

Appendix 2

Stata Do File:

/*

Replication Do File for Dugan and Chenoweth's "Moving Beyond Deterrence: The Effectiveness of Raising the Expected Utility of Abstaining from Terrorism in Israel" (2012)

Ensure the following are installed prior to running:

// <https://www.stata.com/statalist/archive/2008-03/msg01053.html>

ssc desc gam

net get gam

!unzip gam.zip

ssc install estout

ssc install dups

Primary replication data contained in "GATE_GTD_Israel_monthly_data_STATA.dta", which was provided in replication zip folder by Dugan and Chenoweth. Replication code using this dataset were provided in Dugan and Chenoweth's Online Appendix and copied into this Do file.

Data for recreating Dugan and Chenoweth's GTD dataset were downloaded from <https://www.start.umd.edu/gtd/access/> as an excel file: "globalterrorismdb_0221dist.xlsx". This file is used to create a dataset of GTD terrorist attacks according to Dugan and Chenoweth's parameters: "GTD_personal_rep_87-04.dta".

This dataset is used to consider observation-level terrorist attack data and to differentiate Palestinian from Unknown perpetrators.

This dataset is combined with Dugan and Chenoweth's GATE-Israel records to produce "GATE_GTD_Israel_monthly_data_ext.dta" as a direct replica of their provided dataset.

Data for expanding Dugan and Chenoweth's work using the RAND Database of Worldwide Terrorism Incidents (RDWTI) was downloaded from

<https://www.rand.org/nsrd/projects/terrorism-incidents/download.html> as a csv:

"RAND_Database_of_Worldwide_Terrorism_Incidents.csv". This file is used to create a dataset of RAND terrorist attacks according to parameters of Dugan and Chenoweth's study:

"rand_terrorism_87-04.dta"

This dataset is combined with Dugan and Chenoweth's GATE-Israel records to produce "GATE_RAND_Israel_monthly_data.dta" for the extension portion of the report.

*/

/*Dugan and Chenoweth Direct Replication Code*/

ssc install estout

ssc install dups

log using replication_log

```
use "GATE_GTD_Israel_monthly_data_STATA.dta"
```

```
sort mcount
```

```
/* All Actions */
```

```
nbreg att93miss L.allact firstint secondint GTD2 L.att93miss L2.att93miss L3.att93miss  
L4.att93miss, exposure(popthou)  
est sto m1
```

```
* By Tactical Regime;
```

```
nbreg att93miss L.allact L.att93miss L2.att93miss L3.att93miss L4.att93miss if firstint==1,  
exposure(popthou)  
nbreg att93miss L.allact GTD2 L.att93miss L2.att93miss L3.att93miss L4.att93miss if  
oslolull==1, exposure(popthou)  
nbreg att93miss L.allact L.att93miss L2.att93miss L3.att93miss L4.att93miss if secondint==1,  
exposure(popthou)
```

```
/* Conciliatory and Repressive Actions */
```

```
nbreg att93miss L.concil concla2 L.repress firstint secondint GTD2 L.att93miss L2.att93miss  
L3.att93miss L4.att93miss, exposure(popthou)  
est sto m2
```

```
* By Tactical Regime;
```

```
nbreg att93miss L.concil concla2 L.repress L.att93miss L2.att93miss L3.att93miss L4.att93miss  
if firstint==1, exposure(popthou)  
nbreg att93miss L.concil concla2 L.repress GTD2 L.att93miss L2.att93miss L3.att93miss  
L4.att93miss if oslolull==1, exposure(popthou)  
nbreg att93miss L.concil L.repress L.att93miss L2.att93miss L3.att93miss L4.att93miss if  
secondint==1, exposure(popthou)
```

```
/* Conciliatory/Repressive and Discriminate/Indiscriminate */
```

```
nbreg att93miss L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint GTD2  
L.att93miss L2.att93miss L3.att93miss L4.att93miss, exposure(popthou)  
est sto m3
```

```
* By Tactical Regime;
```

```
nbreg att93miss L.concdisc cdisla2 L.concindisc L.reprdisc L.reprindisc L.att93miss  
L2.att93miss L3.att93miss L4.att93miss if firstint==1, exposure(popthou)  
nbreg att93miss L.concdisc L.concindisc cindla2 L.reprdisc rdisla2 L.reprindisc GTD2  
L.att93miss L2.att93miss L3.att93miss L4.att93miss if oslolull==1, exposure(popthou)  
nbreg att93miss L.concdisc L.concindisc L.reprdisc L.reprindisc L.att93miss L2.att93miss  
L3.att93miss L4.att93miss if secondint==1, exposure(popthou)
```

```
/* Create table of results for publication */
```

```

esttab m1 m2 m3 using dug_chen_orig.rtf, se varwidth(32) order(L.allact L.concil concla2
L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint GTD2
L.att93miss L2.att93miss L3.att93miss L4.att93miss) coeﬂabel(L.allact "All Actions" L.concil
"Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc "Conciliatory-
Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-
Indiscriminate" firstint "First Intifada" secondint "Second Intifada" GTD2 "GTD2" L.att93miss
"First Lagged Attacks" L2.att93miss "Second Lagged Attacks" L3.att93miss "Third Lagged
Attacks" L4.att93miss "Fourth Lagged Attacks") title({\b Table 1.} Negative Binomial
Coefficients and (SE), June 1987 through December 2004, n = 191 (Dugan Chenoweth
Replication Data)) drop(_cons lnalpha) noobs nonumbers mtitle("Model 1" "Model 2" "Model
3") replace

```

```
clear
```

```
// Recreate Dugan & Chenoweth GTD counts from updated GTD data; add flag for Palestinian
vs unknown perpetrators
```

```
import excel "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-
Chenoweth_Moving-beyond-deterrence\globalterrorismdb_0221dist.xlsx", firstrow
```

```

keep eventid iyear imonth iday approxdate extended resolution country country_txt region
region_txt provstate city latitude longitude specificity vicinity location summary crit1 crit2 crit3
doubtterr alternative multiple success attacktype1 attacktype1_txt attacktype2 attacktype2_txt
attacktype3 attacktype3_txt targtype1 targtype1_txt targsubtype1 corp1 target1 natlty1
natlty1_txt targtype2 targtype2_txt targsubtype2 corp2 target2 natlty2 natlty2_txt targtype3
targtype3_txt corp3 target3 natlty3 natlty3_txt gname gname2 gname3 guncertain1 guncertain2
individual claimed weaptype1 weaptype2 nkill nkillter nwound nwoundte addnotes scite1 scite2
scite3 dbsource

```

```
keep if (country == 97 | country == 155 ) & ( natlty1 == 97 | natlty2 == 97 | natlty3 == 97 )
```

```
save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-
Chenoweth_Moving-beyond-deterrence\GTD_personal_rep.dta", replace
```

```
keep if ((iyear == 1987 & imonth >= 6) | iyear > 1987) & (iyear <= 2004)
```

```
save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-
Chenoweth_Moving-beyond-deterrence\GTD_personal_rep_87-04.dta", replace
```

```
clear
```

```

// Terrorist Group Names.xlsx created by manually assigning each gname in the above dataset as
a Palestine affiliate, Unknown, or non-Palestinian //
import excel "Terrorist Group Names.xlsx", firstrow

```

```

save "gname_affiliations.dta", replace

use "GTD_personal_rep_87-04.dta"

merge m:1 gname using "gname_affiliations.dta"

egen mo_yr = concat(imonth iyear), punct(-)

egen att_pal = sum(palestineaffiliate), by(mo_yr)
egen att_unk = sum(unknown), by(mo_yr)
egen att_palunk = rowtotal(att_pal-att_unk)
egen att_tot = count(eventid), by(mo_yr)

save "GTD_personal_rep_87-04.dta", replace

// Aggregate GTD records by month and year to merge with GATE-Israel data in
"GATE_GTD_Israel_monthly_data_STATA.dta"
keep iyear imonth mo_yr att_pal att_unk att_palunk att_tot

dups, drop key(mo_yr)
drop _expand

save "GTD_personal_rep_tomerge.dta", replace

use "GATE_GTD_Israel_monthly_data_STATA.dta"

egen mo_yr = concat(month year), punct(-)
merge 1:1 mo_yr using "GTD_personal_rep_tomerge.dta"

replace att_pal = 0 if missing(att_pal) & !missing(att93miss)
replace att_unk = 0 if missing(att_unk) & !missing(att93miss)
replace att_palunk = 0 if missing(att_palunk) & !missing(att93miss)
replace att_tot = 0 if missing(att_tot) & !missing(att93miss)

drop mo_yr imonth iyear

save "GATE_GTD_Israel_monthly_data_ext.dta", replace

// Run if want to compare Dugan & Chenoweth's counts with generated GTD counts
gen cnt_diff = att93miss - att_palunk
tab cnt_diff

// Percent of Palestinian-perpetrated attacks from all known perpetrators
summ att_pal
sca tot_pal = r(sum)

```

```
gen att_known = att_tot - att_unk
summ att_known
sca tot_known = r(sum)
display tot_pal / tot_known
```

```
// Avg % Palestinian-perpetrated attacks per month for all known perpetrators
gen pal_perc_kn = att_pal / att_known
mean(pal_perc_kn)
```

```
// Percent of Palestinian-perpetrated attacks from all perpetrators
summ att_pal
sca tot_pal = r(sum)
summ att_tot
sca tot_att = r(sum)
display tot_pal / tot_att
```

```
// Avg % Palestinian-perpetrated attacks per month for all perpetrators
gen pal_perc = att_pal / att_tot
mean(pal_perc)
```

```
// Percent of Known-Perpetrator attacks
summ att_known
sca tot_known = r(sum)
summ att_tot
sca tot_att = r(sum)
display tot_known / tot_att
```

```
// Generate summary statistics
total(att_palunk)
mean(att_palunk)
total(att_tot)
mean(att_tot)
total(att_pal)
mean(att_pal)
total(att_known)
```

```
// Run models with recreated GTD counts for Palestinian-only attacks (att_pal) and Palestinian
and Unknown attacks (att_palunk)
```

```
/* Conciliatory/Repressive and Discriminate/Indiscriminate */
sort mcount
```

```
nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint
GTD2 L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk, exposure(popthou)
est sto m3
```

```
nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint GTD2
L.att_pal L2.att_pal L3.att_pal L4.att_pal, exposure(popthou)
est sto m3_pal
```

```
/* Conciliatory and Repressive Actions */
```

```
nbreg att_palunk L.concil concla2 L.repress firstint secondint GTD2 L.att_palunk L2.att_palunk
L3.att_palunk L4.att_palunk, exposure(popthou)
est sto m2
```

```
nbreg att_pal L.concil concla2 L.repress firstint secondint GTD2 L.att_pal L2.att_pal L3.att_pal
L4.att_pal, exposure(popthou)
est sto m2_pal
```

```
/* All Actions */
```

```
nbreg att_palunk L.allact firstint secondint GTD2 L.att_palunk L2.att_palunk L3.att_palunk
L4.att_palunk, exposure(popthou)
est sto m1
```

```
nbreg att_pal L.allact firstint secondint GTD2 L.att_pal L2.att_pal L3.att_pal L4.att_pal,
exposure(popthou)
est sto m1_pal
```

```
// Combine model results of Palestinian and Unknown attacks for presentation
```

```
esttab m1 m2 m3 using gtd_rep.rtf, se varwidth(32) order(L.allact L.concil concla2 L.repress
L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint GTD2 L.att_palunk
L2.att_palunk L3.att_palunk L4.att_palunk) coeclabel(L.allact "All Actions" L.concil
"Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc "Conciliatory-
Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-
Indiscriminate" firstint "First Intifada" secondint "Second Intifada" GTD2 "GTD2" L.att_palunk
"First Lagged Attacks" L2.att_palunk "Second Lagged Attacks" L3.att_palunk "Third Lagged
Attacks" L4.att_palunk "Fourth Lagged Attacks") title({\b Table 2.} Negative Binomial
Coefficients and (SE), June 1987 through December 2004, n = 191 (Recreated GTD dataset))
drop(_cons lnalpha) noobs nonumbers mtitle("Model 1" "Model 2" "Model 3") replace
```

```
// Combine model results of Palestinian-only attacks for presentation
```

```

esttab m1_pal m2_pal m3_pal using gtd_rep_pal.rtf, se varwidth(32) order(L.allact L.concil
concla2 L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint
GTD2 L.att_pal L2.att_pal L3.att_pal L4.att_pal) coeclabel(L.allact "All Actions" L.concil
"Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc "Conciliatory-
Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-
Indiscriminate" firstint "First Intifada" secondint "Second Intifada" GTD2 "GTD2" L.att_pal
"First Lagged Attacks" L2.att_pal "Second Lagged Attacks" L3.att_pal "Third Lagged Attacks"
L4.att_pal "Fourth Lagged Attacks") title({\b Table 2.} Negative Binomial Coefficients and
(SE), June 1987 through December 2004, n = 191 (Recreated GTD dataset, only Palestinian
actors)) drop(_cons lnalpha) noobs nonumbers mtitle("Model 1" "Model 2" "Model 3") replace

```

```
clear
```

```
// Create monthly terrorist attack counts from RAND database
```

```
import delimited "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-
Chenoweth_Moving-beyond-
deterrence\RAND_Database_of_Worldwide_Terrorism_Incidents\RAND_Database_of_Worldw
ide_Terrorism_Incidents.csv"
```

```
keep if (country == "Israel" | country == "West Bank/Gaza" )
```

```
gen inc_date = date(date, "DMY", 2009)
```

```
keep if inrange(inc_date,td(01jun1987),td(31dec2004))
```

```
save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-
Chenoweth_Moving-beyond-deterrence\rand_terrorism_87-04.dta", replace
```

```
clear
```

```
// rand_perpetrator_affiliations.xlsx created by manually assigning each Perpetrator in the above
dataset as a Palestine affiliate, Unknown, or non-Palestinian
import excel "rand_perpetrator_affiliations.xlsx", firstrow
```

```
save "rand_perp_affiliations.dta", replace
```

```
use "rand_terrorism_87-04.dta"
```

```
merge m:1 perpetrator using "rand_perp_affiliations.dta"
```

```
gen month=month(inc_date)
```

```
gen yr=year(inc_date)
```

```

egen mo_yr = concat(month yr), punct(-)

egen att_pal = sum(palestineaffiliate), by(mo_yr)
egen att_unk = sum(unknown), by(mo_yr)
egen att_tot = count(description), by(mo_yr)
egen att_palunk = rowtotal(att_pal-att_unk)

save "rand_terrorism_87-04.dta", replace

// Aggregate RAND terrorist attacks to month-year level to merge with GATE-Israel data in
"GATE_GTD_Israel_monthly_data_STATA.dta"
keep yr month mo_yr att_pal att_unk att_palunk att_tot

dups, drop key(mo_yr)
drop _expand

save "rand_terrorism_tomerge.dta", replace

use "GATE_GTD_Israel_monthly_data_STATA.dta"

egen mo_yr = concat(month year), punct(-)
merge 1:1 mo_yr using "rand_terrorism_tomerge.dta"

replace att_pal = 0 if missing(att_pal)
replace att_unk = 0 if missing(att_unk)
replace att_palunk = 0 if missing(att_palunk)
replace att_tot = 0 if missing(att_tot)
gen RAND2 = 1 if year >= 1998
replace RAND2 = 0 if missing(RAND2)

drop mo_yr month yr GTD2

save "GATE_RANDOM_Israel_monthly_data.dta", replace

// Run if want to compare RAND with Dugan and Chenoweth's GTD counts
gen pers_diff = att93miss - att_palunk
tab pers_diff

// Generate summary statistics - all years
total(att_palunk)
mean(att_palunk)
total(att_tot)
mean(att_tot)

