```
.
      name:   <unnamed>
       log:   C:\Users\lvo2\Desktop\2016.smcl
  log type:   smcl
 opened on:    4 Nov 2016, 10:35:37

. do "C:\Users\lvo2\Downloads\GreenWinik_Criminology_2010_SupplementDoFile_draf
> t_2.do"

. // Robustness Assessments
.
. //These assessments fall into six major categories:
.
. //A: Robustness to including suspended sentence as a regressor
. //B: Robustness using only a subset of the strongest instruments (first stage
>  F > 10)
. //C: Robustness to various metrics of recidivism
. //D: Robustness to partition by prior conviction
. //E: Robustness to exclusion of non-convicted defendants
. //F: Robustness to simulation of time on the street by hazard rate analysis
.
. //Table of Contents
.
. //Variable Definitions
.
. //A1: IV Regressions Using Suspended Sentence as Regressor
. //A2: OLS Regressions Using Suspended Sentence as Regressor (note that these
> will be biased)
.
. //B1: Find Strongest Subsets of Instruments for toserve and Show Robustness o
> f Results
. //B2: Find Strongest Subsets of Instruments for probat and Show Robustness of
>  Results
. //B3: Examine Effects of Incarceration and Probation of Any Length
.
. //C1: Later Drug Arrest as Recidivism Metric
. //C2: Later Felony Arrest as Recidivism Metric
. //C3: Later Felony Drug Arrest as Recidivism Metric
. //C4: Later Non-Felony Arrest as Recidivism Metric
. //C5: Later Conviction as Recidivism Metric
. //C6: Later Drug Conviction as Recidivism Metric
. //C7: Later Felony Conviction as Recidivism Metric
. //C8: Later Non-Felony Conviction as Recidivism Metric
. //C9: Later Felony Drug Conviction as Recidivism Metric
.
. //D1: Partition--Defendants Who Have a Prior Conviction
. //D2: Partition--Defendants Who Have No Prior Conviction
.
. //E: Partition--Only Convicted Defendants
.
. //F: Hazard Rate Analysis
.
. //Variable Definitions
.
. //Outcome Measures
```

```
. //laterarr--Indicator: defendant was arrested after disposition of sampled ca
> se
. //laterdrugarr--Indicator: defendant was arrested on drug charge after dispos
> ition of sampled case
. //laterfelarr--Indicator: defendant was arrested on felony charge after dispo
> sition of sampled case
. //laterfeldrugarr--Indicator: defendant was arrested on felony drug charge af
> ter disposition of sampled case
. //latercon--Indicator: defendant was convicted after disposition of sampled c
> ase
. //laterdrugcon--Indicator: defendant was convicted on drug charge after dispo
> sition of sampled case
. //laterfelcon--Indicator: defendant was convicted on felony charge after disp
> osition of sampled case
. //laterfeldrugcon--Indicator: defendant was convicted on felony drug charge a
> fter disposition of sampled case
.
.
. //Sentence Measures
. //toserve--Non-suspended period of incarceration, in months
. //suspend--Suspended period of incarceration, in months
. //probat--Period of probation, in months
. //probsuspend--Interaction of suspend and probat
. //incarcerate--Indicator: defendant was sentenced to non-zero period of non-s
> uspended incarceration
. //suspendnonzero--Indicator: defendant was sentenced to non-zero period of su
> spended incarceration
. //probatnonzero--Indicator: defendant was sentenced to non-zero period of pro
> bation
. //probsuspendbinary--Interaction of suspendnonzero and probatnonzero
.
.
. //Calendar Indicators
. //calendar1--Indicator: defendant was assigned to calendar 1
. //calendar2--Indicator: defendant was assigned to calendar 2
. //calendar3--Indicator: defendant was assigned to calendar 3
. //calendar4--Indicator: defendant was assigned to calendar 4
. //calendar5--Indicator: defendant was assigned to calendar 5
. //calendar6--Indicator: defendant was assigned to calendar 6
. //calendar7--Indicator: defendant was assigned to calendar 7
. //calendar8--Indicator: defendant was assigned to calendar 8
. //calendar9--Indicator: defendant was assigned to calendar 9
.
. //Defendant Demographic Variables
. //age--Defendant's age at arrest
. //agesq--Square of the age variable
. //female--Indicator: defendant was female
. //nonblack--Indicator: defendant was not black
.
. //Defendant Prior Record Variables
. //priorarr--Indicator: defendant was arrested prior to arrest in sampled case
. //priordrugarr--Indicator: defendant was arrested on drug charge prior to arr
> est in sampled case
. //priorfelarr--Indicator: defendant was arrested on felony charge prior to ar
> rest in sampled case
```

```
. //priorfeldrugarr--Indicator: defendant was arrested on felony drug charge pr
> ior to arrest in sampled case
. //priorcon--Indicator: defendant was convicted prior to arrest in sampled cas
> e
. //priordrugcon--Indicator: defendant was convicted on drug charge prior to ar
> rest in sampled case
. //priorfelcon--Indicator: defendant was convicted on felony charge prior to a
> rrest in sampled case
. //priorfeldrugcon--Indicator: defendant was convicted on felony drug charge p
> rior to arrest in sampled case
.
. //Crime Characteristic Variables
. //pwid--Indicator: defendant charged with felony possession with intent to di
> stribute
. //dist--Indicator: defendant charged with felony distribution
. //marijuana--Indicator: marijuana was drug involved in crime
. //cocaine--Indicator: powder cocaine was drug involved in crime
. //crack--Indicator: crack cocaine was drug involved in crime
. //heroin--Indicator: heroin was drug involved in crime
. //pcp--Indicator: PCP was drug involved in crime
. //otherdrug--Indicator: another drug was involved in crime
. //nondrug--Indicator: defendant was charged with a non-drug crime of the natu
> re that we include (see discussion in text)
.
. //Timing Variables
. //timetorecid--Number of days between disposition of sampled case and later a
> rrest
. //fullreleasetorecid--Number of days between estimated release date from non-
> suspended incarceration and later arrest
.
. //Code
.
. //A1: IV Regressions Using Suspended Sentence as Regressor
.
. ivreg2 laterarr (toserve suspend probat = calendar1 calendar2 calendar3 calen
> dar4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, rob
> ust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  3,   926) =       1.50
                                                       Prob > F      =     0.2124
Total (centered) SS     =    250.0498504              Centered R2   =    -0.1352
Total (uncentered) SS   =            528              Uncentered R2 =     0.4624
Residual SS             =    283.8641788              Root MSE      =       .532

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0102341   .0083395     1.23   0.220    -.0034831    .0239513
     suspend |  -.0017394   .0009533    -1.82   0.068    -.0033075   -.0001712
      probat |    .006565   .0060278     1.09   0.276    -.0033499    .0164799
       _cons |   .4217801   .0862683     4.89   0.000     .2798813    .5636788
------------------------------------------------------------------------------
Underidentification test (Kleibergen-Paap rk LM statistic):              22.476
                                                   Chi-sq(    6) P-val =     0.0010
------------------------------------------------------------------------------
Weak identification test (Cragg-Donald Wald F statistic):                 3.102
                         (Kleibergen-Paap rk Wald F statistic):           2.978
```

```
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        15.18
                                         10% maximal IV relative bias         9.01
                                         20% maximal IV relative bias         5.69
                                         30% maximal IV relative bias         4.46
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
```

```
Hansen J statistic  (overidentification test of all instruments):          10.267
                                                  Chi-sq(    5) P-val =     0.0680
```

```
Instrumented:         toserve suspend probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve suspend probat =
> calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calenda
> r8 calendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 24,   926) =       3.37
                                                     Prob > F      =     0.0000
Total (centered) SS     =    250.0498504             Centered R2   =    -0.0475
Total (uncentered) SS   =            528             Uncentered R2 =     0.5039
Residual SS             =    261.9172321             Root MSE      =       .511
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0094706	.0083184	1.14	0.255	-.0042119	.0231532
suspend	-.0012188	.0009432	-1.29	0.196	-.0027702	.0003327
probat	.0046022	.0058214	0.79	0.429	-.0049731	.0141775
age	-.023767	.0105379	-2.26	0.024	-.0411002	-.0064337
agesq	.0001991	.0001391	1.43	0.152	-.0000298	.0004279
female	-.0147016	.0651442	-0.23	0.821	-.1218542	.092451
nonblack	-.2044883	.1230887	-1.66	0.097	-.4069512	-.0020254
priorarr	-.0679399	.0745491	-0.91	0.362	-.1905622	.0546824
priordrugarr	.0072476	.065337	0.11	0.912	-.1002222	.1147174
priorfelarr	.1158847	.0704024	1.65	0.100	.0000831	.2316862
priorfeldru~r	-.0982112	.0688913	-1.43	0.154	-.2115272	.0151049
priorcon	.0094234	.0725569	0.13	0.897	-.1099221	.1287689
priordrugcon	.0371472	.073947	0.50	0.615	-.0844848	.1587791
priorfelcon	-.0957347	.0750509	-1.28	0.202	-.2191824	.027713
priorfeldru~n	.0569964	.0860362	0.66	0.508	-.0845206	.1985134
pwid	.0132026	.0637409	0.21	0.836	-.0916419	.1180471
dist	.0062097	.076432	0.08	0.935	-.1195097	.1319292
marijuana	.0776457	.0610351	1.27	0.203	-.022748	.1780395
cocaine	-.0143382	.0628556	-0.23	0.820	-.1177265	.0890501
crack	.0196268	.0701816	0.28	0.780	-.0958116	.1350652
heroin	.0634737	.0656375	0.97	0.334	-.0444903	.1714378
pcp	.073876	.0959118	0.77	0.441	-.0838848	.2316368
otherdrug	-.0707472	.1148075	-0.62	0.538	-.2595887	.1180944
nondrug	.0019764	.0486389	0.04	0.968	-.0780275	.0819803
_cons	.9702843	.2045307	4.74	0.000	.6338612	1.306707

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.588
                                                      Chi-sq(    6) P-val =     0.0022
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   3.064
                          (Kleibergen-Paap rk Wald F statistic):             2.704
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        15.18
                                         10% maximal IV relative bias         9.01
                                         20% maximal IV relative bias         5.69
                                         30% maximal IV relative bias         4.46
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           11.607
                                                      Chi-sq(    5) P-val =     0.0406
------------------------------------------------------------------------------
Instrumented:         toserve suspend probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr (toserve suspend probat probsuspend = calendar1 calendar2 cal
> endar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjud
> ge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  4,   926) =       1.04
                                                     Prob > F      =     0.3844
Total (centered) SS     =    250.0498504             Centered R2   =    -0.1875
Total (uncentered) SS   =            528             Uncentered R2 =     0.4376
Residual SS             =    296.9350097             Root MSE      =      .5441

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0109192   .0087235     1.25   0.211    -.0034297    .0252682
     suspend |   .0012145   .0094851     0.13   0.898    -.0143871    .0168161
      probat |   .0084043   .0083218     1.01   0.313    -.0052838    .0220924
 probsuspend |   -.000132   .0004208    -0.31   0.754    -.0008242    .0005601
       _cons |   .4061194   .0997955     4.07   0.000     .2419703    .5702684
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.019
                                                      Chi-sq(    5) P-val =     0.0012
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   0.361
                          (Kleibergen-Paap rk Wald F statistic):             2.777
Stock-Yogo weak ID test critical values:                       <not available>
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           10.020
                                                      Chi-sq(    4) P-val =     0.0401
------------------------------------------------------------------------------
Instrumented:         toserve suspend probat probsuspend
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve suspend probat pr
> obsuspend = calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calen
> dar7 calendar8 calendar9) if incjudge == 1, robust cluster(clusterid) level(9
> 0)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 25,   926) =       2.85
                                                     Prob > F      =     0.0000
Total (centered) SS     =    250.0498504             Centered R2   =    -0.1911
Total (uncentered) SS   =            528             Uncentered R2 =     0.4359
Residual SS             =    297.8404395             Root MSE      =      .5449

------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0112315   .0094328     1.19   0.234     -.004284     .026747
     suspend |    .003558   .0102313     0.35   0.728    -.0132711     .020387
      probat |   .0075678   .0084181     0.90   0.369    -.0062788    .0214144
 probsuspend |  -.0002146   .0004532    -0.47   0.636    -.0009599    .0005308
         age |  -.0237077   .0113813    -2.08   0.037    -.0424284   -.0049871
       agesq |   .0002027   .0001521     1.33   0.183    -.0000475    .0004529
      female |  -.0008034   .0744963    -0.01   0.991    -.1233389    .1217321
    nonblack |  -.2270268   .1313953    -1.73   0.084    -.4431528   -.0109009
    priorarr |  -.0657869    .076662    -0.86   0.391    -.1918846    .0603108
 priordrugarr |   -.009856    .077465    -0.13   0.899    -.1372747    .1175626
  priorfelarr |   .1126346   .0744047     1.51   0.130    -.0097504    .2350195
priorfeldru~r |  -.0534986   .1218699    -0.44   0.661    -.2539567    .1469595
     priorcon |  -.0212362   .1045335    -0.20   0.839    -.1931785     .150706
 priordrugcon |   .1045382    .172215     0.61   0.544    -.1787302    .3878066
  priorfelcon |  -.0360168    .156505    -0.23   0.818    -.2934446    .2214111
priorfeldru~n |  -.0516455   .2656502    -0.19   0.846    -.4886011    .3853101
         pwid |   .0461829   .0958704     0.48   0.630      -.11151    .2038757
         dist |   .0247344   .0906462     0.27   0.785    -.1243653    .1738341
    marijuana |   .0429492    .093122     0.46   0.645    -.1102228    .1961212
      cocaine |  -.0352028   .0755063    -0.47   0.641    -.1593996     .088994
        crack |   .0002703   .0788361     0.00   0.997    -.1294035    .1299442
       heroin |   .0531742   .0702016     0.76   0.449    -.0622972    .1686455
          pcp |   .0742278   .1008941     0.74   0.462    -.0917282    .2401837
    otherdrug |   -.106661   .1381601    -0.77   0.440    -.3339142    .1205921
      nondrug |    .016324   .0632911     0.26   0.796    -.0877806    .1204286
        _cons |   .9137328   .2487695     3.67   0.000     .5045434    1.322922
------------------------------------------------------------------------------

Underidentification test  (Kleibergen-Paap rk LM statistic):              10.654
                                                     Chi-sq(    5) P-val =     0.0587
------------------------------------------------------------------------------

Weak identification test  (Cragg-Donald Wald F statistic):                 0.304
                          (Kleibergen-Paap rk Wald F statistic):           1.412
Stock-Yogo weak ID test critical values:                      <not available>
------------------------------------------------------------------------------

Hansen J statistic  (overidentification test of all instruments):         10.915
                                                     Chi-sq(    4) P-val =     0.0275
------------------------------------------------------------------------------

Instrumented:         toserve suspend probat probsuspend
```

```
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
.
. //A2: OLS Regressions Using Suspended Sentence as Regressor (note that these
> will be biased)
.
. reg laterarr toserve suspend probat if incjudge == 1, robust cluster(clusteri
> d) level(90)

Linear regression                                      Number of obs =        1003
                                                       F(  3,   926) =       10.35
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0219
                                                       Root MSE      =      .4948

                                  (Std. Err. adjusted for    927 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0046842**	**.0010018**	**-4.68**	**0.000**	**-.0063336**	**-.0030348**
suspend	**-.0007366**	**.0003178**	**-2.32**	**0.021**	**-.0012598**	**-.0002134**
probat	**.0021399**	**.0013407**	**1.60**	**0.111**	**-.0000675**	**.0043473**
_cons	**.5510067**	**.0228113**	**24.15**	**0.000**	**.5134478**	**.5885655**

```
. reg laterarr toserve suspend probat age agesq female nonblack priorarr priord
> rugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfel
> drugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if inc
> judge == 1, robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F( 24,   926) =        5.36
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0939
                                                       Root MSE      =      .48131

                                  (Std. Err. adjusted for    927 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0055398**	**.0011217**	**-4.94**	**0.000**	**-.0073867**	**-.003693**
suspend	**-.000548**	**.0003375**	**-1.62**	**0.105**	**-.0011037**	**7.72e-06**
probat	**.0012581**	**.0013453**	**0.94**	**0.350**	**-.0009569**	**.0034731**
age	**-.0263683**	**.0091566**	**-2.88**	**0.004**	**-.0414447**	**-.011292**
agesq	**.0002269**	**.0001202**	**1.89**	**0.059**	**.000029**	**.0004249**
female	**-.0529911**	**.0577999**	**-0.92**	**0.359**	**-.1481586**	**.0421764**
nonblack	**-.1804122**	**.0968529**	**-1.86**	**0.063**	**-.3398806**	**-.0209438**
priorarr	**-.0783174**	**.0719259**	**-1.09**	**0.276**	**-.1967435**	**.0401087**
priordrugarr	**-.0005799**	**.0635758**	**-0.01**	**0.993**	**-.1052575**	**.1040978**
priorfelarr	**.150684**	**.061756**	**2.44**	**0.015**	**.0490027**	**.2523653**
priorfeldru~r	**-.1255801**	**.0659**	**-1.91**	**0.057**	**-.2340845**	**-.0170757**
priorcon	**.0320426**	**.0701209**	**0.46**	**0.648**	**-.0834115**	**.1474967**
priordrugcon	**.0674412**	**.0693557**	**0.97**	**0.331**	**-.0467531**	**.1816354**
priorfelcon	**-.0608459**	**.0676096**	**-0.90**	**0.368**	**-.1721652**	**.0504734**
priorfeldru~n	**.0966027**	**.0764242**	**1.26**	**0.207**	**-.0292298**	**.2224352**
pwid	**.0228851**	**.0589963**	**0.39**	**0.698**	**-.0742524**	**.1200226**
dist	**.0473719**	**.0602788**	**0.79**	**0.432**	**-.0518772**	**.1466209**
marijuana	**.080377**	**.0530571**	**1.51**	**0.130**	**-.0069815**	**.1677355**

cocaine	.0006113	.0558493	0.01	0.991	-.0913445	.0925672
crack	.0319617	.0615684	0.52	0.604	-.0694107	.1333341
heroin	.0725766	.0585421	1.24	0.215	-.0238129	.1689662
pcp	.1343974	.0856528	1.57	0.117	-.00663	.2754248
otherdrug	-.0722904	.1017915	-0.71	0.478	-.2398902	.0953093
nondrug	.0154774	.0456793	0.34	0.735	-.0597336	.0906885
_cons	1.041946	.1739195	5.99	0.000	.755587	1.328304

```
. reg laterarr toserve suspend probat probsuspend if incjudge == 1, robust clus
> ter(clusterid) level(90)
```

Linear regression

Number of obs =	1003
F(4, 926) =	7.78
Prob > F =	0.0000
R-squared =	0.0220
Root MSE =	.49503

(Std. Err. adjusted for 927 clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0047082	.0010062	-4.68	0.000	-.0063649	-.0030516
suspend	-.0008951	.0005926	-1.51	0.131	-.0018708	.0000806
probat	.0020106	.0014042	1.43	0.153	-.0003015	.0043226
probsuspend	6.72e-06	.0000216	0.31	0.755	-.0000288	.0000422
_cons	.5522564	.0231696	23.84	0.000	.5141077	.5904052

```
. reg laterarr toserve suspend probat probsuspend age agesq female nonblack pri
> orarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfel
> con priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug no
> ndrug if incjudge == 1, robust cluster(clusterid) level(90)
```

Linear regression

Number of obs =	1003
F(25, 926) =	5.15
Prob > F =	0.0000
R-squared =	0.0942
Root MSE =	.48149

(Std. Err. adjusted for 927 clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0055627	.0011258	-4.94	0.000	-.0074164	-.003709
suspend	-.000805	.000613	-1.31	0.189	-.0018143	.0002044
probat	.0010321	.0014151	0.73	0.466	-.0012978	.0033621
probsuspend	.000011	.0000219	0.50	0.616	-.0000251	.000047
age	-.0264366	.0091679	-2.88	0.004	-.0415316	-.0113416
agesq	.0002277	.0001205	1.89	0.059	.0000293	.000426
female	-.053404	.0577638	-0.92	0.355	-.1485122	.0417041
nonblack	-.1798894	.0972772	-1.85	0.065	-.3400564	-.0197224
priorarr	-.0783841	.0719297	-1.09	0.276	-.1968164	.0400483
priordrugarr	.0003023	.0635221	0.00	0.996	-.1042869	.1048915
priorfelarr	.1502177	.0617299	2.43	0.015	.0485793	.2518561
priorfeldru~r	-.1275009	.0659996	-1.93	0.054	-.2361694	-.0188325
priorcon	.0333788	.0701013	0.48	0.634	-.082043	.1488007
priordrugcon	.0639339	.0695939	0.92	0.359	-.0506525	.1785204
priorfelcon	-.0636619	.0676267	-0.94	0.347	-.1750093	.0476856
priorfeldru~n	.1014203	.0767696	1.32	0.187	-.0249809	.2278215
pwid	.0214085	.0590446	0.36	0.717	-.0758085	.1186256
dist	.0470521	.0602406	0.78	0.435	-.0521341	.1462382
marijuana	.0825149	.0532494	1.55	0.122	-.0051603	.1701902
cocaine	.0020668	.0558918	0.04	0.971	-.089959	.0940926
crack	.033425	.0616335	0.54	0.588	-.0680547	.1349046

heroin	.0734243	.0585147	1.25	0.210	-.0229203	.1697688
pcp	.1343779	.0856659	1.57	0.117	-.0066711	.2754268
otherdrug	-.0702159	.1017381	-0.69	0.490	-.2377278	.097296
nondrug	.014571	.0455834	0.32	0.749	-.060482	.0896241
_cons	1.046145	.1740086	6.01	0.000	.7596392	1.33265

```
.
. //B1: Find Strongest Subsets of Instruments for toserve and Show Robustness o
> f Results
.
. reg toserve calendar1 calendar2 calendar3 calendar4 calendar5 calendar7 calen
> dar8 calendar9
```

Source	SS	df	MS
Model	4360.6825	8	545.085312
Residual	169964.85	994	170.990795
Total	174325.533	1002	173.977577

Number of obs = 1003
F(8, 994) = 3.19
Prob > F = 0.0014
R-squared = 0.0250
Adj R-squared = 0.0172
Root MSE = 13.076

toserve	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	.052177	1.800048	0.03	0.977	-3.480154	3.584508
calendar2	2.562975	1.834479	1.40	0.163	-1.036922	6.162872
calendar3	6.846131	1.813198	3.78	0.000	3.287996	10.40427
calendar4	2.718142	1.793758	1.52	0.130	-.8018452	6.23813
calendar5	.7480376	1.820074	0.41	0.681	-2.823591	4.319666
calendar7	.4828312	1.845896	0.26	0.794	-3.13947	4.105132
calendar8	.4168003	1.88833	0.22	0.825	-3.288771	4.122371
calendar9	2.050265	1.842029	1.11	0.266	-1.564448	5.664978
_cons	5.069462	1.355954	3.74	0.000	2.408602	7.730323

```
. ivreg2 laterarr (toserve = calendar1 calendar2 calendar3 calendar4 calendar5
> calendar6 calendar7 calendar8 calendar9) , robust cluster(clusterid) first
Warning - collinearities detected
Vars dropped:       calendar9

First-stage regressions
```

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = 1003
Number of clusters (clusterid) = 927

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	-1.998088	1.376161	-1.45	0.147	-4.698601	.7024254
calendar2	.5127102	2.11856	0.24	0.809	-3.644652	4.670073
calendar3	4.795866	1.773623	2.70	0.007	1.315391	8.276341
calendar4	.6678776	1.359363	0.49	0.623	-1.999674	3.335429
calendar5	-1.302227	1.417271	-0.92	0.358	-4.083414	1.478959
calendar6	-2.050265	1.526218	-1.34	0.179	-5.045244	.9447146
calendar7	-1.567434	1.298932	-1.21	0.228	-4.116397	.98153
calendar8	-1.633465	2.274254	-0.72	0.473	-6.096355	2.829426
calendar9	0	(omitted)				
_cons	7.119727	1.049444	6.78	0.000	5.060347	9.179108

F test of excluded instruments:
F(8, 926) = 2.96
Prob > F = 0.0029

Sanderson-Windmeijer multivariate F test of excluded instruments:
F(8, 926) = **2.96**
Prob > F = **0.0029**

Summary results for first-stage regressions

			(Underid)		(Weak id)	
Variable	F(8, 926)	P-val	SW Chi-sq (8)	P-val	SW F(8, 926)	
toserve	**2.96**	**0.0029**	**23.86**	**0.0024**	**2.96**	

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**8**)=**22.31** P-val=**0.0044**

Weak identification test
Ho: equation is weakly identified

Cragg-Donald Wald F statistic	**3.19**
Kleibergen-Paap Wald rk F statistic	**2.96**

Stock-Yogo weak ID test critical values for K1=1 and L1=8:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid

Anderson-Rubin Wald test	F(**8**,**926**)= **2.21**	P-val=	**0.0247**
Anderson-Rubin Wald test	Chi-sq(**8**)= **17.84**	P-val=	**0.0225**
Stock-Wright LM S statistic	Chi-sq(**8**)= **17.30**	P-val=	**0.0272**

NB: Underidentification, weak identification and weak-identification-robust test statistics cluster-robust

Number of clusters	N_clust =	**927**
Number of observations	N =	**1003**
Number of regressors	K =	**2**
Number of endogenous regressors	K1 =	**1**
Number of instruments	L =	**9**
Number of excluded instruments	L1 =	**8**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(1, 926) =	**0.97**
		Prob > F =	**0.3240**
Total (centered) SS =	**250.0498504**	Centered R2 =	**-0.0986**
Total (uncentered) SS =	**528**	Uncentered R2 =	**0.4797**
Residual SS =	**274.7047231**	Root MSE =	**.5233**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	**.0079808**	**.0080785**	**0.99**	**0.323**	**-.0078529**	**.0238144**
_cons	**.471286**	**.0583406**	**8.08**	**0.000**	**.3569405**	**.5856315**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **14.426**
Chi-sq(**7**) P-val = **0.0441**

Instrumented: toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9),
> robust cluster(clusterid) first
Warning - collinearities detected
Vars dropped:       calendar9
```

First-stage regressions

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	**-.7975391**	**1.278416**	**-0.62**	**0.533**	**-3.306308**	**1.71123**
calendar2	**.3937448**	**2.067817**	**0.19**	**0.849**	**-3.66415**	**4.45164**
calendar3	**5.161036**	**1.662183**	**3.10**	**0.002**	**1.89916**	**8.422912**
calendar4	**.735573**	**1.249563**	**0.59**	**0.556**	**-1.716576**	**3.187722**
calendar5	**-1.414732**	**1.337603**	**-1.06**	**0.290**	**-4.039651**	**1.210187**
calendar6	**-1.531074**	**1.451315**	**-1.05**	**0.292**	**-4.379141**	**1.316993**
calendar7	**-.9662745**	**1.174823**	**-0.82**	**0.411**	**-3.271754**	**1.339205**
calendar8	**-1.164643**	**2.155578**	**-0.54**	**0.589**	**-5.39476**	**3.065475**
calendar9	**0**	(omitted)				
age	**-.0654471**	**.2228561**	**-0.29**	**0.769**	**-.502781**	**.3718868**
agesq	**.0007588**	**.0030967**	**0.25**	**0.806**	**-.0053181**	**.0068358**
female	**-3.104098**	**.7907963**	**-3.93**	**0.000**	**-4.65596**	**-1.552235**
nonblack	**2.490306**	**3.182894**	**0.78**	**0.434**	**-3.755822**	**8.736434**
priorarr	**-1.093885**	**1.159073**	**-0.94**	**0.346**	**-3.368455**	**1.180685**
priordrugarr	**-.8194215**	**1.151995**	**-0.71**	**0.477**	**-3.080103**	**1.44126**
priorfelarr	**3.294434**	**1.078351**	**3.06**	**0.002**	**1.178273**	**5.410595**
priorfeldru~r	**-1.995546**	**1.318988**	**-1.51**	**0.131**	**-4.583936**	**.5928434**
priorcon	**1.201727**	**1.276515**	**0.94**	**0.347**	**-1.303313**	**3.706766**
priordrugcon	**2.536851**	**1.432373**	**1.77**	**0.077**	**-.2740441**	**5.347746**
priorfelcon	**2.427146**	**1.475636**	**1.64**	**0.100**	**-.4686495**	**5.322942**
priorfeldru~n	**2.514805**	**1.737675**	**1.45**	**0.148**	**-.8952181**	**5.924828**
pwid	**.5422956**	**1.392454**	**0.39**	**0.697**	**-2.190262**	**3.274854**
dist	**1.946878**	**1.358398**	**1.43**	**0.152**	**-.7188492**	**4.612605**
marijuana	**-1.042428**	**1.096979**	**-0.95**	**0.342**	**-3.195147**	**1.11029**
cocaine	**-.1769333**	**1.257971**	**-0.14**	**0.888**	**-2.645583**	**2.291716**
crack	**-.4748651**	**1.318922**	**-0.36**	**0.719**	**-3.063125**	**2.113395**
heroin	**-.6992076**	**1.397539**	**-0.50**	**0.617**	**-3.441745**	**2.04333**
pcp	**3.477215**	**2.176244**	**1.60**	**0.110**	**-.7934581**	**7.747888**
otherdrug	**-1.843093**	**2.519605**	**-0.73**	**0.465**	**-6.787578**	**3.101393**
nondrug	**.6781955**	**1.034896**	**0.66**	**0.512**	**-1.35269**	**2.709081**
_cons	**2.847711**	**4.191787**	**0.68**	**0.497**	**-5.378274**	**11.0737**

F test of excluded instruments:
F(8, 926) = **2.71**
Prob > F = **0.0059**
Sanderson-Windmeijer multivariate F test of excluded instruments:
F(8, 926) = **2.71**
Prob > F = **0.0059**

Summary results for first-stage regressions

			(Underid)		(Weak id)
Variable	F(8, 926)	P-val	SW Chi-sq (8)	P-val	SW F(8, 926)
toserve	**2.71**	**0.0059**	**22.35**	**0.0043**	**2.71**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**8**)=**20.65** P-val=**0.0081**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **3.09**
Kleibergen-Paap Wald rk F statistic **2.71**

Stock-Yogo weak ID test critical values for K1=1 and L1=8:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**8**,**926**)= **2.03** P-val=**0.0400**
Anderson-Rubin Wald test Chi-sq(**8**)= **16.76** P-val=**0.0327**
Stock-Wright LM S statistic Chi-sq(**8**)= **16.42** P-val=**0.0368**

NB: Underidentification, weak identification and weak-identification-robust
test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **23**
Number of endogenous regressors K1 = **1**
Number of instruments L = **30**
Number of excluded instruments L1 = **8**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(22, 926) = **3.56**
Prob > F = **0.0000**
Total (centered) SS = **250.0498504** Centered R2 = **-0.0356**
Total (uncentered) SS = **528** Uncentered R2 = **0.5096**
Residual SS = **258.9567896** Root MSE = **.5081**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	.0086508	.0082088	1.05	0.292	-.0074382	.0247399
age	-.0254644	.0097029	-2.62	0.009	-.0444817	-.0064471
agesq	.0002126	.0001291	1.65	0.100	-.0000405	.0004656
female	-.0012192	.0635414	-0.02	0.985	-.1257581	.1233197
nonblack	-.2190621	.112448	-1.95	0.051	-.4394561	.001332
priorarr	-.0600934	.0734778	-0.82	0.413	-.2041073	.0839204
priordrugarr	.0073863	.0652747	0.11	0.910	-.1205497	.1353224
priorfelarr	.1044293	.0656385	1.59	0.112	-.0242199	.2330784
priorfeldru~r	-.1004298	.0677175	-1.48	0.138	-.2331537	.032294
priorcon	.0204244	.0717169	0.28	0.776	-.1201382	.160987
priordrugcon	.0405106	.0730167	0.55	0.579	-.1025994	.1836206
priorfelcon	-.1001847	.0719564	-1.39	0.164	-.2412167	.0408472
priorfeldru~n	.0555271	.0819435	0.68	0.498	-.1050792	.2161334
pwid	.0113328	.0625704	0.18	0.856	-.1113029	.1339686
dist	.0109205	.0664799	0.16	0.870	-.1193777	.1412187
marijuana	.1000156	.0549919	1.82	0.069	-.0077665	.2077978
cocaine	-.0001741	.0581025	-0.00	0.998	-.1140529	.1137047
crack	.0399155	.0635817	0.63	0.530	-.0847024	.1645334
heroin	.0837925	.0614137	1.36	0.172	-.0365762	.2041613
pcp	.0817318	.0940883	0.87	0.385	-.1026779	.2661415
otherdrug	-.040209	.1093434	-0.37	0.713	-.2545182	.1741002
nondrug	.0014532	.0476261	0.03	0.976	-.0918923	.0947986
_cons	1.01238	.183299	5.52	0.000	.6531204	1.371639

Underidentification test (Kleibergen-Paap rk LM statistic): **20.649**
Chi-sq(**8**) P-val = **0.0081**

Weak identification test (Cragg-Donald Wald F statistic): **3.090**
(Kleibergen-Paap rk Wald F statistic): **2.710**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **13.460**
Chi-sq(**7**) P-val = **0.0617**

Instrumented: toserve
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
.
. reg toserve calendar2 calendar3 calendar4 calendar9
```

Source	SS	df	MS		
Model	**4317.73033**	**4**	**1079.43258**	Number of obs =	**1003**
Residual	**170007.802**	**998**	**170.348499**	F(4, 998) =	**6.34**
				Prob > F =	**0.0000**
Total	**174325.533**	**1002**	**173.977577**	R-squared =	**0.0248**
				Adj R-squared =	**0.0209**
				Root MSE =	**13.052**

toserve	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar2	**2.215981**	**1.355365**	**1.63**	**0.102**	**-.443711**	**4.875673**
calendar3	**6.499137**	**1.326528**	**4.90**	**0.000**	**3.896033**	**9.102241**
calendar4	**2.371148**	**1.299932**	**1.82**	**0.068**	**-.1797655**	**4.922062**
calendar9	**1.703271**	**1.365529**	**1.25**	**0.213**	**-.9763656**	**4.382907**
_cons	**5.416456**	**.5621792**	**9.63**	**0.000**	**4.313268**	**6.519645**

```
. ivreg2 laterarr (toserve = calendar2 calendar3 calendar4 calendar9) , robust
> cluster(clusterid) first

First-stage regressions
```

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar2	**2.215981**	**1.91121**	**1.16**	**0.247**	**-1.53447**	**5.966432**
calendar3	**6.499137**	**1.521692**	**4.27**	**0.000**	**3.513053**	**9.48522**
calendar4	**2.371148**	**1.011376**	**2.34**	**0.019**	**.3864819**	**4.355815**
calendar9	**1.703271**	**1.17314**	**1.45**	**0.147**	**-.5988323**	**4.005374**
_cons	**5.416456**	**.5285236**	**10.25**	**0.000**	**4.379311**	**6.453601**

F test of excluded instruments:
F(4, 926) = **5.32**
Prob > F = **0.0003**
Sanderson-Windmeijer multivariate F test of excluded instruments:
F(4, 926) = **5.32**
Prob > F = **0.0003**

Summary results for first-stage regressions

			(Underid)		(Weak id)
Variable	F(**4**, **926**) P-val		SW Chi-sq(**4**) P-val		SW F(**4**, **926**)
toserve	**5.32** **0.0003**		**21.37** **0.0003**		**5.32**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**4**)=**20.02** P-val=**0.0005**

Weak identification test
Ho: equation is weakly identified

Cragg-Donald Wald F statistic	**6.34**
Kleibergen-Paap Wald rk F statistic	**5.32**

Stock-Yogo weak ID test critical values for K1=1 and L1=4:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**4,926**)= **3.19** P-val=**0.0130**
Anderson-Rubin Wald test Chi-sq(**4**)= **12.81** P-val=**0.0122**
Stock-Wright LM S statistic Chi-sq(**4**)= **12.36** P-val=**0.0149**

NB: Underidentification, weak identification and weak-identification-robust
test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **2**
Number of endogenous regressors K1 = **1**
Number of instruments L = **5**
Number of excluded instruments L1 = **4**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(1, 926) = **0.96**
Prob > F = **0.3265**
Total (centered) SS = **250.0498504** Centered R2 = **-0.0986**
Total (uncentered) SS = **528** Uncentered R2 = **0.4797**
Residual SS = **274.7048889** Root MSE = **.5233**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
toserve	**.0079808**	**.0081202**	**0.98**	**0.326**	**-.0079346**	**.0238962**
_cons	**.4712858**	**.0586247**	**8.04**	**0.000**	**.3563834**	**.5861881**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.016**
Chi-sq(**4**) P-val = **0.0005**

Weak identification test (Cragg-Donald Wald F statistic): **6.337**
(Kleibergen-Paap rk Wald F statistic): **5.316**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **16.85**
10% maximal IV relative bias **10.27**
20% maximal IV relative bias **6.71**
30% maximal IV relative bias **5.34**
10% maximal IV size **24.58**
15% maximal IV size **13.96**
20% maximal IV size **10.26**
25% maximal IV size **8.31**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **10.081**
Chi-sq(**3**) P-val = **0.0179**

