)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-1283.412	-1103.342	-1299.113	-1122.255	-571.532	-466.268
<i>Panel B - Recent Violence and Old Violence</i>						
FEAR (=1)	-0.026 (0.023)	-0.044* (0.024)	-0.010 (0.012)	-0.010 (0.012)	0.015 (0.015)	0.027* (0.015)
Violence (4/02 - 9/05)	-0.009 (0.023)	-0.009 (0.027)	-0.012 (0.011)	-0.008 (0.012)	-0.006 (0.016)	-0.004 (0.019)
FEAR x Violence (04/02 - 09/05)	-0.007 (0.051)	0.010 (0.064)	0.002 (0.026)	0.007 (0.031)	0.012 (0.029)	0.004 (0.035)
Violence (10/05 - 12/07)	-0.003 (0.019)	0.007 (0.021)	-0.005 (0.009)	0.011 (0.012)	-0.001 (0.014)	-0.007 (0.015)
FEAR x Violence (10/05 - 12/07)	-0.026 (0.041)	-0.030 (0.044)	-0.017 (0.021)	-0.050* (0.028)	0.005 (0.024)	0.004 (0.026)
Violence (1/08 - 2/10)	0.006 (0.021)	-0.002 (0.023)	0.005 (0.010)	0.013 (0.016)	-0.001 (0.015)	0.001 (0.015)
FEAR x Violence (1/08 - 2/10)	-0.061* (0.037)	-0.057 (0.038)	-0.008 (0.021)	-0.041 (0.027)	0.054** (0.025)	0.052** (0.026)
Constant	0.261*** (0.016)	0.073 (0.051)	0.627*** (0.007)	0.517*** (0.027)	0.366*** (0.012)	0.445*** (0.034)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-1282.684	-1103.298	-1298.646	-1121.006	-569.341	-464.482

*Notes:* Estimates from interval regressions (Stewart, 1983). Robust standard errors clustered at the Polling Center level reported in parentheses. All regressions include province fixed effects where noted. Violence data are from ISAF CIDNE. Violence is defined as a violent event occurring within one kilometer of interview location over the period April 2002 - February 2010. Temporal violence measures are defined to be exclusive. Sample: 816 individuals with monotonic utility and no multiple switching. The difference  $v(150)_C - v(150)_U$  is the measured Certainty Premium. The covariates are pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income).

Table A3: Robustness - Redefining the Polling Catchment Radius

<i>Panel A: Assigning Events To Only the Nearest Polling Center</i>						
<i>Dependent Variable:</i>	$v(150)_c - v(150)_u$					
	(1)	(2)	(3)	(4)	(5)	(6)
FEAR (=1)	0.022 (0.014)	0.029** (0.015)	0.004 (0.016)	0.015 (0.016)	0.013 (0.017)	0.021 (0.017)
Violence (0.5 km)	0.003 (0.013)	-0.001 (0.014)				
FEAR x Violence (0.5 km)	0.036 (0.022)	0.045** (0.022)				
Violence (1 km)			-0.008 (0.014)	-0.010 (0.015)		
FEAR x Violence (1 km)			0.061*** (0.021)	0.060*** (0.022)		
Violence (3 km)					-0.002 (0.014)	-0.011 (0.015)
FEAR x Violence (3 km)					0.038* (0.022)	0.039* (0.022)
Constant	0.363*** (0.011)	0.442*** (0.033)	0.367*** (0.014)	0.444*** (0.035)	0.366*** (0.015)	0.448*** (0.035)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-571.095	-465.566	-568.666	-463.932	-571.116	-466.230
<i>Panel B: Assigning Events To All Nearby Polling Centers</i>						
FEAR (=1)	0.015 (0.015)	0.023 (0.015)	0.017 (0.023)	0.023 (0.023)	0.009 (0.038)	0.084** (0.040)
Violence (0.5 km)	0.002 (0.014)	-0.004 (0.015)				
FEAR x Violence (0.5 km)	0.041* (0.022)	0.043* (0.022)				
Violence (1 km)			0.004 (0.017)	-0.013 (0.018)		
FEAR x Violence (1 km)			0.023 (0.026)	0.028 (0.026)		
Violence (3 km)					-0.016 (0.025)	0.004 (0.022)
FEAR x Violence (3 km)					0.028 (0.040)	-0.044 (0.041)
Constant	0.362*** (0.013)	0.440*** (0.034)	0.361*** (0.018)	0.454*** (0.038)	0.382*** (0.026)	0.439*** (0.038)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-570.469	-465.553	-572.177	-467.126	-572.606	-467.158