```



```
total(att_pal)
mean(att_pal)
```

```
// Generate summary statistics - post-1998
```

```
total(att_palunk) if year >= 1998
mean(att_palunk) if year >= 1998
total(att_tot) if year >= 1998
mean(att_tot) if year >= 1998
total(att_pal) if year >= 1998
mean(att_pal) if year >= 1998
```

```
// Percent of Known-Perpetrator attacks - post-1998
```

```
summ att_tot
sca tot_att = r(sum)
gen att_known = att_tot - att_unk
summ att_known
sca tot_known = r(sum)
display tot_known / tot_att
```

```
// Percent of Palestinian-perpetrated attacks of known - post-1998
```

```
summ att_pal
sca tot_pal = r(sum)
//gen att_known = att_tot - att_unk
summ att_known
sca tot_known = r(sum)
display tot_pal / tot_known
```

```
// Avg % Palestinian-perpetrated attacks per month
```

```
gen pal_perc = att_pal / att_known
mean(pal_perc)
```

```
// Run RAND data models - all years
```

```
/* Conciliatory/Repressive and Discriminate/Indiscriminate */
```

```
sort mcount
```

```
nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint
RAND2 L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk, exposure(popthou)
est sto m3
```

```
nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint RAND2
L.att_pal L2.att_pal L3.att_pal L4.att_pal, exposure(popthou)
est sto m3_pal
```

```
/* Conciliatory and Repressive Actions */
```

```
nbreg att_palunk L.concil concla2 L.repress firstint secondint RAND2 L.att_palunk  
L2.att_palunk L3.att_palunk L4.att_palunk, exposure(popthou)  
est sto m2
```

```
nbreg att_pal L.concil concla2 L.repress firstint secondint RAND2 L.att_pal L2.att_pal  
L3.att_pal L4.att_pal, exposure(popthou)  
est sto m2_pal
```

```
/* All Actions */
```

```
nbreg att_palunk L.allact firstint secondint RAND2 L.att_palunk L2.att_palunk L3.att_palunk  
L4.att_palunk, exposure(popthou)  
est sto m1
```

```
nbreg att_pal L.allact firstint secondint RAND2 L.att_pal L2.att_pal L3.att_pal L4.att_pal,  
exposure(popthou)  
est sto m1_pal
```

```
// Combine model results of Palestine-only attacks for publication  
esttab m1_pal m2_pal m3_pal using rand_pal.rtf, se varwidth(32) order(L.allact L.concil concla2  
L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint RAND2  
L.att_pal L2.att_pal L3.att_pal L4.att_pal) coeqlabel(L.allact "All Actions" L.concil  
"Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc "Conciliatory-  
Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-  
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-  
Indiscriminate" firstint "First Intifada" secondint "Second Intifada" RAND2 "RAND2" L.att_pal  
"First Lagged Attacks" L2.att_pal "Second Lagged Attacks" L3.att_pal "Third Lagged Attacks"  
L4.att_pal "Fourth Lagged Attacks") title({\b Table 3.} Negative Binomial Coefficients and  
(SE), June 1987 through December 2004, n = 207 (RAND Terrorism Database, confirmed  
Palestinian-affiliated)) drop(_cons lnalpha) noobs nonumbers mtitle("Model 1" "Model 2"  
"Model 3") replace
```

```
// Combine model results of Palestine and Unknown attacks for publication  
esttab m1 m2 m3 using rand_palunk.rtf, se varwidth(32) order(L.allact L.concil concla2  
L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstint secondint RAND2  
L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk) coeqlabel(L.allact "All Actions"  
L.concil "Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc  
"Conciliatory-Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-  
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-  
Indiscriminate" firstint "First Intifada" secondint "Second Intifada" RAND2 "RAND2"  
L.att_palunk "First Lagged Attacks" L2.att_palunk "Second Lagged Attacks" L3.att_palunk  
"Third Lagged Attacks" L4.att_palunk "Fourth Lagged Attacks") title({\b Table 4.} Negative  
Binomial Coefficients and (SE), June 1987 through December 2004, n = 207 (RAND Terrorism
```

```
Database)) drop(_cons lalpha) noobs nonumbers mtitle("Model 1" "Model 2" "Model 3")  
replace
```

```
// Run Models - post-1998
```

```
/* Conciliatory/Repressive and Discriminate/Indiscriminate */
```

```
sort mcount
```

```
nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc secondint L.att_palunk  
L2.att_palunk L3.att_palunk L4.att_palunk if year >= 1998, exposure(popthou)  
est sto m3_trim
```

```
nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc secondint L.att_pal  
L2.att_pal L3.att_pal L4.att_pal if year >= 1998, exposure(popthou)  
est sto m3_trimpal
```

```
/* Conciliatory and Repressive Actions */
```

```
nbreg att_palunk L.concil concla2 L.repress secondint L.att_palunk L2.att_palunk L3.att_palunk  
L4.att_palunk if year >= 1998, exposure(popthou)  
est sto m2_trim
```

```
nbreg att_pal L.concil concla2 L.repress secondint L.att_pal L2.att_pal L3.att_pal L4.att_pal if  
year >= 1998, exposure(popthou)  
est sto m2_trimpal
```

```
/* All Actions */
```

```
nbreg att_palunk L.allact secondint L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk if  
year >= 1998, exposure(popthou)  
est sto m1_trim
```

```
nbreg att_pal L.allact secondint L.att_pal L2.att_pal L3.att_pal L4.att_pal if year >= 1998,  
exposure(popthou)  
est sto m1_trimpal
```

```
// Combine models of Palestine-only attacks post-1998 for publication  
esttab m1_trimpal m2_trimpal m3_trimpal using rand_pal_98.rtf, se varwidth(32) order(L.allact  
L.concil concla2 L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc secondint  
L.att_pal L2.att_pal L3.att_pal L4.att_pal) coeflabel(L.allact "All Actions" L.concil  
"Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc "Conciliatory-  
Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-  
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-
```

```

Indiscriminate" secondint "Second Intifada" L.att_pal "First Lagged Attacks" L2.att_pal "Second
Lagged Attacks" L3.att_pal "Third Lagged Attacks" L4.att_pal "Fourth Lagged Attacks")
title({\b Table 3.} Negative Binomial Coefficients and (SE), Jan 1998 through December 2004, n
= 84 (RAND Terrorism Database, confirmed Palestinian-affiliated)) drop(_cons lnalpha) noobs
nonumbers mtitle("Model 1" "Model 2" "Model 3") replace

```

```

// Combine models of Palestine and Unknown attacks post-1998 for publication
esttab m1_trim m2_trim m3_trim using rand_palunk_98.rtf, se varwidth(32) order(L.allact
L.concil concla2 L.repress L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc secondint
L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk) coeqlabel(L.allact "All Actions"
L.concil "Conciliatory" concla2 "Conciliatory^2" L.repress "Repressive" L.concdisc
"Conciliatory-Discriminate" L.concindisc "Conciliatory-Indiscriminate" cindla2 "(Conciliatory-
Indiscriminate)^2" L.reprdisc "Repressive-Discriminate" L.reprindisc "Repressive-
Indiscriminate" secondint "Second Intifada" L.att_palunk "First Lagged Attacks" L2.att_palunk
"Second Lagged Attacks" L3.att_palunk "Third Lagged Attacks" L4.att_palunk "Fourth Lagged
Attacks") title({\b Table 4.} Negative Binomial Coefficients and (SE), Jan 1998 through
December 2004, n = 84 (RAND Terrorism Database)) drop(_cons lnalpha) noobs nonumbers
mtitle("Model 1" "Model 2" "Model 3") replace

```

```

log close
translate replication_log.smcl replication_log.log

```

Stata Selected Output (excluding combined esttab representations for an attempt at brevity):

```
.
. use "GATE_GTD_Israel_monthly_data_STATA.dta"

.
. sort mcount

.
. /* All Actions */
. nbreg att93miss L.allact firstint secondint GTD2 L.att93miss L2.att93miss L3.
> att93miss L4.att93miss, exposure(pophou)
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -596.75231
Iteration 1: log likelihood = -595.71721
Iteration 2: log likelihood = -595.71526
Iteration 3: log likelihood = -595.71526
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -547.64894
Iteration 1: log likelihood = -547.1875
Iteration 2: log likelihood = -547.18687
Iteration 3: log likelihood = -547.18687
```

Fitting full model:

```
Iteration 0: log likelihood = -508.70529
Iteration 1: log likelihood = -506.53765
Iteration 2: log likelihood = -489.65563
Iteration 3: log likelihood = -488.6419
Iteration 4: log likelihood = -488.63898
Iteration 5: log likelihood = -488.63898
```

```
Negative binomial regression      Number of obs   =    191
                                LR chi2(8)           =   117.10
Dispersion    = mean              Prob > chi2       =   0.0000
Log likelihood = -488.63898        Pseudo R2        =   0.1070
```

```
-----+-----
att93miss |   Coef.   Std. Err.      z    P>|z|   [95% Conf. Interval]
-----+-----
allact |
L1. | .0048216 .0042815    1.13  0.260   - .00357   .0132131
|
```

```

firstint | .7321785 .1585557 4.62 0.000 .4214151 1.042942
secondint | 1.262925 .2638796 4.79 0.000 .7457308 1.78012
GTD2 | -1.023311 .2545668 -4.02 0.000 -1.522252 -.5243688
|
att93miss |
L1. | .0231073 .0112614 2.05 0.040 .0010354 .0451792
L2. | -.0006846 .0095993 -0.07 0.943 -.0194988 .0181297
L3. | .0345852 .0105659 3.27 0.001 .0138765 .0552939
L4. | .0183108 .0107387 1.71 0.088 -.0027367 .0393583
|
_cons | -7.819436 .1884326 -41.50 0.000 -8.188758 -7.450115
ln(popthou) | 1 (exposure)
-----+-----
/lnalpha | -.9590632 .1632015 -1.278932 -.6391942
-----+-----
alpha | .3832517 .0625473 .2783343 .5277175
-----+-----
LR test of alpha=0: chibar2(01) = 214.15 Prob >= chibar2 = 0.000

. est sto m1

.
. * By Tactical Regime;
. nbreg att93miss L.allact L.att93miss L2.att93miss L3.att93miss L4.att93miss i
> f firstint==1, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -205.8924
Iteration 1: log likelihood = -205.8924

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -188.89022
Iteration 1: log likelihood = -181.78763
Iteration 2: log likelihood = -181.78396
Iteration 3: log likelihood = -181.78396

```

Fitting full model:

```

Iteration 0: log likelihood = -178.82254
Iteration 1: log likelihood = -178.54652
Iteration 2: log likelihood = -178.54445
Iteration 3: log likelihood = -178.54445

```

Negative binomial regression Number of obs = 61

LR chi2(5) = 6.48
 Dispersion = mean Prob > chi2 = 0.2624
 Log likelihood = -178.54445 Pseudo R2 = 0.0178

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
allact						
L1.	.0146756	.010895	1.35	0.178	-.0066783	.0360294
att93miss						
L1.	.01113	.0193356	0.58	0.565	-.0267671	.0490271
L2.	-.0159356	.0184907	-0.86	0.389	-.0521766	.0203055
L3.	.0220208	.0180716	1.22	0.223	-.0133989	.0574404
L4.	.0170086	.0194736	0.87	0.382	-.0211589	.0551761
_cons	-6.981134	.2759537	-25.30	0.000	-7.521994	-6.440275
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.141312	.283626			-1.697208	-.585415
-----+-----						
alpha	.3193998	.0905901			.1831942	.5568747

LR test of alpha=0: chibar2(01) = 54.70 Prob >= chibar2 = 0.000

. nbreg att93miss L.allact GTD2 L.att93miss L2.att93miss L3.att93miss L4.att93m
 > iss if oslolull==1, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -162.61854
 Iteration 1: log likelihood = -156.43743
 Iteration 2: log likelihood = -156.43371
 Iteration 3: log likelihood = -156.43371

Fitting constant-only model:

Iteration 0: log likelihood = -174.69725
 Iteration 1: log likelihood = -173.75029
 Iteration 2: log likelihood = -173.74831
 Iteration 3: log likelihood = -173.74831

Fitting full model:

Iteration 0: log likelihood = -159.58545
 Iteration 1: log likelihood = -150.5202

Iteration 2: log likelihood = -148.68141
 Iteration 3: log likelihood = -148.5679
 Iteration 4: log likelihood = -148.56717
 Iteration 5: log likelihood = -148.56717

Negative binomial regression Number of obs = 76
 LR chi2(6) = 50.36
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -148.56717 Pseudo R2 = 0.1449

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
allact						
L1.	-.0202926	.0124749	-1.63	0.104	-.0447429	.0041577
GTD2	-1.111398	.304625	-3.65	0.000	-1.708452	-.5143443
att93miss						
L1.	.0729707	.0337673	2.16	0.031	.006788	.1391533
L2.	-.0056752	.0327086	-0.17	0.862	-.0697829	.0584324
L3.	.0194482	.0312058	0.62	0.533	-.041714	.0806104
L4.	.0406395	.0279534	1.45	0.146	-.0141483	.0954272
_cons	-7.375517	.3924157	-18.80	0.000	-8.144638	-6.606397
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.107077	.422212			-1.934597	-.2795567
-----+-----						
alpha	.3305237	.1395511			.1444825	.7561189

LR test of alpha=0: chibar2(01) = 15.73 Prob >= chibar2 = 0.000

```
. nbreg att93miss L.allact L.att93miss L2.att93miss L3.att93miss L4.att93miss i
> f secondint==1, exposure(popthou)
```

Fitting Poisson model:

Iteration 0: log likelihood = -210.81698
 Iteration 1: log likelihood = -210.77752
 Iteration 2: log likelihood = -210.7775

Fitting constant-only model:

Iteration 0: log likelihood = -162.29866
 Iteration 1: log likelihood = -158.07583

Iteration 2: log likelihood = -158.05628
 Iteration 3: log likelihood = -158.05628

Fitting full model:

Iteration 0: log likelihood = -153.01591
 Iteration 1: log likelihood = -152.11786
 Iteration 2: log likelihood = -152.08242
 Iteration 3: log likelihood = -152.08239
 Iteration 4: log likelihood = -152.08239

Negative binomial regression Number of obs = 52
 LR chi2(5) = 11.95
 Dispersion = mean Prob > chi2 = 0.0355
 Log likelihood = -152.08239 Pseudo R2 = 0.0378

```
-----+-----
att93miss |    Coef.   Std. Err.      z   P>|z|   [95% Conf. Interval]
-----+-----
     allact |
      L1. |  .0072504   .0053196      1.36   0.173   -0.0031758   .0176766
      |
att93miss |
      L1. |  .0153912   .0138786      1.11   0.267   -0.0118103   .0425927
      L2. |  -0.0017429   .0124074     -0.14   0.888   -0.0260609   .0225751
      L3. |  .0332179   .0146574      2.27   0.023     .00449   .0619458
      L4. |  .0080438   .0138683      0.58   0.562   -0.0191375   .0352251
      |
     _cons | -7.525921   .2825079   -26.64   0.000   -8.079627   -6.972216
ln(popthou) |            1 (exposure)
-----+-----
     /lnalpha | -0.9478529   .2497701                                                                                   -1.437393   -0.4583124
-----+-----
     alpha |  .3875723   .096804                                                                                   .2375462   .6323499
-----+-----
LR test of alpha=0: chibar2(01) = 117.39                                                                                   Prob >= chibar2 = 0.000
```

```
.
. /* Conciliatory and Repressive Actions */
. nbreg att93miss L.concil concla2 L.repress firstint secondint GTD2 L.att93mis
> s L2.att93miss L3.att93miss L4.att93miss, exposure(popthou)
```

Fitting Poisson model:

Iteration 0: log likelihood = -587.243
 Iteration 1: log likelihood = -586.24681

Iteration 2: log likelihood = -586.24481
Iteration 3: log likelihood = -586.24481

Fitting constant-only model:

Iteration 0: log likelihood = -547.64894
Iteration 1: log likelihood = -547.1875
Iteration 2: log likelihood = -547.18687
Iteration 3: log likelihood = -547.18687

Fitting full model:

Iteration 0: log likelihood = -507.17368
Iteration 1: log likelihood = -486.72687
Iteration 2: log likelihood = -484.76919
Iteration 3: log likelihood = -484.75867
Iteration 4: log likelihood = -484.75867

Negative binomial regression Number of obs = 191
 LR chi2(10) = 124.86
Dispersion = mean Prob > chi2 = 0.0000
Log likelihood = -484.75867 Pseudo R2 = 0.1141

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	.0484138	.0312955	1.55	0.122	-.0129244	.1097519
concla2	-.0027959	.001241	-2.25	0.024	-.0052283	-.0003635
repress						
L1.	.0085581	.0059497	1.44	0.150	-.003103	.0202192
firstint	.6255994	.1845037	3.39	0.001	.2639789	.98722
secondint	1.120258	.2766812	4.05	0.000	.5779731	1.662543
GTD2	-1.031789	.2524574	-4.09	0.000	-1.526597	-.5369819
att93miss						
L1.	.0248524	.0114197	2.18	0.030	.0024701	.0472347
L2.	.0039241	.0098691	0.40	0.691	-.015419	.0232671
L3.	.0348533	.0105541	3.30	0.001	.0141677	.0555389
L4.	.0200169	.010648	1.88	0.060	-.0008529	.0408866
_cons	-7.932365	.2240893	-35.40	0.000	-8.371572	-7.493159
ln(popthou)	1 (exposure)					

```

-----+-----
      /lnalpha | -1.014989  .1655617          -1.339484  -.6904939
-----+-----
      alpha |  .3624065  .0600006          .2619809  .5013284
-----+-----
LR test of alpha=0: chibar2(01) = 202.97          Prob >= chibar2 = 0.000

```

. est sto m2

```

.
. * By Tactical Regime;
. nbreg att93miss L.concil concla2 L.repress L.att93miss L2.att93miss L3.att93m
> iss L4.att93miss if firstint==1, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -196.22572
Iteration 1: log likelihood = -196.22556
Iteration 2: log likelihood = -196.22556

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -188.89022
Iteration 1: log likelihood = -181.78763
Iteration 2: log likelihood = -181.78396
Iteration 3: log likelihood = -181.78396

```

Fitting full model:

```

Iteration 0: log likelihood = -175.85565
Iteration 1: log likelihood = -174.81234
Iteration 2: log likelihood = -174.76894
Iteration 3: log likelihood = -174.7689
Iteration 4: log likelihood = -174.7689

```

```

Negative binomial regression      Number of obs   =      61
                                LR chi2(7)         =    14.03
Dispersion   = mean              Prob > chi2      =    0.0506
Log likelihood = -174.7689        Pseudo R2       =    0.0386

```

```

-----+-----
      att93miss |   Coef.   Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
      concil |
      L1. |   .280443   .099631   2.81  0.005   .0851698   .4757161
      |

```

```

concla2 | -.0194952 .008112 -2.40 0.016 -.0353943 -.003596
      |
repress |
L1. | -.0023882 .0136314 -0.18 0.861 -.0291052 .0243288
      |
att93miss |
L1. | .0011769 .0185279 0.06 0.949 -.0351371 .0374908
L2. | -.0154531 .0175477 -0.88 0.379 -.0498459 .0189396
L3. | -.0005541 .0190831 -0.03 0.977 -.0379564 .0368481
L4. | .0410524 .0207162 1.98 0.048 .0004494 .0816553
      |
_cons | -7.245324 .2824408 -25.65 0.000 -7.798898 -6.69175
ln(popthou) | 1 (exposure)
-----+-----
/lnalpha | -1.325246 .3017715 -1.916707 -.7337848
-----+-----
alpha | .2657376 .080192 .1470905 .4800885
-----+-----
LR test of alpha=0: chibar2(01) = 42.91 Prob >= chibar2 = 0.000

```

```

. nbreg att93miss L.concla2 L.repress GTD2 L.att93miss L2.att93miss L3.a
> tt93miss L4.att93miss if oslolull==1, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -152.78609
Iteration 1: log likelihood = -146.69838
Iteration 2: log likelihood = -146.68884
Iteration 3: log likelihood = -146.68884

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -174.69725
Iteration 1: log likelihood = -173.75029
Iteration 2: log likelihood = -173.74831
Iteration 3: log likelihood = -173.74831

```

Fitting full model:

```

Iteration 0: log likelihood = -158.0291
Iteration 1: log likelihood = -148.0264
Iteration 2: log likelihood = -144.69203
Iteration 3: log likelihood = -143.38187
Iteration 4: log likelihood = -143.28914
Iteration 5: log likelihood = -143.2816
Iteration 6: log likelihood = -143.28159

```

Negative binomial regression Number of obs = 76
 LR chi2(8) = 60.93
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -143.28159 Pseudo R2 = 0.1753

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	.1731201	.0640181	2.70	0.007	.0476468	.2985933
concla2	-.007393	.0022334	-3.31	0.001	-.0117704	-.0030156
repress						
L1.	-.0110518	.0150096	-0.74	0.462	-.0404701	.0183665
GTD2	-.7217739	.2967597	-2.43	0.015	-1.303412	-.1401355
att93miss						
L1.	.1012866	.0319331	3.17	0.002	.0386989	.1638743
L2.	.0016695	.0301157	0.06	0.956	-.0573562	.0606951
L3.	.0161243	.0275114	0.59	0.558	-.037797	.0700455
L4.	.0311295	.0248062	1.25	0.210	-.0174898	.0797488
_cons	-8.713279	.5242745	-16.62	0.000	-9.740838	-7.68572
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.523985	.5436685			-2.589556	-.4584145
-----+-----						
alpha	.217842	.1184338			.0750534	.6322854
-----+-----						

LR test of alpha=0: chibar2(01) = 6.81 Prob >= chibar2 = 0.005

. nbreg att93miss L.concil L.repress L.att93miss L2.att93miss L3.att93miss L4.a
 > tt93miss if secondint==1, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -197.64699
 Iteration 1: log likelihood = -197.54344
 Iteration 2: log likelihood = -197.54332
 Iteration 3: log likelihood = -197.54332

Fitting constant-only model:

Iteration 0: log likelihood = -162.29866
 Iteration 1: log likelihood = -158.07583
 Iteration 2: log likelihood = -158.05628
 Iteration 3: log likelihood = -158.05628

Fitting full model:

Iteration 0: log likelihood = -150.43434
 Iteration 1: log likelihood = -148.60836
 Iteration 2: log likelihood = -148.39165
 Iteration 3: log likelihood = -148.39068
 Iteration 4: log likelihood = -148.39068

Negative binomial regression Number of obs = 52
 LR chi2(6) = 19.33
 Dispersion = mean Prob > chi2 = 0.0036
 Log likelihood = -148.39068 Pseudo R2 = 0.0612

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	-.0535432	.0230924	-2.32	0.020	-.0988035	-.008283
repress						
L1.	.0205735	.0075542	2.72	0.006	.0057676	.0353794
att93miss						
L1.	.008929	.0133927	0.67	0.505	-.0173202	.0351781
L2.	.0097804	.0126483	0.77	0.439	-.0150099	.0345707
L3.	.0393543	.0146133	2.69	0.007	.0107128	.0679958
L4.	.0159031	.0132367	1.20	0.230	-.0100403	.0418465
_cons	-7.583495	.2679498	-28.30	0.000	-8.108667	-7.058323
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.123771	.2623629			-1.637993	-.6095493
-----+-----						
alpha	.3250517	.0852815			.1943698	.5435958
-----+-----						

LR test of alpha=0: chibar2(01) = 98.31 Prob >= chibar2 = 0.000

.
 ./* Conciliatory/Repressive and Discriminate/Indiscriminate */
 . nbreg att93miss L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc first
 > int secondint GTD2 L.att93miss L2.att93miss L3.att93miss L4.att93miss, exposu

```
> re(popthou)
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -585.78892
Iteration 1: log likelihood = -584.79911
Iteration 2: log likelihood = -584.79713
Iteration 3: log likelihood = -584.79713
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -547.64894
Iteration 1: log likelihood = -547.1875
Iteration 2: log likelihood = -547.18687
Iteration 3: log likelihood = -547.18687
```

Fitting full model:

```
Iteration 0: log likelihood = -507.12022
Iteration 1: log likelihood = -486.57444
Iteration 2: log likelihood = -484.60206
Iteration 3: log likelihood = -484.59107
Iteration 4: log likelihood = -484.59106
```

```
Negative binomial regression      Number of obs   =    191
                                LR chi2(12)    =   125.19
Dispersion   = mean              Prob > chi2      =   0.0000
Log likelihood = -484.59106       Pseudo R2       =   0.1144
```

```
-----
att93miss |   Coef.  Std. Err.   z  P>|z|   [95% Conf. Interval]
-----+-----
concdisc |
  L1. | -.0025727 .0411091  -0.06  0.950  -.0831452  .0779997
      |
concindisc |
  L1. | .0510737 .0355492   1.44  0.151  -.0186014  .1207488
      |
cindla2 | -.0034413 .0015904  -2.16  0.030  -.0065585  -.0003241
      |
reprdisc |
  L1. | .0158859 .0150135   1.06  0.290  -.0135401  .0453119
      |
reprindisc |
  L1. | .0053762 .0081282   0.66  0.508  -.0105547  .0213072
      |
```

```

firstint | .6604086 .1905625 3.47 0.001 .2869129 1.033904
secondint | 1.1532 .2777496 4.15 0.000 .6088208 1.697579
GTD2 | -1.02788 .2528338 -4.07 0.000 -1.523425 -.532335
|
att93miss |
L1. | .0254 .0114727 2.21 0.027 .0029139 .0478862
L2. | .0017546 .0098116 0.18 0.858 -.0174758 .0209849
L3. | .0340408 .0106948 3.18 0.001 .0130793 .0550023
L4. | .0202644 .0106822 1.90 0.058 -.0006724 .0412012
|
_cons | -7.901549 .2207323 -35.80 0.000 -8.334177 -7.468922
ln(popthou) | 1 (exposure)
-----+-----
/lnalpha | -1.019206 .1660539 -1.344665 -.6937461
-----+-----
alpha | .3608814 .0599258 .2606269 .4997006
-----+-----
LR test of alpha=0: chibar2(01) = 200.41 Prob >= chibar2 = 0.000

. est sto m3

.
. * By Tactical Regime;
. nbreg att93miss L.concdisc cdisla2 L.concindisc L.reprdisc L.reprindisc L.att
> 93miss L2.att93miss L3.att93miss L4.att93miss if firstint==1, exposure(poptho
> u)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -194.82023
Iteration 1: log likelihood = -194.82015
Iteration 2: log likelihood = -194.82015

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -188.89022
Iteration 1: log likelihood = -181.78763
Iteration 2: log likelihood = -181.78396
Iteration 3: log likelihood = -181.78396

```

Fitting full model:

```

Iteration 0: log likelihood = -176.06356
Iteration 1: log likelihood = -175.08
Iteration 2: log likelihood = -175.0509
Iteration 3: log likelihood = -175.05088

```


Negative binomial regression Number of obs = 61
 LR chi2(9) = 13.47
 Dispersion = mean Prob > chi2 = 0.1426
 Log likelihood = -175.05088 Pseudo R2 = 0.0370

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	.4756439	.2169036	2.19	0.028	.0505206	.9007671
cdisla2	-.1065427	.0514615	-2.07	0.038	-.2074054	-.00568
concindisc						
L1.	.0296406	.0422365	0.70	0.483	-.0531413	.1124226
reprdisc						
L1.	.0326759	.036842	0.89	0.375	-.039533	.1048848
reprindisc						
L1.	-.0113025	.0191731	-0.59	0.556	-.048881	.026276
att93miss						
L1.	.0022921	.0191903	0.12	0.905	-.0353202	.0399043
L2.	-.0120394	.0175634	-0.69	0.493	-.046463	.0223842
L3.	.0117619	.0176435	0.67	0.505	-.0228188	.0463425
L4.	.0268777	.0189278	1.42	0.156	-.0102202	.0639755
_cons	-7.010207	.2622903	-26.73	0.000	-7.524287	-6.496128
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.33955	.3084543			-1.944109	-.7349904
-----+-----						
alpha	.2619636	.0808038			.1431147	.4795101

LR test of alpha=0: chibar2(01) = 39.54 Prob >= chibar2 = 0.000

```
. nbreg att93miss L.concdisc L.concindisc cindla2 L.reprdisc rdisla2 L.reprindi
> sc GTD2 L.att93miss L2.att93miss L3.att93miss L4.att93miss if oslolull==1, ex
> posure(popthou)
```

Fitting Poisson model:

Iteration 0: log likelihood = -147.321
 Iteration 1: log likelihood = -134.05407

Iteration 2: log likelihood = -133.95137
 Iteration 3: log likelihood = -133.95132
 Iteration 4: log likelihood = -133.95132