Instrumented: toserve
Excluded instruments: calendar2 calendar3 calendar4 calendar9

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar2 calen
> dar3 calendar4 calendar9), robust cluster(clusterid) first
```

First-stage regressions

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
calendar2	**1.549914**	**1.886098**	**0.82**	**0.411**	**-2.151354**	**5.251182**
calendar3	**6.319515**	**1.472799**	**4.29**	**0.000**	**3.4293**	**9.209729**
calendar4	**1.894388**	**.9514098**	**1.99**	**0.047**	**.0273456**	**3.761429**
calendar9	**1.15884**	**1.090942**	**1.06**	**0.288**	**-.9820194**	**3.2997**
age	**-.0694728**	**.2211888**	**-0.31**	**0.754**	**-.5035326**	**.3645871**
agesq	**.0008143**	**.0030767**	**0.26**	**0.791**	**-.0052233**	**.006852**
female	**-3.082588**	**.793047**	**-3.89**	**0.000**	**-4.638859**	**-1.526316**
nonblack	**2.5299**	**3.135785**	**0.81**	**0.420**	**-3.623748**	**8.683548**
priorarr	**-1.085773**	**1.125562**	**-0.96**	**0.335**	**-3.294571**	**1.123025**
priordrugarr	**-.8242256**	**1.162966**	**-0.71**	**0.479**	**-3.106424**	**1.457973**
priorfelarr	**3.269439**	**1.061774**	**3.08**	**0.002**	**1.18582**	**5.353059**
priorfeldru~r	**-1.939042**	**1.288946**	**-1.50**	**0.133**	**-4.468463**	**.5903787**
priorcon	**1.193674**	**1.280964**	**0.93**	**0.352**	**-1.320084**	**3.707432**
priordrugcon	**2.512679**	**1.423536**	**1.77**	**0.078**	**-.2808613**	**5.30622**
priorfelcon	**2.43155**	**1.470299**	**1.65**	**0.098**	**-.4537569**	**5.316857**
priorfeldru~n	**2.48601**	**1.748373**	**1.42**	**0.155**	**-.9449885**	**5.917008**
pwid	**.5407356**	**1.406869**	**0.38**	**0.701**	**-2.220096**	**3.301567**
dist	**1.95101**	**1.357563**	**1.44**	**0.151**	**-.7130641**	**4.615084**
marijuana	**-1.057008**	**1.095389**	**-0.96**	**0.335**	**-3.206594**	**1.092578**

cocaine	-.2034749	1.260587	-0.16	0.872	-2.677244	2.270295
crack	-.5191964	1.322503	-0.39	0.695	-3.114469	2.076076
heroin	-.7457797	1.383365	-0.54	0.590	-3.460489	1.96893
pcp	3.48821	2.161879	1.61	0.107	-.7542498	7.73067
otherdrug	-1.834817	2.519288	-0.73	0.467	-6.778655	3.109021
nondrug	.689857	1.033151	0.67	0.504	-1.337593	2.717307
_cons	1.793841	4.228446	0.42	0.671	-6.50404	10.09172

F test of excluded instruments:
  F(4, 926) = **4.94**
  Prob > F = **0.0006**
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(4, 926) = **4.94**
  Prob > F = **0.0006**

Summary results for first-stage regressions

		(Underid)		(Weak id)
Variable	F(4, 926) P-val	SW Chi-sq(4) P-val	SW F(4, 926)
toserve	**4.94 0.0006**	**20.29 0.0004**	**4.94**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**4**)=**18.85** P-val=**0.0008**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **6.14**
Kleibergen-Paap Wald rk F statistic **4.94**

Stock-Yogo weak ID test critical values for K1=1 and L1=4:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**4,926**)= **3.16** P-val=**0.0137**
Anderson-Rubin Wald test Chi-sq(**4**)= **12.96** P-val=**0.0115**
Stock-Wright LM S statistic Chi-sq(**4**)= **12.61** P-val=**0.0134**

NB: Underidentification, weak identification and weak-identification-robust
    test statistics cluster-robust

Number of clusters	N_clust	=	**927**
Number of observations	N	=	**1003**
Number of regressors	K	=	**23**
Number of endogenous regressors	K1	=	**1**
Number of instruments	L	=	**26**
Number of excluded instruments	L1	=	**4**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid)	=	**927**	Number of obs = **1003**
			F(22, 926) = **3.50**
			Prob > F = **0.0000**
Total (centered) SS	=	**250.0498504**	Centered R2 = **-0.0600**
Total (uncentered) SS	=	**528**	Uncentered R2 = **0.4980**
Residual SS	=	**265.0432313**	Root MSE = **.5141**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	**.0099536**	**.0083715**	**1.19**	**0.234**	**-.0064542**	**.0263615**
age	**-.0253668**	**.0098201**	**-2.58**	**0.010**	**-.0446139**	**-.0061197**
agesq	**.0002114**	**.0001309**	**1.62**	**0.106**	**-.0000451**	**.0004679**
female	**.0030185**	**.0639753**	**0.05**	**0.962**	**-.1223709**	**.1284078**
nonblack	**-.2223099**	**.114689**	**-1.94**	**0.053**	**-.4470963**	**.0024764**
priorarr	**-.0587396**	**.0738286**	**-0.80**	**0.426**	**-.2034409**	**.0859617**
priordrugarr	**.008081**	**.0656768**	**0.12**	**0.902**	**-.1206432**	**.1368051**
priorfelarr	**.1004132**	**.065936**	**1.52**	**0.128**	**-.0288189**	**.2296454**
priorfeldru~r	**-.0979549**	**.0681563**	**-1.44**	**0.151**	**-.2315387**	**.0356289**
priorcon	**.018915**	**.0721396**	**0.26**	**0.793**	**-.122476**	**.160306**
priordrugcon	**.0380149**	**.0736453**	**0.52**	**0.606**	**-.1063273**	**.1823571**
priorfelcon	**-.1033318**	**.0727013**	**-1.42**	**0.155**	**-.2458237**	**.0391601**
priorfeldru~n	**.0515736**	**.0827496**	**0.62**	**0.533**	**-.1106126**	**.2137597**
pwid	**.0105074**	**.0632715**	**0.17**	**0.868**	**-.1135024**	**.1345171**
dist	**.0079463**	**.0673428**	**0.12**	**0.906**	**-.1240432**	**.1399359**
marijuana	**.1011964**	**.0554989**	**1.82**	**0.068**	**-.0075794**	**.2099722**
cocaine	**-.0004882**	**.0586506**	**-0.01**	**0.993**	**-.1154413**	**.1144649**
crack	**.0402092**	**.0641587**	**0.63**	**0.531**	**-.0855395**	**.165958**
heroin	**.0842819**	**.0621228**	**1.36**	**0.175**	**-.0374764**	**.2060403**
pcp	**.0768794**	**.0951076**	**0.81**	**0.419**	**-.1095281**	**.2632869**
otherdrug	**-.038286**	**.110798**	**-0.35**	**0.730**	**-.255446**	**.178874**
nondrug	**.0001484**	**.0480641**	**0.00**	**0.998**	**-.0940554**	**.0943523**
_cons	**1.00916**	**.1854786**	**5.44**	**0.000**	**.6456283**	**1.372691**

Underidentification test (Kleibergen-Paap rk LM statistic): **18.846**
Chi-sq(**4**) P-val = **0.0008**

Weak identification test (Cragg-Donald Wald F statistic): **6.141**
(Kleibergen-Paap rk Wald F statistic): **4.939**

Stock-Yogo weak ID test critical values:		
	5% maximal IV relative bias	**16.85**
	10% maximal IV relative bias	**10.27**
	20% maximal IV relative bias	**6.71**
	30% maximal IV relative bias	**5.34**
	10% maximal IV size	**24.58**
	15% maximal IV size	**13.96**
	20% maximal IV size	**10.26**
	25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

```
Hansen J statistic  (overidentification test of all instruments):           9.700
                                                 Chi-sq(    3) P-val =     0.0213
------------------------------------------------------------------------------
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar2 calendar3 calendar4 calendar9
------------------------------------------------------------------------------

.
. reg toserve calendar3 calendar4
>

      Source |       SS       df       MS              Number of obs =    1003
-------------+------------------------------           F(  2,  1000) =   10.84
       Model |  3697.90365     2  1848.95183            Prob > F      =  0.0000
    Residual |  170627.629  1000  170.627629            R-squared     =  0.0212
-------------+------------------------------           Adj R-squared =  0.0193
       Total |  174325.533  1002  173.977577            Root MSE      =  13.062

------------------------------------------------------------------------------
     toserve |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   calendar3 |    5.926798   1.292367     4.59   0.000     3.390736    8.46286
   calendar4 |     1.79881   1.265008     1.42   0.155    -.6835641    4.281184
       _cons |    5.988795   .4735135    12.65   0.000     5.059601    6.917989
------------------------------------------------------------------------------

. ivreg2 laterarr (toserve = calendar3 calendar4), robust cluster(clusterid) fi
> rst

First-stage regressions


First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs =                    1003
Number of clusters (clusterid) =    927
------------------------------------------------------------------------------
             |               Robust
     toserve |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   calendar3 |    5.926798   1.506424     3.93   0.000     2.970684    8.882913
   calendar4 |     1.79881   .9895612     1.82   0.069    -.1430447    3.740664
       _cons |    5.988795   .4870064    12.30   0.000     5.033123    6.944467
------------------------------------------------------------------------------
F test of excluded instruments:
  F(  2,   926) =      8.47
  Prob > F      =    0.0002
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(  2,   926) =      8.47
  Prob > F      =    0.0002


Summary results for first-stage regressions


                                                (Underid)          (Weak id)
Variable     |  F(  2,   926)  P-val |  SW Chi-sq (  2) P-val |  SW F(  2,   926)
toserve      |       8.47    0.0002 |       16.99    0.0002 |        8.47
```

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:
10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**2**)=**15.81** P-val=**0.0004**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **10.84**
Kleibergen-Paap Wald rk F statistic **8.47**

Stock-Yogo weak ID test critical values for K1=1 and L1=2:
10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**2,926**)= **0.87** P-val=**0.4176**
Anderson-Rubin Wald test Chi-sq(**2**)= **1.75** P-val=**0.4161**
Stock-Wright LM S statistic Chi-sq(**2**)= **1.74** P-val=**0.4188**

NB: Underidentification, weak identification and weak-identification-robust test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **2**
Number of endogenous regressors K1 = **1**
Number of instruments L = **3**
Number of excluded instruments L1 = **2**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(1, 926) = **0.71**
Prob > F = **0.3989**
Total (centered) SS = **250.0498504** Centered R2 = **-0.0875**
Total (uncentered) SS = **528** Uncentered R2 = **0.4850**
Residual SS = **271.9386071** Root MSE = **.5207**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
toserve	**.0073478**	**.0086973**	**0.84**	**0.398**	**-.0096986**	**.0243942**
_cons	**.4756587**	**.062356**	**7.63**	**0.000**	**.3534433**	**.5978742**

Underidentification test (Kleibergen-Paap rk LM statistic): **15.812**
Chi-sq(**2**) P-val = **0.0004**

Weak identification test (Cragg-Donald Wald F statistic): **10.836**
(Kleibergen-Paap rk Wald F statistic): **8.468**
Stock-Yogo weak ID test critical values: 10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **0.887**
Chi-sq(**1**) P-val = **0.3463**

Instrumented: toserve
Excluded instruments: calendar3 calendar4

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar3 calen
> dar4), robust cluster(clusterid) first
```

First-stage regressions

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
calendar3	**5.920578**	**1.449124**	**4.09**	**0.000**	**3.076832**	**8.764325**
calendar4	**1.500443**	**.9300275**	**1.61**	**0.107**	**-.3246336**	**3.32552**
age	**-.0669369**	**.2217676**	**-0.30**	**0.763**	**-.5021314**	**.3682577**
agesq	**.0008032**	**.0030762**	**0.26**	**0.794**	**-.0052334**	**.0068398**
female	**-3.098119**	**.8001259**	**-3.87**	**0.000**	**-4.668278**	**-1.52796**
nonblack	**2.711495**	**3.037023**	**0.89**	**0.372**	**-3.248329**	**8.67132**
priorarr	**-1.006145**	**1.109003**	**-0.91**	**0.364**	**-3.182441**	**1.17015**
priordrugarr	**-.7931558**	**1.15121**	**-0.69**	**0.491**	**-3.052279**	**1.465967**
priorfelarr	**3.243437**	**1.052992**	**3.08**	**0.002**	**1.177056**	**5.309818**
priorfeldru~r	**-1.938016**	**1.277976**	**-1.52**	**0.130**	**-4.445903**	**.5698713**
priorcon	**1.17415**	**1.267815**	**0.93**	**0.355**	**-1.313797**	**3.662098**
priordrugcon	**2.415915**	**1.394813**	**1.73**	**0.084**	**-.3212515**	**5.153081**
priorfelcon	**2.538245**	**1.454915**	**1.74**	**0.081**	**-.3168662**	**5.393357**
priorfeldru~n	**2.481899**	**1.746671**	**1.42**	**0.156**	**-.945751**	**5.909548**
pwid	**.5077018**	**1.400321**	**0.36**	**0.717**	**-2.240273**	**3.255677**
dist	**2.011822**	**1.358346**	**1.48**	**0.139**	**-.6537819**	**4.677426**
marijuana	**-1.066155**	**1.106066**	**-0.96**	**0.335**	**-3.236687**	**1.104378**
cocaine	**-.1991434**	**1.259185**	**-0.16**	**0.874**	**-2.670156**	**2.27187**
crack	**-.5448349**	**1.319804**	**-0.41**	**0.680**	**-3.134805**	**2.045136**
heroin	**-.759986**	**1.384383**	**-0.55**	**0.583**	**-3.476685**	**1.956713**
pcp	**3.552862**	**2.143869**	**1.66**	**0.098**	**-.6542448**	**7.75997**
otherdrug	**-2.019852**	**2.490334**	**-0.81**	**0.418**	**-6.906859**	**2.867156**
nondrug	**.6821619**	**1.037377**	**0.66**	**0.511**	**-1.353576**	**2.717899**

_cons	**2.045327**	**4.190984**	**0.49**	**0.626**	**-6.179018**	**10.26967**

F test of excluded instruments:
  F(2, 926) = **8.77**
  Prob > F = **0.0002**
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(2, 926) = **8.77**
  Prob > F = **0.0002**

Summary results for first-stage regressions

			(Underid)		(Weak id)
Variable	F(**2**, **926**)	P-val	SW Chi-sq(**2**)	P-val	SW F(**2**, **926**)
toserve	**8.77**	**0.0002**	**17.97**	**0.0001**	**8.77**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:
10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**2**)=**16.69** P-val=**0.0002**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **11.36**
Kleibergen-Paap Wald rk F statistic **8.77**

Stock-Yogo weak ID test critical values for K1=1 and L1=2:
10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**2**,**926**)= **1.12** P-val=**0.3262**
Anderson-Rubin Wald test Chi-sq(**2**)= **2.30** P-val=**0.3169**
Stock-Wright LM S statistic Chi-sq(**2**)= **2.28** P-val=**0.3200**

NB: Underidentification, weak identification and weak-identification-robust
    test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **23**
Number of endogenous regressors K1 = **1**
Number of instruments L = **24**
Number of excluded instruments L1 = **2**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(22, 926) =	**3.57**
		Prob > F =	**0.0000**
Total (centered) SS =	**250.0498504**	Centered R2 =	**-0.0317**
Total (uncentered) SS =	**528**	Uncentered R2 =	**0.5114**
Residual SS =	**257.9726782**	Root MSE =	**.5071**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	**.0084288**	**.0084882**	**0.99**	**0.321**	**-.0082078**	**.0250654**
age	**-.025481**	**.0096914**	**-2.63**	**0.009**	**-.0444758**	**-.0064863**
agesq	**.0002128**	**.0001289**	**1.65**	**0.099**	**-.0000399**	**.0004654**
female	**-.0019414**	**.0639138**	**-0.03**	**0.976**	**-.1272101**	**.1233272**
nonblack	**-.2185085**	**.111996**	**-1.95**	**0.051**	**-.4380167**	**.0009997**
priorarr	**-.0603242**	**.0734023**	**-0.82**	**0.411**	**-.20419**	**.0835416**
priordrugarr	**.007268**	**.0652542**	**0.11**	**0.911**	**-.120628**	**.1351639**
priorfelarr	**.1051138**	**.0656131**	**1.60**	**0.109**	**-.0234856**	**.2337131**
priorfeldru~r	**-.1008516**	**.0677043**	**-1.49**	**0.136**	**-.2335497**	**.0318464**
priorcon	**.0206817**	**.0716895**	**0.29**	**0.773**	**-.1198271**	**.1611904**
priordrugcon	**.0409359**	**.0731451**	**0.56**	**0.576**	**-.1024258**	**.1842977**
priorfelcon	**-.0996484**	**.072252**	**-1.38**	**0.168**	**-.2412597**	**.041963**
priorfeldru~n	**.0562009**	**.082161**	**0.68**	**0.494**	**-.1048317**	**.2172335**
pwid	**.0114735**	**.0624699**	**0.18**	**0.854**	**-.1109652**	**.1339123**
dist	**.0114274**	**.066428**	**0.17**	**0.863**	**-.1187691**	**.1416238**
marijuana	**.0998144**	**.0550426**	**1.81**	**0.070**	**-.008067**	**.2076958**
cocaine	**-.0001206**	**.0579967**	**-0.00**	**0.998**	**-.113792**	**.1135509**
crack	**.0398655**	**.0634956**	**0.63**	**0.530**	**-.0845835**	**.1643145**
heroin	**.0837091**	**.0613502**	**1.36**	**0.172**	**-.036535**	**.2039532**
pcp	**.0825588**	**.0943291**	**0.88**	**0.381**	**-.1023229**	**.2674405**
otherdrug	**-.0405368**	**.1091137**	**-0.37**	**0.710**	**-.2543958**	**.1733222**
nondrug	**.0016756**	**.0476145**	**0.04**	**0.972**	**-.0916472**	**.0949983**
_cons	**1.012929**	**.1833211**	**5.53**	**0.000**	**.6536258**	**1.372231**

Underidentification test (Kleibergen-Paap rk LM statistic): **16.692**
Chi-sq(**2**) P-val = **0.0002**

Weak identification test (Cragg-Donald Wald F statistic): **11.357**
(Kleibergen-Paap rk Wald F statistic): **8.771**
Stock-Yogo weak ID test critical values: 10% maximal IV size **19.93**
15% maximal IV size **11.59**
20% maximal IV size **8.75**
25% maximal IV size **7.25**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **1.021**
Chi-sq(**1**) P-val = **0.3123**

Instrumented: toserve
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar3 calendar4

```
.
. reg toserve calendar3
>
```

Source	SS	df	MS	Number of obs =	1003
Model	3352.89215	1	3352.89215	F(1, 1001) =	19.63
Residual	170972.64	1001	170.801839	Prob > F =	0.0000
				R-squared =	0.0192
				Adj R-squared =	0.0183
Total	174325.533	1002	173.977577	Root MSE =	13.069

toserve	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar3	5.674762	1.280808	4.43	0.000	3.161385	8.188139
_cons	6.240832	.4393136	14.21	0.000	5.37875	7.102913

```
. ivreg2 laterarr (toserve = calendar3) , robust cluster(clusterid) first

First-stage regressions
-----------------------


First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs =                     1003
Number of clusters (clusterid) =     927
```

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar3	5.674762	1.490046	3.81	0.000	2.750789	8.598734
_cons	6.240832	.43604	14.31	0.000	5.385174	7.096489

```
F test of excluded instruments:
  F(  1,   926) =     14.50
  Prob > F      =    0.0001
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(  1,   926) =     14.50
  Prob > F      =    0.0001


Summary results for first-stage regressions
-------------------------------------------

                                          (Underid)             (Weak id)
Variable     |  F(  1,   926)  P-val |  SW Chi-sq(  1) P-val |  SW F(  1,   926)
toserve      |      14.50    0.0001 |       14.53   0.0001 |       14.50

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:
                                10% maximal IV size                16.38
                                15% maximal IV size                 8.96
                                20% maximal IV size                 6.66
                                25% maximal IV size                 5.53
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic          Chi-sq( 1)=13.31    P-val=0.0003
```

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **19.63**
Kleibergen-Paap Wald rk F statistic **14.50**

Stock-Yogo weak ID test critical values for K1=1 and L1=1:
10% maximal IV size **16.38**
15% maximal IV size **8.96**
20% maximal IV size **6.66**
25% maximal IV size **5.53**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**1**,**926**)= **1.35** P-val= **0.2452**
Anderson-Rubin Wald test Chi-sq(**1**)= **1.36** P-val= **0.2444**
Stock-Wright LM S statistic Chi-sq(**1**)= **1.34** P-val= **0.2467**

NB: Underidentification, weak identification and weak-identification-robust
test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **2**
Number of endogenous regressors K1 = **1**
Number of instruments L = **2**
Number of excluded instruments L1 = **1**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(1, 926) = **1.11**
Prob > F = **0.2915**
Total (centered) SS = **250.0498504** Centered R2 = **-0.1367**
Total (uncentered) SS = **528** Uncentered R2 = **0.4617**
Residual SS = **284.2343157** Root MSE = **.5323**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	**.0099559**	**.0094237**	**1.06**	**0.291**	**-.0085143**	**.028426**
_cons	**.4576411**	**.067141**	**6.82**	**0.000**	**.3260472**	**.5892351**

Underidentification test (Kleibergen-Paap rk LM statistic): **13.309**
Chi-sq(**1**) P-val = **0.0003**

Weak identification test (Cragg-Donald Wald F statistic): **19.630**
(Kleibergen-Paap rk Wald F statistic): **14.504**
Stock-Yogo weak ID test critical values: 10% maximal IV size **16.38**
15% maximal IV size **8.96**
20% maximal IV size **6.66**
25% maximal IV size **5.53**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **0.000**
(equation exactly identified)

Instrumented: toserve
Excluded instruments: calendar3

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar3), rob
> ust cluster(clusterid) first

First-stage regressions
```

First-stage regression of toserve:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

toserve	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar3	**5.714017**	**1.432539**	**3.99**	**0.000**	**2.902821**	**8.525213**
age	**-.0623125**	**.2215435**	**-0.28**	**0.779**	**-.4970668**	**.3724417**
agesq	**.0007195**	**.0030728**	**0.23**	**0.815**	**-.0053105**	**.0067495**
female	**-3.096837**	**.7999422**	**-3.87**	**0.000**	**-4.666633**	**-1.52704**
nonblack	**2.736518**	**3.015924**	**0.91**	**0.364**	**-3.181893**	**8.654929**
priorarr	**-1.129435**	**1.105266**	**-1.02**	**0.307**	**-3.298395**	**1.039525**
priordrugarr	**-.8008091**	**1.150323**	**-0.70**	**0.486**	**-3.058189**	**1.45657**
priorfelarr	**3.308902**	**1.051017**	**3.15**	**0.002**	**1.246399**	**5.371405**
priorfeldru~r	**-1.919103**	**1.283308**	**-1.50**	**0.135**	**-4.437451**	**.5992456**
priorcon	**1.283647**	**1.268641**	**1.01**	**0.312**	**-1.205918**	**3.773212**
priordrugcon	**2.401994**	**1.395927**	**1.72**	**0.086**	**-.3373554**	**5.141343**
priorfelcon	**2.423508**	**1.456596**	**1.66**	**0.096**	**-.434898**	**5.281915**
priorfeldru~n	**2.529796**	**1.740884**	**1.45**	**0.146**	**-.886493**	**5.946085**
pwid	**.5370952**	**1.409839**	**0.38**	**0.703**	**-2.229556**	**3.303746**
dist	**2.084521**	**1.367659**	**1.52**	**0.128**	**-.5993556**	**4.768398**
marijuana	**-1.120017**	**1.101899**	**-1.02**	**0.310**	**-3.28237**	**1.042335**
cocaine	**-.221877**	**1.259805**	**-0.18**	**0.860**	**-2.694104**	**2.250349**
crack	**-.5685016**	**1.320055**	**-0.43**	**0.667**	**-3.15896**	**2.021957**
heroin	**-.7860838**	**1.384681**	**-0.57**	**0.570**	**-3.503365**	**1.931198**
pcp	**3.442862**	**2.156306**	**1.60**	**0.111**	**-.7886456**	**7.67437**
otherdrug	**-2.005872**	**2.490484**	**-0.81**	**0.421**	**-6.893168**	**2.881424**
nondrug	**.6914986**	**1.037132**	**0.67**	**0.505**	**-1.343757**	**2.726754**
_cons	**2.208234**	**4.188169**	**0.53**	**0.598**	**-6.010577**	**10.42705**

F test of excluded instruments:
  F(1, 926) = **15.91**
  Prob > F = **0.0001**
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(1, 926) = **15.91**
  Prob > F = **0.0001**

Summary results for first-stage regressions

Variable	F(1, 926)	P-val	(Underid) SW Chi-sq (1)	P-val	(Weak id) SW F(1, 926)
toserve	**15.91**	**0.0001**	**16.28**	**0.0001**	**15.91**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:
10% maximal IV size **16.38**
15% maximal IV size **8.96**
20% maximal IV size **6.66**
25% maximal IV size **5.53**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**1**)=**15.03** P-val=**0.0001**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **21.19**
Kleibergen-Paap Wald rk F statistic **15.91**

Stock-Yogo weak ID test critical values for K1=1 and L1=1:
10% maximal IV size **16.38**
15% maximal IV size **8.96**
20% maximal IV size **6.66**
25% maximal IV size **5.53**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**1**,**926**)= **1.73** P-val=**0.1893**
Anderson-Rubin Wald test Chi-sq(**1**)= **1.77** P-val=**0.1839**
Stock-Wright LM S statistic Chi-sq(**1**)= **1.75** P-val=**0.1859**

NB: Underidentification, weak identification and weak-identification-robust test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **23**
Number of endogenous regressors K1 = **1**
Number of instruments L = **23**
Number of excluded instruments L1 = **1**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(22, 926) = **3.48**
Prob > F = **0.0000**
Total (centered) SS = **250.0498504** Centered R2 = **-0.0740**
Total (uncentered) SS = **528** Uncentered R2 = **0.4914**
Residual SS = **268.543553** Root MSE = **.5174**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
toserve	.0106555	.0090389	1.18	0.238	-.0070604	.0283714
age	-.0253143	.0098923	-2.56	0.010	-.0447028	-.0059257
agesq	.0002107	.0001319	1.60	0.110	-.0000478	.0004693
female	.0053016	.0649702	0.08	0.935	-.1220377	.1326409
nonblack	-.2240598	.1157946	-1.93	0.053	-.451013	.0028935
priorarr	-.0580102	.0740066	-0.78	0.433	-.2030606	.0870402
priordrugarr	.0084552	.0659618	0.13	0.898	-.1208276	.137738
priorfelarr	.0982495	.0662885	1.48	0.138	-.0316736	.2281727
priorfeldru~r	-.0966215	.0685845	-1.41	0.159	-.2310447	.0378017
priorcon	.0181018	.072416	0.25	0.803	-.123831	.1600347
priordrugcon	.0366703	.0744875	0.49	0.623	-.1093226	.1826632
priorfelcon	-.1050273	.0739776	-1.42	0.156	-.2500208	.0399662
priorfeldru~n	.0494435	.0836635	0.59	0.555	-.1145338	.2134209
pwid	.0100626	.0636547	0.16	0.874	-.1146983	.1348236
dist	.006344	.0680209	0.09	0.926	-.1269746	.1396626
marijuana	.1018326	.0558998	1.82	0.069	-.007729	.2113942
cocaine	-.0006574	.0589727	-0.01	0.991	-.1162418	.114927
crack	.0403675	.0644676	0.63	0.531	-.0859868	.1667217
heroin	.0845456	.0625643	1.35	0.177	-.0380781	.2071694
pcp	.0742651	.0962166	0.77	0.440	-.1143159	.2628461
otherdrug	-.0372499	.111789	-0.33	0.739	-.2563524	.1818526
nondrug	-.0005545	.048358	-0.01	0.991	-.0953344	.0942254
_cons	1.007425	.1870495	5.39	0.000	.6408146	1.374035

Underidentification test (Kleibergen-Paap rk LM statistic): **15.029**
Chi-sq(**1**) P-val = **0.0001**

Weak identification test (Cragg-Donald Wald F statistic): **21.195**
(Kleibergen-Paap rk Wald F statistic): **15.910**
Stock-Yogo weak ID test critical values: 10% maximal IV size **16.38**
15% maximal IV size **8.96**
20% maximal IV size **6.66**
25% maximal IV size **5.53**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **0.000**
(equation exactly identified)

Instrumented: toserve
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar3

```
.
. //B2: Find Strongest Subsets of Instruments for probat and Show Robustness of
>  Results
.
```

```
. reg probat calendar1 calendar2 calendar3 calendar4 calendar5 calendar7 calend
> ar8 calendar9
```

Source	SS	df	MS		
Model	**8819.69488**	**8**	**1102.46186**	Number of obs =	**1003**
Residual	**165360.949**	**994**	**166.359104**	F(8, 994) =	**6.63**
				Prob > F =	**0.0000**
Total	**174180.644**	**1002**	**173.832978**	R-squared =	**0.0506**
				Adj R-squared =	**0.0430**
				Root MSE =	**12.898**

probat	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	**-2.422704**	**1.775502**	**-1.36**	**0.173**	**-5.906866**	**1.061458**
calendar2	**-3.426363**	**1.809463**	**-1.89**	**0.059**	**-6.977169**	**.1244428**
calendar3	**-3.186805**	**1.788472**	**-1.78**	**0.075**	**-6.696418**	**.3228081**
calendar4	**-8.051075**	**1.769297**	**-4.55**	**0.000**	**-11.52306**	**-4.579088**
calendar5	**-1.192065**	**1.795254**	**-0.66**	**0.507**	**-4.714989**	**2.330858**
calendar7	**-8.523922**	**1.820725**	**-4.68**	**0.000**	**-12.09683**	**-4.951017**
calendar8	**-6.144347**	**1.86258**	**-3.30**	**0.001**	**-9.799386**	**-2.489307**
calendar9	**-7.827175**	**1.81691**	**-4.31**	**0.000**	**-11.3926**	**-4.261755**
_cons	**14.88172**	**1.337463**	**11.13**	**0.000**	**12.25715**	**17.5063**

```
. ivreg2 laterarr (probat = calendar1 calendar2 calendar3 calendar4 calendar5 c
> alendar6 calendar7 calendar8 calendar9), robust cluster(clusterid) first
Warning - collinearities detected
Vars dropped:       calendar9

First-stage regressions
```

First-stage regression of probat:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

probat	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	**5.404471**	**1.692919**	**3.19**	**0.001**	**2.082365**	**8.726577**
calendar2	**4.400812**	**1.632599**	**2.70**	**0.007**	**1.197075**	**7.604548**
calendar3	**4.64037**	**1.728606**	**2.68**	**0.007**	**1.248235**	**8.032505**
calendar4	**-.2239003**	**1.422223**	**-0.16**	**0.875**	**-3.014804**	**2.567004**
calendar5	**6.63511**	**1.946438**	**3.41**	**0.001**	**2.81551**	**10.45471**
calendar6	**7.827175**	**1.72366**	**4.54**	**0.000**	**4.444745**	**11.2096**
calendar7	**-.6967473**	**1.521858**	**-0.46**	**0.647**	**-3.683171**	**2.289677**
calendar8	**1.682828**	**1.481391**	**1.14**	**0.256**	**-1.224184**	**4.589841**
calendar9	**0**	(omitted)				
_cons	**7.054545**	**1.080333**	**6.53**	**0.000**	**4.934551**	**9.17454**

F test of excluded instruments:
F(8, 926) = **6.96**
Prob > F = **0.0000**
Sanderson-Windmeijer multivariate F test of excluded instruments:
F(8, 926) = **6.96**
Prob > F = **0.0000**

Summary results for first-stage regressions

Variable	F(8, 926)	P-val	(Underid) SW Chi-sq (8)	P-val	(Weak id) SW F(8, 926)
probat	**6.96**	**0.0000**	**56.22**	**0.0000**	**6.96**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**8**)=**51.42** P-val=**0.0000**

Weak identification test
Ho: equation is weakly identified

Cragg-Donald Wald F statistic	**6.63**
Kleibergen-Paap Wald rk F statistic	**6.96**

Stock-Yogo weak ID test critical values for K1=1 and L1=8:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid

Anderson-Rubin Wald test	F(**8**,**926**)= **2.21**	P-val=**0.0247**
Anderson-Rubin Wald test	Chi-sq(**8**)= **17.84**	P-val=**0.0225**
Stock-Wright LM S statistic	Chi-sq(**8**)= **17.30**	P-val=**0.0272**

NB: Underidentification, weak identification and weak-identification-robust test statistics cluster-robust

Number of clusters	N_clust =	**927**
Number of observations	N =	**1003**
Number of regressors	K =	**2**
Number of endogenous regressors	K1 =	**1**
Number of instruments	L =	**9**
Number of excluded instruments	L1 =	**8**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

```
Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.16
                                                       Prob > F      =     0.6866
Total (centered) SS     =    250.0498504               Centered R2   =     0.0025
Total (uncentered) SS   =            528               Uncentered R2 =     0.5276
Residual SS             =    249.4266566               Root MSE      =      .4987
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
probat	.0021857	.0054097	0.40	0.686	-.0084171	.0127885
_cons	.5038968	.0577221	8.73	0.000	.3907635	.61703

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                51.421
                                                      Chi-sq(   8) P-val =    0.0000

Weak identification test  (Cragg-Donald Wald F statistic):                  6.627
                          (Kleibergen-Paap rk Wald F statistic):            6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):          17.227
                                                      Chi-sq(   7) P-val =    0.0160

Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9

. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9), r
> obust cluster(clusterid) first
Warning - collinearities detected
Vars dropped:       calendar9