*Notes:* Robust standard errors clustered at the Polling Center level reported in parentheses. Regressions include province fixed effects. Estimates are from single interval regressions (Stewart, 1983). Violence data are from ISAF CIDNE. Violence is defined as a violent event occurring within one kilometer of interview location over the period April - February 2010. Sample: 816 individuals with monotonic utility and no multiple switching. The difference  $v(150)_C - v(150)_U$  is the measured Certainty Premium. The covariates are pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income).

Table A4: Robustness - Decision Error

<i>Dependent Variable:</i>	Multiple Switcher (=1)				Non-monotonic Utility (=1)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FEAR (=1)	-0.022 (0.021)	-0.008 (0.031)	-0.022 (0.030)	-0.046 (0.042)	-0.011 (0.022)	-0.011 (0.033)	-0.024 (0.030)	-0.040 (0.042)
Violence (=1)		-0.037 (0.026)	-0.026 (0.027)			-0.046* (0.026)	-0.004 (0.027)	
FEAR x Violence		-0.033 (0.042)	-0.003 (0.040)	0.018 (0.055)		-0.002 (0.044)	0.018 (0.039)	0.050 (0.053)
Constant	0.134*** (0.013)	0.151*** (0.019)	0.194*** (0.065)	0.152 (0.107)	0.132*** (0.013)	0.154*** (0.019)	0.122* (0.065)	0.069 (0.120)
Covariates	No	No	Yes	Yes	No	No	Yes	Yes
Fixed Effects	No	No	Province	PC	No	No	Province	PC
# Observations	977	977	858	858	977	977	858	858
# Clusters	286	286	277	277	286	286	277	277
R-Squared	0.001	0.006	0.276	0.535	0.000	0.005	0.262	0.527

*Notes:* Estimates from OLS regressions. Robust standard errors clustered at the polling center level reported in parentheses. Polling center or province fixed effects noted. Violence data are from ISAF CIDNE. Violence is defined as a violent event occurring within one kilometer of interview location over the period April 2002- February 2010. Sample: 977 individuals who completed the experimental tasks. Columns 4 and 8 omit Violence (=1) as it is measured at the PC level. The covariates are pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income).

Table A5: Robustness - Attrition from Decision Tasks

<i>Dependent Variable:</i>	Failed to Complete Choice Task 1 or Choice Task 2 (=1)				
	(1)	(2)	(3)	(4)	(5)
FEAR (=1)	0.011 (0.023)	0.019 (0.034)	0.004 (0.033)	0.006 (0.033)	0.004 (0.045)
Violence (=1)		-0.003 (0.027)	-0.013 (0.026)	0.019 (0.025)	
FEAR x Violence		-0.020 (0.045)	0.005 (0.044)	0.001 (0.043)	0.010 (0.059)
Constant	0.130*** (0.014)	0.131*** (0.020)	0.098* (0.057)	-0.097 (0.060)	-0.143 (0.117)
Covariates	No	No	No	Yes	Yes
Fixed Effects	No	No	No	Province	PC
# Observations	1127	1127	997	997	997
# Clusters	287	287	279	279	279
R-Squared	0.000	0.001	0.170	0.259	0.410

*Notes:* Estimates from OLS regressions. Robust standard errors clustered at the polling center level reported in parentheses. Polling center or province fixed effects noted. Violence data are from ISAF CIDNE. Violence is defined as a violent event occurring within one kilometer of interview location over the period April 2002- February 2010. Sample: 1127 who consented to participate. individuals with positive  $v(150)$  and no multiple switching.  $v(150)_C$  Column 5 omits Violence (=1) as it is measured at the PC level. The covariates are pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income).