Fitting constant-only model:

Iteration 0: log likelihood = -174.69725
 Iteration 1: log likelihood = -173.75029
 Iteration 2: log likelihood = -173.74831
 Iteration 3: log likelihood = -173.74831

Fitting full model:

Iteration 0: log likelihood = -156.32027
 Iteration 1: log likelihood = -141.42389
 Iteration 2: log likelihood = -135.80908
 Iteration 3: log likelihood = -134.51578
 Iteration 4: log likelihood = -134.11529
 Iteration 5: log likelihood = -134.01209
 Iteration 6: log likelihood = -133.96888
 Iteration 7: log likelihood = -133.95566
 Iteration 8: log likelihood = -133.95235
 Iteration 9: log likelihood = -133.95156
 Iteration 10: log likelihood = -133.95137
 Iteration 11: log likelihood = -133.95133
 Iteration 12: log likelihood = -133.95132

Negative binomial regression Number of obs = 76
 LR chi2(11) = 79.59
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -133.95132 Pseudo R2 = 0.2290

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	-.0630349	.0453828	-1.39	0.165	-.1519836	.0259138
concindisc						
L1.	.1727689	.0588325	2.94	0.003	.0574594	.2880785
cindla2	-.00887	.002439	-3.64	0.000	-.0136503	-.0040896
reprdisc						
L1.	.489783	.1542231	3.18	0.001	.1875114	.7920547

```

    rdisla2 | -.0651955 .0167274 -3.90 0.000 -.0979806 -.0324103
          |
    reprindisc |
      L1. | .0097333 .0127813 0.76 0.446 -.0153175 .0347841
          |
      GTD2 | -.5436324 .2653406 -2.05 0.040 -1.063691 -.0235744
          |
    att93miss |
      L1. | .0654884 .0216804 3.02 0.003 .0229955 .1079813
      L2. | .0175687 .0211099 0.83 0.405 -.0238059 .0589434
      L3. | .017371 .018575 0.94 0.350 -.0190354 .0537774
      L4. | .0240356 .0166896 1.44 0.150 -.0086755 .0567466
          |
      _cons | -9.260754 .4737973 -19.55 0.000 -10.18938 -8.332128
ln(popthou) |      1 (exposure)
-----+-----
      /lnalpha | -15.22214 1068.445          -2109.337 2078.893
-----+-----
      alpha | 2.45e-07 .0002617          0      .
-----+-----
LR test of alpha=0: chibar2(01) = 0.0e+00          Prob >= chibar2 = 0.500

. nbreg att93miss L.concdisc L.concindisc L.reprdisc L.reprindisc L.att93miss L
> 2.att93miss L3.att93miss L4.att93miss if secondint==1, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -197.05373
Iteration 1: log likelihood = -196.9506
Iteration 2: log likelihood = -196.95046
Iteration 3: log likelihood = -196.95046

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -162.29866
Iteration 1: log likelihood = -158.07583
Iteration 2: log likelihood = -158.05628
Iteration 3: log likelihood = -158.05628

```

Fitting full model:

```

Iteration 0: log likelihood = -150.48232
Iteration 1: log likelihood = -148.63063
Iteration 2: log likelihood = -148.3779
Iteration 3: log likelihood = -148.37663
Iteration 4: log likelihood = -148.37663

```

Negative binomial regression Number of obs = 52
 LR chi2(8) = 19.36
 Dispersion = mean Prob > chi2 = 0.0131
 Log likelihood = -148.37663 Pseudo R2 = 0.0612

att93miss	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	-.0413092	.0767883	-0.54	0.591	-.1918114	.1091931
concindisc						
L1.	-.0548913	.0244743	-2.24	0.025	-.1028601	-.0069224
reprdisc						
L1.	.0205635	.0169436	1.21	0.225	-.0126455	.0537724
reprindisc						
L1.	.0203565	.0103691	1.96	0.050	.0000334	.0406797
att93miss						
L1.	.0088625	.0138054	0.64	0.521	-.0181955	.0359205
L2.	.0101418	.0129399	0.78	0.433	-.0152199	.0355036
L3.	.0388156	.0149373	2.60	0.009	.0095391	.0680921
L4.	.0157288	.0132099	1.19	0.234	-.0101622	.0416198
_cons	-7.583325	.2686585	-28.23	0.000	-8.109886	-7.056764
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.125588	.262855			-1.640774	-.6104017
-----+-----						
alpha	.3244616	.0852863			.1938299	.5431326
-----+-----						

LR test of alpha=0: chibar2(01) = 97.15 Prob >= chibar2 = 0.000

```
.
. clear

.
.
. // Recreate Dugan & Chenoweth GTD counts from updated GTD data; add flag for
> Palestinian vs unknown perpetrators
.
. import excel "C:\Users\natra\Documents\Education\UChicago\Quantitative Securi
```

```
> ty\Dugan-Chenoweth_Moving-beyond-deterrence\globalterrorismdb_0221dist.xlsx",  
> firstrow  
(135 vars, 201,183 obs)
```

```
.  
. keep eventid iyear imonth iday approxdate extended resolution country country  
> _txt region region_txt provstate city latitude longitude specificity vicinity  
> location summary crit1 crit2 crit3 doubtterr alternative multiple success at  
> tacktype1 attacktype1_txt attacktype2 attacktype2_txt attacktype3 attacktype3  
> _txt targtype1 targtype1_txt targsubtype1 corp1 target1 natlty1 natlty1_txt t  
> argtype2 targtype2_txt targsubtype2 corp2 target2 natlty2 natlty2_txt targtyp  
> e3 targtype3_txt corp3 target3 natlty3 natlty3_txt gname gname2 gname3 guncer  
> tain1 guncertain2 individual claimed weaptype1 weaptype2 nkill nkillter nwoun  
> d nwoundte addnotes scite1 scite2 scite3 dbsource
```

```
.  
. keep if (country == 97 | country == 155 ) & ( natlty1 == 97 | natlty2 == 97 |  
> natlty3 == 97 )  
(197,478 observations deleted)
```

```
.  
. save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan  
> -Chenoweth_Moving-beyond-deterrence\GTD_personal_rep.dta", replace  
file C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-Ch  
> enoweth_Moving-beyond-deterrence\GTD_personal_rep.dta saved
```

```
.  
. keep if ((iyear == 1987 & imonth >= 6) | iyear > 1987) & (iyear <= 2004)  
(2,391 observations deleted)
```

```
.  
. save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan  
> -Chenoweth_Moving-beyond-deterrence\GTD_personal_rep_87-04.dta", replace  
file C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-Ch  
> enoweth_Moving-beyond-deterrence\GTD_personal_rep_87-04.dta saved
```

```
.  
. clear
```

```
.  
. // Terrorist Group Names.xlsx created by manually assigning each gname in the  
> above dataset as a Palestine affiliate, Unknown, or non-Palestinian //  
. import excel "Terrorist Group Names.xlsx", firstrow  
(4 vars, 64 obs)
```

```
. save "gname_affiliations.dta", replace
```

file gname_affiliations.dta saved

```
.  
. use "GTD_personal_rep_87-04.dta"  
  
. merge m:1 gname using "gname_affiliations.dta"
```

Result	# of obs.

not matched	19
from master	0 (_merge==1)
from using	19 (_merge==2)
matched	1,314 (_merge==3)

```
.  
. egen mo_yr = concat(imonth iyear), punct(-)  
  
. egen att_pal = sum(palestineaffiliate), by(mo_yr)  
  
. egen att_unk = sum(unknown), by(mo_yr)  
  
. egen att_palunk = rowtotal(att_pal-att_unk)  
  
. egen att_tot = count(eventid), by(mo_yr)  
  
. save "GTD_personal_rep_87-04.dta", replace  
file GTD_personal_rep_87-04.dta saved  
  
.   
.   
. // Aggregate GTD records by month and year to merge with GATE-Israel data in  
> "GATE_GTD_Israel_monthly_data_STATA.dta"  
. keep iyear imonth mo_yr att_pal att_unk att_palunk att_tot  
  
.   
. dups, drop key(mo_yr)  
  
group by: iyear imonth mo_yr att_pal att_unk att_palunk att_tot  
  
groups formed: 152 containing 1305 observations  
unique observations: 28
```

groups of duplicate observations:

+-----+		
_group	_count	mo_yr

1	6	6-1987
2	6	8-1987
3	2	10-1987
4	4	11-1987
5	5	12-1987

6	4	2-1988
7	12	3-1988
8	3	4-1988
9	4	5-1988
10	8	6-1988

11	2	7-1988
12	7	8-1988
13	9	10-1988
14	2	12-1988
15	11	1-1989

16	5	2-1989
17	8	3-1989
18	12	4-1989
19	12	5-1989
20	8	6-1989

21	5	7-1989
22	8	8-1989
23	17	9-1989
24	10	11-1989
25	6	12-1989

26	14	1-1990
27	3	2-1990
28	11	4-1990
29	9	5-1990
30	13	6-1990

31	4	7-1990
32	4	8-1990
33	10	9-1990
34	15	10-1990
35	10	11-1990

36	13	12-1990
37	12	3-1991
38	5	4-1991
39	4	5-1991
40	8	7-1991

41	19	8-1991
42	7	9-1991
43	10	10-1991
44	22	11-1991
45	5	12-1991

46	8	1-1992
47	16	2-1992
48	13	3-1992
49	6	4-1992
50	9	5-1992

51	9	6-1992
52	8	7-1992
53	7	8-1992
54	15	9-1992
55	17	10-1992

56	16	11-1992
57	10	12-1992
58	19	1-1994
59	13	2-1994
60	23	3-1994

61	23	4-1994
62	20	5-1994
63	8	6-1994
64	11	7-1994
65	15	8-1994

66	5	9-1994
67	12	10-1994
68	12	11-1994
69	12	12-1994
70	14	1-1995

71	2	2-1995
72	3	3-1995
73	2	4-1995

	74	4	5-1995	
	75	7	6-1995	

	76	5	7-1995	
	77	4	8-1995	
	78	5	9-1995	
	79	6	11-1995	
	80	5	12-1995	

	81	5	1-1996	
	82	5	2-1996	
	83	5	3-1996	
	84	4	4-1996	
	85	6	5-1996	

	86	5	6-1996	
	87	8	12-1996	
	88	2	1-1997	
	89	3	3-1997	
	90	9	4-1997	

	91	4	7-1997	
	92	2	2-1998	
	93	2	3-1998	
	94	2	7-1998	
	95	3	8-1998	

	96	2	9-1998	
	97	6	10-1998	
	98	4	8-1999	
	99	2	9-1999	
	100	4	5-2000	

	101	4	8-2000	
	102	3	9-2000	
	103	6	10-2000	
	104	14	11-2000	
	105	5	12-2000	

	106	8	1-2001	
	107	5	2-2001	
	108	14	3-2001	
	109	12	4-2001	
	110	18	5-2001	

	111	5	6-2001	

	112	6	7-2001	
	113	51	8-2001	
	114	17	9-2001	
	115	10	10-2001	

	116	14	11-2001	
	117	12	12-2001	
	118	8	1-2002	
	119	35	2-2002	
	120	25	3-2002	

	121	9	4-2002	
	122	14	5-2002	
	123	12	6-2002	
	124	9	7-2002	
	125	7	8-2002	

	126	2	9-2002	
	127	6	10-2002	
	128	12	11-2002	
	129	2	12-2002	
	130	7	1-2003	

	131	6	2-2003	
	132	14	3-2003	
	133	8	4-2003	
	134	13	5-2003	
	135	7	6-2003	

	136	3	7-2003	
	137	5	8-2003	
	138	3	9-2003	
	139	3	10-2003	
	140	3	11-2003	

	141	6	12-2003	
	142	6	1-2004	
	143	3	3-2004	
	144	5	4-2004	
	145	2	5-2004	

	146	5	6-2004	
	147	3	7-2004	
	148	7	8-2004	
	149	5	9-2004	
	150	4	11-2004	

```
|-----|
| 151    2 12-2004 |
| 152    19    .-. |
+-----+
```

(1,153 observations deleted)

observations remaining: 180

```
. drop _expand
```

```
.
. save "GTD_personal_rep_tomerge.dta", replace
file GTD_personal_rep_tomerge.dta saved
```

```
.
. use "GATE_GTD_Israel_monthly_data_STATA.dta"
```

```
.
. egen mo_yr = concat(month year), punct(-)
```

```
. merge 1:1 mo_yr using "GTD_personal_rep_tomerge.dta"
```

Result	# of obs.

not matched	33
from master	32 (_merge==1)
from using	1 (_merge==2)
matched	179 (_merge==3)

```
.
. replace att_pal = 0 if missing(att_pal) & !missing(att93miss)
(20 real changes made)
```

```
. replace att_unk = 0 if missing(att_unk) & !missing(att93miss)
(20 real changes made)
```

```
. replace att_palunk = 0 if missing(att_palunk) & !missing(att93miss)
(20 real changes made)
```

```
. replace att_tot = 0 if missing(att_tot) & !missing(att93miss)
(20 real changes made)
```

```
.
```

```
. drop mo_yr imonth iyear
```

```
.
. save "GATE_GTD_Israel_monthly_data_ext.dta", replace
file GATE_GTD_Israel_monthly_data_ext.dta saved
```

```
.
. // Run if want to compare Dugan & Chenoweth's counts with generated GTD count
> s
. gen cnt_diff = att93miss - att_palunk
(13 missing values generated)
```

```
. tab cnt_diff
```

cnt_diff	Freq.	Percent	Cum.
-----+-----			
-7	2	1.01	1.01
-5	2	1.01	2.01
-3	1	0.50	2.51
-2	9	4.52	7.04
-1	19	9.55	16.58
0	155	77.89	94.47
1	9	4.52	98.99
2	2	1.01	100.00
-----+-----			
Total	199	100.00	

```
.
. // Percent of Palestinian-perpetrated attacks from all known perpetrators
. summ att_pal
```

Variable	Obs	Mean	Std. Dev.	Min	Max
-----+-----					
att_pal	200	4.37	4.962482	0	25

```
. sca tot_pal = r(sum)
```

```
. gen att_known = att_tot - att_unk
(12 missing values generated)
```

```
. summ att_known
```

Variable	Obs	Mean	Std. Dev.	Min	Max
-----+-----					
att_known	200	4.61	5.010331	0	25

```

. sca tot_known = r(sum)

. display tot_pal / tot_known
.94793926

.
. // Avg % Palestinian-perpetrated attacks per month for all known perpetrators
. gen pal_perc_kn = att_pal / att_known
(57 missing values generated)

. mean(pal_perc_kn)

```

Mean estimation Number of obs = 155

```

-----
      |   Mean   Std. Err.   [95% Conf. Interval]
-----+-----
pal_perc_kn | .8961965   .0201498   .8563908   .9360023
-----

