

```

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name: <unnamed>
log: /Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication
Material/Chapter 7/Chapter7replication.log
log type: text
opened on: 12 Jun 2014, 10:00:44

. do "/Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication Material/Chapter
7/Chapter7replication.do"

.
.
.
. **Data accessed originally from: http://users.ox.ac.uk/~ball10144/research.htm
.
. **These files create the results and figures reported in Finding Pathways, Chapter7
. set more off

.
. **Creating Figure 7.1
. histogram sxp, percent
(bin=30, start=.002, width=.07123333)

.
. set more off

.
. ** To compute the difference in predicted probability with and without the key
independent variable: primary resource exports
. *** Begin with a Replication of Table 3, column 1 from Collier and Hoeffler, Guns and
Grievance
. logit warsa c.sxp##c.sxp coldwar secm gyl peace prevwar mount geogia frac lnpop

Iteration 0: log likelihood = -168.86353
Iteration 1: log likelihood = -146.66276
Iteration 2: log likelihood = -129.52381
Iteration 3: log likelihood = -128.50958
Iteration 4: log likelihood = -128.49446
Iteration 5: log likelihood = -128.49443
Iteration 6: log likelihood = -128.49443

Logistic regression
Log likelihood = -128.49443
Number of obs = 688
LR chi2(11) = 80.74
Prob > chi2 = 0.0000
Pseudo R2 = 0.2391

```

	warsa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
	sxp	18.1486	6.006655	3.02	0.003	6.375773	29.92143
	c.sxp#c.sxp	-27.44533	11.99657	-2.29	0.022	-50.95817	-3.932478
	coldwar	-.3256901	.4694831	-0.69	0.488	-1.24586	.5944798
	secm	-.0247598	.0103047	-2.40	0.016	-.0449567	-.0045629
	gyl	-.1169937	.0436841	-2.68	0.007	-.2026129	-.0313744
	peace	-.0025276	.0016592	-1.52	0.128	-.0057796	.0007244
	prevwar	.4639465	.5466868	0.85	0.396	-.6075399	1.535433
	mount	.0128981	.0092598	1.39	0.164	-.0052508	.0310469
	geogia	-2.211477	1.03772	-2.13	0.033	-4.245372	-.1775828
	frac	-.0001584	.0000989	-1.60	0.109	-.0003521	.0000354
	lnpop	.6688053	.1630619	4.10	0.000	.3492099	.9884007

```

      _cons |    -12.3389    2.718042    -4.54    0.000    -17.66616    -7.011637
-----+-----

```

```

.
. **predict probability of war for each case
. predict warSXP
(option pr assumed; Pr(warsa))
(600 missing values generated)

```

```

.
. **estimate the same regression, but WITHOUT the primary exports variable
. logit warsa coldwar secm gyl peace prevwar mount geogia frac lnpop

```

```

Iteration 0:    log likelihood = -169.41382
Iteration 1:    log likelihood = -150.97708
Iteration 2:    log likelihood = -136.61661
Iteration 3:    log likelihood = -136.31462
Iteration 4:    log likelihood = -136.31391
Iteration 5:    log likelihood = -136.31391

```

```

Logistic regression                                Number of obs    =          696
                                                    LR chi2(9)       =          66.20
                                                    Prob > chi2      =          0.0000
Log likelihood = -136.31391                      Pseudo R2       =          0.1954

```

	warsa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
	coldwar	-.3459219	.4517213	-0.77	0.444	-1.23128	.5394356
	secm	-.0188912	.0092578	-2.04	0.041	-.0370362	-.0007463
	gyl	-.1319987	.0441427	-2.99	0.003	-.2185167	-.0454807
	peace	-.0023305	.0015742	-1.48	0.139	-.0054158	.0007547
	prevwar	.7063366	.5163255	1.37	0.171	-.3056427	1.718316
	mount	.0072542	.0085844	0.85	0.398	-.009571	.0240793
	geogia	-1.339319	.9771162	-1.37	0.170	-3.254432	.5757935
	frac	-.0000637	.000092	-0.69	0.489	-.0002441	.0001167
	lnpop	.3727053	.1228715	3.03	0.002	.1318816	.6135289
	_cons	-6.649285	1.936061	-3.43	0.001	-10.44389	-2.854675

```

.
. **predict probability of war for each case using the prior regression
. predict warwoSXP
(option pr assumed; Pr(warsa))
(592 missing values generated)