Table A6: Treatment Effects by Event Type

<i>Dependent Variable:</i>	$v(150)_c - v(150)_u$					
	(1)	(2)	(3)	(4)	(5)	(6)
FEAR (=1)	0.027** (0.011)	0.037*** (0.011)	0.033*** (0.011)	0.042*** (0.011)	0.034*** (0.011)	0.044*** (0.011)
Explosions	0.000 (0.056)	0.015 (0.051)				
FEAR x Explosions	0.013** (0.006)	0.012** (0.006)				
Indirect Fire			0.021 (0.105)	0.043 (0.168)		
FEAR x Indirect Fire			0.012 (0.011)	0.016 (0.011)		
Small Arms Fire					0.104 (0.158)	0.023 (0.084)
FEAR x Small Arms Fire					0.006 (0.006)	0.006 (0.006)
Constant	0.300*** (0.098)	0.431*** (0.096)	0.307*** (0.051)	0.463*** (0.065)	0.306*** (0.051)	0.463*** (0.065)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
Log-Likelihood	-421.382	-315.578	-422.967	-316.700	-423.132	-317.201

*Notes:* Estimates from interval regressions (Stewart, 1983). Standard errors in parentheses. All regressions include polling center fixed effects. Explosions include the 580 IED explosion incidents and five mine strikes in our sample. Covariates are: pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income). Sample: 816 individuals with monotonic utility and no multiple switching.  $v(150)_C$  refers to elicited utility under certainty while  $v(150)_U$  refers to elicited utility under uncertainty. The difference  $v(150)_C - v(150)_U$  is the measured Certainty Premium.



Table A7: Self-Reported Attacks, Primes, and Elicited Utility

<i>Panel A - Self-Reported Violence Results</i>						
<i>Dependent Variable:</i>	$v(150)_u$		$v(150)_c$		$v(150)_c - v(150)_u$	
	(1)	(2)	(3)	(4)	(5)	(6)
Self-Reported Violence (=1)	0.019 (0.020)	0.014 (0.021)	0.019* (0.010)	0.015 (0.011)	0.001 (0.012)	0.003 (0.013)
Constant	0.234*** (0.013)	0.049 (0.050)	0.611*** (0.006)	0.510*** (0.027)	0.377*** (0.009)	0.455*** (0.031)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-1289.147	-1112.244	-1300.611	-1126.228	-577.533	-475.176
<i>Panel B - Self-Reported Violence and Prime Sensitivity</i>						
FEAR (=1)	-0.035* (0.020)	-0.042** (0.021)	-0.009 (0.010)	-0.010 (0.011)	0.025** (0.012)	0.030** (0.012)
Self-Reported Violence (=1)	0.041 (0.025)	0.051* (0.027)	0.031** (0.012)	0.035*** (0.013)	-0.010 (0.015)	-0.016 (0.016)
FEAR x Self-Reported Violence	-0.073* (0.043)	-0.116*** (0.042)	-0.039* (0.022)	-0.062*** (0.022)	0.036 (0.029)	0.058* (0.030)
Constant	0.245*** (0.014)	0.052 (0.050)	0.614*** (0.006)	0.507*** (0.026)	0.369*** (0.010)	0.451*** (0.032)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
# Clusters	278	267	278	267	278	267
Log-Likelihood	-1283.269	-1101.633	-1297.080	-1119.096	-572.029	-465.470
<i>Panel C - Self-Reported Violence and Prime Sensitivity - Including PC Fixed Effects</i>						
FEAR (=1)	-0.036* (0.020)	-0.044** (0.021)	-0.007 (0.010)	-0.010 (0.011)	0.029** (0.012)	0.034*** (0.012)
Self-Reported Violence (=1)	0.057** (0.027)	0.084*** (0.027)	0.041*** (0.014)	0.056*** (0.014)	-0.016 (0.016)	-0.030* (0.016)
FEAR x Self-Reported Violence	-0.093** (0.043)	-0.144*** (0.044)	-0.056*** (0.022)	-0.087*** (0.022)	0.031 (0.025)	0.052** (0.025)
Constant	0.302*** (0.084)	0.004 (0.111)	0.612*** (0.043)	0.493*** (0.057)	0.311*** (0.051)	0.472*** (0.064)
Covariates	No	Yes	No	Yes	No	Yes
# Observations	816	718	816	718	816	718
Log-Likelihood	-1170.460	-978.519	-1188.251	-995.419	-422.743	-315.094