```

```

.
. // Percent of Palestinian-perpetrated attacks from all perpetrators
. summ att_pal

```

Variable	Obs	Mean	Std. Dev.	Min	Max
att_pal	200	4.37	4.962482	0	25

```

. sca tot_pal = r(sum)

```

```

. summ att_tot

```

Variable	Obs	Mean	Std. Dev.	Min	Max
att_tot	200	6.57	6.626815	0	51

```

. sca tot_att = r(sum)

```

```

. display tot_pal / tot_att
.6651446

```

```

.
. // Avg % Palestinian-perpetrated attacks per month for all perpetrators
. gen pal_perc = att_pal / att_tot
(33 missing values generated)

```

```
. mean(pal_perc)
```

```
Mean estimation      Number of obs =    179
```

```
-----
      |   Mean  Std. Err.   [95% Conf. Interval]
-----+-----
pal_perc |   .5899759   .0271514    .5363958   .6435561
-----
```

```
.
. // Percent of Known-Perpetrator attacks
. summ att_known
```

```
Variable |      Obs      Mean  Std. Dev.   Min   Max
-----+-----
att_known |      200      4.61   5.010331     0    25
```

```
. sca tot_known = r(sum)
```

```
. summ att_tot
```

```
Variable |      Obs      Mean  Std. Dev.   Min   Max
-----+-----
att_tot |      200      6.57   6.626815     0    51
```

```
. sca tot_att = r(sum)
```

```
. display tot_known / tot_att
.70167428
```

```
.
. // Generate summary statistics
. total(att_palunk)
```

```
Total estimation      Number of obs =    200
```

```
-----
      |   Total  Std. Err.   [95% Conf. Interval]
-----+-----
att_palunk |   1266  92.56925   1083.457  1448.543
-----
```

```
. mean(att_palunk)
```

```
Mean estimation      Number of obs =    200
```

	Mean	Std. Err.	[95% Conf. Interval]	
att_palunk	6.33	.4628462	5.417287	7.242713

. total(att_tot)

Total estimation Number of obs = 200

	Total	Std. Err.	[95% Conf. Interval]	
att_tot	1314	93.71731	1129.194	1498.806

. mean(att_tot)

Mean estimation Number of obs = 200

	Mean	Std. Err.	[95% Conf. Interval]	
att_tot	6.57	.4685866	5.645968	7.494032

. total(att_pal)

Total estimation Number of obs = 200

	Total	Std. Err.	[95% Conf. Interval]	
att_pal	874	70.1801	735.6079	1012.392

. mean(att_pal)

Mean estimation Number of obs = 200

	Mean	Std. Err.	[95% Conf. Interval]	
att_pal	4.37	.3509005	3.678039	5.061961

```
. total(att_known)
```

```
Total estimation      Number of obs   =      200
```

```
-----+-----  
      |   Total   Std. Err.   [95% Conf. Interval]  
-----+-----  
att_known |      922   70.85678    782.2735    1061.726  
-----+-----
```

```
.  
.   
.   
. // Run models with recreated GTD counts for Palestinian-only attacks (att_pal  
> ) and Palestinian and Unknown attacks (att_palunk)  
.   
.   
. /* Conciliatory/Repressive and Discriminate/Indiscriminate */  
. sort mcount  
  
.   
. nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firs  
> tint secondint GTD2 L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk, e  
> xposure(popthou)
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -591.83659  
Iteration 1: log likelihood = -590.69081  
Iteration 2: log likelihood = -590.68658  
Iteration 3: log likelihood = -590.68658
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -554.68059  
Iteration 1: log likelihood = -554.3128  
Iteration 2: log likelihood = -554.31245  
Iteration 3: log likelihood = -554.31245
```

Fitting full model:

```
Iteration 0: log likelihood = -513.73876  
Iteration 1: log likelihood = -491.97364  
Iteration 2: log likelihood = -489.83647  
Iteration 3: log likelihood = -489.81771
```


Negative binomial regression	Number of obs	=	191
	LR chi2(12)	=	128.99
Dispersion = mean	Prob > chi2	=	0.0000
Log likelihood = -489.81771	Pseudo R2	=	0.1164

att_palunk	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	-.0040176	.0402309	-0.10	0.920	-.0828686	.0748335
concindisc						
L1.	.0408028	.034876	1.17	0.242	-.027553	.1091585
cindla2	-.0029262	.0015318	-1.91	0.056	-.0059284	.000076
reprdisc						
L1.	.0139588	.0147401	0.95	0.344	-.0149313	.0428488
reprindisc						
L1.	.0057565	.0080341	0.72	0.474	-.0099901	.021503
firstint	.6256768	.1874373	3.34	0.001	.2583065	.9930472
secondint	1.136625	.2760348	4.12	0.000	.5956063	1.677643
GTD2	-1.021481	.2488955	-4.10	0.000	-1.509307	-.5336544
att_palunk						
L1.	.0259768	.0106615	2.44	0.015	.0050806	.0468729
L2.	.0019194	.0096662	0.20	0.843	-.0170261	.0208649
L3.	.0313674	.0101522	3.09	0.002	.0114694	.0512653
L4.	.0220503	.0105309	2.09	0.036	.0014102	.0426904
_cons	-7.841774	.2183511	-35.91	0.000	-8.269735	-7.413814
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.043556	.1668915			-1.370657	-.7164542
-----+-----						
alpha	.3522002	.0587792			.2539401	.4884812

LR test of alpha=0: $\chi^2(01) = 201.74$ Prob $\geq \chi^2 = 0.000$

. est sto m3

```
. nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstin
> t secondint GTD2 L.att_pal L2.att_pal L3.att_pal L4.att_pal, exposure(popthou
> )
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -463.22113
Iteration 1: log likelihood = -461.27946
Iteration 2: log likelihood = -461.2589
Iteration 3: log likelihood = -461.25888
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -485.97042
Iteration 1: log likelihood = -483.22476
Iteration 2: log likelihood = -483.22141
Iteration 3: log likelihood = -483.22141
```

Fitting full model:

```
Iteration 0: log likelihood = -443.69943
Iteration 1: log likelihood = -427.88389
Iteration 2: log likelihood = -416.67331
Iteration 3: log likelihood = -409.76848
Iteration 4: log likelihood = -408.98942
Iteration 5: log likelihood = -408.97793
Iteration 6: log likelihood = -408.97793
```

```
Negative binomial regression      Number of obs   =    191
                                LR chi2(12)    =   148.49
Dispersion    = mean              Prob > chi2      =   0.0000
Log likelihood = -408.97793        Pseudo R2       =   0.1536
```

```
-----+-----
att_pal |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
concdisc |
  L1. | -.0295666 .0482645  -0.61  0.540   -0.1241632   0.0650301
      |
concindisc |
  L1. | .010202 .0382431   0.27  0.790   -0.0647532   0.0851572
      |
cindla2 | -.0015635 .0017233  -0.91  0.364   -0.0049411   0.001814
      |
reprdisc |
  L1. | .0097031 .0162956   0.60  0.552   -0.0222357   0.0416419
```

```

      |
reprindisc |
      L1. | .0106336 .0084745  1.25 0.210  -.0059762  .0272434
      |
      firstint | .867487 .2161064  4.01 0.000  .4439263  1.291048
secondint | 1.634517 .3698473  4.42 0.000  .9096292  2.359404
      GTD2 | -1.233671 .3546363  -3.48 0.001  -1.928746  -.5385969
      |
      att_pal |
      L1. | .036076 .0165162  2.18 0.029  .0037048  .0684473
      L2. | .0264248 .0154159  1.71 0.087  -.0037899  .0566395
      L3. | .0403014 .0160985  2.50 0.012  .0087489  .071854
      L4. | .0353383 .0162718  2.17 0.030  .0034461  .0672305
      |
      _cons | -8.536063 .2476058 -34.47 0.000  -9.021361  -8.050764
ln(popthou) |      1 (exposure)
-----+-----
      /lnalpha | -.9911724  .2049674                -1.392901  -.5894436
-----+-----
      alpha | .3711413  .0760719                .2483538  .5546358
-----+-----
LR test of alpha=0: chibar2(01) = 104.56          Prob >= chibar2 = 0.000

.
.
. /* Conciliatory and Repressive Actions */
.
. nbreg att_palunk L.concil concla2 L.repress firstint secondint GTD2 L.att_pal
> unk L2.att_palunk L3.att_palunk L4.att_palunk, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -592.35437
Iteration 1: log likelihood = -591.2314
Iteration 2: log likelihood = -591.2273
Iteration 3: log likelihood = -591.2273

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -554.68059
Iteration 1: log likelihood = -554.3128
Iteration 2: log likelihood = -554.31245
Iteration 3: log likelihood = -554.31245

```

Fitting full model:

Iteration 0: log likelihood = -513.57552
 Iteration 1: log likelihood = -491.74229
 Iteration 2: log likelihood = -489.59097
 Iteration 3: log likelihood = -489.57226
 Iteration 4: log likelihood = -489.57226

Negative binomial regression Number of obs = 191
 LR chi2(10) = 129.48
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -489.57226 Pseudo R2 = 0.1168

att_palunk	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	.0450596	.0308222	1.46	0.144	-.0153509	.10547
concla2	-.0026541	.0012103	-2.19	0.028	-.0050264	-.0002819
repress						
L1.	.0080251	.0059352	1.35	0.176	-.0036076	.0196578
firstint	.6020958	.1808513	3.33	0.001	.2476337	.9565578
secondint	1.108856	.2745205	4.04	0.000	.5708054	1.646906
GTD2	-1.02499	.2482076	-4.13	0.000	-1.511468	-.5385118
att_palunk						
L1.	.0253353	.0104828	2.42	0.016	.0047894	.0458812
L2.	.0037261	.0096993	0.38	0.701	-.0152842	.0227365
L3.	.0319267	.0100526	3.18	0.001	.012224	.0516294
L4.	.0221103	.0104905	2.11	0.035	.0015493	.0426713
_cons	-7.888832	.2213288	-35.64	0.000	-8.322628	-7.455035
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.044926	.1665822			-1.371421	-.7184311
-----+-----						
alpha	.3517178	.0585899			.2537461	.4875165
-----+-----						

LR test of alpha=0: chibar2(01) = 203.31 Prob >= chibar2 = 0.000

. est sto m2

.
 . nbreg att_pal L.concil concla2 L.repress firstint secondint GTD2 L.att_pal L2
 > .att_pal L3.att_pal L4.att_pal, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -463.45033
Iteration 1: log likelihood = -461.52102
Iteration 2: log likelihood = -461.50061
Iteration 3: log likelihood = -461.5006

Fitting constant-only model:

Iteration 0: log likelihood = -485.97042
Iteration 1: log likelihood = -483.22476
Iteration 2: log likelihood = -483.22141
Iteration 3: log likelihood = -483.22141

Fitting full model:

Iteration 0: log likelihood = -443.59894
Iteration 1: log likelihood = -428.51803
Iteration 2: log likelihood = -417.20013
Iteration 3: log likelihood = -409.66875
Iteration 4: log likelihood = -408.64662
Iteration 5: log likelihood = -408.62684
Iteration 6: log likelihood = -408.62684

Negative binomial regression	Number of obs	=	191
	LR chi2(10)	=	149.19
Dispersion = mean	Prob > chi2	=	0.0000
Log likelihood = -408.62684	Pseudo R2	=	0.1544

att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	.0215332	.0343351	0.63	0.531	-.0457624	.0888287
concla2	-.00188	.0013867	-1.36	0.175	-.0045978	.0008378
repress						
L1.	.0096996	.0066849	1.45	0.147	-.0034026	.0228018
firstint	.8477658	.2109433	4.02	0.000	.4343246	1.261207
secondint	1.627883	.3683939	4.42	0.000	.9058441	2.349921
GTD2	-1.234226	.3536132	-3.49	0.000	-1.927295	-.5411565
att_pal						

L1.		.0371892	.016412	2.27	0.023	.0050222	.0693562
L2.		.0280658	.0154319	1.82	0.069	-.0021801	.0583118
L3.		.0390646	.0158472	2.47	0.014	.0080047	.0701245
L4.		.035691	.0161364	2.21	0.027	.0040643	.0673177
_cons		-8.59676	.2499682	-34.39	0.000	-9.086688	-8.106831
ln(popthou)		1	(exposure)				
-----+-----							
/lnalpha		-.9928	.2043842			-1.393386	-.5922142
-----+-----							
alpha		.3705377	.0757321			.2482334	.5531012
-----+-----							

LR test of alpha=0: chibar2(01) = 105.75 Prob >= chibar2 = 0.000

. est sto m2

```
.
. /* All Actions */
.
. nbreg att_palunk L.allact firstint secondint GTD2 L.att_palunk L2.att_palunk
> L3.att_palunk L4.att_palunk, exposure(popthou)
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -603.29505
Iteration 1: log likelihood = -602.18233
Iteration 2: log likelihood = -602.17854
Iteration 3: log likelihood = -602.17854
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -554.68059
Iteration 1: log likelihood = -554.3128
Iteration 2: log likelihood = -554.31245
Iteration 3: log likelihood = -554.31245
```

Fitting full model:

```
Iteration 0: log likelihood = -514.97638
Iteration 1: log likelihood = -495.39431
Iteration 2: log likelihood = -493.41642
Iteration 3: log likelihood = -493.40862
Iteration 4: log likelihood = -493.40862
```

Negative binomial regression	Number of obs	=	191
LR chi2(8)	=	121.81	

Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -493.40862 Pseudo R2 = 0.1099

att_palunk	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
allact						
L1.	.0043414	.0042762	1.02	0.310	-.0040399	.0127227
firstint	.7073582	.1563241	4.52	0.000	.4009686	1.013748
secondint	1.247033	.2628178	4.74	0.000	.7319191	1.762146
GTD2	-1.008798	.2500602	-4.03	0.000	-1.498907	-.518689
att_palunk						
L1.	.0243447	.0103938	2.34	0.019	.0039731	.0447162
L2.	-.0002099	.0095306	-0.02	0.982	-.0188895	.0184696
L3.	.0316485	.0100998	3.13	0.002	.0118532	.0514438
L4.	.0208902	.0106472	1.96	0.050	.0000022	.0417584
_cons	-7.796355	.1847108	-42.21	0.000	-8.158381	-7.434328
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-.9852352	.1636575			-1.305998	-.6644724
-----+-----						
alpha	.3733514	.0611018			.270902	.5145449

LR test of alpha=0: chibar2(01) = 217.54 Prob >= chibar2 = 0.000

. est sto m1

. nbreg att_pal L.allact firstint secondint GTD2 L.att_pal L2.att_pal L3.att_pa
 > l L4.att_pal, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -468.75279
 Iteration 1: log likelihood = -466.80452
 Iteration 2: log likelihood = -466.78351
 Iteration 3: log likelihood = -466.7835

Fitting constant-only model:

Iteration 0: log likelihood = -485.97042
 Iteration 1: log likelihood = -483.22476
 Iteration 2: log likelihood = -483.22141

Iteration 3: log likelihood = -483.22141

Fitting full model:

Iteration 0: log likelihood = -444.33946

Iteration 1: log likelihood = -425.41651

Iteration 2: log likelihood = -414.95405

Iteration 3: log likelihood = -411.53041

Iteration 4: log likelihood = -411.42719

Iteration 5: log likelihood = -411.42703

Iteration 6: log likelihood = -411.42703

Negative binomial regression Number of obs = 191

LR chi2(8) = 143.59

Dispersion = mean Prob > chi2 = 0.0000

Log likelihood = -411.42703 Pseudo R2 = 0.1486

att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	

allact						
L1.	.0031894	.0048077	0.66	0.507	-.0062335	.0126123
firstint	1.023133	.186972	5.47	0.000	.6566746	1.389591
secondint	1.840993	.3555719	5.18	0.000	1.144085	2.537902
GTD2	-1.223234	.3545393	-3.45	0.001	-1.918118	-.5283498
att_pal						
L1.	.0358301	.0165922	2.16	0.031	.0033101	.0683502
L2.	.0220736	.0153232	1.44	0.150	-.0079593	.0521064
L3.	.0380999	.0157955	2.41	0.016	.0071413	.0690585
L4.	.0315678	.0160979	1.96	0.050	.0000164	.0631191
_cons	-8.577613	.2166374	-39.59	0.000	-9.002214	-8.153011
ln(popthou)	1 (exposure)					

/lnalpha	-.945746	.202219			-1.342088	-.549404

alpha	.3883897	.0785398			.2612995	.5772938

LR test of alpha=0: chibar2(01) = 110.71 Prob >= chibar2 = 0.000

. est sto m1

.
.


```

. clear

.

. // Create monthly terrorist attack counts from RAND database

.
. import delimited "C:\Users\natra\Documents\Education\UChicago\Quantitative Se
> curity\Dugan-Chenoweth_Moving-beyond-deterrence\RAND_Database_of_Worldwide_Te
> rrorism_Incidents\RAND_Database_of_Worldwide_Terrorism_Incidents.csv"
(8 vars, 40,129 obs)

.

. keep if (country == "Israel" | country == "West Bank/Gaza" )
(36,404 observations deleted)

.

. gen inc_date = date(date, "DMY", 2009)

.

. keep if inrange(inc_date,td(01jun1987),td(31dec2004))
(1,676 observations deleted)

.

. save "C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan
> -Chenoweth_Moving-beyond-deterrence\rand_terrorism_87-04.dta", replace
file C:\Users\natra\Documents\Education\UChicago\Quantitative Security\Dugan-Ch
> enoweth_Moving-beyond-deterrence\rand_terrorism_87-04.dta saved

.

. clear

.

. // rand_perpetrator_affiliations.xlsx created by manually assigning each Perp
> etrator in the above dataset as a Palestine affiliate, Unknown, or non-Palest
> inian
. import excel "rand_perpetrator_affiliations.xlsx", firstrow
(4 vars, 31 obs)

.

. save "rand_perp_affiliations.dta", replace
file rand_perp_affiliations.dta saved

.

.

. use "rand_terrorism_87-04.dta"

```

```
. merge m:1 perpetrator using "rand_perp_affiliations.dta"
```

Result	# of obs.
not matched	0
matched	2,049 (_merge==3)

```
. gen month=month(inc_date)
```

```
. gen yr=year(inc_date)
```

```
. egen mo_yr = concat(month yr), punct(-)
```

```
. egen att_pal = sum(palestineaffiliate), by(mo_yr)
```

```
. egen att_unk = sum(unknown), by(mo_yr)
```

```
. egen att_tot = count(description), by(mo_yr)
```

```
. egen att_palunk = rowtotal(att_pal-att_unk)
```

```
. save "rand_terrorism_87-04.dta", replace
file rand_terrorism_87-04.dta saved
```

```
. // Aggregate RAND terrorist attacks to month-year level to merge with GATE-Is
> rael data in "GATE_GTD_Israel_monthly_data_STATA.dta"
. keep yr month mo_yr att_pal att_unk att_palunk att_tot
```

```
. dups, drop key(mo_yr)
```

```
group by: month yr mo_yr att_pal att_unk att_tot att_palunk
```

```
groups formed: 125 containing 2005 observations
unique observations: 44
```

```
groups of duplicate observations:
```

```
+-----+
|_group _count mo_yr |
```

1	3	1-1991
2	3	1-1993
3	2	1-1995
4	2	1-1997
5	7	1-1998

6	4	1-1999
7	35	1-2001
8	55	1-2002
9	32	1-2003
10	14	1-2004

11	4	2-1988
12	3	2-1989
13	2	2-1991
14	4	2-1994
15	3	2-1996

16	3	2-1998
17	6	2-1999
18	2	2-2000
19	59	2-2001
20	93	2-2002

21	6	2-2003
22	6	2-2004
23	7	3-1988
24	2	3-1989
25	2	3-1990

26	3	3-1991
27	5	3-1993
28	5	3-1994
29	2	3-1995
30	2	3-1996

31	3	3-1998
32	2	3-1999
33	39	3-2001
34	116	3-2002
35	27	3-2003

36	11	3-2004
37	4	4-1988
38	5	4-1989

	39	2	4-1991	
	40	4	4-1994	

	41	2	4-1995	
	42	5	4-1998	
	43	2	4-1999	
	44	12	4-2001	
	45	41	4-2002	

	46	21	4-2003	
	47	13	4-2004	
	48	4	5-1989	
	49	3	5-1990	
	50	3	5-1992	

	51	2	5-1994	
	52	7	5-1998	
	53	5	5-1999	
	54	18	5-2001	
	55	23	5-2002	

	56	40	5-2003	
	57	6	5-2004	
	58	3	6-1987	
	59	9	6-1988	
	60	2	6-1989	

	61	7	6-1990	
	62	2	6-1991	
	63	3	6-1998	
	64	7	6-2001	
	65	30	6-2002	

	66	39	6-2003	
	67	7	6-2004	
	68	2	7-1990	
	69	2	7-1993	
	70	3	7-1994	

	71	2	7-1997	
	72	7	7-1998	
	73	27	7-2001	
	74	33	7-2002	
	75	11	7-2003	

	76	23	7-2004	

	77	3	8-1994	
	78	2	8-1995	
	79	2	8-1996	
	80	3	8-1998	

	81	2	8-1999	
	82	32	8-2001	
	83	30	8-2002	
	84	17	8-2003	
	85	39	8-2004	

	86	6	9-1989	
	87	2	9-1995	
	88	3	9-1998	
	89	4	9-2000	
	90	9	9-2001	

	91	43	9-2002	
	92	7	9-2003	
	93	33	9-2004	
	94	2	10-1987	
	95	3	10-1988	

	96	3	10-1990	
	97	3	10-1991	
	98	2	10-1992	
	99	4	10-1994	
	100	5	10-1998	

	101	36	10-2000	
	102	34	10-2001	
	103	32	10-2002	
	104	15	10-2003	
	105	24	10-2004	

	106	6	11-1987	
	107	3	11-1990	
	108	2	11-1994	
	109	3	11-1995	
	110	3	11-1998	

	111	90	11-2000	
	112	100	11-2001	
	113	27	11-2002	
	114	6	11-2003	
	115	67	11-2004	

```

|-----|
| 116   13 12-1987 |
| 117    2 12-1989 |
| 118    3 12-1990 |
| 119    3 12-1993 |
| 120    2 12-1998 |
|-----|
| 121   50 12-2000 |
| 122   41 12-2001 |
| 123   17 12-2002 |
| 124   17 12-2003 |
| 125  135 12-2004 |
|-----+

```

(1,880 observations deleted)

observations remaining: 169

```
. drop _expand
```

```
.
. save "rand_terrorism_tomerge.dta", replace
file rand_terrorism_tomerge.dta saved
```

```
.
. use "GATE_GTD_Israel_monthly_data_STATA.dta"
```

```
.
. egen mo_yr = concat(month year), punct(-)
```

```
. merge 1:1 mo_yr using "rand_terrorism_tomerge.dta"
(note: variable month was byte, now float to accommodate using data's values)
```

Result	# of obs.
not matched	42
from master	42 (_merge==1)
from using	0 (_merge==2)
matched	169 (_merge==3)

```
.
. replace att_pal = 0 if missing(att_pal)
(42 real changes made)
```

```

. replace att_unk = 0 if missing(att_unk)
(42 real changes made)

. replace att_palunk = 0 if missing(att_palunk)
(42 real changes made)

. replace att_tot = 0 if missing(att_tot)
(42 real changes made)

. gen RAND2 = 1 if year >= 1998
(127 missing values generated)

. replace RAND2 = 0 if missing(RAND2)
(127 real changes made)

.
. drop mo_yr month yr GTD2

.
. save "GATE RAND Israel monthly data.dta", replace
file GATE RAND Israel monthly data.dta saved

.
.
.
. // Run if want to compare RAND with Dugan and Chenoweth's GTD counts
. gen pers_diff = att93miss - att_palunk
(12 missing values generated)

. tab pers_diff

```

pers_diff	Freq.	Percent	Cum.
-133	1	0.50	0.50
-91	1	0.50	1.01
-88	1	0.50	1.51
-78	1	0.50	2.01
-66	1	0.50	2.51
-63	1	0.50	3.02
-55	1	0.50	3.52
-49	1	0.50	4.02
-45	1	0.50	4.52
-41	1	0.50	5.03
-34	1	0.50	5.53
-33	2	1.01	6.53
-31	1	0.50	7.04

-30	1	0.50	7.54
-29	1	0.50	8.04
-28	2	1.01	9.05
-27	2	1.01	10.05
-26	1	0.50	10.55
-25	1	0.50	11.06
-24	1	0.50	11.56
-23	1	0.50	12.06
-21	1	0.50	12.56
-20	2	1.01	13.57
-18	1	0.50	14.07
-17	1	0.50	14.57
-16	1	0.50	15.08
-14	1	0.50	15.58
-13	1	0.50	16.08
-12	2	1.01	17.09
-11	1	0.50	17.59
-10	1	0.50	18.09
-9	2	1.01	19.10
-8	3	1.51	20.60
-5	7	3.52	24.12
-4	4	2.01	26.13
-3	6	3.02	29.15
-2	5	2.51	31.66
-1	16	8.04	39.70
0	26	13.07	52.76
1	9	4.52	57.29
2	14	7.04	64.32
3	12	6.03	70.35
4	4	2.01	72.36
5	7	3.52	75.88
6	9	4.52	80.40
7	8	4.02	84.42
8	5	2.51	86.93
9	3	1.51	88.44
10	5	2.51	90.95
11	2	1.01	91.96
12	4	2.01	93.97
14	2	1.01	94.97
15	3	1.51	96.48
17	1	0.50	96.98
18	1	0.50	97.49
19	4	2.01	99.50
20	1	0.50	100.00
-----+-----			
Total	199	100.00	


```
.
. // Generate summary statistics - all years
. total(att_palunk)
```

Total estimation Number of obs = 211

```
-----
      |   Total  Std. Err.   [95% Conf. Interval]
-----+-----
att_palunk |   2025  286.6429   1459.934  2590.066
-----
```

```
. mean(att_palunk)
```

Mean estimation Number of obs = 211

```
-----
      |   Mean  Std. Err.   [95% Conf. Interval]
-----+-----
att_palunk |  9.597156  1.358497   6.919117  12.2752
-----
```

```
. total(att_tot)
```

Total estimation Number of obs = 211

```
-----
      |   Total  Std. Err.   [95% Conf. Interval]
-----+-----
att_tot |   2049  287.3337   1482.572  2615.428
-----
```

```
. mean(att_tot)
```

Mean estimation Number of obs = 211

```
-----
      |   Mean  Std. Err.   [95% Conf. Interval]
-----+-----
att_tot |  9.7109  1.361771   7.026407  12.39539
-----
```

```
. total(att_pal)
```

Total estimation Number of obs = 211

	Total	Std. Err.	[95% Conf. Interval]	
att_pal	632	129.0501	377.6004	886.3996

. mean(att_pal)

Mean estimation Number of obs = 211

	Mean	Std. Err.	[95% Conf. Interval]	
att_pal	2.995261	.6116118	1.789575	4.200946

.
 . // Generate summary statistics - post-1998
 . total(att_palunk) if year >= 1998

Total estimation Number of obs = 84

	Total	Std. Err.	[95% Conf. Interval]	
att_palunk	1817	248.6353	1322.474	2311.526

. mean(att_palunk) if year >= 1998

Mean estimation Number of obs = 84

	Mean	Std. Err.	[95% Conf. Interval]	
att_palunk	21.63095	2.959944	15.74374	27.51816

. total(att_tot) if year >= 1998

Total estimation Number of obs = 84

	Total	Std. Err.	[95% Conf. Interval]	
--	-------	-----------	----------------------	--

```
att_tot |    1830  249.1366   1334.477  2325.523
-----
```

```
. mean(att_tot) if year >= 1998
```

```
Mean estimation      Number of obs =      84
```

```
-----
      |    Mean  Std. Err.   [95% Conf. Interval]
-----+-----
att_tot |  21.78571  2.965912   15.88663   27.68479
-----
```

```
. total(att_pal) if year >= 1998
```

```
Total estimation      Number of obs =      84
```

```
-----
      |   Total  Std. Err.   [95% Conf. Interval]
-----+-----
att_pal |    537  122.3613   293.6284   780.3716
-----
```

```
. mean(att_pal) if year >= 1998
```

```
Mean estimation      Number of obs =      84
```

```
-----
      |    Mean  Std. Err.   [95% Conf. Interval]
-----+-----
att_pal |  6.392857  1.456682   3.495576   9.290138
-----
```

```
.
. // Percent of Known-Perpetrator attacks - post-1998
. summ att_tot
```

```
Variable |    Obs    Mean  Std. Dev.    Min    Max
-----+-----
att_tot |    211    9.7109  19.78087     0    135
```

```
. sca tot_att = r(sum)
```

```
. gen att_known = att_tot - att_unk
```

```
. summ att_known
```

Variable	Obs	Mean	Std. Dev.	Min	Max
att_known	211	3.109005	8.896359	0	110

```
. sca tot_known = r(sum)
```

```
. display tot_known / tot_att
.32015617
```

```
.
. // Percent of Palestinian-perpetrated attacks of known - post-1998
. summ att_pal
```

Variable	Obs	Mean	Std. Dev.	Min	Max
att_pal	211	2.995261	8.884174	0	110

```
. sca tot_pal = r(sum)
```

```
. //gen att_known = att_tot - att_unk
. summ att_known
```