```

```

.
. **Generate our measure of Expected Relationship; the difference between the predicted
probability with and without the key explanat
> ory variable
. ** positive values will mean that the probability was higher with the key variable than
without it.
. gen diffwarSXPwoSXP = warSXP-warwoSXP
(600 missing values generated)

```

```

.
.
. ** Using the data we can now create the relevant figures used in case selection
. twoway (scatter diffwarSXPwoSXP sxp if sxp<1 & warsa==1, msymbol(x) legend(off)) ///
> (scatter diffwarSXPwoSXP sxp if sxp<1 & warsa==0) ///
> (scatter diffwarSXPwoSXP sxp if warsa==1 & country_lower=="Angola" & year==1975,
mlabel(country_year) msymbol(x)) ///

```



```

Model VCE      : OIM

Expression     : Pr(warsa), predict()
1._at         : sxp      =      .002
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)
2._at         : sxp      =      .05
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)
3._at         : sxp      =      .1
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)
4._at         : sxp      =      .15
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)
5._at         : sxp      =      .2
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)
6._at         : sxp      =      .25
                coldwar  =      .2761628 (mean)
                secm     =      44.48895 (mean)
                gyl      =      1.618157 (mean)
                peace    =      347.5218 (mean)
                prevwara =      .2485465 (mean)
                mount    =      15.75058 (mean)
                georgia  =      .6019898 (mean)
                frac     =      1790.41 (mean)
                lnpop    =      15.74258 (mean)

```

7._at	: sxp	=	.3	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
8._at	: sxp	=	.35	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
9._at	: sxp	=	.4	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
10._at	: sxp	=	.45	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
11._at	: sxp	=	.5	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
12._at	: sxp	=	.55	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)
	gyl	=	1.618157	(mean)
	peace	=	347.5218	(mean)
	prevwara	=	.2485465	(mean)
	mount	=	15.75058	(mean)
	georgia	=	.6019898	(mean)
	frac	=	1790.41	(mean)
	lnpop	=	15.74258	(mean)
13._at	: sxp	=	.6	
	coldwar	=	.2761628	(mean)
	secm	=	44.48895	(mean)

		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
14._at	:	sxp	=	.65	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
15._at	:	sxp	=	.7	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
16._at	:	sxp	=	.75	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
17._at	:	sxp	=	.8	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
18._at	:	sxp	=	.85	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)
		mount	=	15.75058	(mean)
		georgia	=	.6019898	(mean)
		frac	=	1790.41	(mean)
		lnpop	=	15.74258	(mean)
19._at	:	sxp	=	.9	
		coldwar	=	.2761628	(mean)
		secm	=	44.48895	(mean)
		gyl	=	1.618157	(mean)
		peace	=	347.5218	(mean)
		prevwara	=	.2485465	(mean)

```

                mount      =    15.75058 (mean)
                georgia     =     .6019898 (mean)
                frac        =    1790.41 (mean)
                lnpop       =    15.74258 (mean)
20._at      :  sxp         =         .95
                coldwar     =     .2761628 (mean)
                secm        =    44.48895 (mean)
                gyl         =    1.618157 (mean)
                peace       =    347.5218 (mean)
                prevwara    =     .2485465 (mean)
                mount       =    15.75058 (mean)
                georgia     =     .6019898 (mean)
                frac        =    1790.41 (mean)
                lnpop       =    15.74258 (mean)
21._at      :  sxp         =         1
                coldwar     =     .2761628 (mean)
                secm        =    44.48895 (mean)
                gyl         =    1.618157 (mean)
                peace       =    347.5218 (mean)
                prevwara    =     .2485465 (mean)
                mount       =    15.75058 (mean)
                georgia     =     .6019898 (mean)
                frac        =    1790.41 (mean)
                lnpop       =    15.74258 (mean)