First-stage regressions


First-stage regression of probat:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs =                    1003
Number of clusters (clusterid) =    927
```

probat	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar1	5.243234	1.638478	3.20	0.001	2.027877	8.45859
calendar2	4.700039	1.630156	2.88	0.004	1.501013	7.899064
calendar3	4.564006	1.626496	2.81	0.005	1.372161	7.75585
calendar4	-.0699325	1.391352	-0.05	0.960	-2.800329	2.660464
calendar5	7.407091	1.856726	3.99	0.000	3.763443	11.05074
calendar6	7.729776	1.749649	4.42	0.000	4.296255	11.1633
calendar7	-.5027173	1.51638	-0.33	0.740	-3.47847	2.473035

calendar8	**2.08366**	**1.466337**	**1.42**	**0.156**	**-.7938874**	**4.961208**
calendar9	**0**	(omitted)				
age	**-.6977058**	**.2501854**	**-2.79**	**0.005**	**-1.188671**	**-.2067408**
agesq	**.0087476**	**.0033183**	**2.64**	**0.009**	**.0022358**	**.0152594**
female	**2.16452**	**1.475113**	**1.47**	**0.143**	**-.7302492**	**5.059289**
nonblack	**-5.28159**	**2.384581**	**-2.21**	**0.027**	**-9.961105**	**-.6020758**
priorarr	**.3104688**	**1.826624**	**0.17**	**0.865**	**-3.274108**	**3.895046**
priordrugarr	**.0469816**	**1.668736**	**0.03**	**0.978**	**-3.227755**	**3.321718**
priorfelarr	**-3.987242**	**1.595955**	**-2.50**	**0.013**	**-7.119152**	**-.8553307**
priorfeldru~r	**1.384671**	**1.870516**	**0.74**	**0.459**	**-2.286039**	**5.055381**
priorcon	**-.4613201**	**1.774953**	**-0.26**	**0.795**	**-3.944496**	**3.021856**
priordrugcon	**.2980663**	**2.037562**	**0.15**	**0.884**	**-3.700455**	**4.296588**
priorfelcon	**2.931358**	**1.908858**	**1.54**	**0.125**	**-.8145949**	**6.677311**
priorfeldru~n	**-4.562723**	**2.435457**	**-1.87**	**0.061**	**-9.342077**	**.2166299**
pwid	**1.435689**	**1.6728**	**0.86**	**0.391**	**-1.847023**	**4.718401**
dist	**6.551188**	**1.663506**	**3.94**	**0.000**	**3.286714**	**9.815661**
marijuana	**4.143747**	**1.389211**	**2.98**	**0.003**	**1.417552**	**6.869943**
cocaine	**4.410786**	**1.422121**	**3.10**	**0.002**	**1.620007**	**7.201564**
crack	**5.440649**	**1.606144**	**3.39**	**0.001**	**2.288744**	**8.592554**
heroin	**3.560603**	**1.535473**	**2.32**	**0.021**	**.5473825**	**6.573824**
pcp	**2.152072**	**2.124099**	**1.01**	**0.311**	**-2.016271**	**6.320414**
otherdrug	**4.059765**	**2.665101**	**1.52**	**0.128**	**-1.170242**	**9.289773**
nondrug	**-.6368801**	**1.224508**	**-0.52**	**0.603**	**-3.039861**	**1.7661**
_cons	**12.11176**	**4.72528**	**2.56**	**0.011**	**2.838846**	**21.38467**

F test of excluded instruments:
  F(8, 926) = **7.04**
  Prob > F = **0.0000**
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(8, 926) = **7.04**
  Prob > F = **0.0000**

Summary results for first-stage regressions

			(Underid)		(Weak id)
Variable	F(**8**, **926**)	P-val	SW Chi-sq (**8**)	P-val	SW F(**8**, **926**)
probat	**7.04**	**0.0000**	**58.07**	**0.0000**	**7.04**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**8**)=**53.23** P-val=**0.0000**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **7.10**
Kleibergen-Paap Wald rk F statistic **7.04**

Stock-Yogo weak ID test critical values for K1=1 and L1=8:

5% maximal IV relative bias	**20.25**
10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid

Anderson-Rubin Wald test	F(**8**,**926**)= **2.03**	P-val=**0.0400**
Anderson-Rubin Wald test	Chi-sq(**8**)= **16.76**	P-val=**0.0327**
Stock-Wright LM S statistic	Chi-sq(**8**)= **16.42**	P-val=**0.0368**

NB: Underidentification, weak identification and weak-identification-robust test statistics cluster-robust

Number of clusters	N_clust =	**927**
Number of observations	N =	**1003**
Number of regressors	K =	**23**
Number of endogenous regressors	K1 =	**1**
Number of instruments	L =	**30**
Number of excluded instruments	L1 =	**8**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(22, 926) =	**3.95**
		Prob > F =	**0.0000**
Total (centered) SS =	**250.0498504**	Centered R2 =	**0.0731**
Total (uncentered) SS =	**528**	Uncentered R2 =	**0.5611**
Residual SS =	**231.7619001**	Root MSE =	**.4807**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
probat	**.0012358**	**.0051755**	**0.24**	**0.811**	**-.008908**	**.0113795**
age	**-.0252338**	**.0098171**	**-2.57**	**0.010**	**-.044475**	**-.0059927**
agesq	**.0002094**	**.0001281**	**1.63**	**0.102**	**-.0000417**	**.0004605**
female	**-.0318686**	**.0577919**	**-0.55**	**0.581**	**-.1451387**	**.0814015**
nonblack	**-.1910977**	**.102409**	**-1.87**	**0.062**	**-.3918157**	**.0096202**
priorarr	**-.0697442**	**.0718138**	**-0.97**	**0.331**	**-.2104967**	**.0710084**
priordrugarr	**.0029892**	**.0634089**	**0.05**	**0.962**	**-.12129**	**.1272685**
priorfelarr	**.1368515**	**.0654935**	**2.09**	**0.037**	**.0084866**	**.2652165**
priorfeldru~r	**-.1191658**	**.0655309**	**-1.82**	**0.069**	**-.247604**	**.0092724**
priorcon	**.03091**	**.0692422**	**0.45**	**0.655**	**-.1048023**	**.1666223**
priordrugcon	**.0562407**	**.0688865**	**0.82**	**0.414**	**-.0787743**	**.1912557**
priorfelcon	**-.0825914**	**.068329**	**-1.21**	**0.227**	**-.2165137**	**.051331**
priorfeldru~n	**.0875194**	**.0791068**	**1.11**	**0.269**	**-.0675271**	**.2425659**
pwid	**.0145487**	**.0597673**	**0.24**	**0.808**	**-.1025931**	**.1316905**
dist	**.0225452**	**.0683883**	**0.33**	**0.742**	**-.1114934**	**.1565838**
marijuana	**.0866665**	**.0573204**	**1.51**	**0.131**	**-.0256794**	**.1990125**
cocaine	**-.00364**	**.059601**	**-0.06**	**0.951**	**-.1204559**	**.1131759**
crack	**.0311841**	**.066496**	**0.47**	**0.639**	**-.0991456**	**.1615138**
heroin	**.0753797**	**.06128**	**1.23**	**0.219**	**-.0447268**	**.1954862**
pcp	**.1109518**	**.0852034**	**1.30**	**0.193**	**-.0560439**	**.2779475**
otherdrug	**-.057762**	**.104313**	**-0.55**	**0.580**	**-.2622118**	**.1466878**

nondrug	**.0113237**	**.0454817**	**0.25**	**0.803**	**-.0778187**	**.1004661**
_cons	**1.014707**	**.1907153**	**5.32**	**0.000**	**.6409119**	**1.388502**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(**8**) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **16.126**
Chi-sq(**7**) P-val = **0.0240**

Instrumented: probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
.
. reg probat calendar4 calendar7 calendar8 calendar9
```

Source	SS	df	MS		
Model	**7965.25673**	**4**	**1991.31418**	Number of obs =	**1003**
Residual	**166215.387**	**998**	**166.548484**	F(4, 998) =	**11.96**
				Prob > F =	**0.0000**
				R-squared =	**0.0457**
				Adj R-squared =	**0.0419**
Total	**174180.644**	**1002**	**173.832978**	Root MSE =	**12.905**

probat	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar4	**-5.923366**	**1.280629**	**-4.63**	**0.000**	**-8.4364**	**-3.410331**
calendar7	**-6.396213**	**1.350868**	**-4.73**	**0.000**	**-9.047081**	**-3.745344**
calendar8	**-4.016637**	**1.406835**	**-2.86**	**0.004**	**-6.777332**	**-1.255942**
calendar9	**-5.699465**	**1.345717**	**-4.24**	**0.000**	**-8.340225**	**-3.058705**
_cons	**12.75401**	**.544865**	**23.41**	**0.000**	**11.6848**	**13.82322**

```
. ivreg2 laterarr (probat = calendar4 calendar7 calendar8 calendar9), robust cl
> uster(clusterid) first

First-stage regressions
```

First-stage regression of probat:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

probat	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar4	**-5.923366**	**1.111585**	**-5.33**	**0.000**	**-8.104677**	**-3.742054**
calendar7	**-6.396213**	**1.236034**	**-5.17**	**0.000**	**-8.821736**	**-3.970689**
calendar8	**-4.016637**	**1.186058**	**-3.39**	**0.001**	**-6.34409**	**-1.689184**
calendar9	**-5.699465**	**1.243339**	**-4.58**	**0.000**	**-8.139324**	**-3.259607**
_cons	**12.75401**	**.6192339**	**20.60**	**0.000**	**11.53886**	**13.96916**

F test of excluded instruments:
F(4, 926) = **12.58**
Prob > F = **0.0000**
Sanderson-Windmeijer multivariate F test of excluded instruments:
F(4, 926) = **12.58**
Prob > F = **0.0000**

Summary results for first-stage regressions

			(Underid)		(Weak id)
Variable	F(**4**, **926**)	P-val	SW Chi-sq (**4**)	P-val	SW F(**4**, **926**)
probat	**12.58**	**0.0000**	**50.56**	**0.0000**	**12.58**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**4**)=**47.46** P-val=**0.0000**

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic **11.96**
Kleibergen-Paap Wald rk F statistic **12.58**

Stock-Yogo weak ID test critical values for K1=1 and L1=4:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**4**,**926**)= **2.94** P-val= **0.0196**
Anderson-Rubin Wald test Chi-sq(**4**)= **11.84** P-val= **0.0186**
Stock-Wright LM S statistic Chi-sq(**4**)= **11.42** P-val= **0.0222**

NB: Underidentification, weak identification and weak-identification-robust
test statistics cluster-robust

Number of clusters N_clust = **927**
Number of observations N = **1003**
Number of regressors K = **2**
Number of endogenous regressors K1 = **1**
Number of instruments L = **5**
Number of excluded instruments L1 = **4**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(1, 926) = **0.00**
Prob > F = **0.9862**
Total (centered) SS = **250.0498504** Centered R2 = **-0.0003**
Total (uncentered) SS = **528** Uncentered R2 = **0.5263**
Residual SS = **250.1168451** Root MSE = **.4994**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
probat	**-.0000981**	**.0056646**	**-0.02**	**0.986**	**-.0112006**	**.0110044**
_cons	**.5274317**	**.0603**	**8.75**	**0.000**	**.4092459**	**.6456174**

Underidentification test (Kleibergen-Paap rk LM statistic): **47.463**
Chi-sq(**4**) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **11.956**
(Kleibergen-Paap rk Wald F statistic): **12.577**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **16.85**
10% maximal IV relative bias **10.27**
20% maximal IV relative bias **6.71**
30% maximal IV relative bias **5.34**
10% maximal IV size **24.58**
15% maximal IV size **13.96**
20% maximal IV size **10.26**
25% maximal IV size **8.31**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **11.385**
Chi-sq(**3**) P-val = **0.0098**

Instrumented: probat
Excluded instruments: calendar4 calendar7 calendar8 calendar9

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar4 calend
> ar7 calendar8 calendar9), robust cluster(clusterid) first

First-stage regressions
```

First-stage regression of probat:

Statistics robust to heteroskedasticity and clustering on clusterid
Number of obs = **1003**
Number of clusters (clusterid) = **927**

probat	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
calendar4	**-5.935255**	**1.08262**	**-5.48**	**0.000**	**-8.059783**	**-3.810726**
calendar7	**-6.3771**	**1.24344**	**-5.13**	**0.000**	**-8.817221**	**-3.93698**
calendar8	**-3.76084**	**1.190957**	**-3.16**	**0.002**	**-6.097968**	**-1.423713**
calendar9	**-5.85475**	**1.209769**	**-4.84**	**0.000**	**-8.228794**	**-3.480706**
age	**-.6861596**	**.2511571**	**-2.73**	**0.006**	**-1.179029**	**-.19329**
agesq	**.0085428**	**.0033339**	**2.56**	**0.011**	**.0020004**	**.0150852**
female	**2.183514**	**1.478983**	**1.48**	**0.140**	**-.7188357**	**5.085863**
nonblack	**-5.522107**	**2.382568**	**-2.32**	**0.021**	**-10.19765**	**-.8465678**
priorarr	**.1803849**	**1.810848**	**0.10**	**0.921**	**-3.373214**	**3.733983**
priordrugarr	**-.032317**	**1.657887**	**-0.02**	**0.984**	**-3.285747**	**3.221113**
priorfelarr	**-3.774507**	**1.585677**	**-2.38**	**0.017**	**-6.886231**	**-.6627821**
priorfeldru~r	**1.14636**	**1.842565**	**0.62**	**0.534**	**-2.46948**	**4.7622**
priorcon	**-.423158**	**1.765453**	**-0.24**	**0.811**	**-3.887675**	**3.041359**
priordrugcon	**.6634967**	**1.988582**	**0.33**	**0.739**	**-3.238886**	**4.56588**
priorfelcon	**2.854217**	**1.908929**	**1.50**	**0.135**	**-.8918568**	**6.60029**
priorfeldru~n	**-4.63113**	**2.397855**	**-1.93**	**0.054**	**-9.336668**	**.074409**
pwid	**1.446712**	**1.693499**	**0.85**	**0.393**	**-1.876602**	**4.770027**
dist	**6.425711**	**1.676882**	**3.83**	**0.000**	**3.135005**	**9.716416**
marijuana	**4.179866**	**1.411637**	**2.96**	**0.003**	**1.409676**	**6.950055**
cocaine	**4.426654**	**1.44088**	**3.07**	**0.002**	**1.599078**	**7.254231**
crack	**5.558565**	**1.626779**	**3.42**	**0.001**	**2.366182**	**8.750948**
heroin	**3.647182**	**1.540476**	**2.37**	**0.018**	**.6241595**	**6.670205**
pcp	**2.007693**	**2.144426**	**0.94**	**0.349**	**-2.200517**	**6.215903**
otherdrug	**4.145174**	**2.646112**	**1.57**	**0.118**	**-1.047543**	**9.337891**
nondrug	**-.7295333**	**1.232141**	**-0.59**	**0.554**	**-3.147481**	**1.688415**
_cons	**17.86013**	**4.683196**	**3.81**	**0.000**	**8.669845**	**27.05041**

F test of excluded instruments:
  F(**4**, **926**) = **13.28**
  Prob > F = **0.0000**
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(**4**, **926**) = **13.28**
  Prob > F = **0.0000**

Summary results for first-stage regressions

Variable	F(**4**, **926**)	P-val	(Underid) SW Chi-sq(**4**)	P-val	(Weak id) SW F(**4**, **926**)
probat	**13.28**	**0.0000**	**54.53**	**0.0000**	**13.28**

NB: first-stage test statistics cluster-robust

Stock-Yogo weak ID F test critical values for single endogenous regressor:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for i.i.d. errors only.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Kleibergen-Paap rk LM statistic Chi-sq(**4**)=**50.35** P-val=**0.0000**

Weak identification test
Ho: equation is weakly identified

Cragg-Donald Wald F statistic	**12.60**
Kleibergen-Paap Wald rk F statistic	**13.28**

Stock-Yogo weak ID test critical values for K1=1 and L1=4:

5% maximal IV relative bias	**16.85**
10% maximal IV relative bias	**10.27**
20% maximal IV relative bias	**6.71**
30% maximal IV relative bias	**5.34**
10% maximal IV size	**24.58**
15% maximal IV size	**13.96**
20% maximal IV size	**10.26**
25% maximal IV size	**8.31**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test F(**4,926**)= **2.97** P-val=**0.0188**
Anderson-Rubin Wald test Chi-sq(**4**)= **12.20** P-val=**0.0160**
Stock-Wright LM S statistic Chi-sq(**4**)= **11.83** P-val=**0.0187**

NB: Underidentification, weak identification and weak-identification-robust
test statistics cluster-robust

Number of clusters	N_clust =	**927**
Number of observations	N =	**1003**
Number of regressors	K =	**23**
Number of endogenous regressors	K1 =	**1**
Number of instruments	L =	**26**
Number of excluded instruments	L1 =	**4**

IV (2SLS) estimation

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(22, 926) =	**3.91**
		Prob > F =	**0.0000**
Total (centered) SS =	**250.0498504**	Centered R2 =	**0.0716**
Total (uncentered) SS =	**528**	Uncentered R2 =	**0.5603**
Residual SS =	**232.153054**	Root MSE =	**.4811**

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
probat	**-.0001594**	**.0054205**	**-0.03**	**0.977**	**-.0107833**	**.0104645**
age	**-.0262257**	**.0098634**	**-2.66**	**0.008**	**-.0455575**	**-.0068939**
agesq	**.0002218**	**.0001289**	**1.72**	**0.085**	**-.0000308**	**.0004745**
female	**-.0290344**	**.0577636**	**-0.50**	**0.615**	**-.1422489**	**.0841801**
nonblack	**-.1983209**	**.1026838**	**-1.93**	**0.053**	**-.3995775**	**.0029358**
priorarr	**-.0689981**	**.0716571**	**-0.96**	**0.336**	**-.2094434**	**.0714473**
priordrugarr	**.0027462**	**.0632742**	**0.04**	**0.965**	**-.121269**	**.1267614**
priorfelarr	**.1303544**	**.0658148**	**1.98**	**0.048**	**.0013598**	**.259349**
priorfeldru~r	**-.1165671**	**.0655226**	**-1.78**	**0.075**	**-.2449891**	**.011855**
priorcon	**.0303874**	**.0693732**	**0.44**	**0.661**	**-.1055816**	**.1663564**
priordrugcon	**.0571911**	**.0688013**	**0.83**	**0.406**	**-.0776569**	**.1920392**
priorfelcon	**-.0788613**	**.0684422**	**-1.15**	**0.249**	**-.2130055**	**.055283**
priorfeldru~n	**.0810389**	**.0795739**	**1.02**	**0.308**	**-.0749232**	**.2370009**
pwid	**.0171063**	**.0599937**	**0.29**	**0.776**	**-.1004792**	**.1346918**
dist	**.0317177**	**.0695495**	**0.46**	**0.648**	**-.1045968**	**.1680321**
marijuana	**.0928854**	**.0578431**	**1.61**	**0.108**	**-.020485**	**.2062559**
cocaine	**.0026278**	**.0602316**	**0.04**	**0.965**	**-.1154239**	**.1206795**
crack	**.0388401**	**.0673145**	**0.58**	**0.564**	**-.0930939**	**.170774**
heroin	**.0812091**	**.0620483**	**1.31**	**0.191**	**-.0404034**	**.2028215**
pcp	**.1143402**	**.0856329**	**1.34**	**0.182**	**-.0534972**	**.2821777**
otherdrug	**-.0523612**	**.103906**	**-0.50**	**0.614**	**-.2560133**	**.1512908**
nondrug	**.0099613**	**.0453602**	**0.22**	**0.826**	**-.0789431**	**.0988657**
_cons	**1.036221**	**.191332**	**5.42**	**0.000**	**.6612167**	**1.411224**

Underidentification test (Kleibergen-Paap rk LM statistic): **50.346**
Chi-sq(**4**) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **12.600**
(Kleibergen-Paap rk Wald F statistic): **13.278**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **16.85**
10% maximal IV relative bias **10.27**
20% maximal IV relative bias **6.71**
30% maximal IV relative bias **5.34**
10% maximal IV size **24.58**
15% maximal IV size **13.96**
20% maximal IV size **10.26**
25% maximal IV size **8.31**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **11.612**
Chi-sq(**3**) P-val = **0.0088**

Instrumented: probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar4 calendar7 calendar8 calendar9

```
.
. //B3: Examine Effects of Incarceration and Probation of Any Length
.
. ivregress 2sls laterarr (incarcerate probatnonzero = calendar1 calendar2 cale
> ndar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9), robust cl
> uster(clusterid)
note: calendar9 omitted because of collinearity

Instrumental variables (2SLS) regression              Number of obs =        1003
                                                      Wald chi2(    2)  =     3.95
                                                      Prob > chi2   =      0.1389
                                                      R-squared     =           .
                                                      Root MSE      =      .51595

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  incarcerate |   .2417618   .1371817     1.76   0.078    -.0271094    .5106331
probatnonzero |  -.0110992   .1749344    -0.06   0.949    -.3539642    .3317659
        _cons |   .4302503   .1146405     3.75   0.000     .2055591    .6549415
------------------------------------------------------------------------------
Instrumented:  incarcerate probatnonzero
Instruments:   calendar1 calendar2 calendar3 calendar4 calendar5 calendar6
               calendar7 calendar8

. ivregress 2sls laterarr age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug (incarcerate proba
> tnonzero = calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calend
> ar7 calendar8 calendar9), robust cluster(clusterid)
note: calendar9 omitted because of collinearity

Instrumental variables (2SLS) regression              Number of obs =        1003
                                                      Wald chi2(   23)  =    84.56
                                                      Prob > chi2   =      0.0000
                                                      R-squared     =      0.0239
                                                      Root MSE      =      .49331

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
  incarcerate |   .1945306   .1313183     1.48   0.139    -.0628485    .4519097
probatnonzero |  -.0078451   .1698705    -0.05   0.963    -.3407851    .3250949
          age |  -.0232607   .0106144    -2.19   0.028    -.0440645   -.0024569
        agesq |   .0001859   .0001399     1.33   0.184    -.0000884    .0004602
       female |  -.0060744   .0601833    -0.10   0.920    -.1240315    .1118828
     nonblack |  -.2197991    .111963    -1.96   0.050    -.4392425   -.0003557
     priorarr |  -.0534855   .0738498    -0.72   0.469    -.1982285    .0912575
  priordrugarr |  -.0030195   .0642626    -0.05   0.963    -.1289719     .122933
   priorfelarr |   .1132049     .06718     1.69   0.092    -.0184655    .2448754
priorfeldru~r |  -.0963706   .0669192    -1.44   0.150    -.2275298    .0347886
     priorcon |   .0119253   .0710767     0.17   0.867    -.1273826    .1512331
  priordrugcon |   .0283512   .0720089     0.39   0.694    -.1127837    .1694861
   priorfelcon |  -.0924739   .0693526    -1.33   0.182    -.2284025    .0434548
priorfeldru~n |   .0631032   .0785907     0.80   0.422    -.0909317     .217138
         pwid |  -.0074651   .0654628    -0.11   0.909    -.1357698    .1208396
         dist |  -.0022785   .0785285    -0.03   0.977    -.1561916    .1516345
    marijuana |   .0994214    .062423     1.59   0.111    -.0229254    .2217682
      cocaine |   .0099967   .0597839     0.17   0.867    -.1071777    .1271711
        crack |   .0453113   .0671059     0.68   0.500    -.0862139    .1768365
       heroin |   .0979631   .0627319     1.56   0.118    -.0249891    .2209153
          pcp |   .0982349   .0880305     1.12   0.264    -.0743017    .2707716
    otherdrug |  -.0254721   .1082692    -0.24   0.814    -.2376758    .1867317
```

nondrug	**-.010547**	**.0481067**	**-0.22**	**0.826**	**-.1048345**	**.0837405**
_cons	**.9612458**	**.224068**	**4.29**	**0.000**	**.5220806**	**1.400411**

Instrumented: incarcerate probatnonzero
Instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8

```
.
. ivregress liml laterarr (incarcerate probatnonzero = calendar1 calendar2 cale
> ndar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9), robust cl
> uster(clusterid)
note: calendar9 omitted because of collinearity
```

Instrumental variables (LIML) regression

Number of obs =	**1003**
Wald chi2(**2**) =	**4.03**
Prob > chi2 =	**0.1330**
R-squared =	**.**
Root MSE =	**.52266**

(Std. Err. adjusted for **927** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
incarcerate	**.2914302**	**.1758878**	**1.66**	**0.098**	**-.0533035**	**.6361639**
probatnonzero	**-.011181**	**.2560873**	**-0.04**	**0.965**	**-.5131029**	**.4907408**
_cons	**.409537**	**.164523**	**2.49**	**0.013**	**.0870779**	**.7319962**

Instrumented: incarcerate probatnonzero
Instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8

```
. ivregress liml laterarr age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug (incarcerate proba
> tnonzero = calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calend
> ar7 calendar8 calendar9), robust cluster(clusterid)
note: calendar9 omitted because of collinearity
```

Instrumental variables (LIML) regression

Number of obs =	**1003**
Wald chi2(**23**) =	**83.02**
Prob > chi2 =	**0.0000**
R-squared =	**0.0056**
Root MSE =	**.4979**

(Std. Err. adjusted for **927** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
incarcerate	**.2380907**	**.1678864**	**1.42**	**0.156**	**-.0909606**	**.567142**
probatnonzero	**.0020334**	**.2473716**	**0.01**	**0.993**	**-.482806**	**.4868728**
age	**-.0223705**	**.0118918**	**-1.88**	**0.060**	**-.0456781**	**.000937**
agesq	**.0001747**	**.0001566**	**1.12**	**0.265**	**-.0001323**	**.0004818**
female	**-.0016437**	**.0613516**	**-0.03**	**0.979**	**-.1218907**	**.1186032**
nonblack	**-.2229173**	**.1166263**	**-1.91**	**0.056**	**-.4515007**	**.0056661**
priorarr	**-.0510746**	**.0754245**	**-0.68**	**0.498**	**-.1989039**	**.0967547**
priordrugarr	**-.0039552**	**.0648776**	**-0.06**	**0.951**	**-.1311129**	**.1232024**
priorfelarr	**.1113983**	**.0731238**	**1.52**	**0.128**	**-.0319218**	**.2547184**
priorfeldru~r	**-.0922463**	**.0678102**	**-1.36**	**0.174**	**-.2251518**	**.0406592**
priorcon	**.007945**	**.0720323**	**0.11**	**0.912**	**-.1332357**	**.1491257**
priordrugcon	**.0226498**	**.0732376**	**0.31**	**0.757**	**-.1208933**	**.1661929**
priorfelcon	**-.0958575**	**.0712336**	**-1.35**	**0.178**	**-.2354728**	**.0437578**
priorfeldru~n	**.059834**	**.0799537**	**0.75**	**0.454**	**-.0968724**	**.2165404**

pwid	-.0131494	.0684661	-0.19	0.848	-.1473406	.1210417
dist	-.0118049	.0929603	-0.13	0.899	-.1940037	.170394
marijuana	.0987693	.0711514	1.39	0.165	-.0406849	.2382235
cocaine	.0103039	.0635248	0.16	0.871	-.1142024	.1348102
crack	.0449059	.0733637	0.61	0.540	-.0988842	.1886961
heroin	.1005071	.0652491	1.54	0.123	-.0273787	.228393
pcp	.0944157	.0897011	1.05	0.293	-.0813953	.2702267
otherdrug	-.0216273	.1126564	-0.19	0.848	-.2424298	.1991752
nondrug	-.0145367	.049137	-0.30	0.767	-.1108435	.08177
_cons	.9377094	.2686189	3.49	0.000	.4112259	1.464193

Instrumented: incarcerate probatnonzero
Instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8

```
.
. //C1: Later Drug Arrest as Recidivism Metric
.
. reg laterdrugarr toserve age agesq female nonblack priorarr priordrugarr prio
> rfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwi
> d dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
>  robust cluster(clusterid) level(90)
```

Linear regression

Number of obs =	**1003**
F(22, 926) =	**3.31**
Prob > F =	**0.0000**
R-squared =	**0.0586**
Root MSE =	**.46498**

(Std. Err. adjusted for **927** clusters in clusterid)

laterdrugarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0026453	.0009137	-2.90	0.004	-.0041496	-.0011409
age	-.0264292	.0088632	-2.98	0.003	-.0410224	-.0118359
agesq	.0002816	.0001165	2.42	0.016	.0000898	.0004733
female	-.0575772	.0485945	-1.18	0.236	-.1375881	.0224337
nonblack	-.1273696	.07508	-1.70	0.090	-.2509889	-.0037502
priorarr	-.0358428	.0660212	-0.54	0.587	-.1445467	.0728612
priordrugarr	.0294857	.0619662	0.48	0.634	-.0725417	.1315131
priorfelarr	.0770405	.0599299	1.29	0.199	-.0216341	.1757152
priorfeldru~r	-.0888288	.0626131	-1.42	0.156	-.1919213	.0142638
priorcon	.1455545	.0666028	2.19	0.029	.0358929	.2552161
priordrugcon	.0502879	.0659248	0.76	0.446	-.0582573	.1588331
priorfelcon	-.1420185	.0640919	-2.22	0.027	-.247546	-.0364911
priorfeldru~n	.1328607	.0684178	1.94	0.052	.0202108	.2455107
pwid	.088822	.0584285	1.52	0.129	-.0073805	.1850246
dist	.0519253	.0589738	0.88	0.379	-.0451752	.1490258
marijuana	.0604172	.0531879	1.14	0.256	-.0271568	.1479911
cocaine	.0038817	.0538225	0.07	0.943	-.084737	.0925004
crack	.0149804	.0623015	0.24	0.810	-.0875991	.11756
heroin	.0624908	.0568446	1.10	0.272	-.0311039	.1560854
pcp	.0759983	.0895931	0.85	0.397	-.0715167	.2235134
otherdrug	.0322344	.0909896	0.35	0.723	-.1175799	.1820488
nondrug	-.0179905	.0442525	-0.41	0.684	-.0908522	.0548713
_cons	.6869719	.1730466	3.97	0.000	.4020505	.9718934

```
. reg laterdrugarr probat age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
> robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F( 22,   926) =        2.90
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0545
                                                       Root MSE      =      .46599

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterdrugarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
       probat |   .0010601   .0011832     0.90   0.370    -.000888    .0030082
          age |  -.0254773   .0089234    -2.86   0.004   -.0401698   -.0107849
        agesq |   .0002697   .0001173     2.30   0.022    .0000766    .0004628
       female |  -.0511263   .0487144    -1.05   0.294   -.1313346     .029082
     nonblack |  -.1284758   .0761719    -1.69   0.092    -.253893   -.0030587
     priorarr |  -.0336607   .0661068    -0.51   0.611   -.1425057    .0751842
  priordrugarr |   .0310807   .0619492     0.50   0.616   -.0709187    .1330802
   priorfelarr |   .0738228   .0605917     1.22   0.223   -.0259414    .1735871
priorfeldru~r |  -.0857781   .0627839    -1.37   0.172   -.1891519    .0175956
      priorcon |   .1428868   .0666648     2.14   0.032    .0331231    .2526505
  priordrugcon |   .0444983   .0663617     0.67   0.503   -.0647663    .1537629
   priorfelcon |  -.1512428   .0645625    -2.34   0.019    -.257545   -.0449407
priorfeldru~n |   .1297575    .068887     1.88   0.060    .0163349     .24318
          pwid |   .0852025   .0588655     1.45   0.148   -.0117195    .1821246
          dist |   .0389168   .0599863     0.65   0.517   -.0598507    .1376842
     marijuana |   .0580894   .0534708     1.09   0.278   -.0299504    .1461291
       cocaine |  -.0015186   .0544141    -0.03   0.978   -.0911116    .0880743
         crack |   .0097594   .0631986     0.15   0.877   -.0942971    .1138159
        heroin |    .059055   .0574364     1.03   0.304   -.0355141    .1536241
           pcp |   .0635709   .0891339     0.71   0.476    -.083188    .2103299
     otherdrug |   .0320354   .0912587     0.35   0.726   -.1182221    .1822929
       nondrug |  -.0196045   .0443699    -0.44   0.659   -.0926596    .0534506
         _cons |   .6640867   .1743177     3.81   0.000    .3770724     .951101
------------------------------------------------------------------------------

. reg laterdrugarr toserve probat age agesq female nonblack priorarr priordruga
> rr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrug
> con pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudg
> e == 1, robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F( 23,   926) =        3.16
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0588
                                                       Root MSE      =      .46517

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterdrugarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      toserve |  -.0025331   .0009354    -2.71   0.007   -.0040733    -.000993
       probat |   .0005628   .0012116     0.46   0.642   -.0014321    .0025578
          age |  -.0260206   .0088871    -2.93   0.003   -.0406532    -.011388
        agesq |   .0002764   .0001167     2.37   0.018    .0000844    .0004685
       female |  -.0583558   .0486748    -1.20   0.231   -.1384989    .0217874
     nonblack |  -.1247353    .075328    -1.66   0.098   -.2487629   -.0007076
     priorarr |  -.0360272   .0661098    -0.54   0.586    -.144877    .0728226
  priordrugarr |   .0296435   .0620401     0.48   0.633   -.0725055    .1317925
   priorfelarr |   .0793158    .060536     1.31   0.190   -.0203567    .1789884
priorfeldru~r |  -.0896641   .0627971    -1.43   0.154   -.1930595    .0137313
```

priorcon	**.1456354**	**.0667339**	**2.18**	**0.029**	**.0357581**	**.2555127**
priordrugcon	**.0496896**	**.0662138**	**0.75**	**0.453**	**-.0593314**	**.1587107**
priorfelcon	**-.1437942**	**.0645384**	**-2.23**	**0.026**	**-.2500567**	**-.0375317**
priorfeldru~n	**.1351348**	**.0691286**	**1.95**	**0.051**	**.0213145**	**.248955**
pwid	**.0877192**	**.0586071**	**1.50**	**0.135**	**-.0087774**	**.1842158**
dist	**.047969**	**.0598757**	**0.80**	**0.423**	**-.0506164**	**.1465544**
marijuana	**.05801**	**.0533982**	**1.09**	**0.278**	**-.0299102**	**.1459302**
cocaine	**.0013262**	**.05419**	**0.02**	**0.980**	**-.0878976**	**.09055**
crack	**.0119172**	**.062779**	**0.19**	**0.849**	**-.0914485**	**.1152829**
heroin	**.0601813**	**.0571026**	**1.05**	**0.292**	**-.0338382**	**.1542007**
pcp	**.0742137**	**.0897691**	**0.83**	**0.409**	**-.0735912**	**.2220187**
otherdrug	**.0302213**	**.0908876**	**0.33**	**0.740**	**-.1194252**	**.1798677**
nondrug	**-.0175532**	**.0443175**	**-0.40**	**0.692**	**-.090522**	**.0554157**
_cons	**.678016**	**.1737513**	**3.90**	**0.000**	**.3919343**	**.9640977**

```
. reg laterdrugarr toserve if incjudge == 1, robust cluster(clusterid) level(90
> )

Linear regression                               Number of obs =        1003
                                                F(  1,   926) =        2.94
                                                Prob > F      =      0.0868
                                                R-squared     =      0.0018
                                                Root MSE      =      .47376

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterdrugarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0015085     .00088    -1.71   0.087    -.0029575   -.0000596
       _cons |   .3504018   .0167437    20.93   0.000     .3228334    .3779702
------------------------------------------------------------------------------

. reg laterdrugarr probat if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F(  1,   926) =        0.76
                                                Prob > F      =      0.3835
                                                R-squared     =      0.0008
                                                Root MSE      =        .474

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterdrugarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0009873   .0011323     0.87   0.383    -.0008771    .0028517
       _cons |    .329806   .0189857    17.37   0.000      .298546     .361066
------------------------------------------------------------------------------

. reg laterdrugarr toserve probat if incjudge == 1, robust cluster(clusterid) l
> evel(90)

Linear regression                               Number of obs =        1003
                                                F(  2,   926) =        1.62
                                                Prob > F      =      0.1989
                                                R-squared     =      0.0021
                                                Root MSE      =      .47391
```

(Std. Err. adjusted for **927** clusters in clusterid)

laterdrugarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.001358**	**.0009135**	**-1.49**	**0.137**	**-.0028621**	**.0001461**
probat	**.0006913**	**.0011685**	**0.59**	**0.554**	**-.0012327**	**.0026153**
_cons	**.3422382**	**.0215183**	**15.90**	**0.000**	**.3068083**	**.3776681**

```
.
. ivreg2 laterdrugarr age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 c
> alendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar
> 9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.80
                                                     Prob > F      =     0.0000
Total (centered) SS     =    225.0667996             Centered R2   =     0.0148
Total (uncentered) SS   =            341             Uncentered R2 =     0.3497
Residual SS             =    221.7401776             Root MSE      =      .4702
```

laterdrugarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0052724**	**.007806**	**0.68**	**0.499**	**-.0075672**	**.0181121**
age	**-.0258361**	**.0090789**	**-2.85**	**0.004**	**-.0407696**	**-.0109027**
agesq	**.0002744**	**.0001202**	**2.28**	**0.022**	**.0000768**	**.000472**
female	**-.0318228**	**.0544512**	**-0.58**	**0.559**	**-.1213871**	**.0577415**
nonblack	**-.1471086**	**.080026**	**-1.84**	**0.066**	**-.2787397**	**-.0154775**
priorarr	**-.0276147**	**.0657311**	**-0.42**	**0.674**	**-.1357328**	**.0805034**
priordrugarr	**.0337072**	**.0616436**	**0.55**	**0.585**	**-.0676876**	**.1351019**
priorfelarr	**.0526329**	**.0633223**	**0.83**	**0.406**	**-.051523**	**.1567888**
priorfeldru~r	**-.0737873**	**.0641925**	**-1.15**	**0.250**	**-.1793745**	**.0317999**
priorcon	**.1363812**	**.066379**	**2.05**	**0.040**	**.0271975**	**.2455649**
priordrugcon	**.0351204**	**.0682616**	**0.51**	**0.607**	**-.07716**	**.1474007**
priorfelcon	**-.1611448**	**.0670927**	**-2.40**	**0.016**	**-.2715024**	**-.0507872**
priorfeldru~n	**.1088331**	**.0713698**	**1.52**	**0.127**	**-.0085598**	**.2262261**
pwid	**.0838053**	**.0597445**	**1.40**	**0.161**	**-.0144656**	**.1820762**
dist	**.03385**	**.0626651**	**0.54**	**0.589**	**-.069225**	**.1369249**
marijuana	**.0675936**	**.0536253**	**1.26**	**0.207**	**-.0206122**	**.1557993**
cocaine	**.0019728**	**.0547941**	**0.04**	**0.971**	**-.0881554**	**.0921011**
crack	**.0167655**	**.0634168**	**0.26**	**0.791**	**-.0875458**	**.1210768**
heroin	**.065465**	**.0580213**	**1.13**	**0.259**	**-.0299715**	**.1609015**
pcp	**.0465077**	**.0934916**	**0.50**	**0.619**	**-.1072723**	**.2002878**
otherdrug	**.0439217**	**.0942036**	**0.47**	**0.641**	**-.1110294**	**.1988729**
nondrug	**-.02592**	**.0452901**	**-0.57**	**0.567**	**-.1004156**	**.0485756**
_cons	**.6674018**	**.1768445**	**3.77**	**0.000**	**.3765185**	**.9582851**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.649**
Chi-sq(**8**) P-val = **0.0081**

Weak identification test (Cragg-Donald Wald F statistic): **3.090**
(Kleibergen-Paap rk Wald F statistic): **2.710**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**

```
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           8.716
                                                 Chi-sq(    7) P-val =     0.2737
------------------------------------------------------------------------------
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterdrugarr age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 ca
> lendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9
> ) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.89
                                                     Prob > F      =     0.0000
Total (centered) SS     =    225.0667996             Centered R2   =     0.0529
Total (uncentered) SS   =            341             Uncentered R2 =     0.3749
Residual SS             =    213.1536751             Root MSE      =       .461