Variable	Obs	Mean	Std. Dev.	Min	Max
att_known	211	3.109005	8.896359	0	110

```
. sca tot_known = r(sum)
```

```
. display tot_pal / tot_known
.96341463
```

```
.
. // Avg % Palestinian-perpetrated attacks per month
. gen pal_perc = att_pal / att_known
(90 missing values generated)
```

```
. mean(pal_perc)
```

```
Mean estimation      Number of obs   =      121
```

	Mean	Std. Err.	[95% Conf. Interval]
pal_perc	.8812021	.0265658	.8286037 .9338006

```

.
.
. // Run RAND data models - all years
.
. /* Conciliatory/Repressive and Discriminate/Indiscriminate */
.
. sort mcount

.
. nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc fir
> tint secondint RAND2 L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk,
> exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -3130.8493
Iteration 1: log likelihood = -1395.0622
Iteration 2: log likelihood = -839.83324
Iteration 3: log likelihood = -754.93592
Iteration 4: log likelihood = -753.83127
Iteration 5: log likelihood = -753.82984
Iteration 6: log likelihood = -753.82984

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -666.66238
Iteration 1: log likelihood = -621.61073
Iteration 2: log likelihood = -621.3754
Iteration 3: log likelihood = -621.37521
Iteration 4: log likelihood = -621.37521

```

Fitting full model:

```

Iteration 0: log likelihood = -575.53791
Iteration 1: log likelihood = -518.82571 (backed up)
Iteration 2: log likelihood = -499.26541
Iteration 3: log likelihood = -498.30592
Iteration 4: log likelihood = -498.29445
Iteration 5: log likelihood = -498.29445

```

Negative binomial regression	Number of obs	=	207
	LR chi2(12)	=	246.16
Dispersion = mean	Prob > chi2	=	0.0000
Log likelihood = -498.29445	Pseudo R2	=	0.1981

```

-----
att_palunk |   Coef.  Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
concdisc |
  L1. | .0271455 .0446697   0.61  0.543   -0.0604055   .1146965
      |
concindisc |
  L1. | -.0057699 .0377605  -0.15  0.879   -0.0797791   .0682392
      |
cindla2 | -.0007142 .0016321  -0.44  0.662   -0.0039131   .0024847
      |
reprdisc |
  L1. | .0111258 .0155029   0.72  0.473   -0.0192594   .041511
      |
reprindisc |
  L1. | .001518 .0085058   0.18  0.858   -0.015153   .018189
      |
firstint | .4319013 .2291928   1.88  0.060   -0.0173082   .8811109
secondint | 1.834066 .259083   7.08  0.000   1.326273   2.341859
  RAND2 | .4523179 .2461496   1.84  0.066   -0.0301265   .9347622
      |
att_palunk |
  L1. | .0194637 .0051335   3.79  0.000   .0094023   .0295251
  L2. | -.0059872 .0050752  -1.18  0.238   -0.0159344   .00396
  L3. | .0114016 .0057434   1.99  0.047   .0001447   .0226585
  L4. | -.0045229 .0049178  -0.92  0.358   -0.0141616   .0051157
      |
  _cons | -8.356765 .2560603 -32.64  0.000   -8.858634  -7.854896
ln(popthou) |      1 (exposure)
-----+-----
/lnalpha | -.8107304 .1726535          -1.149125  -.4723357
-----+-----
alpha | .4445333 .0767502          .3169139  .6235441
-----

```

LR test of alpha=0: chibar2(01) = 511.07 Prob >= chibar2 = 0.000

. est sto m3

```

.
. nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc firstin
> t secondint RAND2 L.att_pal L2.att_pal L3.att_pal L4.att_pal, exposure(poptho
> u)

```

Fitting Poisson model:

Iteration 0: log likelihood = -6548.6862

Iteration 1: log likelihood = -4964.5988 (backed up)
 Iteration 2: log likelihood = -2343.2204 (backed up)
 Iteration 3: log likelihood = -1236.0068
 Iteration 4: log likelihood = -1226.7095
 Iteration 5: log likelihood = -399.27711
 Iteration 6: log likelihood = -348.46307
 Iteration 7: log likelihood = -334.56981
 Iteration 8: log likelihood = -334.53454
 Iteration 9: log likelihood = -334.53453

Fitting constant-only model:

Iteration 0: log likelihood = -448.65677
 Iteration 1: log likelihood = -407.16121
 Iteration 2: log likelihood = -407.01485
 Iteration 3: log likelihood = -407.01445
 Iteration 4: log likelihood = -407.01445

Fitting full model:

Iteration 0: log likelihood = -374.27624
 Iteration 1: log likelihood = -334.28886 (backed up)
 Iteration 2: log likelihood = -318.9244
 Iteration 3: log likelihood = -317.41093
 Iteration 4: log likelihood = -315.61745
 Iteration 5: log likelihood = -315.60412
 Iteration 6: log likelihood = -315.60411

Negative binomial regression Number of obs = 207
 LR chi2(12) = 182.82
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -315.60411 Pseudo R2 = 0.2246

att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	-.0136438	.0574716	-0.24	0.812	-.1262861	.0989986
concindisc						
L1.	.1026248	.0465993	2.20	0.028	.0112919	.1939578
cindla2	-.0061955	.0023502	-2.64	0.008	-.0108018	-.0015892
reprdisc						
L1.	-.0067155	.0185831	-0.36	0.718	-.0431377	.0297068

```

      |
reprindisc |
      L1. | -.003968 .0086153 -.046 0.645 -.0208538 .0129177
      |
      firstint | -.1376152 .2651123 -.052 0.604 -.6572258 .3819953
secondint | 2.448277 .4428104 5.53 0.000 1.580384 3.316169
      RAND2 | -1.354533 .411757 -3.29 0.001 -2.161562 -.5475045
      |
      att_pal |
      L1. | .048552 .0151476 3.21 0.001 .0188633 .0782408
      L2. | .013769 .0210936 0.65 0.514 -.0275738 .0551117
      L3. | .0261627 .0216463 1.21 0.227 -.0162632 .0685885
      L4. | .0427057 .0218324 1.96 0.050 -.0000851 .0854965
      |
      _cons | -8.982391 .2757401 -32.58 0.000 -9.522832 -8.44195
ln(popthou) | 1 (exposure)
-----+-----
      /lnalpha | -1.171324 .3201937 -1.798892 -.5437563
-----+-----
      alpha | .3099562 .099246 .1654821 .5805634
-----+-----
LR test of alpha=0: chibar2(01) = 37.86 Prob >= chibar2 = 0.000

. est sto m3

.
. /* Conciliatory and Repressive Actions */
.
. nbreg att_palunk L.concil concla2 L.repress firstint secondint RAND2 L.att_pa
> lunk L2.att_palunk L3.att_palunk L4.att_palunk, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -3121.806
Iteration 1: log likelihood = -1421.8881
Iteration 2: log likelihood = -849.67272
Iteration 3: log likelihood = -749.40416
Iteration 4: log likelihood = -748.20346
Iteration 5: log likelihood = -748.20299
Iteration 6: log likelihood = -748.20299

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -666.66238
Iteration 1: log likelihood = -621.61073
Iteration 2: log likelihood = -621.3754

```


Iteration 4: $\log \text{likelihood} = -621.37521$

Iteration 0: log likelihood = -575.55157

Iteration 2: log likelihood = -504.24427

Iteration 4: log likelihood = -498.48872

Iteration 6: $\log \text{likelihood} = -498.48836$

$$\text{LR chi2(10)} = 245.77$$

Log likelihood = -498.48836 Pseudo R2 = 0.1978

att_palunk	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concil						
L1.	.0199549	.0342032	0.58	0.560	-.0470822	.086992
concla2	-.0014811	.0013877	-1.07	0.286	-.004201	.0012388
repress						
L1.	.0046053	.005784	0.80	0.426	-.0067311	.0159417
firstint	.4490332	.2219222	2.02	0.043	.0140737	.8839926
secondint	1.804015	.2561297	7.04	0.000	1.30201	2.30602
RAND2	.4249434	.2438355	1.74	0.081	-.0529654	.9028521
att_palunk						
L1.	.0191989	.0050291	3.82	0.000	.009342	.0290558
L2.	-.0060031	.0050016	-1.20	0.230	-.0158061	.0037998
L3.	.0110724	.0055093	2.01	0.044	.0002744	.0218704
L4.	-.0037114	.0045042	-0.82	0.410	-.0125394	.0051166
_cons	-8.411628	.2581175	-32.59	0.000	-8.917529	-7.905727
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-.820217	.1738713			-1.160998	-.4794355
-----+-----						
alpha	.4403361	.0765618			.3131734	.6191328

LR test of alpha=0: $\chi^2(01) = 499.43$ Prob $\geq \chi^2 = 0.000$

. est sto m2

.
. nbreg att_pal L.concil concla2 L.repress firstint secondint RAND2 L.att_pal L
> 2.att_pal L3.att_pal L4.att_pal, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -6424.6623
Iteration 1: log likelihood = -5030.3603 (backed up)
Iteration 2: log likelihood = -2262.9468 (backed up)
Iteration 3: log likelihood = -1976.0753 (backed up)
Iteration 4: log likelihood = -1388.9287
Iteration 5: log likelihood = -484.18429
Iteration 6: log likelihood = -341.89904
Iteration 7: log likelihood = -339.66134
Iteration 8: log likelihood = -339.65373
Iteration 9: log likelihood = -339.65373

Fitting constant-only model:

Iteration 0: log likelihood = -448.65677
Iteration 1: log likelihood = -407.16121
Iteration 2: log likelihood = -407.01485
Iteration 3: log likelihood = -407.01445
Iteration 4: log likelihood = -407.01445

Fitting full model:

Iteration 0: log likelihood = -374.51307
Iteration 1: log likelihood = -346.80321
Iteration 2: log likelihood = -318.24869
Iteration 3: log likelihood = -317.12277
Iteration 4: log likelihood = -317.09183
Iteration 5: log likelihood = -317.0918

Negative binomial regression Number of obs = 207
 LR $\chi^2(10)$ = 179.85
Dispersion = mean Prob > χ^2 = 0.0000
Log likelihood = -317.0918 Pseudo R2 = 0.2209

att_pal | Coef. Std. Err. z P>|z| [95% Conf. Interval]
-----+-----

```

concil |
  L1. | .0713786 .0423069 1.69 0.092 -.0115414 .1542987
      |
concla2 | -.0038006 .0018098 -2.10 0.036 -.0073477 -.0002535
      |
repress |
  L1. | -.0039687 .0068325 -0.58 0.561 -.0173601 .0094228
      |
firstint | -.1902046 .2608814 -0.73 0.466 -.7015227 .3211135
secondint | 2.428915 .4394321 5.53 0.000 1.567644 3.290186
  RAND2 | -1.365093 .4122733 -3.31 0.001 -2.173134 -.5570521
      |
att_pal |
  L1. | .0495981 .0150587 3.29 0.001 .0200836 .0791125
  L2. | .0147405 .0214643 0.69 0.492 -.0273288 .0568098
  L3. | .0280779 .0210674 1.33 0.183 -.0132135 .0693692
  L4. | .0400411 .0213179 1.88 0.060 -.0017413 .0818234
      |
_cons | -8.947663 .2842905 -31.47 0.000 -9.504862 -8.390464
ln(popthou) | 1 (exposure)
-----+-----
/lnalpha | -1.116096 .3113453 -1.726321 -.5058703
-----+-----
alpha | .3275562 .1019831 .1779378 .6029806
-----+-----
LR test of alpha=0: chibar2(01) = 45.12 Prob >= chibar2 = 0.000

. est sto m2

.
. /* All Actions */
.
. nbreg att_palunk L.allact firstint secondint RAND2 L.att_palunk L2.att_palunk
> L3.att_palunk L4.att_palunk, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -3109.0448
Iteration 1: log likelihood = -3090.3368
Iteration 2: log likelihood = -822.63603
Iteration 3: log likelihood = -758.57514
Iteration 4: log likelihood = -756.97731
Iteration 5: log likelihood = -756.97571
Iteration 6: log likelihood = -756.97571

```

Fitting constant-only model:

Iteration 0: log likelihood = -666.66238
 Iteration 1: log likelihood = -621.61073
 Iteration 2: log likelihood = -621.3754
 Iteration 3: log likelihood = -621.37521
 Iteration 4: log likelihood = -621.37521

Fitting full model:

Iteration 0: log likelihood = -575.40253
 Iteration 1: log likelihood = -518.02563
 Iteration 2: log likelihood = -501.8929
 Iteration 3: log likelihood = -499.70717
 Iteration 4: log likelihood = -499.59341
 Iteration 5: log likelihood = -499.59325
 Iteration 6: log likelihood = -499.59325

Negative binomial regression Number of obs = 207
 LR chi2(8) = 243.56
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -499.59325 Pseudo R2 = 0.1960

```
-----+-----
att_palunk |   Coef.   Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
allact |
  L1. | .0031192 .0040642   0.77  0.443   -.0048465   .0110848
      |
firstint | .5762891 .1972958   2.92  0.003   .1895965   .9629817
secondint | 1.860033 .251953   7.38  0.000   1.366214   2.353852
  RAND2 | .5276429 .233663   2.26  0.024   .0696719   .985614
      |
att_palunk |
  L1. | .0191498 .0050817   3.77  0.000   .0091898   .0291099
  L2. | -.0060057 .0049033  -1.22  0.221  -.0156161   .0036047
  L3. | .0083595 .0051896   1.61  0.107  -.0018119   .018531
  L4. | -.0027523 .0045379  -0.61  0.544  -.0116463   .0061418
      |
   _cons | -8.489837 .2001526 -42.42  0.000  -8.882129  -8.097546
ln(popthou) |      1 (exposure)
-----+-----
  /lnalpha | -.8147791 .1747714          -1.157325  -.4722336
-----+-----
    alpha | .4427371 .0773778          .314326   .6236078
-----+-----
LR test of alpha=0: chibar2(01) = 514.76      Prob >= chibar2 = 0.000
```

```
. est sto m1
```

```
.  
. nbreg att_pal L.allact firstint secondint RAND2 L.att_pal L2.att_pal L3.att_p  
> al L4.att_pal, exposure(popthou)
```

Fitting Poisson model:

```
Iteration 0: log likelihood = -6201.0422  
Iteration 1: log likelihood = -4969.4215 (backed up)  
Iteration 2: log likelihood = -1691.7028 (backed up)  
Iteration 3: log likelihood = -1069.7792  
Iteration 4: log likelihood = -357.57436  
Iteration 5: log likelihood = -348.1402  
Iteration 6: log likelihood = -348.08501  
Iteration 7: log likelihood = -348.085
```

Fitting constant-only model:

```
Iteration 0: log likelihood = -448.65677  
Iteration 1: log likelihood = -407.16121  
Iteration 2: log likelihood = -407.01485  
Iteration 3: log likelihood = -407.01445  
Iteration 4: log likelihood = -407.01445
```