```

		Delta-method					
		Margin	Std. Err.	z	P> z	[95% Conf. Interval]	
	at						
1		.0048229	.0032714	1.47	0.140	-.001589	.0112348
2		.0106983	.0049804	2.15	0.032	.0009369	.0204597
3		.0213458	.0071117	3.00	0.003	.007407	.0352845
4		.036935	.0107303	3.44	0.001	.0159041	.057966
5		.0555235	.0163369	3.40	0.001	.0235038	.0875433
6		.0728364	.0219818	3.31	0.001	.029753	.1159199
7		.0838439	.0256138	3.27	0.001	.0336418	.134046
8		.0850389	.0278192	3.06	0.002	.0305143	.1395634
9		.0760306	.0308259	2.47	0.014	.015613	.1364483
10		.0597184	.0338584	1.76	0.078	-.0066427	.1260796
11		.0409826	.0333674	1.23	0.219	-.0244164	.1063816
12		.0244538	.0278769	0.88	0.380	-.030184	.0790916
13		.012656	.0194425	0.65	0.515	-.0254506	.0507626
14		.0056818	.0113433	0.50	0.616	-.0165507	.0279143
15		.0022158	.0055771	0.40	0.691	-.0087152	.0131468
16		.0007518	.0023282	0.32	0.747	-.0038113	.005315
17		.0002222	.00083	0.27	0.789	-.0014046	.001849
18		.0000572	.0002538	0.23	0.822	-.0004401	.0005546
19		.0000128	.0000667	0.19	0.847	-.0001179	.0001436
20		2.51e-06	.0000151	0.17	0.868	-.0000271	.0000321
21		4.29e-07	2.96e-06	0.15	0.885	-5.36e-06	6.22e-06

```

.
. marginsplot

Variables that uniquely identify margins: sxp

. marginsplot, noci

Variables that uniquely identify margins: sxp
.

```

```

. *Now, let's graph the effects
.
. mat t=J(21,3,.)

.
. mat a = (.002\.05\.1\.15\.2\.25\.30\.35\.40\.45\.5\.55\.6\.65\.7\.75\.8\.85\.9\.95\1)
/* get the 11 "at" val
> ues      */

.
. forvalues i=1/21 {
2.   mat t[`i',1] = _b[`i'._at]           /* get probability estimates */
3.   mat t[`i',2] = _b[`i'._at] - 1.96*_se[`i'._at] /* compute lower limit */
4.   mat t[`i',3] = _b[`i'._at] + 1.96*_se[`i'._at] /* compute upper limit */
5. }

.
. mat t=t,a                               /* horizontal concatenation */

. mat colnames t = prob ll ul at          /* fix column names */

. svmat t, names(col)                     /* save matrix as data */

.
. twoway (rarea ll ul at)(line prob at), legend(off) ///
>       xtitle(sxp) ytitle(probability) scheme(lean1)
(note: scheme lean1 not found, using s2color)

.
. clear

.
. **      TO COMPUTE THE SAME EFFECTS BUT AT MEDIAN VALUES OF Xs
. use "/Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication Material/Chapter
7/Chapter7replication.dta"

.
. logit warsa c.sxp#c.sxp coldwar secm gyl peace prevwar mount geogia frac lnpop

```

```

Iteration 0:   log likelihood = -168.86353
Iteration 1:   log likelihood = -146.66276
Iteration 2:   log likelihood = -129.52381
Iteration 3:   log likelihood = -128.50958
Iteration 4:   log likelihood = -128.49446
Iteration 5:   log likelihood = -128.49443
Iteration 6:   log likelihood = -128.49443

```

```

Logistic regression                                Number of obs   =          688
                                                    LR chi2(11)    =          80.74
                                                    Prob > chi2    =          0.0000
Log likelihood = -128.49443                      Pseudo R2      =          0.2391

```

	warsa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
	sxp	18.1486	6.006655	3.02	0.003	6.375773	29.92143
	c.sxp#c.sxp	-27.44533	11.99657	-2.29	0.022	-50.95817	-3.932478
	coldwar	-.3256901	.4694831	-0.69	0.488	-1.24586	.5944798
	secm	-.0247598	.0103047	-2.40	0.016	-.0449567	-.0045629
	gyl	-.1169937	.0436841	-2.68	0.007	-.2026129	-.0313744
	peace	-.0025276	.0016592	-1.52	0.128	-.0057796	.0007244