------------------------------------------------------------------------------
             |               Robust
 laterdrugar |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0004154   .0050035    -0.08   0.934    -.0086454    .0078146
         age |  -.0265263   .0094963    -2.79   0.005    -.0421464   -.0109063
       agesq |   .0002829   .0001239     2.28   0.022     .0000791    .0004866
      female |  -.0481289   .0492078    -0.98   0.328    -.1290685    .0328107
    nonblack |  -.1361148   .0792379    -1.72   0.086    -.2664496     -.00578
    priorarr |  -.0328717   .0652488    -0.50   0.614    -.1401964    .0744531
 priordrugarr |   .0308237   .0610895     0.50   0.614    -.0696595    .1313069
  priorfelarr |   .0669516   .0634695     1.05   0.291    -.0374465    .1713497
priorfeldru~r |  -.0830297   .0626653    -1.32   0.185    -.1861049    .0200454
     priorcon |   .1423341   .0656856     2.17   0.030      .034291    .2503773
 priordrugcon |   .0455035   .0651168     0.70   0.485    -.0616042    .1526111
  priorfelcon |   -.147298   .0647076    -2.28   0.023    -.2537325   -.0408635
priorfeldru~n |   .1229037   .0713946     1.72   0.085     .0054701    .2403374
         pwid |   .0879074   .0586205     1.50   0.134    -.0085147    .1843296
         dist |   .0486173   .0667568     0.73   0.466    -.0611879    .1584225
    marijuana |   .0646663   .0564626     1.15   0.252    -.0282064     .157539
      cocaine |   .0051101   .0582286     0.09   0.930    -.0906674    .1008875
        crack |   .0178562   .0673218     0.27   0.791    -.0928783    .1285907
       heroin |     .06522   .0598782     1.09   0.276    -.0332709     .163711
          pcp |   .0671545   .0889026     0.76   0.450    -.0790773    .2133862
```

otherdrug	**.0377471**	**.093429**	**0.40**	**0.686**	**-.1159299**	**.1914241**
nondrug	**-.0210453**	**.0438809**	**-0.48**	**0.632**	**-.0932229**	**.0511323**
_cons	**.6868388**	**.1892835**	**3.63**	**0.000**	**.3754951**	**.9981826**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(**8**) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **9.730**
Chi-sq(**7**) P-val = **0.2044**

```
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterdrugarr age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = cale
> ndar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 c
> alendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F( 23,   926) =       2.68
                                                       Prob > F      =     0.0000
Total (centered) SS     =    225.0667996               Centered R2   =     0.0145
Total (uncentered) SS   =            341               Uncentered R2 =     0.3495
Residual SS             =    221.8038674               Root MSE      =      .4703
```

laterdrugarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0052551**	**.0078338**	**0.67**	**0.502**	**-.0076303**	**.0181405**
probat	**-.0001542**	**.0050727**	**-0.03**	**0.976**	**-.008498**	**.0081896**
age	**-.0259471**	**.0097678**	**-2.66**	**0.008**	**-.0420136**	**-.0098805**
agesq	**.0002758**	**.000128**	**2.15**	**0.031**	**.0000652**	**.0004863**
female	**-.0315658**	**.0551413**	**-0.57**	**0.567**	**-.1222652**	**.0591336**
nonblack	**-.1478639**	**.0841906**	**-1.76**	**0.079**	**-.2863451**	**-.0093827**
priorarr	**-.0275502**	**.0657542**	**-0.42**	**0.675**	**-.1357063**	**.0806058**
priordrugarr	**.0336711**	**.0616368**	**0.55**	**0.585**	**-.0677124**	**.1350545**
priorfelarr	**.051968**	**.0669821**	**0.78**	**0.438**	**-.0582077**	**.1621437**

priorfeldru~r	-.0735329	.0649298	-1.13	0.257	-.1803329	.0332671
priorcon	.1363435	.0663831	2.05	0.040	.0271529	.245534
priordrugcon	.0352586	.0683846	0.52	0.606	-.0772241	.1477413
priorfelcon	-.1606906	.0688776	-2.33	0.020	-.2739843	-.047397
priorfeldru~n	.1081693	.0750319	1.44	0.149	-.0152472	.2315858
pwid	.084099	.0603682	1.39	0.164	-.0151978	.1833958
dist	.0349034	.0714647	0.49	0.625	-.0826456	.1524524
marijuana	.0682653	.0574185	1.19	0.234	-.0261798	.1627104
cocaine	.0026699	.0597053	0.04	0.964	-.0955366	.1008763
crack	.0176079	.0688809	0.26	0.798	-.0956912	.130907
heroin	.0661029	.0614701	1.08	0.282	-.0350064	.1672123
pcp	.0469468	.0946748	0.50	0.620	-.1087794	.202673
otherdrug	.0444932	.0967201	0.46	0.646	-.1145972	.2035836
nondrug	-.0260533	.045343	-0.57	0.566	-.1006359	.0485293
_cons	.6698227	.1944431	3.44	0.001	.3499922	.9896533

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.716**
Chi-sq(**6**) P-val = **0.1902**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterdrugarr (toserve = calendar1 calendar2 calendar3 calendar4 calend
> ar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster
> (clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.22
                                                     Prob > F      =     0.6380
Total (centered) SS     =    225.0667996             Centered R2   =    -0.0178
Total (uncentered) SS   =            341             Uncentered R2 =     0.3283
Residual SS             =    229.0633441             Root MSE      =     .4779
```

laterdrugarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf. Interval]	
toserve	**.0035116**	**.0074539**	**0.47**	**0.638**	**-.008749**	**.0157721**
_cons	**.3157206**	**.0536281**	**5.89**	**0.000**	**.2275103**	**.403931**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **10.543**
Chi-sq(**7**) P-val = **0.1598**

Instrumented: toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterdrugarr (probat = calendar1 calendar2 calendar3 calendar4 calenda
> r5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(
> clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.13
                                                       Prob > F      =     0.7174
Total (centered) SS     =    225.0667996              Centered R2   =     0.0001
Total (uncentered) SS   =            341              Uncentered R2 =     0.3401
Residual SS             =    225.0347648              Root MSE      =     .4737
```

laterdrugarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf. Interval]	
probat	**.0018766**	**.0051781**	**0.36**	**0.717**	**-.0066406**	**.0103937**
_cons	**.3206419**	**.0551889**	**5.81**	**0.000**	**.2298642**	**.4114196**

Underidentification test (Kleibergen-Paap rk LM statistic): **51.421**
Chi-sq(**8**) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **6.627**
(Kleibergen-Paap rk Wald F statistic): **6.964**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**

```
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.953
                                                 Chi-sq(    7) P-val =     0.1407
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterdrugarr (toserve probat = calendar1 calendar2 calendar3 calendar4
>  calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust
> cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  2,   926) =       0.19
                                                       Prob > F      =     0.8262
Total (centered) SS     =    225.0667996              Centered R2   =    -0.0169
Total (uncentered) SS   =            341              Uncentered R2 =     0.3288
Residual SS             =    228.8626825              Root MSE      =      .4777

------------------------------------------------------------------------------
             |               Robust
laterdrugarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0037074   .0074627     0.50   0.619    -.0085677    .0159824
      probat |   .0020515   .0052132     0.39   0.694    -.0065234    .0106265
       _cons |   .2932267   .0774165     3.79   0.000      .165888    .4205654
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              22.874
                                                 Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 3.143
                         (Kleibergen-Paap rk Wald F statistic):            3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      17.70
                                         10% maximal IV relative bias      10.22
                                         20% maximal IV relative bias       6.20
                                         30% maximal IV relative bias       4.73
                                         10% maximal IV size               25.64
                                         15% maximal IV size               14.31
                                         20% maximal IV size               10.41
                                         25% maximal IV size                8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.367
                                                 Chi-sq(    6) P-val =     0.1100
------------------------------------------------------------------------------
Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //C2: Later Felony Arrest as Recidivism Metric
.
. reg laterfelarr toserve age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
> robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F( 22,   926) =        5.78
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0942
                                                       Root MSE      =      .45061

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0037875   .0009704    -3.90   0.000    -.0053852   -.0021898
         age |  -.0440724   .0086436    -5.10   0.000    -.0583041   -.0298407
       agesq |   .0004655   .0001135     4.10   0.000     .0002787    .0006523
      female |   .0056117    .049469     0.11   0.910     -.075839    .0870625
    nonblack |  -.1548901   .0649864    -2.38   0.017    -.2618903     -.04789
    priorarr |   .0039995   .0654964     0.06   0.951    -.1038403    .1118393
 priordrugarr |  -.0576363   .0600637    -0.96   0.338    -.1565312    .0412586
  priorfelarr |   .1238898   .0581132     2.13   0.033     .0282065    .2195732
priorfeldru~r |  -.0652511   .0609297    -1.07   0.284    -.1655718    .0350697
     priorcon |   .0672227   .0631879     1.06   0.288    -.0368162    .1712617
 priordrugcon |   .1441882   .0648472     2.22   0.026     .0374172    .2509593
  priorfelcon |  -.0480151   .0632245    -0.76   0.448    -.1521144    .0560841
priorfeldru~n |  -.0056078   .0700081    -0.08   0.936    -.1208762    .1096606
         pwid |   .0384968    .057032     0.68   0.500    -.0554065       .1324
         dist |   .0458525   .0574384     0.80   0.425      -.04872    .1404249
    marijuana |  -.0055215   .0498451    -0.11   0.912    -.0875915    .0765486
      cocaine |  -.0477151   .0506101    -0.94   0.346    -.1310447    .0356145
        crack |  -.0342057   .0581647    -0.59   0.557    -.1299738    .0615625
       heroin |   .0345029   .0543315     0.64   0.526    -.0549539    .1239597
          pcp |    .120966   .0860013     1.41   0.160    -.0206352    .2625673
    otherdrug |  -.0748279   .0811588    -0.92   0.357    -.2084559    .0588001
      nondrug |   .0550217   .0436895     1.26   0.208    -.0169131    .1269564
        _cons |   1.093527   .1688731     6.48   0.000     .8154768    1.371576
------------------------------------------------------------------------------

. reg laterfelarr probat age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1, r
> obust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F( 22,   926) =        5.09
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0887
                                                       Root MSE      =      .45198
```

(Std. Err. adjusted for **927** clusters in clusterid)

laterfelarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
probat	**.0025587**	**.0011929**	**2.14**	**0.032**	**.0005946**	**.0045227**
age	**-.0419697**	**.008695**	**-4.83**	**0.000**	**-.0562861**	**-.0276533**
agesq	**.0004393**	**.000114**	**3.85**	**0.000**	**.0002515**	**.000627**
female	**.012734**	**.0494226**	**0.26**	**0.797**	**-.0686405**	**.0941084**
nonblack	**-.1510859**	**.0668525**	**-2.26**	**0.024**	**-.2611587**	**-.0410132**
priorarr	**.0065672**	**.0656488**	**0.10**	**0.920**	**-.1015235**	**.1146579**
priordrugarr	**-.0551712**	**.0599318**	**-0.92**	**0.358**	**-.1538489**	**.0435065**
priorfelarr	**.1241294**	**.0582243**	**2.13**	**0.033**	**.0282631**	**.2199957**
priorfeldru~r	**-.0628217**	**.0610525**	**-1.03**	**0.304**	**-.1633446**	**.0377012**
priorcon	**.0637929**	**.0629134**	**1.01**	**0.311**	**-.0397941**	**.16738**
priordrugcon	**.1351897**	**.0651008**	**2.08**	**0.038**	**.0280012**	**.2423782**
priorfelcon	**-.0640049**	**.0636418**	**-1.01**	**0.315**	**-.1687912**	**.0407814**
priorfeldru~n	**-.0052169**	**.0704407**	**-0.07**	**0.941**	**-.1211975**	**.1107637**
pwid	**.0314066**	**.0571835**	**0.55**	**0.583**	**-.062746**	**.1255592**
dist	**.0203848**	**.0581204**	**0.35**	**0.726**	**-.0753106**	**.1160801**
marijuana	**-.0134933**	**.0507397**	**-0.27**	**0.790**	**-.0970362**	**.0700496**
cocaine	**-.0601228**	**.0510945**	**-1.18**	**0.240**	**-.14425**	**.0240044**
crack	**-.047392**	**.0593755**	**-0.80**	**0.425**	**-.1451539**	**.0503699**
heroin	**.0252352**	**.0551239**	**0.46**	**0.647**	**-.0655263**	**.1159968**
pcp	**.1006449**	**.0867987**	**1.16**	**0.247**	**-.0422692**	**.243559**
otherdrug	**-.0791417**	**.0818146**	**-0.97**	**0.334**	**-.2138495**	**.0555662**
nondrug	**.0537271**	**.0440407**	**1.22**	**0.223**	**-.0187859**	**.1262401**
_cons	**1.044712**	**.1699902**	**6.15**	**0.000**	**.7648226**	**1.324601**

```
. reg laterfelarr toserve probat age agesq female nonblack priorarr priordrugar
> r priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugc
> on pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge
>  == 1, robust cluster(clusterid) level(90)
```

Linear regression — Number of obs = **1003**; F(23, 926) = **5.64**; Prob > F = **0.0000**; R-squared = **0.0967**; Root MSE = **.45022**

(Std. Err. adjusted for **927** clusters in clusterid)

laterfelarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0034111**	**.0009687**	**-3.52**	**0.000**	**-.0050062**	**-.0018161**
probat	**.001889**	**.0012177**	**1.55**	**0.121**	**-.0001159**	**.0038939**
age	**-.0427013**	**.0086173**	**-4.96**	**0.000**	**-.0568896**	**-.0285129**
agesq	**.0004483**	**.0001129**	**3.97**	**0.000**	**.0002625**	**.0006341**
female	**.0029987**	**.0497666**	**0.06**	**0.952**	**-.078942**	**.0849394**
nonblack	**-.1460489**	**.0656205**	**-2.23**	**0.026**	**-.2540931**	**-.0380047**
priorarr	**.0033805**	**.0656713**	**0.05**	**0.959**	**-.1047474**	**.1115084**
priordrugarr	**-.0571066**	**.0600464**	**-0.95**	**0.342**	**-.155973**	**.0417599**
priorfelarr	**.1315262**	**.0584224**	**2.25**	**0.025**	**.0353337**	**.2277188**
priorfeldru~r	**-.0680546**	**.0610747**	**-1.11**	**0.265**	**-.1686141**	**.032505**
priorcon	**.0674942**	**.0629156**	**1.07**	**0.284**	**-.0360963**	**.1710847**
priordrugcon	**.1421804**	**.06497**	**2.19**	**0.029**	**.0352073**	**.2491536**
priorfelcon	**-.0539745**	**.0635802**	**-0.85**	**0.396**	**-.1586593**	**.0507103**
priorfeldru~n	**.0020242**	**.0704614**	**0.03**	**0.977**	**-.1139905**	**.1180389**
pwid	**.0347955**	**.0569725**	**0.61**	**0.542**	**-.0590097**	**.1286007**
dist	**.0325746**	**.0581057**	**0.56**	**0.575**	**-.0630965**	**.1282456**
marijuana	**-.0136002**	**.0503988**	**-0.27**	**0.787**	**-.0965818**	**.0693814**
cocaine	**-.056292**	**.0509446**	**-1.10**	**0.269**	**-.1401723**	**.0275884**
crack	**-.0444864**	**.0589339**	**-0.75**	**0.451**	**-.1415211**	**.0525484**
heroin	**.0267518**	**.0547639**	**0.49**	**0.625**	**-.0634169**	**.1169206**
pcp	**.1149765**	**.0860964**	**1.34**	**0.182**	**-.0267812**	**.2567343**

otherdrug	**-.0815846**	**.0814318**	**-1.00**	**0.317**	**-.2156622**	**.052493**
nondrug	**.0564894**	**.043733**	**1.29**	**0.197**	**-.0155171**	**.1284958**
_cons	**1.063469**	**.168804**	**6.30**	**0.000**	**.7855329**	**1.341405**

```
. reg laterfelarr toserve if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F(  1,   926) =       11.38
                                                Prob > F      =      0.0008
                                                R-squared     =      0.0063
                                                Root MSE      =        .467

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laterfelarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0028151**	**.0008346**	**-3.37**	**0.001**	**-.0041893**	**-.0014409**
_cons	**.3434759**	**.0167564**	**20.50**	**0.000**	**.3158865**	**.3710653**

```
. reg laterfelarr probat if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F(  1,   926) =        5.61
                                                Prob > F      =      0.0180
                                                R-squared     =      0.0060
                                                Root MSE      =     .46706

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laterfelarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
probat	**.0027606**	**.0011653**	**2.37**	**0.018**	**.0008419**	**.0046794**
_cons	**.2955794**	**.0188326**	**15.70**	**0.000**	**.2645716**	**.3265873**

```
. reg laterfelarr toserve probat if incjudge == 1, robust cluster(clusterid) le
> vel(90)

Linear regression                               Number of obs =        1003
                                                F(  2,   926) =        7.47
                                                Prob > F      =      0.0006
                                                R-squared     =      0.0101
                                                Root MSE      =     .46633

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laterfelarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0023242**	**.000857**	**-2.71**	**0.007**	**-.0037352**	**-.0009131**
probat	**.002254**	**.001205**	**1.87**	**0.062**	**.0002699**	**.0042381**
_cons	**.3168568**	**.0215442**	**14.71**	**0.000**	**.2813842**	**.3523294**

```
.
. ivreg2 laterfelarr age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 ca
> lendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9
> ) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       4.67
                                                     Prob > F      =     0.0000
Total (centered) SS     =    219.6909272             Centered R2   =     0.0396
Total (uncentered) SS   =            325             Uncentered R2 =     0.3508
Residual SS             =    210.9929627             Root MSE      =      .4587
```

laterfelarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0049523	.0078044	0.63	0.526	-.0078848	.0177894
age	-.0434178	.0089284	-4.86	0.000	-.0581037	-.0287319
agesq	.0004576	.000118	3.88	0.000	.0002635	.0006518
female	.0340403	.0537563	0.63	0.527	-.054381	.1224615
nonblack	-.1766786	.0731248	-2.42	0.016	-.2969582	-.056399
priorarr	.0130819	.0652134	0.20	0.841	-.0941846	.1203484
priordrugarr	-.0529765	.0597573	-0.89	0.375	-.1512685	.0453155
priorfelarr	.0969479	.0614847	1.58	0.115	-.0041853	.1980812
priorfeldru~r	-.0486478	.0630811	-0.77	0.441	-.1524069	.0551113
priorcon	.0570969	.0635054	0.90	0.369	-.0473601	.1615539
priordrugcon	.1274459	.0673502	1.89	0.058	.0166646	.2382272
priorfelcon	-.0691273	.0671515	-1.03	0.303	-.1795816	.0413271
priorfeldru~n	-.0321302	.0738768	-0.43	0.664	-.1536468	.0893864
pwid	.0329592	.0582975	0.57	0.572	-.0629317	.1288501
dist	.0259004	.0612902	0.42	0.673	-.074913	.1267138
marijuana	.0024001	.0509688	0.05	0.962	-.0814362	.0862363
cocaine	-.0498222	.0514537	-0.97	0.333	-.1344561	.0348117
crack	-.0322352	.0592745	-0.54	0.587	-.1297331	.0652626
heroin	.037786	.0555588	0.68	0.496	-.0536001	.1291721
pcp	.0884134	.0932468	0.95	0.343	-.0649639	.2417907
otherdrug	-.0619271	.08446	-0.73	0.463	-.2008515	.0769972
nondrug	.0462688	.0454758	1.02	0.309	-.0285322	.1210698
_cons	1.071924	.1736954	6.17	0.000	.7862209	1.357628

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(   8) P-val =    0.0081

Weak identification test  (Cragg-Donald Wald F statistic):                   3.090
                          (Kleibergen-Paap rk Wald F statistic):             2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):            9.061
```

Chi-sq(7) P-val = **0.2483**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfelarr age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 cal
> endar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9)
>  if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       4.88
                                                     Prob > F      =     0.0000
Total (centered) SS     =    219.6909272             Centered R2   =     0.0884
Total (uncentered) SS   =            325             Uncentered R2 =     0.3838
Residual SS             =     200.260547             Root MSE      =      .4468
```

laterfelarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**.0031929**	**.0048228**	**0.66**	**0.508**	**-.0047399**	**.0111258**
age	**-.0415188**	**.0092052**	**-4.51**	**0.000**	**-.05666**	**-.0263776**
agesq	**.0004336**	**.00012**	**3.61**	**0.000**	**.0002363**	**.0006309**
female	**.0114455**	**.0499762**	**0.23**	**0.819**	**-.0707581**	**.0936491**
nonblack	**-.1478022**	**.0701052**	**-2.11**	**0.035**	**-.263115**	**-.0324894**
priorarr	**.006228**	**.0650467**	**0.10**	**0.924**	**-.1007643**	**.1132203**
priordrugarr	**-.0550607**	**.0592831**	**-0.93**	**0.353**	**-.1525726**	**.0424513**
priorfelarr	**.1270831**	**.0609654**	**2.08**	**0.037**	**.026804**	**.2273622**
priorfeldru~r	**-.0640032**	**.0609667**	**-1.05**	**0.294**	**-.1642845**	**.0362782**
priorcon	**.0640305**	**.0622456**	**1.03**	**0.304**	**-.0383544**	**.1664154**
priordrugcon	**.1347576**	**.0644859**	**2.09**	**0.037**	**.0286878**	**.2408275**
priorfelcon	**-.0657007**	**.0643171**	**-1.02**	**0.307**	**-.1714929**	**.0400915**
priorfeldru~n	**-.0022707**	**.0725084**	**-0.03**	**0.975**	**-.1215364**	**.1169951**
pwid	**.0302438**	**.0574064**	**0.53**	**0.598**	**-.0641814**	**.124669**
dist	**.0162148**	**.0652766**	**0.25**	**0.804**	**-.0911557**	**.1235853**
marijuana	**-.0163206**	**.0544241**	**-0.30**	**0.764**	**-.1058403**	**.0731992**
cocaine	**-.0629723**	**.0539782**	**-1.17**	**0.243**	**-.1517586**	**.025814**
crack	**-.0508726**	**.0633746**	**-0.80**	**0.422**	**-.1551146**	**.0533694**
heroin	**.0225851**	**.0574189**	**0.39**	**0.694**	**-.0718606**	**.1170308**
pcp	**.0991044**	**.0863113**	**1.15**	**0.251**	**-.0428651**	**.2410739**
otherdrug	**-.081597**	**.0835409**	**-0.98**	**0.329**	**-.2190095**	**.0558155**
nondrug	**.0543465**	**.0436312**	**1.25**	**0.213**	**-.0174204**	**.1261133**
_cons	**1.034931**	**.1828835**	**5.66**	**0.000**	**.7341146**	**1.335748**

```
Underidentification test (Kleibergen-Paap rk LM statistic):                53.233
                                                     Chi-sq( 8) P-val =     0.0000
```

```
Weak identification test (Cragg-Donald Wald F statistic):                   7.098
                         (Kleibergen-Paap rk Wald F statistic):             7.041
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
```

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           9.645
                                                 Chi-sq(    7) P-val =     0.2096
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfelarr age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calen
> dar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 ca
> lendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       4.46
                                                     Prob > F      =     0.0000
Total (centered) SS     =    219.6909272             Centered R2   =     0.0441
Total (uncentered) SS   =            325             Uncentered R2 =     0.3538
Residual SS             =    210.0110276             Root MSE      =      .4576

------------------------------------------------------------------------------
             |               Robust
  laterfelarr|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0053405   .0078444     0.68   0.496    -.0075624    .0182434
      probat |   .0034583   .0049122     0.70   0.481    -.0046216    .0115382
         age |  -.0409301   .0095273    -4.30   0.000    -.0566011   -.0252591
       agesq |   .0004264   .0001247     3.42   0.001     .0002213    .0006315
      female |   .0282777   .0545472     0.52   0.604    -.0614446    .1179999
    nonblack |   -.159742   .0774624    -2.06   0.039    -.2871564   -.0323277
    priorarr |   .0116359   .0656962     0.18   0.859    -.0964247    .1196964
 priordrugarr|  -.0521671    .059769    -0.87   0.383    -.1504783    .0461441
  priorfelarr|   .1118561   .0644571     1.74   0.083     .0058336    .2178786
priorfeldru~r|  -.0543521   .0635522    -0.86   0.392    -.1588861     .050182
     priorcon|   .0579425   .0631812     0.92   0.359    -.0459814    .1618664
 priordrugcon|   .1243463   .0675351     1.84   0.066      .013261    .2354317
  priorfelcon|  -.0793109   .0693218    -1.14   0.253    -.1933351    .0347133
priorfeldru~n|  -.0172445   .0762573    -0.23   0.821    -.1426766    .1081877
         pwid|   .0263735   .0590694     0.45   0.655     -.070787    .1235341
         dist|   .0022782   .0703893     0.03   0.974    -.1135019    .1180582
    marijuana|  -.0126631   .0555317    -0.23   0.820    -.1040045    .0786784
      cocaine|  -.0654521   .0553876    -1.18   0.237    -.1565567    .0256524
        crack|  -.0511249   .0648336    -0.79   0.430    -.1577667    .0555169
```

heroin	**.0234823**	**.0589855**	**0.40**	**0.691**	**-.0735402**	**.1205049**
pcp	**.0785685**	**.0942883**	**0.83**	**0.405**	**-.0765219**	**.2336589**
otherdrug	**-.0747413**	**.0868685**	**-0.86**	**0.390**	**-.2176273**	**.0681447**
nondrug	**.0492571**	**.0454918**	**1.08**	**0.279**	**-.0255702**	**.1240844**
_cons	**1.017639**	**.1887705**	**5.39**	**0.000**	**.7071389**	**1.328138**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.720**
Chi-sq(**6**) P-val = **0.1899**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterfelarr (toserve = calendar1 calendar2 calendar3 calendar4 calenda
> r5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(
> clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.05
                                                       Prob > F      =     0.8209
Total (centered) SS     =    219.6909272              Centered R2   =    -0.0098
Total (uncentered) SS   =            325              Uncentered R2 =     0.3174
Residual SS             =    221.8449217              Root MSE      =     .4703
```

laterfelarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0016883**	**.0074473**	**0.23**	**0.821**	**-.0105614**	**.0139381**
_cons	**.3123641**	**.0536266**	**5.82**	**0.000**	**.2241562**	**.400572**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          11.099
                                                 Chi-sq(    7) P-val =     0.1344
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfelarr (probat = calendar1 calendar2 calendar3 calendar4 calendar
> 5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(c
> lusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.76
                                                     Prob > F      =     0.3831
Total (centered) SS     =    219.6909272             Centered R2   =     0.0038
Total (uncentered) SS   =            325             Uncentered R2 =     0.3266
Residual SS             =    218.8626013             Root MSE      =      .4671

------------------------------------------------------------------------------
             |               Robust
  laterfelarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0044534   .0050984     0.87   0.382    -.0039327    .0128395
       _cons |   .2781352   .0543161     5.12   0.000     .1887933    .3674772
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              51.421
                                                 Chi-sq(    8) P-val =     0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 6.627
                        (Kleibergen-Paap rk Wald F statistic):             6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.780
                                                 Chi-sq(    7) P-val =     0.1485
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterfelarr (toserve probat = calendar1 calendar2 calendar3 calendar4
> calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust c
> luster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.42
                                                     Prob > F      =     0.6567
Total (centered) SS     =    219.6909272              Centered R2   =    -0.0062
Total (uncentered) SS   =            325              Uncentered R2 =     0.3198
Residual SS             =    221.0586784              Root MSE      =     .4695

------------------------------------------------------------------------------
             |               Robust
  laterfelarr|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |    .002123   .0074598     0.28   0.776    -.0101473    .0143933
      probat |   .0045536    .005124     0.89   0.374    -.0038747    .0129818
       _cons |   .2624363   .0770553     3.41   0.001     .1356916    .3891809
------------------------------------------------------------------------------

Underidentification test  (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test  (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):              3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        17.70
                                         10% maximal IV relative bias        10.22
                                         20% maximal IV relative bias         6.20
                                         30% maximal IV relative bias         4.73
                                         10% maximal IV size                 25.64
                                         15% maximal IV size                 14.31
                                         20% maximal IV size                 10.41
                                         25% maximal IV size                  8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic  (overidentification test of all instruments):           10.524
                                                     Chi-sq(    6) P-val =     0.1043
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //C3: Later Felony Drug Arrest as Recidivism Metric
.
. reg laterfeldrugarr toserve age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
>  1, robust cluster(clusterid) level(90)

Linear regression                                     Number of obs =         1003
                                                      F( 22,   926) =         3.47
                                                      Prob > F      =       0.0000
                                                      R-squared     =       0.0537
                                                      Root MSE      =       .42107

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldru~r|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0023844   .0008332    -2.86   0.004    -.0037563   -.0010124
         age |   -.029805   .0081296    -3.67   0.000    -.0431905   -.0164196
       agesq |    .000335   .0001075     3.12   0.002      .000158    .0005121
      female |  -.0331707   .0423337    -0.78   0.434    -.1028731    .0365318
    nonblack |  -.1204481   .0470842    -2.56   0.011    -.1979723    -.042924
    priorarr |  -.0178546   .0602414    -0.30   0.767    -.1170421    .0813329
 priordrugarr |   -.002374   .0559363    -0.04   0.966    -.0944732    .0897252
  priorfelarr |   .0820538   .0551153     1.49   0.137    -.0086936    .1728013
priorfeldru~r |  -.0199309   .0591678    -0.34   0.736    -.1173506    .0774889
     priorcon |   .0534966   .0567381     0.94   0.346    -.0399227     .146916
 priordrugcon |   .1179403   .0578465     2.04   0.042     .0226959    .2131846
  priorfelcon |  -.0803513   .0575197    -1.40   0.163    -.1750576    .0143549
priorfeldru~n |  -.0013954   .0617195    -0.02   0.982    -.1030166    .1002257
         pwid |   .0394849   .0530875     0.74   0.457    -.0479237    .1268934
         dist |   .0241858     .05305     0.46   0.649    -.0631611    .1115327
    marijuana |   .0406186   .0483469     0.84   0.401    -.0389846    .1202219
      cocaine |  -.0041888   .0482405    -0.09   0.931    -.0836168    .0752393
        crack |   .0046507   .0558796     0.08   0.934     -.087355    .0966565
       heroin |   .0541266   .0521477     1.04   0.300    -.0317346    .1399878
          pcp |   .1214698   .0848853     1.43   0.153    -.0182939    .2612335
    otherdrug |   .0199449   .0796904     0.25   0.802    -.1112654    .1511552
      nondrug |   .0064596   .0409083     0.16   0.875     -.060896    .0738152
        _cons |    .691484   .1611376     4.29   0.000     .4261708    .9567972
------------------------------------------------------------------------------

. reg laterfeldrugarr probat age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
> 1, robust cluster(clusterid) level(90)

Linear regression                                     Number of obs =         1003
                                                      F( 22,   926) =         3.31
                                                      Prob > F      =       0.0000
                                                      R-squared     =       0.0524
                                                      Root MSE      =       .42135

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldru~r|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0020416   .0011025     1.85   0.064     .0002263    .0038568
         age |   -.028175   .0081617    -3.45   0.001    -.0416133   -.0147367
       agesq |   .0003146   .0001078     2.92   0.004     .0001372    .0004921
      female |  -.0295621   .0426942    -0.69   0.489    -.0998581    .0407339
    nonblack |  -.1158229   .0476406    -2.43   0.015    -.1942633   -.0373826
    priorarr |  -.0164685   .0601599    -0.27   0.784    -.1155218    .0825848
 priordrugarr |   -.000747   .0557888    -0.01   0.989    -.0926033    .0911093
```

priorfelarr	.0842108	.0551327	1.53	0.127	-.0065652	.1749868
priorfeldru~r	-.0192039	.0592245	-0.32	0.746	-.1167171	.0783092
priorcon	.0514988	.0564831	0.91	0.362	-.0415007	.1444984
priordrugcon	.1119819	.0583431	1.92	0.055	.01592	.2080438
priorfelcon	-.0915692	.0580498	-1.58	0.115	-.1871483	.0040099
priorfeldru~n	.0008517	.0625617	0.01	0.989	-.1021562	.1038596
pwid	.0342316	.0531381	0.64	0.520	-.0532604	.1217236
dist	.0053208	.0536091	0.10	0.921	-.0829467	.0935882
marijuana	.0336798	.0488924	0.69	0.491	-.0468216	.1141812
cocaine	-.0139352	.0488305	-0.29	0.775	-.0943347	.0664643
crack	-.0060145	.0569127	-0.11	0.916	-.0997214	.0876923
heroin	.0464923	.0528036	0.88	0.379	-.0404488	.1334334
pcp	.1076306	.0846226	1.27	0.204	-.0317006	.2469619
otherdrug	.0155616	.0801827	0.19	0.846	-.1164594	.1475825
nondrug	.0060653	.0410051	0.15	0.882	-.0614497	.0735802
_cons	.6541104	.1618195	4.04	0.000	.3876745	.9205463

```
. reg laterfeldrugarr toserve probat age agesq female nonblack priorarr priordr
> ugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeld
> rugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incj
> udge == 1, robust cluster(clusterid) level(90)
```

Linear regression

Number of obs =	1003
F(23, 926) =	3.41
Prob > F =	0.0000
R-squared =	0.0559
Root MSE =	.42079

(Std. Err. adjusted for 927 clusters in clusterid)

laterfeldru~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0020581	.0008364	-2.46	0.014	-.0034352	-.000681
probat	.0016375	.0011233	1.46	0.145	-.0002119	.003487
age	-.0286164	.0081276	-3.52	0.000	-.0419985	-.0152343
agesq	.0003201	.0001072	2.99	0.003	.0001436	.0004966
female	-.0354358	.0426357	-0.83	0.406	-.1056355	.0347638
nonblack	-.1127838	.0476409	-2.37	0.018	-.1912247	-.034343
priorarr	-.0183912	.060287	-0.31	0.760	-.1176537	.0808713
priordrugarr	-.0019147	.0559151	-0.03	0.973	-.093979	.0901495
priorfelarr	.0886737	.0553001	1.60	0.109	-.002378	.1797253
priorfeldru~r	-.0223612	.0592854	-0.38	0.706	-.1199746	.0752523
priorcon	.053732	.0566804	0.95	0.343	-.0395923	.1470562
priordrugcon	.1161997	.0583272	1.99	0.047	.020164	.2122355
priorfelcon	-.0855174	.0580719	-1.47	0.141	-.1811329	.010098
priorfeldru~n	.0052206	.0627558	0.08	0.934	-.0981069	.1085481
pwid	.0362763	.0530569	0.68	0.494	-.0510819	.1236345
dist	.0126755	.0536252	0.24	0.813	-.0756185	.1009694
marijuana	.0336154	.0487085	0.69	0.490	-.0465832	.1138139
cocaine	-.0116239	.0487065	-0.24	0.811	-.0918192	.0685714
crack	-.0042614	.0566595	-0.08	0.940	-.0975514	.0890286
heroin	.0474073	.0525847	0.90	0.368	-.0391735	.133988
pcp	.1162776	.0848175	1.37	0.171	-.0233745	.2559296
otherdrug	.0140877	.0798294	0.18	0.860	-.1173516	.1455269
nondrug	.0077319	.0409388	0.19	0.850	-.0596739	.0751376
_cons	.6654275	.1614202	4.12	0.000	.399649	.931206

```
. reg laterfeldrugarr toserve if incjudge == 1, robust cluster(clusterid) level
> (90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        4.35
                                                      Prob > F      =      0.0372
                                                      R-squared     =      0.0023
                                                      Root MSE      =      .42778

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~r |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   -.001568   .0007516    -2.09   0.037    -.0028055   -.0003305
       _cons |   .2521086   .0151077    16.69   0.000     .2272338    .2769834
------------------------------------------------------------------------------

. reg laterfeldrugarr probat if incjudge == 1, robust cluster(clusterid) level(
> 90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        3.74
                                                      Prob > F      =      0.0534
                                                      R-squared     =      0.0039
                                                      Root MSE      =      .42745

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~r |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0020219   .0010452     1.93   0.053     .0003009    .0037429
       _cons |   .2204407   .0168194    13.11   0.000     .1927476    .2481338
------------------------------------------------------------------------------

. reg laterfeldrugarr toserve probat if incjudge == 1, robust cluster(clusterid
> ) level(90)

Linear regression                                     Number of obs =        1003
                                                      F(  2,   926) =        3.37
                                                      Prob > F      =      0.0348
                                                      R-squared     =      0.0051
                                                      Root MSE      =      .42739

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~r |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0011838   .0007749    -1.53   0.127    -.0024597    .0000921
      probat |   .0017638   .0010752     1.64   0.101    -6.45e-06    .0035341
       _cons |   .2312785   .0190773    12.12   0.000     .1998676    .2626893
------------------------------------------------------------------------------
```