Fitting full model:

```
Iteration 0: log likelihood = -374.57295  
Iteration 1: log likelihood = -345.23246  
Iteration 2: log likelihood = -319.67763  
Iteration 3: log likelihood = -319.25102  
Iteration 4: log likelihood = -319.24743  
Iteration 5: log likelihood = -319.24743
```

```
Negative binomial regression      Number of obs   =      207  
                                LR chi2(8)         =    175.53  
Dispersion    = mean              Prob > chi2      =    0.0000  
Log likelihood = -319.24743        Pseudo R2        =    0.2156
```

```
-----  
att_pal |   Coef.  Std. Err.   z  P>|z|  [95% Conf. Interval]  
-----+-----  
allact |  
  L1. | -.0053931 .0048962  -1.10  0.271  -.0149894 .0042033  
      |
```

```

firstint | -.1863374 .2422275 -0.77 0.442 -.6610945 .2884198
secondint | 2.513296 .431176 5.83 0.000 1.668206 3.358385
RAND2 | -1.343827 .4128987 -3.25 0.001 -2.153094 -.5345608
|
att_pal |
L1. | .0497173 .0155226 3.20 0.001 .0192934 .0801411
L2. | .0090327 .0220992 0.41 0.683 -.0342809 .0523463
L3. | .0334959 .0217661 1.54 0.124 -.0091649 .0761567
L4. | .0397456 .0219755 1.81 0.071 -.0033256 .0828168
|
_cons | -8.70182 .2304109 -37.77 0.000 -9.153417 -8.250223
ln(popthou) | 1 (exposure)
-----+-----
/lnalpha | -1.010587 .2936992 -1.586227 -.4349474
-----+-----
alpha | .3640052 .106908 .2046965 .6472987
-----+-----
LR test of alpha=0: chibar2(01) = 57.68 Prob >= chibar2 = 0.000

. est sto m1

.
.
. // Run Models - post-1998
.
. /* Conciliatory/Repressive and Discriminate/Indiscriminate */
.
. sort mcount

.
. nbreg att_palunk L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc seco
> ndint L.att_palunk L2.att_palunk L3.att_palunk L4.att_palunk if year >= 1998,
> exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -529.01536
Iteration 1: log likelihood = -514.50082
Iteration 2: log likelihood = -514.46315
Iteration 3: log likelihood = -514.46315

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -342.38079
Iteration 1: log likelihood = -338.54234
Iteration 2: log likelihood = -338.54029

```

Iteration 3: log likelihood = -338.54029

Fitting full model:

Iteration 0: log likelihood = -314.45082
Iteration 1: log likelihood = -308.88005
Iteration 2: log likelihood = -288.54156
Iteration 3: log likelihood = -282.02881
Iteration 4: log likelihood = -281.9799
Iteration 5: log likelihood = -281.97985
Iteration 6: log likelihood = -281.97985

Negative binomial regression Number of obs = 84
 LR chi2(10) = 113.12
Dispersion = mean Prob > chi2 = 0.0000
Log likelihood = -281.97985 Pseudo R2 = 0.1671

```
-----
att_palunk |    Coef. Std. Err.    z   P>|z|   [95% Conf. Interval]
-----+-----
      concdisc |
          L1. | -.074841   .0647894   -1.16  0.248   -0.2018258   .0521439
              |
      concindisc |
          L1. | .0421902   .0440716    0.96  0.338   -0.0441885   .1285689
              |
          cindla2 | -.0020833   .0019247   -1.08  0.279   -0.0058556   .0016891
              |
          reprdisc |
          L1. | .0068832   .0153148    0.45  0.653   -0.0231331   .0368996
              |
          reprindisc |
          L1. | .0064551   .0088774    0.73  0.467   -0.0109443   .0238545
              |
          secondint | 1.788983   .2444134    7.32  0.000    1.309942   2.268025
              |
          att_palunk |
          L1. | .0179442   .0047372    3.79  0.000    .0086594   .0272289
          L2. | -.0067318   .0045887   -1.47  0.142   -0.0157254   .0022619
          L3. | .0098849   .0053103    1.86  0.063   -0.0005231   .0202929
          L4. | -.0013934   .0046224   -0.30  0.763   -0.0104531   .0076662
              |
          _cons | -8.017713   .2200387  -36.44  0.000   -8.448981   -7.586445
ln(popthou) |            1 (exposure)
-----+-----
      /lnalpha | -1.028073   .1959596                      -1.412147   -0.6439995
```

```

-----+-----
alpha | .3576955 .0700939 .2436197 .5251877
-----
LR test of alpha=0: chibar2(01) = 464.97      Prob >= chibar2 = 0.000

```

```
. est sto m3
```

```
.
. nbreg att_pal L.concdisc L.concindisc cindla2 L.reprdisc L.reprindisc secondi
> nt L.att_pal L2.att_pal L3.att_pal L4.att_pal if year >= 1998, exposure(popth
> ou)
```

Fitting Poisson model:

```

Iteration 0: log likelihood = -1805.6336
Iteration 1: log likelihood = -675.29101
Iteration 2: log likelihood = -333.52069
Iteration 3: log likelihood = -185.18629
Iteration 4: log likelihood = -176.30883
Iteration 5: log likelihood = -176.00761
Iteration 6: log likelihood = -176.0067
Iteration 7: log likelihood = -176.0067

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -243.12866
Iteration 1: log likelihood = -230.02006
Iteration 2: log likelihood = -230.00382
Iteration 3: log likelihood = -230.00381

```

Fitting full model:

```

Iteration 0: log likelihood = -210.64602 (not concave)
Iteration 1: log likelihood = -189.4746
Iteration 2: log likelihood = -166.95946
Iteration 3: log likelihood = -166.46942
Iteration 4: log likelihood = -164.5771
Iteration 5: log likelihood = -164.52909
Iteration 6: log likelihood = -164.52897
Iteration 7: log likelihood = -164.52897

```

```

Negative binomial regression      Number of obs   =      84
                                LR chi2(10)        =    130.95
Dispersion    = mean              Prob > chi2      =    0.0000
Log likelihood = -164.52897        Pseudo R2       =    0.2847

```


att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
concdisc						
L1.	-.0828053	.0795119	-1.04	0.298	-.2386457	.0730352
concindisc						
L1.	.1569738	.054677	2.87	0.004	.0498089	.2641387
cindla2	-.0087809	.0031143	-2.82	0.005	-.0148849	-.002677
reprdisc						
L1.	-.0127942	.0177258	-0.72	0.470	-.0475362	.0219478
reprindisc						
L1.	-.0032176	.0079809	-0.40	0.687	-.0188598	.0124247
secondint	2.472653	.4310986	5.74	0.000	1.627715	3.31759
att_pal						
L1.	.0489364	.013022	3.76	0.000	.0234137	.0744591
L2.	.0082009	.0189481	0.43	0.665	-.0289367	.0453386
L3.	.0340173	.0204142	1.67	0.096	-.0059938	.0740284
L4.	.040193	.0193175	2.08	0.037	.0023314	.0780546
_cons	-10.4391	.4041958	-25.83	0.000	-11.23131	-9.646895
ln(popthou)	1 (exposure)					
-----+-----						
/lnalpha	-1.661896	.3659654			-2.379175	-.9446172
-----+-----						
alpha	.1897788	.0694525			.0926269	.3888284

LR test of alpha=0: chibar2(01) = 22.96 Prob >= chibar2 = 0.000

. est sto m3

.
 . /* Conciliatory and Repressive Actions */
 .

. nbreg att_palunk L.concil concla2 L.repress secondint L.att_palunk L2.att_pal
 > unk L3.att_palunk L4.att_palunk if year >= 1998, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -522.35138

Iteration 1: log likelihood = -508.95867

/lnalpha	-1.021057	.1962305		-1.405661	-.636452
-----+-----					
alpha	.3602141	.070685		.2452048	.5291666

LR test of alpha=0: chibar2(01) = 452.96 Prob >= chibar2 = 0.000

. est sto m2

.
 . nbreg att_pal L.concil concla2 L.repress secondint L.att_pal L2.att_pal L3.at
 > t_pal L4.att_pal if year >= 1998, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -1732.8449
 Iteration 1: log likelihood = -568.116
 Iteration 2: log likelihood = -297.82849
 Iteration 3: log likelihood = -183.19907
 Iteration 4: log likelihood = -180.79935
 Iteration 5: log likelihood = -180.79243
 Iteration 6: log likelihood = -180.79243

Fitting constant-only model:

Iteration 0: log likelihood = -243.12866
 Iteration 1: log likelihood = -230.02006
 Iteration 2: log likelihood = -230.00382
 Iteration 3: log likelihood = -230.00381

Fitting full model:

Iteration 0: log likelihood = -210.88247 (not concave)
 Iteration 1: log likelihood = -190.23026
 Iteration 2: log likelihood = -168.22037
 Iteration 3: log likelihood = -167.23135
 Iteration 4: log likelihood = -165.98453
 Iteration 5: log likelihood = -165.97395
 Iteration 6: log likelihood = -165.97394

Negative binomial regression	Number of obs	=	84
	LR chi2(8)	=	128.06
Dispersion = mean	Prob > chi2	=	0.0000
Log likelihood = -165.97394	Pseudo R2	=	0.2784

att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]

```

-----+-----
      concil |
      L1. | .1386975 .0541038  2.56 0.010  .032656 .2447389
      |
      concla2 | -.0072121 .0026275  -2.74 0.006  -.0123618 -.0020624
      |
      repress |
      L1. | -.005441 .0064626  -0.84 0.400  -.0181073 .0072254
      |
      secondint | 2.494892 .4252731  5.87 0.000  1.661372 3.328412
      |
      att_pal |
      L1. | .0526847 .0129285  4.08 0.000  .0273452 .0780241
      L2. | .0134163 .019609  0.68 0.494  -.0250166 .0518492
      L3. | .0268677 .0185363  1.45 0.147  -.0094628 .0631982
      L4. | .0303541 .0182885  1.66 0.097  -.0054907 .0661989
      |
      _cons | -10.51604 .4179932 -25.16 0.000  -11.33529 -9.696784
ln(popthou) |      1 (exposure)
-----+-----
      /lnalpha | -1.589078 .3475602          -2.270283 -.9078722
-----+-----
      alpha | .2041138 .0709418          .1032829 .4033816
-----+-----
LR test of alpha=0: chibar2(01) = 29.64          Prob >= chibar2 = 0.000

. est sto m2

.
. /* All Actions */
.
. nbreg att_palunk L.allact secondint L.att_palunk L2.att_palunk L3.att_palunk
> L4.att_palunk if year >= 1998, exposure(popthou)

```

Fitting Poisson model:

```

Iteration 0: log likelihood = -533.67571
Iteration 1: log likelihood = -518.84798
Iteration 2: log likelihood = -518.81587
Iteration 3: log likelihood = -518.81587

```

Fitting constant-only model:

```

Iteration 0: log likelihood = -342.38079
Iteration 1: log likelihood = -338.54234
Iteration 2: log likelihood = -338.54029

```

Iteration 3: log likelihood = -338.54029

Fitting full model:

Iteration 0: log likelihood = -314.26051
Iteration 1: log likelihood = -288.8418
Iteration 2: log likelihood = -284.08845
Iteration 3: log likelihood = -282.67197
Iteration 4: log likelihood = -282.66654
Iteration 5: log likelihood = -282.66654

Negative binomial regression Number of obs = 84
 LR chi2(6) = 111.75
Dispersion = mean Prob > chi2 = 0.0000
Log likelihood = -282.66654 Pseudo R2 = 0.1650

```
-----+-----
att_palunk |    Coef.  Std. Err.    z   P>|z|   [95% Conf. Interval]
-----+-----
allact |
L1. | .0061107   .004547    1.34   0.179   -0.0028012   .0150227
|
secondint | 1.844945   .2367112    7.79   0.000    1.380999    2.30889
|
att_palunk |
L1. | .0178321   .0046359    3.85   0.000    .0087459   .0269183
L2. | -.0063468   .0044973   -1.41   0.158   -.0151614   .0024677
L3. | .007325    .0046726    1.57   0.117   -.0018332   .0164831
L4. | -.002367   .0041482   -0.57   0.568   -.0104972   .0057633
|
_cons | -8.005194   .1724147  -46.43   0.000   -8.34312   -7.667267
ln(popthou) |        1 (exposure)
-----+-----
/lnalpha | -1.0253   .1966475                      -1.410722   -.639878
-----+-----
alpha | .3586889   .0705353                      .2439671   .5273567
-----+-----
```

LR test of alpha=0: chibar2(01) = 472.30 Prob >= chibar2 = 0.000

. est sto m1

.
. nbreg att_pal L.allact secondint L.att_pal L2.att_pal L3.att_pal L4.att_pal i
> f year >= 1998, exposure(popthou)

Fitting Poisson model:

Iteration 0: log likelihood = -1655.5855
 Iteration 1: log likelihood = -622.97294
 Iteration 2: log likelihood = -313.55687
 Iteration 3: log likelihood = -194.1814
 Iteration 4: log likelihood = -191.50614
 Iteration 5: log likelihood = -191.49669
 Iteration 6: log likelihood = -191.49669

Fitting constant-only model:

Iteration 0: log likelihood = -243.12866
 Iteration 1: log likelihood = -230.02006
 Iteration 2: log likelihood = -230.00382
 Iteration 3: log likelihood = -230.00381

Fitting full model:

Iteration 0: log likelihood = -211.1519 (not concave)
 Iteration 1: log likelihood = -192.39085
 Iteration 2: log likelihood = -171.30577
 Iteration 3: log likelihood = -170.02019
 Iteration 4: log likelihood = -169.74976
 Iteration 5: log likelihood = -169.7492
 Iteration 6: log likelihood = -169.7492

Negative binomial regression Number of obs = 84
 LR chi2(6) = 120.51
 Dispersion = mean Prob > chi2 = 0.0000
 Log likelihood = -169.7492 Pseudo R2 = 0.2620

att_pal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
allact						
L1.	-.0053993	.0049637	-1.09	0.277	-.0151279	.0043294
secondint	2.574293	.4166225	6.18	0.000	1.757728	3.390858
att_pal						
L1.	.0541816	.0135417	4.00	0.000	.0276404	.0807228
L2.	.0008963	.0196815	0.05	0.964	-.0376788	.0394714
L3.	.037216	.0194927	1.91	0.056	-.000989	.0754211
L4.	.030585	.0192644	1.59	0.112	-.0071725	.0683426
_cons	-10.04439	.3736297	-26.88	0.000	-10.77669	-9.312088

```

ln(popthou) |      1 (exposure)
-----+-----
/lnalpha | -1.391472  .3204951          -2.019631  -.7633128
-----+-----
alpha |   .248709   .07971          .1327045   .4661197
-----+-----
LR test of alpha=0: chibar2(01) = 43.49      Prob >= chibar2 = 0.000

```

```
. est sto m1
```