prevwara		.4639465	.5466868	0.85	0.396	-.6075399	1.535433
mount		.0128981	.0092598	1.39	0.164	-.0052508	.0310469
geogia		-2.211477	1.03772	-2.13	0.033	-4.245372	-.1775828
frac		-.0001584	.0000989	-1.60	0.109	-.0003521	.0000354
lnpop		.6688053	.1630619	4.10	0.000	.3492099	.9884007
_cons		-12.3389	2.718042	-4.54	0.000	-17.66616	-7.011637

```

.
. *note that the regression above uses a different syntax, but estimates the same
regression they did. I use an interaction term to t
> ake account of the squared stuff
.
. **to compute the marginal effects:
.
. margins, at(sxp=(.002 .05 .1 .15 .2 .25 .3 .35 .4 .45 .5 .55 .6 .65 .7 .75 .8 .85 .9
.95 1.0)) at((median) _all) vsquish post

```

Predictive margins Number of obs = 688
Model VCE : OIM

```

Expression : Pr(warsa), predict()
1._at      : sxp      = .002
2._at      : sxp      = .05
3._at      : sxp      = .1
4._at      : sxp      = .15
5._at      : sxp      = .2
6._at      : sxp      = .25
7._at      : sxp      = .3
8._at      : sxp      = .35
9._at      : sxp      = .4
10._at     : sxp      = .45
11._at     : sxp      = .5
12._at     : sxp      = .55
13._at     : sxp      = .6
14._at     : sxp      = .65
15._at     : sxp      = .7
16._at     : sxp      = .75
17._at     : sxp      = .8
18._at     : sxp      = .85
19._at     : sxp      = .9
20._at     : sxp      = .95
21._at     : sxp      = 1
22._at     : sxp      = .112 (median)
             coldwar   = 0 (median)
             secm      = 40 (median)
             gyl       = 1.8505 (median)
             peace     = 352 (median)
             prevwara  = 0 (median)
             mount     = 8.65 (median)
             geogia    = .608 (median)
             frac      = 748.5 (median)
             lnpop     = 15.72193 (median)

```

		Delta-method				
		Margin	Std. Err.	z	P> z	[95% Conf. Interval]
_at						
1		.0173908	.0075895	2.29	0.022	.0025158 .0322659
2		.03479	.008199	4.24	0.000	.0187202 .0508598
3		.0608032	.0089932	6.76	0.000	.043177 .0784295
4		.0919127	.0148106	6.21	0.000	.0628844 .1209409

5		.1228821	.023168	5.30	0.000	.0774736	.1682905
6		.147969	.0298658	4.95	0.000	.0894331	.2065049
7		.1625668	.0335467	4.85	0.000	.0968165	.2283171
8		.1640987	.0361409	4.54	0.000	.0932638	.2349336
9		.1523001	.0413077	3.69	0.000	.0713385	.2332618
10		.129238	.049615	2.60	0.009	.0319944	.2264815
11		.0991117	.0567307	1.75	0.081	-.0120784	.2103019
12		.0675283	.0573537	1.18	0.239	-.0448828	.1799395
13		.0400046	.0492094	0.81	0.416	-.0564441	.1364532
14		.0201363	.0347091	0.58	0.562	-.0478924	.088165
15		.0084784	.0195978	0.43	0.665	-.0299327	.0468895
16		.002992	.0088329	0.34	0.735	-.0143202	.0203041
17		.0008981	.0032552	0.28	0.783	-.0054819	.0072781
18		.0002325	.0010077	0.23	0.818	-.0017426	.0022075
19		.0000523	.0002663	0.20	0.844	-.0004696	.0005741
20		.0000102	.0000605	0.17	0.866	-.0001083	.0001288
21		1.74e-06	.0000118	0.15	0.883	-.0000215	.000025
22		.0270207	.0093812	2.88	0.004	.0086339	.0454074

```

-----
.
. *Now, let's graph the effects
.
. mat t=J(21,3,.)

.
. mat a = (.002\.05\.1\.15\.2\.25\.30\.35\.40\.45\.5\.55\.6\.65\.7\.75\.8\.85\.9\.95\1)
/* get the 11 "at" val
> ues      */

.
. forvalues i=1/21 {
2.   mat t[`i',1] = _b[`i'._at]                /* get probability estimates */
3.   mat t[`i',2] = _b[`i'._at] - 1.96*_se[`i'._at] /* compute lower limit      */
4.   mat t[`i',3] = _b[`i'._at] + 1.96*_se[`i'._at] /* compute upper limit      */
5. }

.
. mat t=t,a                                     /* horizontal concatenation */

. mat colnames t = prob ll ul at                /* fix column names        */

. svmat t, names(col)                          /* save matrix as data     */

.
. twoway (rarea ll ul at)(line prob at), legend(off) ///
>       xtitle(sxp) ytitle(probability) scheme(lean1)
(note: scheme lean1 not found, using s2color)

.
.   clear

.
.
. *BELOW COMPUTES MARGINAL EFFECTS WITH Xs SET AT 25TH PERCENTILE
.
. use "/Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication Material/Chapter
7/Chapter7replication.dta"

.
. logit warsa c.sxp##c.sxp coldwar secm gyl peace prevwar mount georgia frac lnpop

Iteration 0:   log likelihood = -168.86353