```
.
. ivreg2 laterfeldrugarr age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.78
                                                     Prob > F      =     0.0000
Total (centered) SS     =    183.6111665             Centered R2   =    -0.0290
Total (uncentered) SS   =            242             Uncentered R2 =     0.2193
Residual SS             =    188.9304207             Root MSE      =       .434
```

laterfeldru~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0074418	.0073387	1.01	0.311	-.0046292	.0195128
age	-.029069	.0085321	-3.41	0.001	-.043103	-.015035
agesq	.0003261	.000114	2.86	0.004	.0001387	.0005136
female	-.0012086	.0472642	-0.03	0.980	-.0789513	.0765341
nonblack	-.1449449	.0562407	-2.58	0.010	-.2374526	-.0524371
priorarr	-.0076433	.0599772	-0.13	0.899	-.1062971	.0910105
priordrugarr	.0028651	.0558743	0.05	0.959	-.0890399	.09477
priorfelarr	.0517631	.0581026	0.89	0.373	-.0438072	.1473335
priorfeldru~r	-.0012639	.0614998	-0.02	0.984	-.1024221	.0998943
priorcon	.0421122	.0565598	0.74	0.457	-.0509204	.1351448
priordrugcon	.0991169	.0608319	1.63	0.103	-.0009426	.1991764
priorfelcon	-.1040876	.0615594	-1.69	0.091	-.2053439	-.0028314
priorfeldru~n	-.0312145	.0657727	-0.47	0.635	-.139401	.0769721
pwid	.033259	.0545943	0.61	0.542	-.0565406	.1230586
dist	.0017537	.0564598	0.03	0.975	-.0911144	.0946218
marijuana	.0495248	.0498624	0.99	0.321	-.0324916	.1315412
cocaine	-.0065578	.0499022	-0.13	0.895	-.0886396	.075524
crack	.0068661	.0576637	0.12	0.905	-.0879822	.1017144
heroin	.0578177	.0543279	1.06	0.287	-.0315437	.1471791
pcp	.0848709	.0903382	0.94	0.347	-.0637222	.2334641
otherdrug	.0344492	.0853319	0.40	0.686	-.1059093	.1748076
nondrug	-.0033813	.0426599	-0.08	0.937	-.0735505	.066788
_cons	.6671968	.1678764	3.97	0.000	.3910647	.9433288

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(   8) P-val =    0.0081

Weak identification test  (Cragg-Donald Wald F statistic):                   3.090
                          (Kleibergen-Paap rk Wald F statistic):             2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):            8.241
```

Chi-sq(7) P-val = **0.3118**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfeldrugarr age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1
>  calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calend
> ar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       3.13
                                                     Prob > F      =     0.0000
Total (centered) SS     =    183.6111665             Centered R2   =     0.0454
Total (uncentered) SS   =            242             Uncentered R2 =     0.2758
Residual SS             =     175.268046             Root MSE      =       .418
```

laterfeldru~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**-.0007981**	**.004497**	**-0.18**	**0.859**	**-.008195**	**.0065988**
age	**-.0301938**	**.0086684**	**-3.48**	**0.000**	**-.0444521**	**-.0159355**
agesq	**.00034**	**.0001138**	**2.99**	**0.003**	**.0001528**	**.0005271**
female	**-.0237937**	**.0431116**	**-0.55**	**0.581**	**-.0947059**	**.0471186**
nonblack	**-.1305242**	**.0529053**	**-2.47**	**0.014**	**-.2175458**	**-.0435027**
priorarr	**-.01495**	**.0595224**	**-0.25**	**0.802**	**-.1128556**	**.0829556**
priordrugarr	**-.0012417**	**.0552138**	**-0.02**	**0.982**	**-.0920603**	**.0895769**
priorfelarr	**.0709871**	**.0573314**	**1.24**	**0.216**	**-.0233147**	**.1652889**
priorfeldru~r	**-.0139147**	**.0589142**	**-0.24**	**0.813**	**-.1108199**	**.0829906**
priorcon	**.0504352**	**.0560651**	**0.90**	**0.368**	**-.0417837**	**.1426541**
priordrugcon	**.1139164**	**.0571126**	**1.99**	**0.046**	**.0199744**	**.2078583**
priorfelcon	**-.0839773**	**.057884**	**-1.45**	**0.147**	**-.1791881**	**.0112334**
priorfeldru~n	**-.0123382**	**.0633554**	**-0.19**	**0.846**	**-.1165487**	**.0918722**
pwid	**.0394372**	**.0532105**	**0.74**	**0.459**	**-.0480863**	**.1269606**
dist	**.0239894**	**.0595887**	**0.40**	**0.687**	**-.0740252**	**.1220041**
marijuana	**.0463371**	**.0515809**	**0.90**	**0.369**	**-.038506**	**.1311802**
cocaine	**-.0011783**	**.052443**	**-0.02**	**0.982**	**-.0874394**	**.0850828**
crack	**.0095677**	**.061119**	**0.16**	**0.876**	**-.0909641**	**.1100995**
heroin	**.0583568**	**.0554169**	**1.05**	**0.292**	**-.032796**	**.1495095**
pcp	**.1145272**	**.0848008**	**1.35**	**0.177**	**-.0249578**	**.2540121**
otherdrug	**.0265538**	**.0822603**	**0.32**	**0.747**	**-.1087523**	**.1618599**
nondrug	**.0032923**	**.0406681**	**0.08**	**0.935**	**-.0636008**	**.0701854**
_cons	**.6978968**	**.1741271**	**4.01**	**0.000**	**.4114833**	**.9843104**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(8) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.263
                                                 Chi-sq(    7) P-val =     0.1741
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfeldrugarr age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = c
> alendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar
> 8 calendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       2.66
                                                     Prob > F      =     0.0000
Total (centered) SS     =   183.6111665              Centered R2   =    -0.0309
Total (uncentered) SS   =           242              Uncentered R2 =     0.2178
Residual SS             =   189.2910317              Root MSE      =      .4344

------------------------------------------------------------------------------
             |               Robust
laterfeldru~r|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0073935   .0073772     1.00   0.316    -.0047409    .0195278
      probat |  -.0004307   .0046219    -0.09   0.926     -.008033    .0071717
         age |  -.0293788   .0091024    -3.23   0.001    -.0443509   -.0144068
       agesq |     .00033   .0001204     2.74   0.006      .000132     .000528
      female |   -.000491   .0480827    -0.01   0.992    -.0795799     .078598
    nonblack |  -.1470539   .0616313    -2.39   0.017    -.2484285   -.0456794
    priorarr |  -.0074632   .0600314    -0.12   0.901    -.1062061    .0912796
 priordrugarr |   .0027643   .0558993     0.05   0.961     -.089182    .0947105
  priorfelarr |   .0499066   .0606833     0.82   0.411    -.0499085    .1497218
priorfeldru~r |  -.0005535   .0618594    -0.01   0.993    -.1023032    .1011961
     priorcon |   .0420069   .0566513     0.74   0.458    -.0511762     .13519
 priordrugcon |   .0995029   .0609761     1.63   0.103    -.0007939    .1997996
  priorfelcon |  -.1028195   .0630946    -1.63   0.103    -.2066009    .0009619
priorfeldru~n |  -.0330682   .0683199    -0.48   0.628    -.1454444     .079308
         pwid |   .0340791   .0551908     0.62   0.537    -.0567017    .1248598
         dist |   .0046954   .0642275     0.07   0.942    -.1009495    .1103403
    marijuana |   .0514006   .0532965     0.96   0.335    -.0362644    .1390656
      cocaine |  -.0046114   .0545703    -0.08   0.933    -.0943715    .0851487
        crack |   .0092184   .0635047     0.15   0.885    -.0952376    .1136744
```

heroin	**.0595989**	**.0580437**	**1.03**	**0.305**	**-.0358745**	**.1550723**
pcp	**.0860969**	**.0914105**	**0.94**	**0.346**	**-.0642599**	**.2364537**
otherdrug	**.0360449**	**.0877935**	**0.41**	**0.681**	**-.1083626**	**.1804524**
nondrug	**-.0037534**	**.042745**	**-0.09**	**0.930**	**-.0740627**	**.0665559**
_cons	**.6739569**	**.1821154**	**3.70**	**0.000**	**.3744038**	**.97351**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.222**
Chi-sq(**6**) P-val = **0.2223**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterfeldrugarr (toserve = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clus
> ter(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.42
                                                       Prob > F      =     0.5182
Total (centered) SS     =    183.6111665              Centered R2   =    -0.0323
Total (uncentered) SS   =            242              Uncentered R2 =     0.2168
Residual SS             =    189.5407921              Root MSE      =     .4347
```

laterfeldr~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0044713**	**.0069107**	**0.65**	**0.518**	**-.0068957**	**.0158384**
_cons	**.2103863**	**.0492738**	**4.27**	**0.000**	**.1293381**	**.2914346**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.128
                                                    Chi-sq(    7) P-val =    0.1814
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfeldrugarr (probat = calendar1 calendar2 calendar3 calendar4 cale
> ndar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clust
> er(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.09
                                                     Prob > F      =     0.7685
Total (centered) SS     =    183.6111665             Centered R2   =     0.0035
Total (uncentered) SS   =            242             Uncentered R2 =     0.2439
Residual SS             =    182.9725331             Root MSE      =      .4271

------------------------------------------------------------------------------
             |               Robust
laterfeldr~r |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0013727   .0046567     0.29   0.768    -.0062869    .0090323
       _cons |   .2271305   .0497037     4.57   0.000     .1453752    .3088859
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              51.421
                                                    Chi-sq(    8) P-val =    0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 6.627
                          (Kleibergen-Paap rk Wald F statistic):           6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          11.022
                                                    Chi-sq(    7) P-val =    0.1376
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterfeldrugarr (toserve probat = calendar1 calendar2 calendar3 calend
> ar4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robu
> st cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.27
                                                     Prob > F      =     0.7636
Total (centered) SS     =    183.6111665              Centered R2   =    -0.0273
Total (uncentered) SS   =            242              Uncentered R2 =     0.2206
Residual SS             =    188.6263406              Root MSE      =     .4337

------------------------------------------------------------------------------
             |               Robust
laterfeldr~r |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0046232   .0068989     0.67   0.503    -.0067245    .0159708
      probat |   .0015909   .0047091     0.34   0.735    -.0061549    .0093366
       _cons |   .1929433    .070499     2.74   0.006     .0769827    .3089038
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):             3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           10.023
                                                     Chi-sq(    6) P-val =     0.1237
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //C4: Later Non-Felony Arrest as Recidivism Metric
.
. gen laternonfelarr = laterarr - laterfelarr

.
. reg laternonfelarr toserve age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
> 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        1.75
                                                Prob > F      =      0.0177
                                                R-squared     =      0.0248
                                                Root MSE      =      .41839

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfel~r|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0017704   .0007929    -2.23   0.026    -.003076   -.0004649
         age |   .0175438   .0068396     2.57   0.010     .0062823    .0288052
       agesq |  -.0002401   .0000851    -2.82   0.005    -.0003803   -.0000999
      female |  -.0530486   .0462176    -1.15   0.251     -.129146    .0230487
    nonblack |  -.0287493   .0824774    -0.35   0.727    -.1645483    .1070498
    priorarr |  -.0788586   .0648432    -1.22   0.224     -.185623    .0279058
 priordrugarr |   .0574469   .0566029     1.01   0.310    -.0357497    .1506436
  priorfelarr |   .0243403   .0556814     0.44   0.662    -.0673393    .1160198
priorfeldru~r |  -.0621715   .0578513    -1.07   0.283    -.1574237    .0330807
     priorcon |  -.0303362   .0606701    -0.50   0.617    -.1302296    .0695571
 priordrugcon |  -.0764587   .0612105    -1.25   0.212    -.1772419    .0243245
  priorfelcon |  -.0178465   .0597945    -0.30   0.765    -.1162981    .0806051
priorfeldru~n |   .1042537   .0633758     1.65   0.100    -.0000946     .208602
         pwid |  -.0181612   .0481393    -0.38   0.706    -.0974226    .0611002
         dist |  -.0024949   .0482275    -0.05   0.959    -.0819016    .0769118
    marijuana |   .0926586   .0489451     1.89   0.059     .0120705    .1732468
      cocaine |   .0509666    .049427     1.03   0.303     -.030415    .1323483
        crack |   .0709178    .055747     1.27   0.204    -.0208697    .1627052
       heroin |   .0439522   .0520371     0.84   0.399    -.0417269    .1296312
          pcp |   .0136883   .0700713     0.20   0.845    -.1016841    .1290607
    otherdrug |   .0136454   .0763499     0.18   0.858    -.1120647    .1393556
      nondrug |  -.0393385   .0393649    -1.00   0.318    -.1041529    .0254759
        _cons |  -.0460271   .1395349    -0.33   0.742    -.2757713    .1837172
------------------------------------------------------------------------------

. reg laternonfelarr probat age agesq female nonblack priorarr priordrugarr pri
> orfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pw
> id dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1
> , robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        1.53
                                                Prob > F      =      0.0563
                                                R-squared     =      0.0232
                                                Root MSE      =      .41873
```

(Std. Err. adjusted for **927** clusters in clusterid)

laternonfel~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
probat	**-.0011418**	**.0010767**	**-1.06**	**0.289**	**-.0029147**	**.000631**
age	**.0168646**	**.006873**	**2.45**	**0.014**	**.0055483**	**.028181**
agesq	**-.0002315**	**.0000856**	**-2.70**	**0.007**	**-.0003724**	**-.0000906**
female	**-.0449704**	**.0462189**	**-0.97**	**0.331**	**-.1210699**	**.0311291**
nonblack	**-.0390744**	**.0839489**	**-0.47**	**0.642**	**-.1772963**	**.0991476**
priorarr	**-.0764082**	**.064981**	**-1.18**	**0.240**	**-.1833994**	**.030583**
priordrugarr	**.058192**	**.0565706**	**1.03**	**0.304**	**-.0349516**	**.1513355**
priorfelarr	**.0135654**	**.0558635**	**0.24**	**0.808**	**-.0784139**	**.1055447**
priorfeldru~r	**-.0566814**	**.0577887**	**-0.98**	**0.327**	**-.1518305**	**.0384678**
priorcon	**-.0328151**	**.0606606**	**-0.54**	**0.589**	**-.1326929**	**.0670626**
priordrugcon	**-.0790724**	**.0613454**	**-1.29**	**0.198**	**-.1800777**	**.0219329**
priorfelcon	**-.0190705**	**.0597578**	**-0.32**	**0.750**	**-.1174618**	**.0793208**
priorfeldru~n	**.0935773**	**.0638724**	**1.47**	**0.143**	**-.0115887**	**.1987434**
pwid	**-.0171898**	**.0481747**	**-0.36**	**0.721**	**-.0965096**	**.0621299**
dist	**.0009701**	**.049012**	**0.02**	**0.984**	**-.0797283**	**.0816684**
marijuana	**.0993528**	**.0492587**	**2.02**	**0.044**	**.0182484**	**.1804572**
cocaine	**.0556693**	**.0495919**	**1.12**	**0.262**	**-.0259837**	**.1373224**
crack	**.0775825**	**.0557065**	**1.39**	**0.164**	**-.0141383**	**.1693033**
heroin	**.0493879**	**.0522939**	**0.94**	**0.345**	**-.036714**	**.1354898**
pcp	**.0098671**	**.0696876**	**0.14**	**0.887**	**-.1048736**	**.1246079**
otherdrug	**.0206787**	**.0765226**	**0.27**	**0.787**	**-.1053158**	**.1466733**
nondrug	**-.0422266**	**.0391745**	**-1.08**	**0.281**	**-.1067274**	**.0222743**
_cons	**-.0327966**	**.1408358**	**-0.23**	**0.816**	**-.2646828**	**.1990897**

```
. reg laternonfelarr toserve probat age agesq female nonblack priorarr priordru
> garr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldr
> ugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incju
> dge == 1, robust cluster(clusterid) level(90)
```

Linear regression — Number of obs = **1003**; F(23, 926) = **1.76**; Prob > F = **0.0150**; R-squared = **0.0269**; Root MSE = **.41815**

(Std. Err. adjusted for **927** clusters in clusterid)

laternonfel~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0020793**	**.0008053**	**-2.58**	**0.010**	**-.0034052**	**-.0007534**
probat	**-.00155**	**.0010885**	**-1.42**	**0.155**	**-.0033423**	**.0002422**
age	**.0164187**	**.0068813**	**2.39**	**0.017**	**.0050887**	**.0277487**
agesq	**-.000226**	**.0000856**	**-2.64**	**0.008**	**-.0003669**	**-.0000851**
female	**-.0509045**	**.0461091**	**-1.10**	**0.270**	**-.1268231**	**.0250141**
nonblack	**-.036004**	**.0825286**	**-0.44**	**0.663**	**-.1718875**	**.0998794**
priorarr	**-.0783507**	**.0647697**	**-1.21**	**0.227**	**-.184994**	**.0282926**
priordrugarr	**.0570123**	**.0564108**	**1.01**	**0.312**	**-.0358682**	**.1498927**
priorfelarr	**.0180742**	**.05582**	**0.32**	**0.746**	**-.0738335**	**.1099818**
priorfeldru~r	**-.0598711**	**.0576975**	**-1.04**	**0.300**	**-.15487**	**.0351278**
priorcon	**-.030559**	**.0606155**	**-0.50**	**0.614**	**-.1303624**	**.0692444**
priordrugcon	**-.0748112**	**.0612324**	**-1.22**	**0.222**	**-.1756304**	**.026008**
priorfelcon	**-.0129565**	**.0601188**	**-0.22**	**0.829**	**-.1119421**	**.0860292**
priorfeldru~n	**.0979912**	**.0636159**	**1.54**	**0.124**	**-.0067525**	**.2027348**
pwid	**-.0151241**	**.0480961**	**-0.31**	**0.753**	**-.0943144**	**.0640662**
dist	**.0084004**	**.0489592**	**0.17**	**0.864**	**-.0722109**	**.0890118**
marijuana	**.0992877**	**.0493231**	**2.01**	**0.044**	**.0180772**	**.1804982**
cocaine	**.0580044**	**.0495595**	**1.17**	**0.242**	**-.0235954**	**.1396042**
crack	**.0793537**	**.0558154**	**1.42**	**0.155**	**-.0125464**	**.1712537**
heroin	**.0503124**	**.0523247**	**0.96**	**0.337**	**-.0358403**	**.136465**
pcp	**.018603**	**.0703237**	**0.26**	**0.791**	**-.097185**	**.134391**

otherdrug	**.0191897**	**.0756948**	**0.25**	**0.800**	**-.1054419**	**.1438213**
nondrug	**-.0405428**	**.039225**	**-1.03**	**0.302**	**-.1051267**	**.0240412**
_cons	**-.021363**	**.1410079**	**-0.15**	**0.880**	**-.2535327**	**.2108066**

```
. reg laternonfelarr toserve if incjudge == 1, robust cluster(clusterid) level(
> 90)

Linear regression                                      Number of obs =        1003
                                                       F(  1,   926) =        6.76
                                                       Prob > F      =      0.0095
                                                       R-squared     =      0.0042
                                                       Root MSE      =      .41833

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laternonfe~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	**-.0020552**	**.0007903**	**-2.60**	**0.009**	**-.0033564**	**-.000754**
_cons	**.2165911**	**.014753**	**14.68**	**0.000**	**.1923002**	**.240882**

```
. reg laternonfelarr probat if incjudge == 1, robust cluster(clusterid) level(9
> 0)

Linear regression                                      Number of obs =        1003
                                                       F(  1,   926) =        0.69
                                                       Prob > F      =      0.4054
                                                       R-squared     =      0.0007
                                                       Root MSE      =      .41906

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laternonfe~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
probat	**-.0008493**	**.0010202**	**-0.83**	**0.405**	**-.0025291**	**.0008305**
_cons	**.211145**	**.0171887**	**12.28**	**0.000**	**.1828438**	**.2394461**

```
. reg laternonfelarr toserve probat if incjudge == 1, robust cluster(clusterid)
>  level(90)

Linear regression                                      Number of obs =        1003
                                                       F(  2,   926) =        4.66
                                                       Prob > F      =      0.0097
                                                       R-squared     =      0.0059
                                                       Root MSE      =      .41817

                                (Std. Err. adjusted for    927 clusters in clusterid)
```

laternonfe~r	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	**-.0023519**	**.0008031**	**-2.93**	**0.003**	**-.0036742**	**-.0010295**
probat	**-.001362**	**.0010311**	**-1.32**	**0.187**	**-.0030597**	**.0003357**
_cons	**.2326759**	**.019086**	**12.19**	**0.000**	**.2012508**	**.2641011**

```
.
. ivreg2 laternonfelarr age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1
>  calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calend
> ar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.47
                                                     Prob > F      =     0.0761
Total (centered) SS     =    175.9142572             Centered R2   =    -0.0019
Total (uncentered) SS   =            217             Uncentered R2 =     0.1878
Residual SS             =    176.2469106             Root MSE      =     .4192
```

laternonfel~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0036985	.007043	0.53	0.599	-.0078863	.0152833
age	.0179534	.0068345	2.63	0.009	.0067116	.0291952
agesq	-.0002451	.0000855	-2.87	0.004	-.0003857	-.0001045
female	-.0352595	.0513616	-0.69	0.492	-.1197418	.0492228
nonblack	-.0423835	.0878623	-0.48	0.630	-.1869041	.1021372
priorarr	-.0731753	.0651773	-1.12	0.262	-.1803825	.0340319
priordrugarr	.0603628	.0566521	1.07	0.287	-.0328216	.1535473
priorfelarr	.0074813	.0585485	0.13	0.898	-.0888224	.1037851
priorfeldru~r	-.051782	.0589182	-0.88	0.379	-.1486939	.0451299
priorcon	-.0366725	.0613794	-0.60	0.550	-.1376326	.0642876
priordrugcon	-.0869353	.0621328	-1.40	0.162	-.1891347	.0152641
priorfelcon	-.0310575	.0614869	-0.51	0.613	-.1321944	.0700795
priorfeldru~n	.0876573	.0668379	1.31	0.190	-.0222812	.1975958
pwid	-.0216264	.0488097	-0.44	0.658	-.1019113	.0586585
dist	-.0149799	.0513545	-0.29	0.771	-.0994505	.0694907
marijuana	.0976156	.0494857	1.97	0.049	.0162188	.1790124
cocaine	.0496481	.0492198	1.01	0.313	-.0313112	.1306074
crack	.0721508	.0553024	1.30	0.192	-.0188136	.1631151
heroin	.0460066	.0522447	0.88	0.379	-.0399283	.1319415
pcp	-.0066816	.0722728	-0.09	0.926	-.1255597	.1121966
otherdrug	.0217181	.0785842	0.28	0.782	-.1075414	.1509777
nondrug	-.0448156	.0400319	-1.12	0.263	-.1106623	.0210311
_cons	-.0595447	.139688	-0.43	0.670	-.2893109	.1702216

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(   8) P-val =    0.0081
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   3.090
                          (Kleibergen-Paap rk Wald F statistic):             2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):            5.408
```

Chi-sq(7) P-val = **0.6103**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laternonfelarr age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1
> calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calenda
> r9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.51
                                                     Prob > F      =     0.0623
Total (centered) SS     =    175.9142572             Centered R2   =     0.0226
Total (uncentered) SS   =            217             Uncentered R2 =     0.2077
Residual SS             =    171.9361148             Root MSE      =       .414
```

laternonfel~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**-.0019572**	**.0045358**	**-0.43**	**0.666**	**-.0094179**	**.0055035**
age	**.016285**	**.0075472**	**2.16**	**0.031**	**.0038709**	**.028699**
agesq	**-.0002242**	**.0000938**	**-2.39**	**0.017**	**-.0003785**	**-.00007**
female	**-.0433141**	**.0463698**	**-0.93**	**0.350**	**-.1195856**	**.0329574**
nonblack	**-.0432956**	**.0864058**	**-0.50**	**0.616**	**-.1854205**	**.0988294**
priorarr	**-.0759722**	**.0642544**	**-1.18**	**0.237**	**-.1816613**	**.0297169**
priordrugarr	**.0580499**	**.0558907**	**1.04**	**0.299**	**-.033882**	**.1499819**
priorfelarr	**.0097684**	**.0582023**	**0.17**	**0.867**	**-.0859658**	**.1055027**
priorfeldru~r	**-.0551626**	**.0574428**	**-0.96**	**0.337**	**-.1496476**	**.0393223**
priorcon	**-.0331205**	**.0599157**	**-0.55**	**0.580**	**-.1316731**	**.0654321**
priordrugcon	**-.078517**	**.0608004**	**-1.29**	**0.197**	**-.1785247**	**.0214908**
priorfelcon	**-.0168907**	**.0600633**	**-0.28**	**0.779**	**-.1156861**	**.0819048**
priorfeldru~n	**.0897901**	**.0665105**	**1.35**	**0.177**	**-.0196099**	**.1991901**
pwid	**-.0156951**	**.0478341**	**-0.33**	**0.743**	**-.0943752**	**.0629849**
dist	**.0063304**	**.0556499**	**0.11**	**0.909**	**-.0852055**	**.0978663**
marijuana	**.1029871**	**.0523112**	**1.97**	**0.049**	**.0169428**	**.1890314**
cocaine	**.0593322**	**.0523287**	**1.13**	**0.257**	**-.0267409**	**.1454054**
crack	**.0820567**	**.0595766**	**1.38**	**0.168**	**-.0159381**	**.1800514**
heroin	**.0527946**	**.0541761**	**0.97**	**0.330**	**-.0363172**	**.1419064**
pcp	**.0118473**	**.0695779**	**0.17**	**0.865**	**-.1025981**	**.1262928**
otherdrug	**.0238349**	**.0758471**	**0.31**	**0.753**	**-.1009224**	**.1485923**
nondrug	**-.0430228**	**.0384574**	**-1.12**	**0.263**	**-.1062796**	**.0202341**
_cons	**-.0202241**	**.1585462**	**-0.13**	**0.898**	**-.2810094**	**.2405611**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(8) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           5.623
                                                 Chi-sq(    7) P-val =     0.5844
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laternonfelarr age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = ca
> lendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
>  calendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       1.41
                                                     Prob > F      =     0.0957
Total (centered) SS     =    175.9142572             Centered R2   =    -0.0014
Total (uncentered) SS   =            217             Uncentered R2 =     0.1882
Residual SS             =    176.1574971             Root MSE      =     .4191

------------------------------------------------------------------------------
             |               Robust
laternonfel~r|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      toserve|   .0034984   .0070617     0.50   0.620    -.008117    .0151138
       probat|  -.0017833   .0045801    -0.39   0.697    -.009317    .0057503
          age|   .0166706   .0076491     2.18   0.029     .0040889    .0292523
        agesq|   -.000229   .0000954    -2.40   0.016    -.0003859    -.000072
       female|  -.0322879   .0515672    -0.63   0.531    -.1171084    .0525325
     nonblack|  -.0511169    .091321    -0.56   0.576    -.2013266    .0990927
     priorarr|  -.0724297   .0650807    -1.11   0.266    -.1794779    .0346186
  priordrugarr|   .0599454    .056475     1.06   0.288    -.0329477    .1528386
   priorfelarr|  -.0002062   .0611319    -0.00   0.997    -.1007592    .1003468
priorfeldru~r|  -.0488406   .0590419    -0.83   0.408    -.1459558    .0482747
     priorcon|  -.0371085   .0612844    -0.61   0.545    -.1379124    .0636954
  priordrugcon|   -.085337   .0624174    -1.37   0.172    -.1880045    .0173305
   priorfelcon|  -.0258062    .062946    -0.41   0.682    -.1293432    .0777308
priorfeldru~n|   .0799813   .0699014     1.14   0.253    -.0349963    .1949589
          pwid|  -.0182304   .0490381    -0.37   0.710    -.0988908      .06243
          dist|  -.0027989    .059364    -0.05   0.962     -.100444    .0948462
     marijuana|    .105383   .0531706     1.98   0.047     .0179251    .1928409
       cocaine|   .0577078     .05274     1.09   0.274    -.0290419    .1444574
         crack|   .0818914   .0598708     1.37   0.171    -.0165873     .18037
```

heroin	.0533824	.0547551	0.97	0.330	-.0366817	.1434464
pcp	-.001605	.0733507	-0.02	0.983	-.1222562	.1190462
otherdrug	.0283259	.0784704	0.36	0.718	-.1007465	.1573982
nondrug	-.0463566	.0396594	-1.17	0.242	-.1115904	.0188773
_cons	-.0315518	.1611284	-0.20	0.845	-.2965844	.2334809

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **5.103**
Chi-sq(**6**) P-val = **0.5307**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laternonfelarr (toserve = calendar1 calendar2 calendar3 calendar4 cale
> ndar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clust
> er(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.83
                                                       Prob > F      =     0.3635
Total (centered) SS     =    175.9142572              Centered R2   =    -0.0649
Total (uncentered) SS   =            217              Uncentered R2 =     0.1367
Residual SS             =    187.3254464              Root MSE      =      .4322
```

laternonfe~r	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0062924	.0069137	0.91	0.363	-.0050797	.0176645
_cons	.1589219	.048678	3.26	0.001	.0788537	.2389901

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           4.614
                                                  Chi-sq(    7) P-val =    0.7069
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laternonfelarr (probat = calendar1 calendar2 calendar3 calendar4 calen
> dar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluste
> r(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.25
                                                     Prob > F      =     0.6188
Total (centered) SS     =    175.9142572             Centered R2   =    -0.0013
Total (uncentered) SS   =            217             Uncentered R2 =     0.1883
Residual SS             =     176.139037             Root MSE      =      .4191

------------------------------------------------------------------------------
             |               Robust
laternonfe~r |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0022677   .0045513    -0.50   0.618    -.009754    .0052186
       _cons |   .2257615   .0492946     4.58   0.000    .1446792    .3068439
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):               51.421
                                                  Chi-sq(    8) P-val =    0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  6.627
                          (Kleibergen-Paap rk Wald F statistic):            6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           5.698
                                                  Chi-sq(    7) P-val =    0.5754
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laternonfelarr (toserve probat = calendar1 calendar2 calendar3 calenda
> r4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robus
> t cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.52
                                                     Prob > F      =     0.5926
Total (centered) SS     =    175.9142572              Centered R2   =    -0.0675
Total (uncentered) SS   =            217              Uncentered R2 =     0.1346
Residual SS             =    187.7961889              Root MSE      =     .4327

------------------------------------------------------------------------------
             |               Robust
laternonfe~r |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0061035   .0069582     0.88   0.380    -.0053418    .0175487
      probat |  -.0019796   .0046796    -0.42   0.672    -.0096769    .0057176
       _cons |   .1806278   .0728107     2.48   0.013     .0608648    .3003907
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):             3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           4.340
                                                     Chi-sq(    6) P-val =     0.6308
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //C5: Later Conviction as Recidivism Metric
.
. reg latercon toserve age agesq female nonblack priorarr priordrugarr priorfel
> arr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid di
> st marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1, rob
> ust cluster(clusterid) level(90)

Linear regression                                      Number of obs =      1003
                                                       F( 22,   926) =      3.33
                                                       Prob > F      =    0.0000
                                                       R-squared     =    0.0523
                                                       Root MSE      =    .44511

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0026743   .0008657    -3.09   0.002    -.0040997    -.001249
         age |  -.0202999   .0086425    -2.35   0.019    -.0345299    -.00607
       agesq |   .0001892   .0001126     1.68   0.093     3.79e-06    .0003746
      female |    .020817   .0492103     0.42   0.672    -.0602078    .1018419
    nonblack |  -.1046222   .0700993    -1.49   0.136    -.2200408    .0107965
    priorarr |  -.0097112   .0658032    -0.15   0.883    -.1180563    .0986339
 priordrugarr |  -.0347683   .0599473    -0.58   0.562    -.1334717    .0639351
  priorfelarr |   .0522325   .0591929     0.88   0.378    -.0452287    .1496936
priorfeldru~r |  -.0921233   .0600645    -1.53   0.125    -.1910195    .0067729
     priorcon |   .0878053    .064091     1.37   0.171    -.0177206    .1933313
 priordrugcon |   .1322949   .0663627     1.99   0.046     .0230287    .2415611
  priorfelcon |   -.037507   .0635855    -0.59   0.555    -.1422006    .0671866
priorfeldru~n |  -.0010542   .0702814    -0.01   0.988    -.1167726    .1146643
         pwid |    .050479   .0539157     0.94   0.349    -.0382931    .1392512
         dist |   .0901387   .0539869     1.67   0.095     .0012492    .1790281
    marijuana |   .0286842   .0502622     0.57   0.568    -.0540725    .1114409
      cocaine |   .0203267   .0513578     0.40   0.692     -.064234    .1048873
        crack |   .0626748   .0598484     1.05   0.295    -.0358657    .1612153
       heroin |   .1034067   .0534489     1.93   0.053     .0154031    .1914102
          pcp |   .0096889   .0808318     0.12   0.905    -.1234008    .1427786
    otherdrug |  -.0893703    .074501    -1.20   0.231    -.2120363    .0332957
      nondrug |   .0272497   .0427194     0.64   0.524    -.0430878    .0975871
        _cons |   .5483961    .168184     3.26   0.001     .2714809    .8253112
------------------------------------------------------------------------------

. reg latercon probat age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1, robu
> st cluster(clusterid) level(90)

Linear regression                                      Number of obs =      1003
                                                       F( 22,   926) =      2.83
                                                       Prob > F      =    0.0000
                                                       R-squared     =    0.0470
                                                       Root MSE      =    .44635

                                    (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0005028   .0011332    -0.44   0.657    -.0023686    .0013629
         age |  -.0204571   .0087388    -2.34   0.019    -.0348456   -.0060686
       agesq |   .0001912    .000114     1.68   0.094     3.53e-06    .0003789
      female |   .0305375   .0492218     0.62   0.535    -.0505063    .1115813
    nonblack |  -.1138925   .0713856    -1.60   0.111    -.2314291     .003644
    priorarr |  -.0066631   .0656441    -0.10   0.919    -.1147462      .10142
 priordrugarr |    -.03343   .0597553    -0.56   0.576    -.1318172    .0649572
```

priorfelarr	.0416468	.0593344	0.70	0.483	-.0560474	.139341
priorfeldru~r	-.0861062	.0600272	-1.43	0.152	-.184941	.0127286
priorcon	.0845186	.0637701	1.33	0.185	-.020479	.1895161
priordrugcon	.1275143	.0663914	1.92	0.055	.0182008	.2368278
priorfelcon	-.0426229	.0634838	-0.67	0.502	-.147149	.0619032
priorfeldru~n	-.0115055	.0706198	-0.16	0.871	-.1277811	.1047701
pwid	.0497063	.0542419	0.92	0.360	-.0396031	.1390157
dist	.0873391	.0545226	1.60	0.110	-.0024323	.1771106
marijuana	.0333494	.0505678	0.66	0.510	-.0499105	.1166093
cocaine	.0219408	.0518048	0.42	0.672	-.0633557	.1072374
crack	.0660369	.0602794	1.10	0.274	-.0332132	.1652871
heroin	.1065121	.0539068	1.98	0.048	.0177546	.1952697
pcp	.0009491	.0811691	0.01	0.991	-.1326959	.1345941
otherdrug	-.0834763	.0749083	-1.11	0.265	-.2068129	.0398603
nondrug	.0240803	.0429877	0.56	0.576	-.0466989	.0948596
_cons	.5495393	.1704213	3.22	0.001	.2689404	.8301382

```
. reg latercon toserve probat age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
>  1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =      1003
                                                F( 23,   926) =      3.28
                                                Prob > F      =    0.0000
                                                R-squared     =    0.0532
                                                Root MSE      =    .44514

                                  (Std. Err. adjusted for    927 clusters in clusterid)
```

latercon	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0028875	.0008993	-3.21	0.001	-.0043682	-.0014068
probat	-.0010697	.0011628	-0.92	0.358	-.0029843	.0008449
age	-.0210764	.0086844	-2.43	0.015	-.0353752	-.0067775
agesq	.0001989	.0001132	1.76	0.079	.0000126	.0003853
female	.0222967	.0491919	0.45	0.650	-.0586977	.1032911
nonblack	-.1096287	.0697983	-1.57	0.117	-.2245518	.0052943
priorarr	-.0093606	.0656914	-0.14	0.887	-.1175216	.0988003
priordrugarr	-.0350683	.0599069	-0.59	0.558	-.1337051	.0635685
priorfelarr	.0479082	.0594517	0.81	0.421	-.0499792	.1457955
priorfeldru~r	-.0905358	.060034	-1.51	0.132	-.1893819	.0083103
priorcon	.0876516	.0640086	1.37	0.171	-.0177386	.1930418
priordrugcon	.1334319	.0662825	2.01	0.044	.0242977	.242566
priorfelcon	-.0341323	.0636763	-0.54	0.592	-.1389754	.0707107
priorfeldru~n	-.005376	.0706969	-0.08	0.939	-.1217786	.1110266
pwid	.052575	.0540559	0.97	0.331	-.0364282	.1415781
dist	.0976576	.0543036	1.80	0.072	.0082467	.1870686
marijuana	.033259	.0503714	0.66	0.509	-.0496776	.1161955
cocaine	.0251836	.0514733	0.49	0.625	-.0595672	.1099343
crack	.0684965	.0598926	1.14	0.253	-.0301168	.1671098
heroin	.1077959	.0535433	2.01	0.044	.0196368	.195955
pcp	.0130806	.0809371	0.16	0.872	-.1201823	.1463435
otherdrug	-.0855442	.0744024	-1.15	0.251	-.2080478	.0369595
nondrug	.0264186	.042626	0.62	0.536	-.0437652	.0966023
_cons	.565417	.169404	3.34	0.001	.2864933	.8443408