*Notes:* Estimates from interval regressions (Stewart, 1983). Robust standard errors clustered at the Polling Center level reported in parentheses in Panels A and B. Regressions include province fixed effects in Panels A and B and polling center fixed effects in Panel C. Self-reported violence is a positive response to the question: “have you lived in a neighborhood that has experienced attacks in the last 5 years?” Sample: 816 individuals with monotonic utility and no multiple switching.  $v(150)_C$  refers to elicited utility under certainty while  $v(150)_U$  refers to elicited utility under uncertainty. The differences  $v(150)_C - v(150)_U$  is the measured Certainty Premium. The covariates are pre-prime risk (0 - 10), female (=1), Shia (=1), years of education, born locally (=1), reporting insurgent activity important (=1), prefer police resolve disputes (=1), prefer courts resolve disputes (=1), married (=1), age, and log(income).

## A.C Robustness Questions

1. How willing are you to take risks regarding your households finances? Please tick a box on the scale, where the value 0 means: “unwilling to take risks” and the value 10 means: ”fully prepared to take risks.”
2. In your opinion, how important is it for you to share information about insurgents to ISAF (for example, pending IED attacks or the location of weapons caches): is it very important, somewhat important, or not at all important? 1.Very important 2. Somewhat important 3. Not at all important 98.Dont know 99.RTA
3. If you had a dispute with a neighbor, who would you trust to settle it (randomize ordering): head of family, police, courts, religious leaders, shura, elders, ISAF, or other?
  1. Head of family
  2. Police
  3. Courts
  4. Religious leaders
  5. Shura
  6. Elders
  7. ISAF
  8. Other (record verbatim)98. Dont know  
99. RTA
4. Were you born in this village, or did you move here from somewhere else?
  1. Born here
  2. Moved98. Dont know  
99. RTA
5. Have you lived in a neighborhood that has experienced attacks in the last 5 years?
  1. Yes
  2. No98.Dont know  
99. RTA
6. In your opinion, please tell us how likely you think it is that insurgent-related violence will occur in your community. Please tick a box on the scale, where the value 0 means: “there is no chance of violence in my community” and the value 10 means: “violence will certainly happen in my community.”

## A.D Screen and Instructions

THE FOLLOWING QUESTIONS SHOULD ONLY APPEAR FOR THE FOLLOWING PROVINCES: BADAKSHAN, BALKH, BAMYAN, DAIKONDI, FARYAB, HERAT, JUZJAN, KABUL, KAPISA, PANJSCHER, PARWAN, SAMANGAN

D1. We are interested in understanding how Afghans make decisions involving uncertain outcomes and some normal risks that people face every day. We would like to ask you some hypothetical questions that will help us understand these decisions. There is no real money involved and you will not receive any money for answering these questions. Are you willing to answer these questions?

1. Yes (Proceed with survey)
2. No (Conclude Survey)

65a: “We are interested in understanding your daily experiences that may make you fearful or anxious. This could be anything, for example getting sick, experiencing violence, losing a job, etc. Could you describe one event in the past year that caused you fear or anxiety?”

65b: “We are interested in understanding your daily experiences that make you happy or joyous. This could be anything, for example birth of child, marriage of a relative, or success in your job. Could you describe an event in the past year that caused you happiness?”

65c “We are interested in understanding your general daily experiences. This could be anything. Could you describe an event from the past year.

[Show Card] First we will ask you a hypothetical question over an amount for certain, or an amount that will be awarded depending on which of ten numbers you draw from a bag. We have deposited 10 cards numbered 1 through 10 into a bag. You have an even chance of drawing any of the 10 numbers. The numbers in parentheses indicate the winning number. For each Option No., please indicate whether you would prefer Choice 1 or Choice 2. For each Option No. there will be 10 numbers in the bag and you are only able to draw one. This is not for real money and we are not asking you to make a gamble, we just want to understand how you would respond to naturally occurring risk.