```

```

Iteration 1:  log likelihood = -146.66276
Iteration 2:  log likelihood = -129.52381
Iteration 3:  log likelihood = -128.50958
Iteration 4:  log likelihood = -128.49446
Iteration 5:  log likelihood = -128.49443
Iteration 6:  log likelihood = -128.49443

```

Logistic regression

```

Number of obs   =      688
LR chi2(11)     =      80.74
Prob > chi2     =      0.0000
Pseudo R2      =      0.2391

```

Log likelihood = -128.49443

	warsa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
sxp		18.1486	6.006655	3.02	0.003	6.375773	29.92143
c.sxp#c.sxp		-27.44533	11.99657	-2.29	0.022	-50.95817	-3.932478
coldwar		-.3256901	.4694831	-0.69	0.488	-1.24586	.5944798
secm		-.0247598	.0103047	-2.40	0.016	-.0449567	-.0045629
gyl		-.1169937	.0436841	-2.68	0.007	-.2026129	-.0313744
peace		-.0025276	.0016592	-1.52	0.128	-.0057796	.0007244
prevwara		.4639465	.5466868	0.85	0.396	-.6075399	1.535433
mount		.0128981	.0092598	1.39	0.164	-.0052508	.0310469
georgia		-2.211477	1.03772	-2.13	0.033	-4.245372	-.1775828
frac		-.0001584	.0000989	-1.60	0.109	-.0003521	.0000354
lnpop		.6688053	.1630619	4.10	0.000	.3492099	.9884007
_cons		-12.3389	2.718042	-4.54	0.000	-17.66616	-7.011637

```

.
. *note that the regression above uses a different syntax, but estimates the same
regression they did. I use an interaction term to t
> ake account of the squared stuff
.
. **to compute the marginal effects:
.
. margins, at(sxp=(.002 .05 .1 .15 .2 .25 .3 .35 .4 .45 .5 .55 .6 .65 .7 .75 .8 .85 .9
.95 1.0)) at((p25) _all) vsquish post

```

Predictive margins
Model VCE : OIM

Number of obs = 688

```

Expression : Pr(warsa), predict()
1._at      : sxp          =      .002
2._at      : sxp          =      .05
3._at      : sxp          =      .1
4._at      : sxp          =      .15
5._at      : sxp          =      .2
6._at      : sxp          =      .25
7._at      : sxp          =      .3
8._at      : sxp          =      .35
9._at      : sxp          =      .4
10._at     : sxp          =      .45
11._at     : sxp          =      .5
12._at     : sxp          =      .55
13._at     : sxp          =      .6
14._at     : sxp          =      .65
15._at     : sxp          =      .7
16._at     : sxp          =      .75
17._at     : sxp          =      .8
18._at     : sxp          =      .85

```

```

19._at      : sxp      =      .9
20._at      : sxp      =      .95
21._at      : sxp      =      1
22._at      : sxp      =      .059 (p25)
              coldwar   =      0 (p25)
              secm      =      18 (p25)
              gyl       =      -.259 (p25)
              peace     =      232 (p25)
              prevwara  =      0 (p25)
              mount     =      .6 (p25)
              georgia   =      .491 (p25)
              frac      =      176 (p25)
              lnpop     =      14.79252 (p25)