```
. reg latercon toserve if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =      1003
                                                F(  1,   926) =      5.93
                                                Prob > F      =    0.0151
                                                R-squared     =    0.0033
                                                Root MSE      =    .45167

                          (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0019557   .0008032    -2.43   0.015    -.0032782   -.0006332
       _cons |   .2996522   .0159879    18.74   0.000     .2733281    .3259762
------------------------------------------------------------------------------

. reg latercon probat if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =      1003
                                                F(  1,   926) =      0.04
                                                Prob > F      =    0.8438
                                                R-squared     =    0.0000
                                                Root MSE      =     .4524

                          (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |    .000215   .0010903     0.20   0.844    -.0015803    .0020102
       _cons |   .2839265   .0182589    15.55   0.000     .2538632    .3139897
------------------------------------------------------------------------------

. reg latercon toserve probat if incjudge == 1, robust cluster(clusterid) level
> (90)

Linear regression                               Number of obs =      1003
                                                F(  2,   926) =      2.98
                                                Prob > F      =    0.0514
                                                R-squared     =    0.0033
                                                Root MSE      =    .45189

                          (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   -.002004   .0008401    -2.39   0.017    -.0033873   -.0006207
      probat |  -.0002219   .0011309    -0.20   0.844    -.0020839    .0016401
       _cons |   .3022728    .020708    14.60   0.000      .268177    .3363685
------------------------------------------------------------------------------

.
. ivreg2 latercon age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) i
> f incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------
```

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(22, 926) =	**2.74**
		Prob > F =	**0.0000**
Total (centered) SS =	**204.8773679**	Centered R2 =	**0.0195**
Total (uncentered) SS =	**287**	Uncentered R2 =	**0.3001**
Residual SS =	**200.8752792**	Root MSE =	**.4475**

latercon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0038617**	**.0077542**	**0.50**	**0.618**	**-.0088929**	**.0166162**
age	**-.0198104**	**.0088024**	**-2.25**	**0.024**	**-.034289**	**-.0053318**
agesq	**.0001833**	**.0001152**	**1.59**	**0.112**	**-6.28e-06**	**.0003728**
female	**.0420771**	**.0554855**	**0.76**	**0.448**	**-.0491885**	**.1333426**
nonblack	**-.1209165**	**.0763234**	**-1.58**	**0.113**	**-.2464574**	**.0046244**
priorarr	**-.002919**	**.065418**	**-0.04**	**0.964**	**-.1105221**	**.104684**
priordrugarr	**-.0312835**	**.0593656**	**-0.53**	**0.598**	**-.1289312**	**.0663642**
priorfelarr	**.0320842**	**.0615721**	**0.52**	**0.602**	**-.0691929**	**.1333614**
priorfeldru~r	**-.0797067**	**.0611112**	**-1.30**	**0.192**	**-.1802257**	**.0208123**
priorcon	**.0802328**	**.0636031**	**1.26**	**0.207**	**-.0243849**	**.1848505**
priordrugcon	**.1197742**	**.067977**	**1.76**	**0.078**	**.007962**	**.2315865**
priorfelcon	**-.0532955**	**.0661752**	**-0.81**	**0.421**	**-.162144**	**.0555529**
priorfeldru~n	**-.0208887**	**.0732042**	**-0.29**	**0.775**	**-.1412989**	**.0995215**
pwid	**.0463378**	**.0546656**	**0.85**	**0.397**	**-.0435791**	**.1362546**
dist	**.0752177**	**.0572566**	**1.31**	**0.189**	**-.0189611**	**.1693964**
marijuana	**.0346082**	**.0508273**	**0.68**	**0.496**	**-.0489953**	**.1182118**
cocaine	**.0187509**	**.0521308**	**0.36**	**0.719**	**-.0669966**	**.1044985**
crack	**.0641483**	**.0603783**	**1.06**	**0.288**	**-.0351651**	**.1634618**
heroin	**.1058619**	**.0542475**	**1.95**	**0.051**	**.0166327**	**.195091**
pcp	**-.0146554**	**.0864652**	**-0.17**	**0.865**	**-.156878**	**.1275672**
otherdrug	**-.0797226**	**.0773988**	**-1.03**	**0.303**	**-.2070323**	**.0475872**
nondrug	**.0207039**	**.0443547**	**0.47**	**0.641**	**-.0522531**	**.0936609**
_cons	**.5322411**	**.171289**	**3.11**	**0.002**	**.2504957**	**.8139865**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.649**
Chi-sq(**8**) P-val = **0.0081**

Weak identification test (Cragg-Donald Wald F statistic): **3.090**
(Kleibergen-Paap rk Wald F statistic): **2.710**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.489**
Chi-sq(**7**) P-val = **0.2914**

Instrumented: toserve
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 latercon age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if
>  incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.73
                                                     Prob > F      =     0.0000
Total (centered) SS     =    204.8773679             Centered R2   =     0.0399
Total (uncentered) SS   =            287             Uncentered R2 =     0.3146
Residual SS             =    196.7104432             Root MSE      =      .4429

------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |    .002529   .0048166     0.53   0.600    -.0053937    .0104517
         age |   -.0183017   .0092096    -1.99   0.047    -.0334501   -.0031533
       agesq |    .0001642   .0001191     1.38   0.168    -.0000317       .00036
      female |    .0243787   .0496926     0.49   0.624    -.0573584    .1061157
    nonblack |   -.0981964   .0759206    -1.29   0.196    -.2230747    .0266819
    priorarr |   -.0082844   .0655142    -0.13   0.899    -.1160457    .0994768
 priordrugarr |   -.0329019   .0594814    -0.55   0.580      -.13074    .0649363
  priorfelarr |    .0557654   .0625453     0.89   0.373    -.0471125    .1586433
priorfeldru~r |   -.0917534   .0603057    -1.52   0.128    -.1909474    .0074406
     priorcon |    .0856541   .0636533     1.35   0.178    -.0190463    .1903545
 priordrugcon |     .125449   .0662078     1.89   0.058     .0165469    .2343511
  priorfelcon |   -.0507285    .064704    -0.78   0.433    -.1571572    .0557001
priorfeldru~n |    .0025771   .0735704     0.04   0.972    -.1184354    .1235895
         pwid |    .0441485   .0540506     0.82   0.414    -.0447568    .1330538
         dist |    .0674071   .0611485     1.10   0.270    -.0331732    .1679874
    marijuana |    .0198356   .0531438     0.37   0.709    -.0675783    .1072494
      cocaine |    .0083206   .0556395     0.15   0.881    -.0831982    .0998394
        crack |    .0494002   .0644147     0.77   0.443    -.0565526    .1553529
       heroin |    .0938447   .0563537     1.67   0.096     .0011512    .1865383
          pcp |   -.0064141   .0818708    -0.08   0.938    -.1410796    .1282513
    otherdrug |   -.0952124   .0769983    -1.24   0.216    -.2218633    .0314385
      nondrug |    .0270409   .0429701     0.63   0.529    -.0436387    .0977205
        _cons |    .5027897    .184499     2.73   0.006     .1993159    .8062635
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                53.233
                                                     Chi-sq(  8) P-val =    0.0000
------------------------------------------------------------------------------

Weak identification test  (Cragg-Donald Wald F statistic):                  7.098
                        (Kleibergen-Paap rk Wald F statistic):              7.041
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                         10% maximal IV relative bias      11.39
                                         20% maximal IV relative bias       6.69
                                         30% maximal IV relative bias       4.99
                                         10% maximal IV size               33.84
                                         15% maximal IV size               18.54
                                         20% maximal IV size               13.24
                                         25% maximal IV size               10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           9.127
                                                     Chi-sq(  7) P-val =    0.2436
```

```
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 latercon age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       2.56
                                                     Prob > F      =     0.0001
Total (centered) SS     =    204.8773679             Centered R2   =     0.0119
Total (uncentered) SS   =            287             Uncentered R2 =     0.2946
Residual SS             =    202.4400432             Root MSE      =      .4493
```

latercon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0041688	.0078539	0.53	0.596	-.0087497	.0170872
probat	.0027362	.0048802	0.56	0.575	-.005291	.0107634
age	-.0178422	.0094603	-1.89	0.059	-.033403	-.0022813
agesq	.0001585	.0001227	1.29	0.196	-.0000433	.0003603
female	.0375178	.0561183	0.67	0.504	-.0547886	.1298242
nonblack	-.1075166	.0813625	-1.32	0.186	-.2413461	.0263129
priorarr	-.0040631	.0660932	-0.06	0.951	-.1127766	.1046505
priordrugarr	-.0306431	.0597545	-0.51	0.608	-.1289305	.0676443
priorfelarr	.0438793	.0653401	0.67	0.502	-.0635957	.1513542
priorfeldru~r	-.0842198	.0619615	-1.36	0.174	-.1861374	.0176978
priorcon	.0809018	.0642446	1.26	0.208	-.0247711	.1865748
priordrugcon	.1173219	.0685326	1.71	0.087	.0045959	.230048
priorfelcon	-.0613526	.0685812	-0.89	0.371	-.1741587	.0514535
priorfeldru~n	-.0091114	.0766299	-0.12	0.905	-.1351564	.1169335
pwid	.0411273	.0552789	0.74	0.457	-.0497984	.132053
dist	.0565282	.0653913	0.86	0.387	-.0510309	.1640874
marijuana	.0226906	.053929	0.42	0.674	-.0660148	.1113959
cocaine	.0063848	.0567458	0.11	0.910	-.0869538	.0997234
crack	.0492032	.0653178	0.75	0.451	-.058235	.1566415
heroin	.0945451	.0573795	1.65	0.099	.0001642	.188926
pcp	-.0224444	.0884654	-0.25	0.800	-.1679571	.1230682
otherdrug	-.0898609	.0800481	-1.12	0.262	-.2215283	.0418066
nondrug	.0230682	.0448092	0.51	0.607	-.0506363	.0967728
_cons	.4892913	.1895742	2.58	0.010	.1774695	.801113

```
Underidentification test (Kleibergen-Paap rk LM statistic):                20.887
                                                     Chi-sq(    7) P-val =     0.0039

Weak identification test (Cragg-Donald Wald F statistic):                   3.071
                         (Kleibergen-Paap rk Wald F statistic):             2.739
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
```

```
                                          10% maximal IV relative bias        10.22
                                          20% maximal IV relative bias         6.20
                                          30% maximal IV relative bias         4.73
                                          10% maximal IV size                 25.64
                                          15% maximal IV size                 14.31
                                          20% maximal IV size                 10.41
                                          25% maximal IV size                  8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           8.344
                                                 Chi-sq(    6) P-val =     0.2140
------------------------------------------------------------------------------
Instrumented:         toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 latercon (toserve = calendar1 calendar2 calendar3 calendar4 calendar5
> calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(clu
> sterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.06
                                                     Prob > F      =     0.8100
Total (centered) SS     =    204.8773679             Centered R2   =    -0.0084
Total (uncentered) SS   =            287             Uncentered R2 =     0.2802
Residual SS             =    206.5964008             Root MSE      =      .4538

------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0017438   .0072437     0.24   0.810    -.010171    .0136585
       _cons |    .274095   .0517364     5.30   0.000     .1889962    .3591937
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):               22.308
                                                 Chi-sq(    8) P-val =     0.0044
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  3.188
                         (Kleibergen-Paap rk Wald F statistic):             2.956
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias       11.39
                                          20% maximal IV relative bias        6.69
                                          30% maximal IV relative bias        4.99
                                          10% maximal IV size                33.84
                                          15% maximal IV size                18.54
                                          20% maximal IV size                13.24
                                          25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          11.124
                                                 Chi-sq(    7) P-val =     0.1333
```

```
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 latercon (probat = calendar1 calendar2 calendar3 calendar4 calendar5 c
> alendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(clus
> terid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.69
                                                     Prob > F      =     0.4068
Total (centered) SS     =    204.8773679             Centered R2   =    -0.0134
Total (uncentered) SS   =            287             Uncentered R2 =     0.2766
Residual SS             =    207.6144091             Root MSE      =       .455
```

latercon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf. Interval]	
probat	**.0041848**	**.0050372**	**0.83**	**0.406**	**-.0041007**	**.0124704**
_cons	**.2430164**	**.0534091**	**4.55**	**0.000**	**.1551662**	**.3308666**

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                51.421
                                                   Chi-sq(    8) P-val =     0.0000

Weak identification test  (Cragg-Donald Wald F statistic):                   6.627
                          (Kleibergen-Paap rk Wald F statistic):             6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
                                         20% maximal IV relative bias         6.69
                                         30% maximal IV relative bias         4.99
                                         10% maximal IV size                 33.84
                                         15% maximal IV size                 18.54
                                         20% maximal IV size                 13.24
                                         25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):           11.139
                                                   Chi-sq(    7) P-val =     0.1327

Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 latercon (toserve probat = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clus
> ter(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.39
                                                     Prob > F      =     0.6774
Total (centered) SS     =    204.8773679             Centered R2   =    -0.0217
Total (uncentered) SS   =            287             Uncentered R2 =     0.2706
Residual SS             =    209.3318554             Root MSE      =     .4568

------------------------------------------------------------------------------
             |               Robust
    latercon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0021529   .0073682     0.29   0.770    -.0099667    .0142725
      probat |   .0042864   .0050596     0.85   0.397    -.0040359    .0126088
       _cons |   .2270963   .0751056     3.02   0.002     .1035585    .3506341
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              22.874
                                                   Chi-sq(   7) P-val =    0.0018
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 3.143
                          (Kleibergen-Paap rk Wald F statistic):           3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      17.70
                                         10% maximal IV relative bias      10.22
                                         20% maximal IV relative bias       6.20
                                         30% maximal IV relative bias       4.73
                                         10% maximal IV size               25.64
                                         15% maximal IV size               14.31
                                         20% maximal IV size               10.41
                                         25% maximal IV size                8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):         10.808
                                                   Chi-sq(   6) P-val =    0.0945
------------------------------------------------------------------------------
Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

.
. //C6: Later Drug Conviction as Recidivism Metric
.
```

```
. reg laterdrugcon toserve age agesq female nonblack priorarr priordrugarr prio
> rfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwi
> d dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
>  robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        2.01
                                                Prob > F      =      0.0040
                                                R-squared     =      0.0337
                                                Root MSE      =      .40461

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
 laterdrugcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      toserve|  -.0022193    .000754    -2.94   0.003    -.0034609   -.0009778
          age|  -.0161137   .0078424    -2.05   0.040    -.0290263   -.0032012
        agesq|   .0001613   .0001028     1.57   0.117    -7.93e-06    .0003306
       female|  -.0182932   .0415201    -0.44   0.660     -.086656    .0500696
     nonblack|  -.0856464   .0593316    -1.44   0.149    -.1833359    .0120432
     priorarr|  -.0441948   .0574539    -0.77   0.442    -.1387927    .0504031
  priordrugarr|   .0116395   .0522233     0.22   0.824    -.0743462    .0976253
   priorfelarr|   .0209712   .0530285     0.40   0.693    -.0663402    .1082826
priorfeldru~r|  -.0493817   .0551578    -0.90   0.371    -.1401991    .0414357
      priorcon|   .0760424   .0549503     1.38   0.167    -.0144332    .1665181
  priordrugcon|     .08561   .0568462     1.51   0.132    -.0079873    .1792073
   priorfelcon|  -.0307495   .0570297    -0.54   0.590     -.124649      .06315
priorfeldru~n|    .006837   .0627566     0.11   0.913    -.0964918    .1101658
          pwid|   .0485503   .0511731     0.95   0.343    -.0357062    .1328068
          dist|   .0714838   .0503146     1.42   0.156    -.0113592    .1543267
     marijuana|   .0026897   .0450386     0.06   0.952    -.0714664    .0768458
       cocaine|   .0067056   .0468367     0.14   0.886     -.070411    .0838222
         crack|  -.0019191   .0538645    -0.04   0.972    -.0906071    .0867689
        heroin|   .0651494   .0484735     1.34   0.179    -.0146623    .1449611
           pcp|   .0023915   .0770381     0.03   0.975    -.1244518    .1292347
     otherdrug|  -.0427914   .0712059    -0.60   0.548    -.1600319    .0744491
       nondrug|   .0135345   .0388264     0.35   0.727    -.0503931    .0774621
         _cons|   .4347443   .1554164     2.80   0.005     .1788512    .6906375
------------------------------------------------------------------------------

. reg laterdrugcon probat age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
> robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        1.67
                                                Prob > F      =      0.0278
                                                R-squared     =      0.0291
                                                Root MSE      =      .40558

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
 laterdrugcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
       probat|  -.0001238   .0010055    -0.12   0.902    -.0017793    .0015317
          age|  -.0160355   .0079045    -2.03   0.043    -.0290503   -.0030208
        agesq|   .0001604   .0001036     1.55   0.122    -.0000102     .000331
       female|  -.0108227   .0416736    -0.26   0.795    -.0794384     .057793
     nonblack|  -.0918201   .0598539    -1.53   0.125    -.1903696    .0067294
     priorarr|  -.0418223   .0573767    -0.73   0.466     -.136293    .0526485
  priordrugarr|   .0128013   .0521193     0.25   0.806    -.0730131    .0986157
   priorfelarr|   .0135533   .0532535     0.25   0.799    -.0741287    .1012352
priorfeldru~r|   -.044935    .055045    -0.82   0.415    -.1355666    .0456967
      priorcon|   .0734248   .0546919     1.34   0.180    -.0166255    .1634751
```

priordrugcon	.0814428	.0567981	1.43	0.152	-.0120753	.174961
priorfelcon	-.0357797	.0568524	-0.63	0.529	-.1293872	.0578279
priorfeldru~n	-.000473	.0626629	-0.01	0.994	-.1036475	.1027016
pwid	.047371	.0514152	0.92	0.357	-.0372842	.1320262
dist	.0672311	.0507398	1.33	0.185	-.0163121	.1507743
marijuana	.005253	.0451913	0.12	0.907	-.0691545	.0796605
cocaine	.0067266	.0474311	0.14	0.887	-.0713687	.084822
crack	-.0007394	.0544744	-0.01	0.989	-.0904315	.0889527
heroin	.0665003	.0491642	1.35	0.177	-.0144486	.1474493
pcp	-.0055742	.0771192	-0.07	0.942	-.1325509	.1214026
otherdrug	-.0390363	.0718385	-0.54	0.587	-.1573184	.0792459
nondrug	.0111909	.0390435	0.29	0.774	-.0530942	.0754761
_cons	.4311677	.1569962	2.75	0.006	.1726734	.689662

```
. reg laterdrugcon toserve probat age agesq female nonblack priorarr priordruga
> rr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrug
> con pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudg
> e == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         1003
                                                F( 23,   926) =         1.94
                                                Prob > F      =       0.0051
                                                R-squared     =       0.0340
                                                Root MSE      =       .40475

                                   (Std. Err. adjusted for    927 clusters in clusterid)
```

laterdrugcon	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0023354	.0007768	-3.01	0.003	-.0036144	-.0010563
probat	-.0005823	.0010294	-0.57	0.572	-.0022772	.0011126
age	-.0165364	.0078936	-2.09	0.036	-.0295333	-.0035395
agesq	.0001666	.0001034	1.61	0.107	-3.55e-06	.0003368
female	-.0174877	.0415091	-0.42	0.674	-.0858326	.0508571
nonblack	-.0883716	.0592258	-1.49	0.136	-.1858869	.0091437
priorarr	-.044004	.0574145	-0.77	0.444	-.138537	.050529
priordrugarr	.0114763	.0521603	0.22	0.826	-.0744058	.0973583
priorfelarr	.0186174	.0532707	0.35	0.727	-.0690929	.1063277
priorfeldru~r	-.0485175	.0551037	-0.88	0.379	-.1392457	.0422107
priorcon	.0759588	.0547988	1.39	0.166	-.0142676	.1661851
priordrugcon	.0862289	.0566526	1.52	0.128	-.0070496	.1795074
priorfelcon	-.0289126	.0569866	-0.51	0.612	-.1227411	.0649159
priorfeldru~n	.0044845	.063008	0.07	0.943	-.0992582	.1082272
pwid	.0496912	.0512625	0.97	0.333	-.0347126	.134095
dist	.0755766	.0505407	1.50	0.135	-.0076387	.1587919
marijuana	.0051799	.0449488	0.12	0.908	-.0688284	.0791881
cocaine	.0093493	.0470373	0.20	0.842	-.0680976	.0867962
crack	.0012499	.0540137	0.02	0.982	-.0876838	.0901835
heroin	.0675386	.0486634	1.39	0.166	-.0125857	.1476629
pcp	.0042377	.0771957	0.05	0.956	-.1228651	.1313404
otherdrug	-.0407087	.0713054	-0.57	0.568	-.1581132	.0766957
nondrug	.0130821	.038772	0.34	0.736	-.050756	.0769202
_cons	.4440094	.1566714	2.83	0.005	.1860499	.7019689

```
. reg laterdrugcon toserve if incjudge == 1, robust cluster(clusterid) level(90
> )

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        4.45
                                                      Prob > F      =      0.0351
                                                      R-squared     =      0.0022
                                                      Root MSE      =      .40683

                                   (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterdrugcon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0014357   .0006804    -2.11   0.035    -.002556   -.0003153
       _cons |     .21929   .0143429    15.29   0.000    .1956745    .2429056
------------------------------------------------------------------------------

. reg laterdrugcon probat if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        0.07
                                                      Prob > F      =      0.7917
                                                      R-squared     =      0.0001
                                                      Root MSE      =      .40725

                                   (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterdrugcon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0002522   .0009545     0.26   0.792    -.0013194    .0018239
       _cons |   .2067727   .0162464    12.73   0.000     .180023    .2335224
------------------------------------------------------------------------------

. reg laterdrugcon toserve probat if incjudge == 1, robust cluster(clusterid) l
> evel(90)

Linear regression                                     Number of obs =        1003
                                                      F(  2,   926) =        2.22
                                                      Prob > F      =      0.1087
                                                      R-squared     =      0.0022
                                                      Root MSE      =      .40703

                                   (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterdrugcon |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0014495   .0007156    -2.03   0.043    -.0026278   -.0002713
      probat |  -.0000638   .0009925    -0.06   0.949    -.0016979    .0015703
       _cons |   .2200431   .0185013    11.89   0.000     .1895807    .2505055
------------------------------------------------------------------------------

.
```

```
. ivreg2 laterdrugcon age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 c
> alendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar
> 9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.65
                                                     Prob > F      =     0.0303
Total (centered) SS     =    166.0319043             Centered R2   =    -0.0063
Total (uncentered) SS   =            210             Uncentered R2 =     0.2044
Residual SS             =    167.0778518             Root MSE      =     .4081
```

laterdrugcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0042826	.0069641	0.61	0.539	-.0071724	.0157376
age	-.0156267	.0079594	-1.96	0.050	-.0287189	-.0025346
agesq	.0001554	.0001049	1.48	0.138	-.0000171	.000328
female	.0028561	.0469531	0.06	0.951	-.0743748	.080087
nonblack	-.1018558	.0632857	-1.61	0.108	-.2059515	.0022399
priorarr	-.037438	.0569767	-0.66	0.511	-.1311564	.0562803
priordrugarr	.0151062	.052021	0.29	0.772	-.0704607	.1006731
priorfelarr	.000928	.0557004	0.02	0.987	-.0906911	.092547
priorfeldru~r	-.0370298	.0562819	-0.66	0.511	-.1296053	.0555457
priorcon	.0685094	.0545812	1.26	0.209	-.0212687	.1582875
priordrugcon	.0731546	.0585006	1.25	0.211	-.0230702	.1693794
priorfelcon	-.0464558	.0588136	-0.79	0.430	-.1431955	.0502839
priorfeldru~n	-.0128942	.0651203	-0.20	0.843	-.1200076	.0942192
pwid	.0444306	.0517844	0.86	0.391	-.0407471	.1296083
dist	.0566405	.052949	1.07	0.285	-.0304528	.1437339
marijuana	.0085829	.0457372	0.19	0.851	-.0666482	.0838139
cocaine	.005138	.0482013	0.11	0.915	-.0741461	.0844221
crack	-.0004532	.0549653	-0.01	0.993	-.090863	.0899566
heroin	.0675918	.0499887	1.35	0.176	-.0146323	.1498159
pcp	-.0218259	.0814427	-0.27	0.789	-.1557871	.1121353
otherdrug	-.033194	.0746005	-0.44	0.656	-.1559008	.0895129
nondrug	.0070228	.0404225	0.17	0.862	-.0594663	.073512
_cons	.4186736	.1578311	2.65	0.008	.1590646	.6782825

```
Underidentification test (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(  8) P-val =   0.0081
-------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  3.090
                         (Kleibergen-Paap rk Wald F statistic):             2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                         10% maximal IV relative bias      11.39
                                         20% maximal IV relative bias       6.69
                                         30% maximal IV relative bias       4.99
                                         10% maximal IV size               33.84
                                         15% maximal IV size               18.54
                                         20% maximal IV size               13.24
                                         25% maximal IV size               10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
-------------------------------------------------------------------------------
Hansen J statistic (overidentification test of all instruments):           6.491
                                                      Chi-sq(  7) P-val =   0.4837
```

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterdrugcon age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 ca
> lendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9
> ) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.70
                                                     Prob > F      =     0.0233
Total (centered) SS     =    166.0319043             Centered R2   =     0.0243
Total (uncentered) SS   =            210             Uncentered R2 =     0.2286
Residual SS             =     161.992899             Root MSE      =      .4019
```

laterdrugcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	-.0023472	.0043931	-0.53	0.593	-.0095731	.0048788
age	-.0176162	.0082463	-2.14	0.033	-.0311801	-.0040522
agesq	.0001803	.0001076	1.67	0.094	3.22e-06	.0003573
female	-.0063062	.0418711	-0.15	0.880	-.0751781	.0625656
nonblack	-.1033307	.0645244	-1.60	0.109	-.2094639	.0028024
priorarr	-.0406333	.0566135	-0.72	0.473	-.1337542	.0524876
priordrugarr	.012414	.0513026	0.24	0.809	-.0719713	.0967992
priorfelarr	.0031996	.056157	0.06	0.955	-.0891705	.0955697
priorfeldru~r	-.0407937	.054781	-0.74	0.456	-.1309005	.0493131
priorcon	.072592	.0535368	1.36	0.175	-.0154681	.1606522
priordrugcon	.0829575	.0553493	1.50	0.134	-.008084	.1739989
priorfelcon	-.0298355	.0570187	-0.52	0.601	-.1236229	.0639519
priorfeldru~n	-.0108002	.064856	-0.17	0.868	-.1174789	.0958784
pwid	.0514468	.0514519	1.00	0.317	-.0331841	.1360777
dist	.081848	.0564023	1.45	0.147	-.0109256	.1746216
marijuana	.0151632	.0471236	0.32	0.748	-.0623482	.0926747
cocaine	.0167149	.0514134	0.33	0.745	-.0678527	.1012825
crack	.011461	.0591553	0.19	0.846	-.0858408	.1087627
heroin	.0757898	.0514073	1.47	0.140	-.0087677	.1603474
pcp	-.0001744	.0770715	-0.00	0.998	-.1269457	.1265969
otherdrug	-.0304297	.07247	-0.42	0.675	-.1496323	.0887729
nondrug	.0090198	.0386561	0.23	0.816	-.0545638	.0726034
_cons	.4654509	.1666335	2.79	0.005	.1913632	.7395387

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                53.233
                                                      Chi-sq(    8) P-val =     0.0000

Weak identification test  (Cragg-Donald Wald F statistic):                   7.098
                          (Kleibergen-Paap rk Wald F statistic):             7.041
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
```

```
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           6.861
                                                 Chi-sq(    7) P-val =     0.4435
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterdrugcon age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = cale
> ndar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 c
> alendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       1.61
                                                     Prob > F      =     0.0348
Total (centered) SS     =    166.0319043             Centered R2   =    -0.0106
Total (uncentered) SS   =            210             Uncentered R2 =     0.2010
Residual SS             =    167.7880411             Root MSE      =       .409

------------------------------------------------------------------------------
             |               Robust
 laterdrugcon|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      toserve|   .0040417    .006986     0.58   0.563    -.0074493    .0155326
       probat|  -.0021463   .0044581    -0.48   0.630    -.0094793    .0051867
          age|  -.0171706   .0084511    -2.03   0.042    -.0310715   -.0032698
        agesq|   .0001748   .0001107     1.58   0.114    -7.28e-06    .0003569
       female|   .0064324   .0473022     0.14   0.892    -.0713729    .0842376
     nonblack|  -.1123668    .068297    -1.65   0.100    -.2247055   -.0000282
     priorarr|  -.0365406   .0568406    -0.64   0.520    -.1300351    .0569539
  priordrugarr|   .0146039   .0518111     0.28   0.778    -.0706179    .0998256
   priorfelarr|  -.0083242    .059014    -0.14   0.888    -.1053937    .0887452
priorfeldru~r|  -.0334897   .0566829    -0.59   0.555    -.1267248    .0597454
     priorcon|   .0679846   .0540098     1.26   0.208    -.0208536    .1568228
  priordrugcon|   .0750782   .0579801     1.29   0.195    -.0202906    .1704469
   priorfelcon|  -.0401357   .0601177    -0.67   0.504    -.1390204     .058749
priorfeldru~n|  -.0221324   .0682698    -0.32   0.746    -.1344263    .0901614
          pwid|   .0485177   .0526664     0.92   0.357    -.0381107    .1351462
          dist|   .0713008   .0602819     1.18   0.237    -.0278542    .1704557
     marijuana|   .0179312   .0479348     0.37   0.708    -.0609145     .096777
       cocaine|   .0148381   .0528585     0.28   0.779    -.0721063    .1017826
         crack|     .01127   .0604276     0.19   0.852    -.0881246    .1106646
        heroin|   .0764689   .0528925     1.45   0.148    -.0105315    .1634692
```

pcp	**-.015716**	**.082621**	**-0.19**	**0.849**	**-.1516154**	**.1201833**
otherdrug	**-.0252413**	**.0758949**	**-0.33**	**0.739**	**-.1500774**	**.0995947**
nondrug	**.0051682**	**.0403674**	**0.13**	**0.898**	**-.0612303**	**.0715667**
_cons	**.452364**	**.1708605**	**2.65**	**0.008**	**.1713234**	**.7334045**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **6.060**
Chi-sq(**6**) P-val = **0.4165**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterdrugcon (toserve = calendar1 calendar2 calendar3 calendar4 calend
> ar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster
> (clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.09
                                                       Prob > F      =     0.7706
Total (centered) SS     =    166.0319043              Centered R2   =    -0.0095
Total (uncentered) SS   =            210              Uncentered R2 =     0.2018
Residual SS             =    167.6171689              Root MSE      =     .4088
```

laterdrugcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0019042**	**.0065213**	**0.29**	**0.770**	**-.0088223**	**.0126308**
_cons	**.1962166**	**.0466184**	**4.21**	**0.000**	**.1195362**	**.2728971**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**

```
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           7.717
                                                 Chi-sq(    7) P-val =     0.3582
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterdrugcon (probat = calendar1 calendar2 calendar3 calendar4 calenda
> r5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(
> clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.01
                                                     Prob > F      =     0.9092
Total (centered) SS     =    166.0319043             Centered R2   =    -0.0006
Total (uncentered) SS   =            210             Uncentered R2 =     0.2089
Residual SS             =    166.1235743             Root MSE      =       .407

------------------------------------------------------------------------------
             |               Robust
laterdrugcon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0005158   .0045193    -0.11   0.909    -.0079494    .0069178
       _cons |   .2146876   .0483344     4.44   0.000     .1351846    .2941906
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):               51.421
                                                 Chi-sq(    8) P-val =     0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  6.627
                          (Kleibergen-Paap rk Wald F statistic):            6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           7.905
                                                 Chi-sq(    7) P-val =     0.3410
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterdrugcon (toserve probat = calendar1 calendar2 calendar3 calendar4
>  calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust
> cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.05
                                                     Prob > F      =     0.9546
Total (centered) SS     =    166.0319043             Centered R2   =    -0.0100
Total (uncentered) SS   =            210             Uncentered R2 =     0.2014
Residual SS             =    167.6999376             Root MSE      =     .4089

------------------------------------------------------------------------------
             |               Robust
laterdrugcon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0018634   .0065258     0.29   0.775    -.0088706    .0125974
      probat |  -.0004279   .0045367    -0.09   0.925    -.0078901    .0070343
       _cons |   .2009083   .0674674     2.98   0.003     .0899343    .3118823
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):             3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      17.70
                                         10% maximal IV relative bias      10.22
                                         20% maximal IV relative bias       6.20
                                         30% maximal IV relative bias       4.73
                                         10% maximal IV size               25.64
                                         15% maximal IV size               14.31
                                         20% maximal IV size               10.41
                                         25% maximal IV size                8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           7.655
                                                     Chi-sq(    6) P-val =     0.2645
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

.
```

```
. //C7: Later Felony Conviction as Recidivism Metric
.
. reg laterfelcon toserve age agesq female nonblack priorarr priordrugarr prior
> felarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
>  dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1,
> robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        2.84
                                                Prob > F      =      0.0000
                                                R-squared     =      0.0481
                                                Root MSE      =      .39803

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0028979   .0008224    -3.52   0.000    -.0042519   -.0015438
         age |  -.0275824   .0078128    -3.53   0.000    -.0404462   -.0147186
       agesq |    .000301   .0001022     2.94   0.003     .0001327    .0004693
      female |   .0286588   .0444599     0.64   0.519    -.0445445    .1018621
    nonblack |  -.0725438    .059876    -1.21   0.226    -.1711297     .026042
    priorarr |  -.0017301   .0576293    -0.03   0.976    -.0966168    .0931567
 priordrugarr|  -.0565915   .0511404    -1.11   0.269    -.1407942    .0276112
  priorfelarr|    .055903   .0513672     1.09   0.277    -.0286731    .1404791
priorfeldru~r|  -.0156023   .0540396    -0.29   0.773    -.1045785     .073374
     priorcon|   .0462205   .0525523     0.88   0.379    -.0403068    .1327479
 priordrugcon|   .1406309   .0553332     2.54   0.011     .0495247    .2317371
  priorfelcon|  -.0199698   .0566931    -0.35   0.725     -.113315    .0733753
priorfeldru~n|  -.0425318   .0632637    -0.67   0.502    -.1466956    .0616319
         pwid|   .0281709   .0502268     0.56   0.575    -.0545275    .1108694
         dist|   .0515906   .0496921     1.04   0.299    -.0302275    .1334087
    marijuana|  -.0282073   .0442789    -0.64   0.524    -.1011126     .044698
      cocaine|  -.0002883   .0427029    -0.01   0.995    -.0705987     .070022
        crack|   .0177813   .0505564     0.35   0.725    -.0654599    .1010224
       heroin|   .0348152   .0455352     0.76   0.445    -.0401584    .1097889
          pcp|   .0320308   .0741578     0.43   0.666      -.09007    .1541317
    otherdrug|  -.0453342   .0697131    -0.65   0.516    -.1601169    .0694485
      nondrug|   .0515352    .039438     1.31   0.192    -.0133995    .1164699
       _cons |   .6410344   .1535028     4.18   0.000     .3882919    .8937769
------------------------------------------------------------------------------

. reg laterfelcon probat age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1, r
> obust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 22,   926) =        2.26
                                                Prob > F      =      0.0008
                                                R-squared     =      0.0416
                                                Root MSE      =      .39938

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0012867   .0010461     1.23   0.219    -.0004356    .0030091
         age |  -.0264506   .0078802    -3.36   0.001    -.0394253   -.0134759
       agesq |   .0002869   .0001029     2.79   0.005     .0001174    .0004563
      female |    .035471   .0443447     0.80   0.424    -.0375426    .1084846
    nonblack |  -.0731066   .0610762    -1.20   0.232    -.1736687    .0274555
    priorarr |   .0005933   .0578176     0.01   0.992    -.0946035      .09579
 priordrugarr|  -.0548223   .0511864    -1.07   0.284    -.1391007    .0294562
  priorfelarr|   .0529619   .0518093     1.02   0.307    -.0323421    .1382659
```

priorfeldru~r	**-.0124939**	**.0540643**	**-0.23**	**0.817**	**-.1015107**	**.076523**
priorcon	**.043345**	**.0525724**	**0.82**	**0.410**	**-.0432155**	**.1299056**
priordrugcon	**.1342031**	**.0556259**	**2.41**	**0.016**	**.042615**	**.2257912**
priorfelcon	**-.0304101**	**.0568063**	**-0.54**	**0.593**	**-.1239417**	**.0631215**
priorfeldru~n	**-.0453491**	**.0634976**	**-0.71**	**0.475**	**-.1498979**	**.0591998**
pwid	**.023976**	**.0504422**	**0.48**	**0.635**	**-.0590771**	**.1070292**
dist	**.0365157**	**.0503231**	**0.73**	**0.468**	**-.0463412**	**.1193727**
marijuana	**-.0313162**	**.0441063**	**-0.71**	**0.478**	**-.1039372**	**.0413049**
cocaine	**-.0067675**	**.0428982**	**-0.16**	**0.875**	**-.0773995**	**.0638644**
crack	**.0113738**	**.0510083**	**0.22**	**0.824**	**-.0726114**	**.095359**
heroin	**.0305276**	**.0458779**	**0.67**	**0.506**	**-.0450104**	**.1060656**
pcp	**.0181123**	**.0743902**	**0.24**	**0.808**	**-.1043712**	**.1405959**
otherdrug	**-.0460376**	**.0703864**	**-0.65**	**0.513**	**-.1619289**	**.0698536**
nondrug	**.0498895**	**.0398956**	**1.25**	**0.211**	**-.0157987**	**.1155777**
_cons	**.6140308**	**.155899**	**3.94**	**0.000**	**.3573429**	**.8707186**

```
. reg laterfelcon toserve probat age agesq female nonblack priorarr priordrugar
> r priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugc
> on pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge
>  == 1, robust cluster(clusterid) level(90)
```