```

		Delta-method					
		Margin	Std. Err.	z	P> z	[95% Conf. Interval]	
at							
1		.0173908	.0075895	2.29	0.022	.0025158	.0322659
2		.03479	.008199	4.24	0.000	.0187202	.0508598
3		.0608032	.0089932	6.76	0.000	.043177	.0784295
4		.0919127	.0148106	6.21	0.000	.0628844	.1209409
5		.1228821	.023168	5.30	0.000	.0774736	.1682905
6		.147969	.0298658	4.95	0.000	.0894331	.2065049
7		.1625668	.0335467	4.85	0.000	.0968165	.2283171
8		.1640987	.0361409	4.54	0.000	.0932638	.2349336
9		.1523001	.0413077	3.69	0.000	.0713385	.2332618
10		.129238	.049615	2.60	0.009	.0319944	.2264815
11		.0991117	.0567307	1.75	0.081	-.0120784	.2103019
12		.0675283	.0573537	1.18	0.239	-.0448828	.1799395
13		.0400046	.0492094	0.81	0.416	-.0564441	.1364532
14		.0201363	.0347091	0.58	0.562	-.0478924	.088165
15		.0084784	.0195978	0.43	0.665	-.0299327	.0468895
16		.002992	.0088329	0.34	0.735	-.0143202	.0203041
17		.0008981	.0032552	0.28	0.783	-.0054819	.0072781
18		.0002325	.0010077	0.23	0.818	-.0017426	.0022075
19		.0000523	.0002663	0.20	0.844	-.0004696	.0005741
20		.0000102	.0000605	0.17	0.866	-.0001083	.0001288
21		1.74e-06	.0000118	0.15	0.883	-.0000215	.000025
22		.02717	.0151069	1.80	0.072	-.002439	.0567791

[illegible]

```

. mat colnames t = prob ll ul at /* fix column names */

. svmat t, names(col) /* save matrix as data */

.
. twoway (rarea ll ul at)(line prob at), legend(off) ///
> xtitle(sxp) ytitle(probability) scheme(lean1)
(note: scheme lean1 not found, using s2color)

.
. clear

.
.
. **BELOW PROVIDES MARGINAL EFFECTS AT 75TH PERCENTILE
. use "/Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication Material/Chapter
7/Chapter7replication.dta"

.
. logit warsa c.sxp#c.sxp coldwar secm gyl peace prevwar mount geogia frac lnpop

```

```

Iteration 0: log likelihood = -168.86353
Iteration 1: log likelihood = -146.66276
Iteration 2: log likelihood = -129.52381
Iteration 3: log likelihood = -128.50958
Iteration 4: log likelihood = -128.49446
Iteration 5: log likelihood = -128.49443
Iteration 6: log likelihood = -128.49443

```

```

Logistic regression      Number of obs   =      688
                        LR chi2(11)      =      80.74
                        Prob > chi2       =      0.0000
Log likelihood = -128.49443  Pseudo R2      =      0.2391

```

	warsa	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
	sxp	18.1486	6.006655	3.02	0.003	6.375773	29.92143
	c.sxp#c.sxp	-27.44533	11.99657	-2.29	0.022	-50.95817	-3.932478
	coldwar	-.3256901	.4694831	-0.69	0.488	-1.24586	.5944798
	secm	-.0247598	.0103047	-2.40	0.016	-.0449567	-.0045629
	gyl	-.1169937	.0436841	-2.68	0.007	-.2026129	-.0313744
	peace	-.0025276	.0016592	-1.52	0.128	-.0057796	.0007244
	prevwar	.4639465	.5466868	0.85	0.396	-.6075399	1.535433
	mount	.0128981	.0092598	1.39	0.164	-.0052508	.0310469
	geogia	-2.211477	1.03772	-2.13	0.033	-4.245372	-.1775828
	frac	-.0001584	.0000989	-1.60	0.109	-.0003521	.0000354
	lnpop	.6688053	.1630619	4.10	0.000	.3492099	.9884007
	_cons	-12.3389	2.718042	-4.54	0.000	-17.66616	-7.011637

```

.
. *note that the regression above uses a different syntax, but estimates the same
regression they did. I use an interaction term to t
> take account of the squared stuff

.
. **to compute the marginal effects:

.
. margins, at(sxp=(.002 .05 .1 .15 .2 .25 .3 .35 .4 .45 .5 .55 .6 .65 .7 .75 .8 .85 .9
.95 1.0)) at((p75) _all) vsquish post

```

Predictive margins
Model VCE : OIM

Number of obs = 688

```

Expression : Pr(warsa), predict()
1._at      : sxp          =          .002
2._at      : sxp          =          .05
3._at      : sxp          =          .1
4._at      : sxp          =          .15
5._at      : sxp          =          .2
6._at      : sxp          =          .25
7._at      : sxp          =          .3
8._at      : sxp          =          .35
9._at      : sxp          =          .4
10._at     : sxp          =          .45
11._at     : sxp          =          .5
12._at     : sxp          =          .55
13._at     : sxp          =          .6
14._at     : sxp          =          .65
15._at     : sxp          =          .7
16._at     : sxp          =          .75
17._at     : sxp          =          .8
18._at     : sxp          =          .85
19._at     : sxp          =          .9
20._at     : sxp          =          .95
21._at     : sxp          =          1
22._at     : sxp          =          .2055 (p75)
             coldwar      =          1 (p75)
             secm         =          67.5 (p75)
             gyl          =          3.683 (p75)
             peace        =          472 (p75)
             prevwara     =          0 (p75)
             mount        =          21.8 (p75)
             georgia      =          .766 (p75)
             frac         =          3245 (p75)
             lnpop        =          16.66137 (p75)

```

		Delta-method				
		Margin	Std. Err.	z	P> z	[95% Conf. Interval]

	_at					
1		.0173908	.0075895	2.29	0.022	.0025158 .0322659
2		.03479	.008199	4.24	0.000	.0187202 .0508598
3		.0608032	.0089932	6.76	0.000	.043177 .0784295
4		.0919127	.0148106	6.21	0.000	.0628844 .1209409
5		.1228821	.023168	5.30	0.000	.0774736 .1682905
6		.147969	.0298658	4.95	0.000	.0894331 .2065049
7		.1625668	.0335467	4.85	0.000	.0968165 .2283171
8		.1640987	.0361409	4.54	0.000	.0932638 .2349336
9		.1523001	.0413077	3.69	0.000	.0713385 .2332618
10		.129238	.049615	2.60	0.009	.0319944 .2264815
11		.0991117	.0567307	1.75	0.081	-.0120784 .2103019
12		.0675283	.0573537	1.18	0.239	-.0448828 .1799395
13		.0400046	.0492094	0.81	0.416	-.0564441 .1364532
14		.0201363	.0347091	0.58	0.562	-.0478924 .088165
15		.0084784	.0195978	0.43	0.665	-.0299327 .0468895
16		.002992	.0088329	0.34	0.735	-.0143202 .0203041
17		.0008981	.0032552	0.28	0.783	-.0054819 .0072781
18		.0002325	.0010077	0.23	0.818	-.0017426 .0022075
19		.0000523	.0002663	0.20	0.844	-.0004696 .0005741
20		.0000102	.0000605	0.17	0.866	-.0001083 .0001288
21		1.74e-06	.0000118	0.15	0.883	-.0000215 .000025
22		.0151756	.010054	1.51	0.131	-.0045298 .034881

```

-----

.
. *Now, let's graph the effects
.
. mat t=J(21,3,.)

.
. mat a = (.002\.05\.1\.15\.2\.25\.30\.35\.40\.45\.5\.55\.6\.65\.7\.75\.8\.85\.9\.95\1)
/* get the 11 "at" val
> ues      */

.
. forvalues i=1/21 {
2.   mat t[`i',1] = _b[`i'._at]           /* get probability estimates */
3.   mat t[`i',2] = _b[`i'._at] - 1.96*_se[`i'._at] /* compute lower limit      */
4.   mat t[`i',3] = _b[`i'._at] + 1.96*_se[`i'._at] /* compute upper limit      */
5. }

.
. mat t=t,a                               /* horizontal concatenation */

. mat colnames t = prob ll ul at          /* fix column names        */

. svmat t, names(col)                     /* save matrix as data     */

.
. twoway (rarea ll ul at)(line prob at), legend(off) ///
>       xtitle(sxp) ytitle(probability) scheme(lean1)
(note: scheme lean1 not found, using s2color)

.
.       clear

.
.
.
end of do-file

. log close
      name: <unnamed>
      log:  /Users/nicholasweller/Dropbox/Weller Files/BarLer/Replication
Material/Chapter 7/Chapter7replication.log
      log type: text
      closed on: 12 Jun 2014, 10:01:07
-----

```