Linear regression — Number of obs = **1003**; F(23, 926) = **2.73**; Prob > F = **0.0000**; R-squared = **0.0486**; Root MSE = **.39812**

(Std. Err. adjusted for **927** clusters in clusterid)

laterfelcon	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.002749**	**.0008362**	**-3.29**	**0.001**	**-.0041259**	**-.0013722**
probat	**.0007471**	**.0010735**	**0.70**	**0.487**	**-.0010205**	**.0025146**
age	**-.0270401**	**.0078352**	**-3.45**	**0.001**	**-.0399408**	**-.0141395**
agesq	**.0002942**	**.0001023**	**2.88**	**0.004**	**.0001258**	**.0004626**
female	**.0276254**	**.0445076**	**0.62**	**0.535**	**-.0456564**	**.1009071**
nonblack	**-.0690473**	**.0601054**	**-1.15**	**0.251**	**-.1680109**	**.0299164**
priorarr	**-.0019749**	**.0578221**	**-0.03**	**0.973**	**-.097179**	**.0932292**
priordrugarr	**-.056382**	**.0512252**	**-1.10**	**0.271**	**-.1407243**	**.0279603**
priorfelarr	**.058923**	**.0519151**	**1.13**	**0.257**	**-.0265553**	**.1444013**
priorfeldru~r	**-.016711**	**.0541035**	**-0.31**	**0.757**	**-.1057925**	**.0723705**
priorcon	**.0463279**	**.0526526**	**0.88**	**0.379**	**-.0403647**	**.1330204**
priordrugcon	**.1398369**	**.0554827**	**2.52**	**0.012**	**.0484846**	**.2311891**
priorfelcon	**-.0223266**	**.0568552**	**-0.39**	**0.695**	**-.1159388**	**.0712855**
priorfeldru~n	**-.0395135**	**.0635745**	**-0.62**	**0.534**	**-.144189**	**.065162**
pwid	**.0267071**	**.0503327**	**0.53**	**0.596**	**-.0561657**	**.10958**
dist	**.0463394**	**.0501378**	**0.92**	**0.356**	**-.0362125**	**.1288914**
marijuana	**-.0314023**	**.043869**	**-0.72**	**0.474**	**-.1036326**	**.040828**
cocaine	**-.0036803**	**.0426831**	**-0.09**	**0.931**	**-.0739581**	**.0665975**
crack	**.0137154**	**.0505708**	**0.27**	**0.786**	**-.0695494**	**.0969803**
heroin	**.0317498**	**.0454889**	**0.70**	**0.485**	**-.0431478**	**.1066474**
pcp	**.0296621**	**.0743441**	**0.40**	**0.690**	**-.0927454**	**.1520697**
otherdrug	**-.0480064**	**.0700314**	**-0.69**	**0.493**	**-.1633132**	**.0673005**
nondrug	**.0521156**	**.0395048**	**1.32**	**0.187**	**-.0129291**	**.1171603**
_cons	**.6291471**	**.1549046**	**4.06**	**0.000**	**.3740966**	**.8841976**

```
. reg laterfelcon toserve if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F(  1,   926) =        9.91
                                                       Prob > F      =      0.0017
                                                       R-squared     =      0.0052
                                                       Root MSE      =      .40261

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0022012   .0006992    -3.15   0.002    -.0033525   -.0010499
       _cons |   .2195939   .0143902    15.26   0.000     .1959004    .2432873
------------------------------------------------------------------------------

. reg laterfelcon probat if incjudge == 1, robust cluster(clusterid) level(90)

Linear regression                                      Number of obs =        1003
                                                       F(  1,   926) =        2.54
                                                       Prob > F      =      0.1114
                                                       R-squared     =      0.0027
                                                       Root MSE      =      .40311

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0015872    .000996     1.59   0.111    -.0000527    .0032271
       _cons |   .1880307   .0157571    11.93   0.000     .1620866    .2139749
------------------------------------------------------------------------------

. reg laterfelcon toserve probat if incjudge == 1, robust cluster(clusterid) le
> vel(90)

Linear regression                                      Number of obs =        1003
                                                       F(  2,   926) =        5.85
                                                       Prob > F      =      0.0030
                                                       R-squared     =      0.0066
                                                       Root MSE      =      .40253

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   -.001948   .0007318    -2.66   0.008    -.0031529   -.0007431
      probat |   .0011625   .0010399     1.12   0.264    -.0005497    .0028748
       _cons |   .2058645   .0184278    11.17   0.000     .1755231    .2362059
------------------------------------------------------------------------------


.
. ivreg2 laterfelcon age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 ca
> lendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9
> ) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------
```

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =	**927**	Number of obs =	**1003**
		F(22, 926) =	**2.17**
		Prob > F =	**0.0014**
Total (centered) SS =	**163.1006979**	Centered R2 =	**0.0071**
Total (uncentered) SS =	**205**	Uncentered R2 =	**0.2101**
Residual SS =	**161.9346553**	Root MSE =	**.4018**

laterfelcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0036186**	**.0068723**	**0.53**	**0.599**	**-.0076853**	**.0149224**
age	**-.0270943**	**.0079886**	**-3.39**	**0.001**	**-.0402343**	**-.0139543**
agesq	**.0002951**	**.0001049**	**2.81**	**0.005**	**.0001225**	**.0004677**
female	**.0498552**	**.0484254**	**1.03**	**0.303**	**-.0297974**	**.1295078**
nonblack	**-.0887894**	**.0663558**	**-1.34**	**0.181**	**-.197935**	**.0203562**
priorarr	**.0050418**	**.0571135**	**0.09**	**0.930**	**-.0889015**	**.0989851**
priordrugarr	**-.0531171**	**.0508847**	**-1.04**	**0.297**	**-.136815**	**.0305807**
priorfelarr	**.035815**	**.0533414**	**0.67**	**0.502**	**-.0519238**	**.1235538**
priorfeldru~r	**-.0032228**	**.0552423**	**-0.06**	**0.953**	**-.0940884**	**.0876427**
priorcon	**.0386707**	**.0521054**	**0.74**	**0.458**	**-.047035**	**.1243763**
priordrugcon	**.1281477**	**.0577183**	**2.22**	**0.026**	**.0332095**	**.2230859**
priorfelcon	**-.0357111**	**.0594926**	**-0.60**	**0.548**	**-.1335677**	**.0621455**
priorfeldru~n	**-.062307**	**.0659981**	**-0.94**	**0.345**	**-.1708642**	**.0462502**
pwid	**.0240421**	**.0506563**	**0.47**	**0.635**	**-.0592801**	**.1073643**
dist	**.0367143**	**.0523661**	**0.70**	**0.483**	**-.0494202**	**.1228488**
marijuana	**-.022301**	**.0448155**	**-0.50**	**0.619**	**-.0960159**	**.051414**
cocaine	**-.0018594**	**.0435622**	**-0.04**	**0.966**	**-.0735128**	**.069794**
crack	**.0192504**	**.0513811**	**0.37**	**0.708**	**-.0652639**	**.1037648**
heroin	**.0372631**	**.0466368**	**0.80**	**0.424**	**-.0394477**	**.1139739**
pcp	**.0077595**	**.079338**	**0.10**	**0.922**	**-.1227399**	**.1382589**
otherdrug	**-.0357154**	**.0723666**	**-0.49**	**0.622**	**-.1547479**	**.0833172**
nondrug	**.045009**	**.0411769**	**1.09**	**0.274**	**-.0227209**	**.1127389**
_cons	**.6249278**	**.1572268**	**3.97**	**0.000**	**.3663127**	**.8835428**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.649**
Chi-sq(**8**) P-val = **0.0081**

Weak identification test (Cragg-Donald Wald F statistic): **3.090**
(Kleibergen-Paap rk Wald F statistic): **2.710**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**
10% maximal IV relative bias **11.39**
20% maximal IV relative bias **6.69**
30% maximal IV relative bias **4.99**
10% maximal IV size **33.84**
15% maximal IV size **18.54**
20% maximal IV size **13.24**
25% maximal IV size **10.50**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **12.036**
Chi-sq(**7**) P-val = **0.0994**

Instrumented: toserve
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterfelcon age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 cal
> endar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9)
>  if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.17
                                                     Prob > F      =     0.0015
Total (centered) SS     =    163.1006979             Centered R2   =     0.0403
Total (uncentered) SS   =            205             Uncentered R2 =     0.2365
Residual SS             =     156.524513             Root MSE      =       .395
```

laterfelcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	.0024314	.004236	0.57	0.566	-.0045362	.009399
age	-.0256368	.0082265	-3.12	0.002	-.0391682	-.0121055
agesq	.0002767	.0001066	2.59	0.009	.0001013	.0004521
female	.0331458	.0446761	0.74	0.458	-.0403399	.1066315
nonblack	-.0671808	.0637539	-1.05	0.292	-.1720466	.0376851
priorarr	-.0000188	.0574023	-0.00	1.000	-.0944372	.0943995
priordrugarr	-.0546229	.0507159	-1.08	0.281	-.1380431	.0287973
priorfelarr	.0582922	.0532825	1.09	0.274	-.0293498	.1459341
priorfeldru~r	-.0146259	.0536593	-0.27	0.785	-.1028876	.0736359
priorcon	.0437738	.0522561	0.84	0.402	-.0421799	.1297275
priordrugcon	.1334233	.0550692	2.42	0.015	.0428426	.2240041
priorfelcon	-.0334702	.0575394	-0.58	0.561	-.1281141	.0611736
priorfeldru~n	-.0400324	.0649413	-0.62	0.538	-.1468514	.0667865
pwid	.0218777	.0503202	0.43	0.664	-.0608916	.104647
dist	.0289907	.0557517	0.52	0.603	-.0627127	.1206941
marijuana	-.0364181	.0473544	-0.77	0.442	-.1143092	.0414729
cocaine	-.0119096	.0467577	-0.25	0.799	-.0888192	.0649999
crack	.0050929	.0557366	0.09	0.927	-.0865856	.0967713
heroin	.0257452	.0489211	0.53	0.599	-.0547228	.1062132
pcp	.0153325	.0749085	0.20	0.838	-.1078811	.1385461
otherdrug	-.0504684	.0719278	-0.70	0.483	-.1687791	.0678423
nondrug	.0510072	.0395974	1.29	0.198	-.0141248	.1161392
_cons	.5963811	.1654924	3.60	0.000	.3241704	.8685919

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                53.233
                                                      Chi-sq(    8) P-val =     0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   7.098
                          (Kleibergen-Paap rk Wald F statistic):             7.041
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
                                         20% maximal IV relative bias         6.69
                                         30% maximal IV relative bias         4.99
                                         10% maximal IV size                 33.84
                                         15% maximal IV size                 18.54
                                         20% maximal IV size                 13.24
                                         25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           12.822
                                                      Chi-sq(    7) P-val =     0.0766
```

```
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfelcon age agesq female nonblack priorarr priordrugarr priorfelar
> r priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist
>  marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calen
> dar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 ca
> lendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       2.04
                                                     Prob > F      =     0.0027
Total (centered) SS     =    163.1006979             Centered R2   =     0.0072
Total (uncentered) SS   =            205             Uncentered R2 =     0.2101
Residual SS             =    161.9303871             Root MSE      =      .4018
```

laterfelcon	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0039133	.0069239	0.57	0.572	-.0074754	.015302
probat	.0026258	.004298	0.61	0.541	-.0044437	.0096954
age	-.0252055	.0084744	-2.97	0.003	-.0391447	-.0112662
agesq	.0002714	.0001101	2.46	0.014	.0000903	.0004525
female	.0454798	.048795	0.93	0.351	-.0347809	.1257405
nonblack	-.0759299	.0696071	-1.09	0.275	-.1904234	.0385636
priorarr	.0039439	.0577426	0.07	0.946	-.0910343	.098922
priordrugarr	-.0525025	.051132	-1.03	0.305	-.1366073	.0316022
priorfelarr	.0471344	.0555436	0.85	0.396	-.0442266	.1384954
priorfeldru~r	-.0075539	.0554067	-0.14	0.892	-.0986898	.083582
priorcon	.0393127	.0525841	0.75	0.455	-.0471805	.1258059
priordrugcon	.1257944	.0579573	2.17	0.030	.030463	.2211257
priorfelcon	-.0434433	.061447	-0.71	0.480	-.1445146	.057628
priorfeldru~n	-.0510046	.0679351	-0.75	0.453	-.1627479	.0607386
pwid	.0190417	.0512539	0.37	0.710	-.0652634	.1033468
dist	.0187785	.0594611	0.32	0.752	-.0790264	.1165833
marijuana	-.0337381	.0479133	-0.70	0.481	-.1125484	.0450723
cocaine	-.0137268	.0478973	-0.29	0.774	-.0925108	.0650572
crack	.004908	.0568326	0.09	0.931	-.0885734	.0983893
heroin	.0264027	.0500725	0.53	0.598	-.0559592	.1087646
pcp	.0002845	.0810842	0.00	0.997	-.1330871	.1336561
otherdrug	-.0454448	.0746789	-0.61	0.543	-.1682807	.077391
nondrug	.047278	.0413648	1.14	0.253	-.0207611	.1153171
_cons	.5837099	.1706474	3.42	0.001	.3030198	.8643999

```
Underidentification test (Kleibergen-Paap rk LM statistic):                20.887
                                                     Chi-sq(    7) P-val =     0.0039
------------------------------------------------------------------------------
Weak identification test (Cragg-Donald Wald F statistic):                   3.071
                         (Kleibergen-Paap rk Wald F statistic):             2.739
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
```

```
                                          10% maximal IV relative bias        10.22
                                          20% maximal IV relative bias         6.20
                                          30% maximal IV relative bias         4.73
                                          10% maximal IV size                 25.64
                                          15% maximal IV size                 14.31
                                          20% maximal IV size                 10.41
                                          25% maximal IV size                  8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          11.975
                                                 Chi-sq(    6) P-val =     0.0625
------------------------------------------------------------------------------
Instrumented:         toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfelcon (toserve = calendar1 calendar2 calendar3 calendar4 calenda
> r5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(
> clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.01
                                                     Prob > F      =     0.9036
Total (centered) SS     =    163.1006979             Centered R2   =    -0.0043
Total (uncentered) SS   =            205             Uncentered R2 =     0.2009
Residual SS             =    163.8058559             Root MSE      =      .4041

------------------------------------------------------------------------------
             |               Robust
 laterfelcon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0007805   .0064384     0.12   0.904    -.0098097    .0113707
       _cons |   .1989951    .046112     4.32   0.000     .1231476    .2748425
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):               22.308
                                                 Chi-sq(    8) P-val =     0.0044
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  3.188
                         (Kleibergen-Paap rk Wald F statistic):             2.956
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias       11.39
                                          20% maximal IV relative bias        6.69
                                          30% maximal IV relative bias        4.99
                                          10% maximal IV size                33.84
                                          15% maximal IV size                18.54
                                          20% maximal IV size                13.24
                                          25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          12.531
                                                 Chi-sq(    7) P-val =     0.0844
```

```
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfelcon (probat = calendar1 calendar2 calendar3 calendar4 calendar
> 5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluster(c
> lusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.70
                                                     Prob > F      =     0.4039
Total (centered) SS     =    163.1006979             Centered R2   =    -0.0020
Total (uncentered) SS   =            205             Uncentered R2 =     0.2028
Residual SS             =    163.4239747             Root MSE      =      .4037

------------------------------------------------------------------------------
             |               Robust
 laterfelcon |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0036789   .0044011     0.84   0.403    -.0035602     .010918
       _cons |   .1664757   .0465819     3.57   0.000     .0898553    .2430961
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                51.421
                                                     Chi-sq(    8) P-val =     0.0000
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   6.627
                         (Kleibergen-Paap rk Wald F statistic):             6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                         10% maximal IV relative bias      11.39
                                         20% maximal IV relative bias       6.69
                                         30% maximal IV relative bias       4.99
                                         10% maximal IV size               33.84
                                         15% maximal IV size               18.54
                                         20% maximal IV size               13.24
                                         25% maximal IV size               10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           12.519
                                                     Chi-sq(    7) P-val =     0.0847
------------------------------------------------------------------------------

Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
. ivreg2 laterfelcon (toserve probat = calendar1 calendar2 calendar3 calendar4
> calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust c
> luster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.37
                                                     Prob > F      =     0.6936
Total (centered) SS     =    163.1006979             Centered R2   =    -0.0070
Total (uncentered) SS   =            205             Uncentered R2 =     0.1988
Residual SS             =    164.2390144             Root MSE      =     .4047

------------------------------------------------------------------------------
             |               Robust
  laterfelcon|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0011367   .0064776     0.18   0.861    -.009518    .0117915
      probat |   .0037325   .0044121     0.85   0.398    -.0035248    .0109898
       _cons |   .1580698    .065879     2.40   0.016     .0497086    .2664311
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              22.874
                                                     Chi-sq(   7) P-val =     0.0018
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                3.143
                          (Kleibergen-Paap rk Wald F statistic):          3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias     17.70
                                         10% maximal IV relative bias     10.22
                                         20% maximal IV relative bias      6.20
                                         30% maximal IV relative bias      4.73
                                         10% maximal IV size              25.64
                                         15% maximal IV size              14.31
                                         20% maximal IV size              10.41
                                         25% maximal IV size               8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):         12.357
                                                     Chi-sq(   6) P-val =     0.0545
------------------------------------------------------------------------------
Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

.
. //C8: Later Non-Felony Conviction as Recidivism Metric
.
```

```
. gen laternonfelcon = latercon - laterfelcon

.
. reg laternonfelcon toserve age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
> 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         1003
                                                F( 22,   926) =         2.73
                                                Prob > F      =       0.0000
                                                R-squared     =       0.0274
                                                Root MSE      =       .27336

                               (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfel~n|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0002235   .0005645     0.40   0.692     -.000706     .001153
         age |   .0072825   .0048676     1.50   0.135    -.0007321     .015297
       agesq |  -.0001118   .0000612    -1.83   0.068    -.0002127    -.000011
      female |  -.0078418   .0277068    -0.28   0.777     -.053461    .0377775
    nonblack |  -.0320783   .0428718    -0.75   0.455    -.1026667    .0385101
    priorarr |  -.0079811    .039147    -0.20   0.838    -.0724366    .0564744
 priordrugarr |   .0218232   .0368112     0.59   0.553    -.0387866    .0824329
  priorfelarr |  -.0036705   .0395782    -0.09   0.926    -.0688361    .0614951
priorfeldru~r |  -.0765211   .0339099    -2.26   0.024    -.1323537   -.0206884
     priorcon |   .0415848   .0457284     0.91   0.363    -.0337071    .1168768
 priordrugcon |   -.008336   .0433801    -0.19   0.848    -.0797615    .0630894
  priorfelcon |  -.0175372   .0410536    -0.43   0.669    -.0851319    .0500575
priorfeldru~n |   .0414777   .0400698     1.04   0.301    -.0244973    .1074527
         pwid |   .0223081   .0370107     0.60   0.547      -.03863    .0832462
         dist |   .0385481   .0372821     1.03   0.301    -.0228369     .099933
    marijuana |   .0568915   .0334647     1.70   0.089     .0017918    .1119912
      cocaine |    .020615   .0357549     0.58   0.564    -.0382555    .0794855
        crack |   .0448935   .0410672     1.09   0.275    -.0227236    .1125106
       heroin |   .0685914   .0374371     1.83   0.067     .0069512    .1302317
          pcp |   -.022342   .0417315    -0.54   0.593    -.0910529     .046369
    otherdrug |  -.0440361   .0331408    -1.33   0.184    -.0986025    .0105303
      nondrug |  -.0242855   .0234154    -1.04   0.300     -.062839     .014268
        _cons |  -.0926383   .0962917    -0.96   0.336    -.2511828    .0659061
------------------------------------------------------------------------------

. reg laternonfelcon probat age agesq female nonblack priorarr priordrugarr pri
> orfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pw
> id dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1
> , robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         1003
                                                F( 22,   926) =         2.74
                                                Prob > F      =       0.0000
                                                R-squared     =       0.0341
                                                Root MSE      =       .27242

                               (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfel~n|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0017896   .0006445    -2.78   0.006    -.0028508   -.0007284
         age |   .0059935   .0048594     1.23   0.218    -.0020075    .0139944
       agesq |  -.0000956   .0000611    -1.56   0.118    -.0001963    5.02e-06
      female |  -.0049335   .0277149    -0.18   0.859    -.0505662    .0406992
    nonblack |  -.0407859   .0423868    -0.96   0.336    -.1105758     .029004
    priorarr |  -.0072564   .0392212    -0.19   0.853    -.0718341    .0573213
 priordrugarr |   .0213923    .036757     0.58   0.561    -.0391281    .0819127
```

priorfelarr	-.0113151	.0392957	-0.29	0.773	-.0760155	.0533854
priorfeldru~r	-.0736124	.0336782	-2.19	0.029	-.1290636	-.0181611
priorcon	.0411735	.0456431	0.90	0.367	-.0339779	.1163249
priordrugcon	-.0066888	.0434109	-0.15	0.878	-.0781649	.0647874
priorfelcon	-.0122128	.0410341	-0.30	0.766	-.0797756	.0553499
priorfeldru~n	.0338436	.0403698	0.84	0.402	-.0326253	.1003125
pwid	.0257303	.0369664	0.70	0.487	-.0351349	.0865955
dist	.0508234	.0371001	1.37	0.171	-.0102619	.1119087
marijuana	.0646656	.0339123	1.91	0.057	.0088289	.1205023
cocaine	.0287084	.0359597	0.80	0.425	-.0304993	.0879161
crack	.0546631	.0417548	1.31	0.191	-.0140862	.1234125
heroin	.0759845	.0377169	2.01	0.044	.0138837	.1380854
pcp	-.0171632	.0414165	-0.41	0.679	-.0853555	.051029
otherdrug	-.0374387	.0332529	-1.13	0.261	-.0921897	.0173123
nondrug	-.0258092	.0232117	-1.11	0.266	-.0640273	.012409
_cons	-.0644914	.0966978	-0.67	0.505	-.2237045	.0947216

```
. reg laternonfelcon toserve probat age agesq female nonblack priorarr priordru
> garr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldr
> ugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incju
> dge == 1, robust cluster(clusterid) level(90)
```

Linear regression

Number of obs =	**1003**
F(23, 926) =	**2.62**
Prob > F =	**0.0001**
R-squared =	**0.0341**
Root MSE =	**.27256**

(Std. Err. adjusted for **927** clusters in clusterid)

laternonfel~n	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0001385	.0005724	-0.24	0.809	-.0010809	.000804
probat	-.0018168	.0006668	-2.72	0.007	-.0029146	-.0007189
age	.0059638	.0048667	1.23	0.221	-.0020493	.0139769
agesq	-.0000953	.0000612	-1.56	0.120	-.0001961	5.53e-06
female	-.0053287	.027594	-0.19	0.847	-.0507623	.0401049
nonblack	-.0405815	.0423759	-0.96	0.338	-.1103534	.0291905
priorarr	-.0073858	.0392622	-0.19	0.851	-.0720311	.0572596
priordrugarr	.0213137	.0367892	0.58	0.562	-.0392597	.0818872
priorfelarr	-.0110148	.0392729	-0.28	0.779	-.0756778	.0536481
priorfeldru~r	-.0738248	.0336364	-2.19	0.028	-.1292071	-.0184425
priorcon	.0413238	.0457133	0.90	0.366	-.0339432	.1165907
priordrugcon	-.006405	.0433698	-0.15	0.883	-.0778134	.0650034
priorfelcon	-.0118057	.041252	-0.29	0.775	-.0797272	.0561158
priorfeldru~n	.0341375	.0403734	0.85	0.398	-.0323373	.1006123
pwid	.0258679	.0369848	0.70	0.484	-.0350277	.0867634
dist	.0513182	.0371769	1.38	0.168	-.0098936	.11253
marijuana	.0646612	.0339302	1.91	0.057	.0087951	.1205274
cocaine	.0288639	.0360229	0.80	0.423	-.0304478	.0881755
crack	.054781	.041812	1.31	0.190	-.0140625	.1236246
heroin	.0760461	.0377537	2.01	0.044	.0138846	.1382076
pcp	-.0165815	.0417174	-0.40	0.691	-.0852692	.0521062
otherdrug	-.0375378	.0332362	-1.13	0.259	-.0922612	.0171856
nondrug	-.0256971	.0232224	-1.11	0.269	-.0639328	.0125387
_cons	-.0637301	.0967994	-0.66	0.510	-.2231104	.0956502

```
. reg laternonfelcon toserve if incjudge == 1, robust cluster(clusterid) level(
> 90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        0.21
                                                      Prob > F      =      0.6452
                                                      R-squared     =      0.0001
                                                      Root MSE      =      .27425

                                  (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfe~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0002456   .0005331     0.46   0.645    -.0006321    .0011233
       _cons |   .0800583   .0094772     8.45   0.000     .0644541    .0956626
------------------------------------------------------------------------------

. reg laternonfelcon probat if incjudge == 1, robust cluster(clusterid) level(9
> 0)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        5.08
                                                      Prob > F      =      0.0245
                                                      R-squared     =      0.0044
                                                      Root MSE      =      .27367

                                  (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfe~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0013722   .0006091    -2.25   0.024    -.0023751   -.0003694
       _cons |   .0958957   .0119713     8.01   0.000      .076185    .1156065
------------------------------------------------------------------------------

. reg laternonfelcon toserve probat if incjudge == 1, robust cluster(clusterid)
>  level(90)

Linear regression                                     Number of obs =        1003
                                                      F(  2,   926) =        2.55
                                                      Prob > F      =      0.0788
                                                      R-squared     =      0.0044
                                                      Root MSE      =      .2738

                                  (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laternonfe~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   -.000056   .0005474    -0.10   0.919    -.0009573    .0008453
      probat |  -.0013844   .0006343    -2.18   0.029    -.0024288     -.00034
       _cons |   .0964083   .0132978     7.25   0.000     .0745134    .1183031
------------------------------------------------------------------------------
```

```
.
. ivreg2 laternonfelcon age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1
>  calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calend
> ar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       2.73
                                                     Prob > F      =     0.0000
Total (centered) SS     =   75.29611167              Centered R2   =     0.0274
Total (uncentered) SS   =            82              Uncentered R2 =     0.1069
Residual SS             =   73.23353533              Root MSE      =      .2702
```

laternonfel~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0002431	.0044778	0.05	0.957	-.0071222	.0076084
age	.0072839	.0048173	1.51	0.131	-.0006399	.0152077
agesq	-.0001118	.0000606	-1.85	0.065	-.0002115	-.0000122
female	-.0077781	.0330147	-0.24	0.814	-.0620824	.0465262
nonblack	-.0321271	.040773	-0.79	0.431	-.0991927	.0349385
priorarr	-.0079608	.0394379	-0.20	0.840	-.0728304	.0569088
priordrugarr	.0218336	.0364039	0.60	0.549	-.0380454	.0817127
priorfelarr	-.0037308	.0405104	-0.09	0.927	-.0703644	.0629028
priorfeldru~r	-.0764839	.0337892	-2.26	0.024	-.1320622	-.0209056
priorcon	.0415622	.0461093	0.90	0.367	-.0342808	.1174052
priordrugcon	-.0083735	.0431588	-0.19	0.846	-.0793635	.0626164
priorfelcon	-.0175844	.0422491	-0.42	0.677	-.087078	.0519091
priorfeldru~n	.0414183	.0408215	1.01	0.310	-.025727	.1085636
pwid	.0222957	.0370454	0.60	0.547	-.0386385	.0832299
dist	.0385034	.0390986	0.98	0.325	-.025808	.1028148
marijuana	.0569092	.0336364	1.69	0.091	.0015823	.1122362
cocaine	.0206103	.0352073	0.59	0.558	-.0373005	.0785211
crack	.0448979	.0407355	1.10	0.270	-.0221061	.1119019
heroin	.0685988	.0371252	1.85	0.065	.0075333	.1296642
pcp	-.0224149	.0427175	-0.52	0.600	-.0926788	.0478491
otherdrug	-.0440072	.0337567	-1.30	0.192	-.0995321	.0115177
nondrug	-.0243051	.023985	-1.01	0.311	-.0637569	.0151467
_cons	-.0926867	.0959783	-0.97	0.334	-.2505569	.0651835

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(    8) P-val =     0.0081
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   3.090
                         (Kleibergen-Paap rk Wald F statistic):              2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):            8.193
```

Chi-sq(7) P-val = **0.3159**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laternonfelcon age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1
> calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calenda
> r9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------
```

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) = **927** Number of obs = **1003**
F(22, 926) = **2.75**
Prob > F = **0.0000**
Total (centered) SS = **75.29611167** Centered R2 = **0.0265**
Total (uncentered) SS = **82** Uncentered R2 = **0.1061**
Residual SS = **73.29860027** Root MSE = **.2703**

laternonfel~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**.0000976**	**.0031779**	**0.03**	**0.975**	**-.0051295**	**.0053248**
age	**.0073351**	**.0054402**	**1.35**	**0.178**	**-.0016132**	**.0162834**
agesq	**-.0001125**	**.0000692**	**-1.63**	**0.104**	**-.0002263**	**1.30e-06**
female	**-.0087671**	**.0273564**	**-0.32**	**0.749**	**-.0537645**	**.0362302**
nonblack	**-.0310156**	**.0463855**	**-0.67**	**0.504**	**-.107313**	**.0452818**
priorarr	**-.0082656**	**.0386242**	**-0.21**	**0.831**	**-.0717967**	**.0552655**
priordrugarr	**.021721**	**.0363911**	**0.60**	**0.551**	**-.0381371**	**.0815791**
priorfelarr	**-.0025268**	**.0420424**	**-0.06**	**0.952**	**-.0716804**	**.0666268**
priorfeldru~r	**-.0771275**	**.0342281**	**-2.25**	**0.024**	**-.1334277**	**-.0208274**
priorcon	**.0418804**	**.0451289**	**0.93**	**0.353**	**-.0323501**	**.1161108**
priordrugcon	**-.0079744**	**.0430395**	**-0.19**	**0.853**	**-.0787681**	**.0628194**
priorfelcon	**-.0172583**	**.0408855**	**-0.42**	**0.673**	**-.0845089**	**.0499923**
priorfeldru~n	**.0426095**	**.0425998**	**1.00**	**0.317**	**-.0274609**	**.1126799**
pwid	**.0222707**	**.0367623**	**0.61**	**0.545**	**-.0381978**	**.0827393**
dist	**.0384164**	**.0412707**	**0.93**	**0.352**	**-.0294679**	**.1063007**
marijuana	**.0562537**	**.0351593**	**1.60**	**0.110**	**-.0015783**	**.1140856**
cocaine	**.0202303**	**.0393472**	**0.51**	**0.607**	**-.0444901**	**.0849506**
crack	**.0443073**	**.0453042**	**0.98**	**0.328**	**-.0302115**	**.1188262**
heroin	**.0680995**	**.0383765**	**1.77**	**0.076**	**.0049758**	**.1312232**
pcp	**-.0217466**	**.0418673**	**-0.52**	**0.603**	**-.0906123**	**.047119**
otherdrug	**-.044744**	**.0353879**	**-1.26**	**0.206**	**-.1029519**	**.013464**
nondrug	**-.0239663**	**.0229834**	**-1.04**	**0.297**	**-.0617707**	**.013838**
_cons	**-.0935914**	**.1096317**	**-0.85**	**0.393**	**-.2739196**	**.0867367**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(8) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           8.142
                                                 Chi-sq(    7) P-val =     0.3202
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laternonfelcon age agesq female nonblack priorarr priordrugarr priorfe
> larr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid d
> ist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = ca
> lendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
>  calendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       2.62
                                                     Prob > F      =     0.0001
Total (centered) SS     =    75.29611167             Centered R2   =     0.0266
Total (uncentered) SS   =             82             Uncentered R2 =     0.1061
Residual SS             =    73.29681268             Root MSE      =      .2703

------------------------------------------------------------------------------
             |               Robust
laternonfel~n|      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0002555   .0044636     0.06   0.954    -.0070866    .0075975
      probat |   .0001103   .0031684     0.03   0.972    -.0051013    .0053219
         age |   .0073633   .0054462     1.35   0.176    -.0015949    .0163214
       agesq |  -.0001128   .0000692    -1.63   0.103    -.0002267    1.04e-06
      female |   -.007962   .0329861    -0.24   0.809    -.0622192    .0462953
    nonblack |  -.0315868   .0453067    -0.70   0.486    -.1061096    .0429361
    priorarr |  -.0080069    .039396    -0.20   0.839    -.0728075    .0567937
 priordrugarr |   .0218594   .0364035     0.60   0.548     -.038019    .0817379
  priorfelarr |  -.0032552   .0433547    -0.08   0.940    -.0745673     .068057
priorfeldru~r |  -.0766659   .0344437    -2.23   0.026    -.1333208    -.020011
     priorcon |   .0415891   .0460919     0.90   0.367    -.0342253    .1174036
 priordrugcon |  -.0084724   .0432267    -0.20   0.845     -.079574    .0626292
  priorfelcon |  -.0179093   .0425569    -0.42   0.674    -.0879093    .0520906
priorfeldru~n |   .0418932   .0438072     0.96   0.339    -.0301632    .1139497
         pwid |   .0220856   .0372777     0.59   0.554    -.0392307    .0834019
         dist |   .0377497   .0433089     0.87   0.383    -.0334871    .1089865
    marijuana |   .0564286   .0356396     1.58   0.113    -.0021932    .1150505
      cocaine |   .0201116   .0391193     0.51   0.607    -.0442339    .0844571
        crack |   .0442953   .0452661     0.98   0.328    -.0301608    .1187513
```

heroin	**.0681424**	**.0384347**	**1.77**	**0.076**	**.004923**	**.1313618**
pcp	**-.0227289**	**.043426**	**-0.52**	**0.601**	**-.0941584**	**.0487005**
otherdrug	**-.044416**	**.0362894**	**-1.22**	**0.221**	**-.1041068**	**.0152748**
nondrug	**-.0242098**	**.0238423**	**-1.02**	**0.310**	**-.0634269**	**.0150074**
_cons	**-.0944186**	**.1103498**	**-0.86**	**0.392**	**-.275928**	**.0870907**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.064**
Chi-sq(**6**) P-val = **0.2335**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laternonfelcon (toserve = calendar1 calendar2 calendar3 calendar4 cale
> ndar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clust
> er(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.05
                                                       Prob > F      =     0.8181
Total (centered) SS     =    75.29611167              Centered R2   =    -0.0011
Total (uncentered) SS   =             82              Uncentered R2 =     0.0808
Residual SS             =    75.37540154              Root MSE      =      .2741
```

laternonfe~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0009633**	**.0041839**	**0.23**	**0.818**	**-.0059186**	**.0078452**
_cons	**.0750999**	**.030166**	**2.49**	**0.013**	**.0254813**	**.1247185**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           9.486
                                                    Chi-sq(    7) P-val =    0.2196
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laternonfelcon (probat = calendar1 calendar2 calendar3 calendar4 calen
> dar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust cluste
> r(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.02
                                                     Prob > F      =     0.8756
Total (centered) SS     =    75.29611167             Centered R2   =    -0.0038
Total (uncentered) SS   =             82             Uncentered R2 =     0.0783
Residual SS             =    75.58257049             Root MSE      =      .2745

------------------------------------------------------------------------------
             |               Robust
laternonfe~n |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |    .000506    .003227     0.16   0.875    -.004802    .0058139
       _cons |   .0765407   .0341525     2.24   0.025     .0203648    .1327166
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              51.421
                                                    Chi-sq(    8) P-val =    0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 6.627
                         (Kleibergen-Paap rk Wald F statistic):            6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           9.722
                                                    Chi-sq(    7) P-val =    0.2049
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laternonfelcon (toserve probat = calendar1 calendar2 calendar3 calenda
> r4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robus
> t cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.04
                                                     Prob > F      =     0.9560
Total (centered) SS     =    75.29611167             Centered R2   =    -0.0049
Total (uncentered) SS   =             82             Uncentered R2 =     0.0773
Residual SS             =    75.66461147             Root MSE      =      .2747

------------------------------------------------------------------------------
             |               Robust
laternonfe~n |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0010162   .0041855     0.24   0.808    -.0058683    .0079006
      probat |   .0005539   .0032215     0.17   0.863    -.0047449    .0058527
       _cons |   .0690264   .0441739     1.56   0.118    -.0036331     .141686
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):             3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           9.412
                                                     Chi-sq(    6) P-val =     0.1517
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //C9: Later Felony Drug Conviction as Recidivism Metric
.
. reg laterfeldrugcon toserve age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
>  1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         1003
                                                F( 22,   926) =         2.01
                                                Prob > F      =       0.0040
                                                R-squared     =       0.0308
                                                Root MSE      =       .3581

                               (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldru~n|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0022324   .0006816    -3.28   0.001    -.0033547   -.0011101
         age |  -.0188659   .0069734    -2.71   0.007    -.0303477   -.0073841
       agesq |   .0002146    .000093     2.31   0.021     .0000615    .0003677
      female |  -.0077688   .0365979    -0.21   0.832    -.0680272    .0524897
    nonblack |  -.0697923   .0435874    -1.60   0.110    -.1415589    .0019744
    priorarr |  -.0133129   .0510693    -0.26   0.794    -.0973985    .0707727
 priordrugarr|  -.0166513   .0449782    -0.37   0.711    -.0907079    .0574052
  priorfelarr|   .0493232   .0466328     1.06   0.290    -.0274577     .126104
priorfeldru~r|   -.014823   .0501953    -0.30   0.768    -.0974696    .0678237
     priorcon|   .0143657   .0421564     0.34   0.733    -.0550448    .0837762
 priordrugcon|   .1214434   .0471693     2.57   0.010     .0437791    .1991076
  priorfelcon|  -.0077573   .0496087    -0.16   0.876     -.089438    .0739234
priorfeldru~n|  -.0410816   .0547579    -0.75   0.453    -.1312405    .0490774
         pwid|   .0247879    .046628     0.53   0.595    -.0519851    .1015609
         dist|   .0452154   .0454479     0.99   0.320    -.0296146    .1200454
    marijuana|  -.0119635   .0394596    -0.30   0.762    -.0769338    .0530067
      cocaine|   .0141316   .0397069     0.36   0.722    -.0512459     .079509
        crack|   .0155291   .0477609     0.33   0.745    -.0631094    .0941675
       heroin|   .0469211    .042231     1.11   0.267    -.0226123    .1164545
          pcp|   .0392401   .0695153     0.56   0.573    -.0752169    .1536971
    otherdrug|   .0073269   .0675062     0.11   0.914    -.1038222    .1184759
      nondrug|   .0100048   .0349619     0.29   0.775      -.04756    .0675696
       _cons |    .412477   .1404835     2.94   0.003     .1811708    .6437832
------------------------------------------------------------------------------

. reg laterfeldrugcon probat age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
> 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         1003
                                                F( 22,   926) =         1.73
                                                Prob > F      =       0.0196
                                                R-squared     =       0.0256
                                                Root MSE      =       .35905

                               (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldru~n|      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0008355   .0009004     0.93   0.354    -.0006471     .002318
         age |  -.0181047   .0070553    -2.57   0.010    -.0297213   -.0064881
       agesq |   .0002052   .0000938     2.19   0.029     .0000506    .0003597
      female |  -.0022045   .0367503    -0.06   0.952    -.0627139    .0583049
    nonblack |  -.0710323   .0441813    -1.61   0.108    -.1437768    .0017123
    priorarr |  -.0114398   .0511303    -0.22   0.823    -.0956259    .0727463
 priordrugarr|  -.0153155   .0450335    -0.34   0.734    -.0894633    .0588322
```

priorfelarr	.0463321	.0468046	0.99	0.322	-.0307317	.1233958
priorfeldru~r	-.0121382	.0502466	-0.24	0.809	-.0948693	.0705929
priorcon	.0120922	.0420536	0.29	0.774	-.057149	.0813334
priordrugcon	.1165977	.0473903	2.46	0.014	.0385695	.194626
priorfelcon	-.0153836	.0497319	-0.31	0.757	-.0972672	.0665
priorfeldru~n	-.0439754	.0552139	-0.80	0.426	-.1348852	.0469343
pwid	.0218419	.0468927	0.47	0.641	-.055367	.0990508
dist	.0346265	.0460207	0.75	0.452	-.0411467	.1103996
marijuana	-.0136641	.0393605	-0.35	0.729	-.0784712	.0511429
cocaine	.0098401	.040039	0.25	0.806	-.0560842	.0757643
crack	.0114478	.0481292	0.24	0.812	-.067797	.0906927
heroin	.044269	.0427045	1.04	0.300	-.026044	.1145819
pcp	.0288961	.0694352	0.42	0.677	-.085429	.1432213
otherdrug	.007388	.0681515	0.11	0.914	-.1048236	.1195996
nondrug	.0085849	.0352148	0.24	0.807	-.0493964	.0665661
_cons	.3940764	.1425794	2.76	0.006	.1593194	.6288335

```
. reg laterfeldrugcon toserve probat age agesq female nonblack priorarr priordr
> ugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeld
> rugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incj
> udge == 1, robust cluster(clusterid) level(90)

Linear regression                               Number of obs =        1003
                                                F( 23,   926) =        1.93
                                                Prob > F      =      0.0054
                                                R-squared     =      0.0310
                                                Root MSE      =      .35824

                                  (Std. Err. adjusted for    927 clusters in clusterid)
```

laterfeldru~n	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.00215	.0006884	-3.12	0.002	-.0032835	-.0010166
probat	.0004134	.0009164	0.45	0.652	-.0010955	.0019222
age	-.0185658	.0070339	-2.64	0.008	-.0301472	-.0069845
agesq	.0002109	.0000935	2.26	0.024	.0000569	.0003648
female	-.0083406	.0367538	-0.23	0.821	-.0688558	.0521746
nonblack	-.0678574	.0438632	-1.55	0.122	-.1400783	.0043634
priorarr	-.0134484	.0511642	-0.26	0.793	-.0976902	.0707934
priordrugarr	-.0165354	.0450455	-0.37	0.714	-.0907029	.0576321
priorfelarr	.0509943	.0469515	1.09	0.278	-.0263114	.1283
priorfeldru~r	-.0154365	.050308	-0.31	0.759	-.0982687	.0673957
priorcon	.0144251	.0422238	0.34	0.733	-.0550965	.0839467
priordrugcon	.121004	.0473896	2.55	0.011	.0429769	.199031
priorfelcon	-.0090615	.0498655	-0.18	0.856	-.0911651	.0730422
priorfeldru~n	-.0394114	.0554736	-0.71	0.478	-.1307487	.0519259
pwid	.0239779	.0467945	0.51	0.608	-.0530693	.1010251
dist	.0423097	.0458534	0.92	0.356	-.033188	.1178074
marijuana	-.0137315	.0391726	-0.35	0.726	-.0782291	.0507662
cocaine	.0122546	.0398085	0.31	0.758	-.0532901	.0777993
crack	.0132792	.0477657	0.28	0.781	-.0653671	.0919256
heroin	.0452249	.0423714	1.07	0.286	-.0245396	.1149894
pcp	.0379293	.0696278	0.54	0.586	-.0767128	.1525715
otherdrug	.0058482	.0678033	0.09	0.931	-.1057899	.1174864
nondrug	.010326	.034997	0.30	0.768	-.0472967	.0679486
_cons	.4058991	.1421284	2.86	0.004	.1718845	.6399137

```
. reg laterfeldrugcon toserve if incjudge == 1, robust cluster(clusterid) level
> (90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        6.64
                                                      Prob > F      =      0.0101
                                                      R-squared     =      0.0030
                                                      Root MSE      =      .35937

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0014885   .0005776    -2.58   0.010    -.0024396   -.0005375
       _cons |   .1628259   .0128128    12.71   0.000     .1417295    .1839222
------------------------------------------------------------------------------

. reg laterfeldrugcon probat if incjudge == 1, robust cluster(clusterid) level(
> 90)

Linear regression                                     Number of obs =        1003
                                                      F(  1,   926) =        1.43
                                                      Prob > F      =      0.2327
                                                      R-squared     =      0.0014
                                                      Root MSE      =      .35966

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0010066   .0008428     1.19   0.233    -.0003811    .0023942
       _cons |   .1421698   .0138261    10.28   0.000      .119405    .1649345
------------------------------------------------------------------------------

. reg laterfeldrugcon toserve probat if incjudge == 1, robust cluster(clusterid
> ) level(90)

Linear regression                                     Number of obs =        1003
                                                      F(  2,   926) =        3.65
                                                      Prob > F      =      0.0264
                                                      R-squared     =      0.0036
                                                      Root MSE      =      .35943

                                (Std. Err. adjusted for    927 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
laterfeldr~n |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0013326   .0006007    -2.22   0.027    -.0023216   -.0003435
      probat |   .0007161   .0008719     0.82   0.412    -.0007195    .0021516
       _cons |   .1543693   .0159778     9.66   0.000     .1280617    .1806768
------------------------------------------------------------------------------
```

```
.
. ivreg2 laterfeldrugcon age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.58
                                                     Prob > F      =     0.0429
Total (centered) SS     =    129.6610169              Centered R2   =    -0.0437
Total (uncentered) SS   =            153              Uncentered R2 =     0.1155
Residual SS             =    135.3336454              Root MSE      =      .3673
```

laterfeldru~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	.0056091	.0062959	0.89	0.373	-.0047466	.0159649
age	-.0182786	.007255	-2.52	0.012	-.0302119	-.0063452
agesq	.0002075	.0000973	2.13	0.033	.0000476	.0003675
female	.0177379	.0402944	0.44	0.660	-.0485406	.0840163
nonblack	-.0893413	.0518758	-1.72	0.085	-.1746694	-.0040132
priorarr	-.0051641	.0507522	-0.10	0.919	-.088644	.0783159
priordrugarr	-.0124705	.0453009	-0.28	0.783	-.0869838	.0620429
priorfelarr	.0251504	.0485968	0.52	0.605	-.0547843	.105085
priorfeldru~r	.0000738	.0514466	0.00	0.999	-.0845483	.0846959
priorcon	.0052806	.0419961	0.13	0.900	-.0637968	.074358
priordrugcon	.1064218	.0496212	2.14	0.032	.0248022	.1880414
priorfelcon	-.0266995	.052132	-0.51	0.609	-.112449	.05905
priorfeldru~n	-.064878	.0577649	-1.12	0.261	-.1598927	.0301368
pwid	.0198195	.0474388	0.42	0.676	-.0582104	.0978493
dist	.027314	.0482386	0.57	0.571	-.0520313	.1066594
marijuana	-.0048562	.0404915	-0.12	0.905	-.0714588	.0617465
cocaine	.0122411	.0413828	0.30	0.767	-.0558276	.0803097
crack	.017297	.0491895	0.35	0.725	-.0636125	.0982065
heroin	.0498668	.0442236	1.13	0.259	-.0228745	.122608
pcp	.0100332	.0743477	0.13	0.893	-.1122578	.1323242
otherdrug	.0189017	.0716679	0.26	0.792	-.0989814	.1367848
nondrug	.0021515	.036785	0.06	0.953	-.0583545	.0626575
_cons	.3930951	.1457598	2.70	0.007	.1533415	.6328487

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                20.649
                                                      Chi-sq(    8) P-val =     0.0081

Weak identification test  (Cragg-Donald Wald F statistic):                   3.090
                          (Kleibergen-Paap rk Wald F statistic):             2.710
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
                                         20% maximal IV relative bias         6.69
                                         30% maximal IV relative bias         4.99
                                         10% maximal IV size                 33.84
                                         15% maximal IV size                 18.54
                                         20% maximal IV size                 13.24
                                         25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):            9.723
```

Chi-sq(7) P-val = **0.2048**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfeldrugcon age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1
>  calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calend
> ar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 22,   926) =       1.68
                                                     Prob > F      =     0.0258
Total (centered) SS     =    129.6610169             Centered R2   =     0.0236
Total (uncentered) SS   =            153             Uncentered R2 =     0.1725
Residual SS             =    126.6069472             Root MSE      =      .3553
```

laterfeldru~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**-.0004583**	**.0038586**	**-0.12**	**0.905**	**-.0068052**	**.0058885**
age	**-.0190245**	**.0072955**	**-2.61**	**0.009**	**-.0310246**	**-.0070244**
agesq	**.0002167**	**.0000964**	**2.25**	**0.025**	**.0000582**	**.0003752**
female	**.0004238**	**.0373118**	**0.01**	**0.991**	**-.0609487**	**.0617962**
nonblack	**-.0777305**	**.0488592**	**-1.59**	**0.112**	**-.1580967**	**.0026356**
priorarr	**-.0107479**	**.0504318**	**-0.21**	**0.831**	**-.0937008**	**.072205**
priordrugarr	**-.0155409**	**.0443869**	**-0.35**	**0.726**	**-.088551**	**.0574691**
priorfelarr	**.040307**	**.0486086**	**0.83**	**0.407**	**-.039647**	**.1202611**
priorfeldru~r	**-.0097283**	**.0498429**	**-0.20**	**0.845**	**-.0917125**	**.0722559**
priorcon	**.0116076**	**.041525**	**0.28**	**0.780**	**-.056695**	**.0799102**
priordrugcon	**.1174791**	**.0465034**	**2.53**	**0.012**	**.0409879**	**.1939703**
priorfelcon	**-.0119246**	**.0501552**	**-0.24**	**0.812**	**-.0944225**	**.0705734**
priorfeldru~n	**-.0499851**	**.0566054**	**-0.88**	**0.377**	**-.1430926**	**.0431225**
pwid	**.0242137**	**.0465393**	**0.52**	**0.603**	**-.0523366**	**.100764**
dist	**.0431324**	**.0503235**	**0.86**	**0.391**	**-.0396424**	**.1259071**
marijuana	**-.0078972**	**.0418414**	**-0.19**	**0.850**	**-.0767201**	**.0609258**
cocaine	**.0156525**	**.0435448**	**0.36**	**0.719**	**-.0559724**	**.0872773**
crack	**.0185475**	**.0521641**	**0.36**	**0.722**	**-.0672548**	**.1043497**
heroin	**.0496747**	**.0453005**	**1.10**	**0.273**	**-.0248379**	**.1241874**
pcp	**.0320384**	**.0696624**	**0.46**	**0.646**	**-.082546**	**.1466227**
otherdrug	**.0123963**	**.0685748**	**0.18**	**0.857**	**-.1003993**	**.1251919**
nondrug	**.0073215**	**.0349374**	**0.21**	**0.834**	**-.0501455**	**.0647884**
_cons	**.4140266**	**.1498767**	**2.76**	**0.006**	**.1675014**	**.6605519**

Underidentification test (Kleibergen-Paap rk LM statistic): **53.233**
Chi-sq(8) P-val = **0.0000**

Weak identification test (Cragg-Donald Wald F statistic): **7.098**
(Kleibergen-Paap rk Wald F statistic): **7.041**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **11.816**
Chi-sq(**7**) P-val = **0.1068**

```
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterfeldrugcon age agesq female nonblack priorarr priordrugarr priorf
> elarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid
> dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = c
> alendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar
> 8 calendar9) if incjudge == 1, robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F( 23,   926) =       1.52
                                                     Prob > F      =     0.0570
Total (centered) SS     =    129.6610169             Centered R2   =    -0.0443
Total (uncentered) SS   =            153             Uncentered R2 =     0.1150
Residual SS             =    135.4003064             Root MSE      =      .3674
```

laterfeldru~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0055889**	**.0063198**	**0.88**	**0.377**	**-.0048062**	**.015984**
probat	**-.0001806**	**.0039576**	**-0.05**	**0.964**	**-.0066902**	**.0063291**
age	**-.0184085**	**.0076362**	**-2.41**	**0.016**	**-.0309689**	**-.005848**
agesq	**.0002092**	**.0001013**	**2.06**	**0.039**	**.0000425**	**.0003758**
female	**.0180388**	**.041127**	**0.44**	**0.661**	**-.0496091**	**.0856867**
nonblack	**-.0902257**	**.0564426**	**-1.60**	**0.110**	**-.1830656**	**.0026142**
priorarr	**-.0050886**	**.050797**	**-0.10**	**0.920**	**-.0886422**	**.0784651**
priordrugarr	**-.0125127**	**.0452796**	**-0.28**	**0.782**	**-.086991**	**.0619656**
priorfelarr	**.0243719**	**.0510681**	**0.48**	**0.633**	**-.0596277**	**.1083714**
priorfeldru~r	**.0003717**	**.0517771**	**0.01**	**0.994**	**-.084794**	**.0855373**
priorcon	**.0052364**	**.0420496**	**0.12**	**0.901**	**-.063929**	**.0744019**
priordrugcon	**.1065836**	**.0497269**	**2.14**	**0.032**	**.0247902**	**.1883771**
priorfelcon	**-.0261677**	**.0538327**	**-0.49**	**0.627**	**-.1147146**	**.0623791**
priorfeldru~n	**-.0656553**	**.0606187**	**-1.08**	**0.279**	**-.1653642**	**.0340537**
pwid	**.0201634**	**.0479082**	**0.42**	**0.674**	**-.0586386**	**.0989654**
dist	**.0285476**	**.0542032**	**0.53**	**0.598**	**-.0606088**	**.1177039**
marijuana	**-.0040696**	**.0429296**	**-0.09**	**0.924**	**-.0746825**	**.0665434**
cocaine	**.0130573**	**.0454051**	**0.29**	**0.774**	**-.0616274**	**.087742**
crack	**.0182834**	**.0539973**	**0.34**	**0.735**	**-.0705342**	**.107101**

heroin	**.0506137**	**.0473695**	**1.07**	**0.285**	**-.0273022**	**.1285295**
pcp	**.0105473**	**.0755762**	**0.14**	**0.889**	**-.1137644**	**.1348591**
otherdrug	**.0195709**	**.0728433**	**0.27**	**0.788**	**-.1002457**	**.1393874**
nondrug	**.0019955**	**.0368678**	**0.05**	**0.957**	**-.0586467**	**.0626376**
_cons	**.3959299**	**.1564194**	**2.53**	**0.011**	**.1386429**	**.6532169**

Underidentification test (Kleibergen-Paap rk LM statistic): **20.887**
Chi-sq(**7**) P-val = **0.0039**

Weak identification test (Cragg-Donald Wald F statistic): **3.071**
(Kleibergen-Paap rk Wald F statistic): **2.739**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **9.536**
Chi-sq(**6**) P-val = **0.1456**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterfeldrugcon (toserve = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clus
> ter(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                       F(  1,   926) =       0.22
                                                       Prob > F      =     0.6389
Total (centered) SS     =    129.6610169              Centered R2   =    -0.0211
Total (uncentered) SS   =            153              Uncentered R2 =     0.1347
Residual SS             =    132.3917339              Root MSE      =      .3633
```

laterfeldr~n	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.00274**	**.0058306**	**0.47**	**0.638**	**-.0068506**	**.0123305**
_cons	**.1336135**	**.0417319**	**3.20**	**0.001**	**.0649706**	**.2022563**

Underidentification test (Kleibergen-Paap rk LM statistic): **22.308**
Chi-sq(**8**) P-val = **0.0044**

Weak identification test (Cragg-Donald Wald F statistic): **3.188**
(Kleibergen-Paap rk Wald F statistic): **2.956**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          12.078
                                                 Chi-sq(    7) P-val =     0.0980
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterfeldrugcon (probat = calendar1 calendar2 calendar3 calendar4 cale
> ndar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robust clust
> er(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  1,   926) =       0.07
                                                     Prob > F      =     0.7913
Total (centered) SS     =    129.6610169              Centered R2   =     0.0014
Total (uncentered) SS   =            153              Uncentered R2 =     0.1537
Residual SS             =    129.4849757              Root MSE      =      .3593

------------------------------------------------------------------------------
             |               Robust
laterfeldr~n |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0010562   .0039869     0.26   0.791    -.0055017    .0076141
       _cons |   .1416579   .0424592     3.34   0.001     .0718188     .211497
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              51.421
                                                 Chi-sq(    8) P-val =     0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 6.627
                          (Kleibergen-Paap rk Wald F statistic):           6.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          12.864
                                                 Chi-sq(    7) P-val =     0.0755
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterfeldrugcon (toserve probat = calendar1 calendar2 calendar3 calend
> ar4 calendar5 calendar6 calendar7 calendar8 calendar9) if incjudge == 1, robu
> st cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      927              Number of obs =       1003
                                                     F(  2,   926) =       0.16
                                                     Prob > F      =     0.8525
Total (centered) SS     =    129.6610169              Centered R2   =    -0.0191
Total (uncentered) SS   =            153              Uncentered R2 =     0.1364
Residual SS             =    132.1329454              Root MSE      =       .363

------------------------------------------------------------------------------
             |               Robust
laterfeldr~n |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0028536    .005828     0.49   0.624    -.0067326    .0124399
      probat |   .0011909   .0040094     0.30   0.766    -.0054039    .0077857
       _cons |    .120556   .0592281     2.04   0.042     .0231344    .2179775
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                22.874
                                                     Chi-sq(    7) P-val =     0.0018
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   3.143
                         (Kleibergen-Paap rk Wald F statistic):             3.020
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           12.087
                                                     Chi-sq(    6) P-val =     0.0601
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //D1: Partition--Defendants Who Have a Prior Conviction
.
. reg laterarr toserve age agesq female nonblack priorarr priordrugarr priorfel
> arr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid di
> st marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & p
> riorcon == 1), robust cluster(clusterid) level(90)
note: priorarr omitted because of collinearity
note: priorcon omitted because of collinearity

Linear regression                               Number of obs =         673
                                                F( 20,   635) =        4.97
                                                Prob > F      =      0.0000
                                                R-squared     =      0.0996
                                                Root MSE      =      .48163

                                  (Std. Err. adjusted for    636 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
------------+-----------------------------------------------------------------
    toserve |    -.00515   .0011173    -4.61   0.000    -.0069905   -.0033095
        age |  -.0178217   .0111348    -1.60   0.110    -.0361636    .0005202
      agesq |   .0001105   .0001423     0.78   0.438    -.0001239    .0003448
     female |    .012607   .0794302     0.16   0.874    -.1182349    .1434489
   nonblack |   -.345293   .1159384    -2.98   0.003    -.5362733   -.1543127
   priorarr |          0  (omitted)
priordrugarr |   .0001119   .0925597     0.00   0.999    -.1523577    .1525815
 priorfelarr |    .127196   .0900824     1.41   0.158    -.0211928    .2755849
priorfeldru~r |  -.1126974   .0802774    -1.40   0.161    -.2449348    .0195401
   priorcon |          0  (omitted)
priordrugcon |   .0620531   .0738909     0.84   0.401    -.0596643    .1837704
 priorfelcon |  -.0524694   .0706811    -0.74   0.458    -.1688993    .0639604
priorfeldru~n |   .0825238   .0804958     1.03   0.306    -.0500734     .215121
        pwid |  -.0135414   .0690112    -0.20   0.845    -.1272205    .1001377
        dist |    .004742   .0713515     0.07   0.947    -.1127922    .1222762
   marijuana |   .1547002   .0672852     2.30   0.022     .0438642    .2655361
     cocaine |   .0631832   .0693516     0.91   0.363    -.0510567    .1774232
       crack |    .148358   .0743475     2.00   0.046     .0258886    .2708275
      heroin |   .1488108   .0732443     2.03   0.043     .0281586     .269463
         pcp |   .0230363   .1112148     0.21   0.836    -.1601631    .2062357
   otherdrug |  -.0837408   .1246849    -0.67   0.502    -.2891288    .1216472
     nondrug |  -.0077852   .0506496    -0.15   0.878    -.0912181    .0756478
       _cons |   .8377639   .2355384     3.56   0.000     .4497716    1.225756
------------------------------------------------------------------------------

. reg laterarr probat age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & pr
> iorcon == 1), robust cluster(clusterid) level(90)
note: priorarr omitted because of collinearity
note: priorcon omitted because of collinearity

Linear regression                               Number of obs =         673
                                                F( 20,   635) =        3.65
                                                Prob > F      =      0.0000
                                                R-squared     =      0.0809
                                                Root MSE      =      .48661
```

(Std. Err. adjusted for **636** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
probat	**.0023415**	**.0014787**	**1.58**	**0.114**	**-.0000942**	**.0047773**
age	**-.0151071**	**.0113226**	**-1.33**	**0.183**	**-.0337583**	**.0035441**
agesq	**.0000756**	**.0001451**	**0.52**	**0.603**	**-.0001634**	**.0003145**
female	**.0224516**	**.0810567**	**0.28**	**0.782**	**-.1110696**	**.1559728**
nonblack	**-.3763296**	**.1176815**	**-3.20**	**0.001**	**-.5701812**	**-.1824779**
priorarr	**0**	(omitted)				
priordrugarr	**.0019246**	**.0946416**	**0.02**	**0.984**	**-.1539743**	**.1578236**
priorfelarr	**.1249996**	**.0911065**	**1.37**	**0.171**	**-.0250762**	**.2750754**
priorfeldru~r	**-.106051**	**.0812057**	**-1.31**	**0.192**	**-.2398176**	**.0277156**
priorcon	**0**	(omitted)				
priordrugcon	**.0491475**	**.0749995**	**0.66**	**0.513**	**-.0743959**	**.1726908**
priorfelcon	**-.0738333**	**.0711895**	**-1.04**	**0.300**	**-.1911006**	**.0434341**
priorfeldru~n	**.0773226**	**.0817454**	**0.95**	**0.345**	**-.0573331**	**.2119783**
pwid	**-.0206849**	**.0699983**	**-0.30**	**0.768**	**-.1359901**	**.0946203**
dist	**-.0258544**	**.073441**	**-0.35**	**0.725**	**-.1468306**	**.0951218**
marijuana	**.1573798**	**.0682275**	**2.31**	**0.021**	**.0449916**	**.269768**
cocaine	**.0611907**	**.0696319**	**0.88**	**0.380**	**-.0535109**	**.1758924**
crack	**.1410356**	**.0752647**	**1.87**	**0.061**	**.0170552**	**.2650159**
heroin	**.1521069**	**.0734771**	**2.07**	**0.039**	**.0310712**	**.2731426**
pcp	**-.002999**	**.1113701**	**-0.03**	**0.979**	**-.1864542**	**.1804561**
otherdrug	**-.0606533**	**.1258268**	**-0.48**	**0.630**	**-.2679223**	**.1466157**
nondrug	**-.0093652**	**.0513842**	**-0.18**	**0.855**	**-.0940082**	**.0752779**
_cons	**.7709489**	**.2377964**	**3.24**	**0.001**	**.3792372**	**1.162661**

```
. reg laterarr toserve probat age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge =
> = 1 & priorcon == 1), robust cluster(clusterid) level(90)
note: priorarr omitted because of collinearity
note: priorcon omitted because of collinearity

Linear regression                                   Number of obs =        673
                                                    F( 21,   635) =       4.87
                                                    Prob > F      =     0.0000
                                                    R-squared     =     0.1003
                                                    Root MSE      =     .48181
```

(Std. Err. adjusted for **636** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0049388**	**.0011351**	**-4.35**	**0.000**	**-.0068086**	**-.003069**
probat	**.0010808**	**.0015073**	**0.72**	**0.474**	**-.0014021**	**.0035637**
age	**-.0169517**	**.011225**	**-1.51**	**0.131**	**-.0354423**	**.0015388**
agesq	**.0000993**	**.0001433**	**0.69**	**0.488**	**-.0001367**	**.0003353**
female	**.007554**	**.0807186**	**0.09**	**0.925**	**-.1254102**	**.1405183**
nonblack	**-.3423782**	**.115351**	**-2.97**	**0.003**	**-.5323908**	**-.1523655**
priorarr	**0**	(omitted)				
priordrugarr	**.0014911**	**.0929526**	**0.02**	**0.987**	**-.1516257**	**.154608**
priorfelarr	**.1321343**	**.0906531**	**1.46**	**0.145**	**-.0171946**	**.2814633**
priorfeldru~r	**-.1133928**	**.0806135**	**-1.41**	**0.160**	**-.2461838**	**.0193983**
priorcon	**0**	(omitted)				
priordrugcon	**.0599821**	**.0741319**	**0.81**	**0.419**	**-.0621321**	**.1820963**
priorfelcon	**-.0567053**	**.0711986**	**-0.80**	**0.426**	**-.1739877**	**.060577**
priorfeldru~n	**.0865478**	**.0808309**	**1.07**	**0.285**	**-.0466015**	**.219697**
pwid	**-.0163619**	**.0691109**	**-0.24**	**0.813**	**-.1302054**	**.0974815**
dist	**-.0035142**	**.0725317**	**-0.05**	**0.961**	**-.1229925**	**.1159641**
marijuana	**.1507457**	**.0676645**	**2.23**	**0.026**	**.0392848**	**.2622065**
cocaine	**.0588899**	**.0694183**	**0.85**	**0.397**	**-.0554599**	**.1732397**
crack	**.1415044**	**.0748814**	**1.89**	**0.059**	**.0181555**	**.2648533**

heroin	.1446704	.0733564	1.97	0.049	.0238335	.2655073
pcp	.0222209	.1110036	0.20	0.841	-.1606306	.2050724
otherdrug	-.0850193	.1253489	-0.68	0.498	-.2915012	.1214625
nondrug	-.0066969	.0508984	-0.13	0.895	-.0905396	.0771459
_cons	.8191848	.2377331	3.45	0.001	.4275774	1.210792

```
. reg laterarr toserve if (incjudge == 1 & priorcon == 1), robust cluster(clust
> erid) level(90)

Linear regression                                       Number of obs =       673
                                                        F(  1,   635) =     23.60
                                                        Prob > F      =    0.0000
                                                        R-squared     =    0.0235
                                                        Root MSE      =    .49442

                                (Std. Err. adjusted for    636 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	-.0051466	.0010593	-4.86	0.000	-.0068915	-.0034016
_cons	.5668956	.0222055	25.53	0.000	.5303174	.6034738

```
. reg laterarr probat if (incjudge == 1 & priorcon == 1), robust cluster(cluste
> rid) level(90)

Linear regression                                       Number of obs =       673
                                                        F(  1,   635) =      3.36
                                                        Prob > F      =    0.0674
                                                        R-squared     =    0.0050
                                                        Root MSE      =    .49909

                                (Std. Err. adjusted for    636 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
probat	.0026715	.0014584	1.83	0.067	.0002692	.0050739
_cons	.4948327	.0235373	21.02	0.000	.4560606	.5336047

```
. reg laterarr toserve probat if (incjudge == 1 & priorcon == 1), robust cluste
> r(clusterid) level(90)

Linear regression                                       Number of obs =       673
                                                        F(  2,   635) =     12.43
                                                        Prob > F      =    0.0000
                                                        R-squared     =    0.0248
                                                        Root MSE      =    .49446

                                (Std. Err. adjusted for    636 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	-.0048567	.0010763	-4.51	0.000	-.0066296	-.0030837
probat	.0013903	.001494	0.93	0.352	-.0010706	.0038512
_cons	.5511293	.0275227	20.02	0.000	.5057923	.5964662

```
.
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) i
> f (incjudge == 1 & priorcon == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorarr priorcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                     F( 20,   635) =       3.04
                                                     Prob > F      =     0.0000
Total (centered) SS     =    167.9791976             Centered R2   =     0.0054
Total (uncentered) SS   =            350             Uncentered R2 =     0.5226
Residual SS             =    167.0757328             Root MSE      =      .4983

------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0054585   .0082917     0.66   0.510    -.0081801    .0190971
         age |  -.0159454   .0116625    -1.37   0.172    -.0351285    .0032376
       agesq |   .0000862   .0001508     0.57   0.567    -.0001618    .0003342
      female |   .0596118   .0851744     0.70   0.484    -.0804876    .1997113
    nonblack |  -.4297356   .1471219    -2.92   0.003    -.6717296   -.1877416
    priorarr |          0  (omitted)
 priordrugarr |  -.0025452   .0957824    -0.03   0.979    -.1600932    .1550027
  priorfelarr |   .0980436    .092585     1.06   0.290    -.0542452    .2503323
priorfeldru~r |  -.0942655   .0812727    -1.16   0.246    -.2279473    .0394162
    priorcon |          0  (omitted)
 priordrugcon |   .0430198   .0770671     0.56   0.577    -.0837443    .1697839
  priorfelcon |  -.0800215   .0736963    -1.09   0.278    -.2012412    .0411982
priorfeldru~n |   .0510565   .0853353     0.60   0.550    -.0893076    .1914206
         pwid |  -.0158766   .0717399    -0.22   0.825    -.1338783     .102125
         dist |  -.0239921    .077412    -0.31   0.757    -.1513236    .1033393
    marijuana |   .1801266   .0709679     2.54   0.011     .0633948    .2968584
      cocaine |   .0797063   .0705158     1.13   0.258    -.0362818    .1956944
        crack |   .1653714    .075663     2.19   0.029     .0409169     .289826
       heroin |   .1765412    .075986     2.32   0.020     .0515554    .3015271
          pcp |  -.0318297    .122803    -0.26   0.795    -.2338226    .1701632
    otherdrug |  -.0252833   .1335618    -0.19   0.850    -.2449728    .1944063
      nondrug |  -.0166875    .052106    -0.32   0.749    -.1023942    .0690191
        _cons |    .777707   .2440009     3.19   0.001     .3763612    1.179053
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                18.190
                                                     Chi-sq(  8) P-val =    0.0198
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   2.014
                         (Kleibergen-Paap rk Wald F statistic):             2.386
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                         10% maximal IV relative bias      11.39
                                         20% maximal IV relative bias       6.69
                                         30% maximal IV relative bias       4.99
                                         10% maximal IV size               33.84
                                         15% maximal IV size               18.54
                                         20% maximal IV size               13.24
                                         25% maximal IV size               10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):            8.763
```

Chi-sq(7) P-val = **0.2701**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priordrugarr priorfelarr
                      priorfeldrugarr priordrugcon priorfelcon priorfeldrugcon
                      pwid dist marijuana cocaine crack heroin pcp otherdrug
                      nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    priorarr priorcon calendar9
```

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if
>  (incjudge == 1 & priorcon == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorarr priorcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                     F( 20,   635) =       3.33
                                                     Prob > F      =     0.0000
Total (centered) SS     =    167.9791976             Centered R2   =     0.0782
Total (uncentered) SS   =            350             Uncentered R2 =     0.5576
Residual SS             =    154.8398482             Root MSE      =      .4797
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	.0002872	.0056339	0.05	0.959	-.0089798	.0095541
age	-.0166896	.0118537	-1.41	0.159	-.0361872	.0028079
agesq	.0000959	.0001518	0.63	0.528	-.0001538	.0003456
female	.0338349	.0832183	0.41	0.684	-.103047	.1707168
nonblack	-.3850655	.1194019	-3.22	0.001	-.5814641	-.1886668
priorarr	0	(omitted)				
priordrugarr	-.0007975	.0929799	-0.01	0.993	-.1537358	.1521407
priorfelarr	.1145099	.09408	1.22	0.224	-.040238	.2692577
priorfeldru~r	-.1040317	.0794561	-1.31	0.190	-.2347253	.0266619
priorcon	0	(omitted)				
priordrugcon	.0523636	.074209	0.71	0.480	-.0696993	.1744266
priorfelcon	-.0668246	.073243	-0.91	0.362	-.1872986	.0536494
priorfeldru~n	.0684832	.0837453	0.82	0.413	-.0692655	.2062319
pwid	-.0154121	.0703015	-0.22	0.826	-.1310477	.1002236
dist	-.0112488	.0815159	-0.14	0.890	-.1453306	.1228329
marijuana	.1658586	.071245	2.33	0.020	.048671	.2830461
cocaine	.0699765	.0720292	0.97	0.331	-.0485009	.1884539
crack	.1547065	.0816923	1.89	0.058	.0203346	.2890783
heroin	.1610261	.0754608	2.13	0.033	.0369041	.2851481
pcp	-.0035254	.110128	-0.03	0.974	-.1846698	.1776189
otherdrug	-.0560109	.1234101	-0.45	0.650	-.2590023	.1469806
nondrug	-.0117707	.0506907	-0.23	0.816	-.0951495	.0716081
_cons	.8039901	.2502571	3.21	0.001	.3923538	1.215626

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                43.980
                                                      Chi-sq( 8) P-val =     0.0000
```

```
Weak identification test  (Cragg-Donald Wald F statistic):                   5.767
                          (Kleibergen-Paap rk Wald F statistic):             5.964
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
```

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          10.097
                                                 Chi-sq(    7) P-val =     0.1831
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priordrugarr priorfelarr
                      priorfeldrugarr priordrugcon priorfelcon priorfeldrugcon
                      pwid dist marijuana cocaine crack heroin pcp otherdrug
                      nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    priorarr priorcon calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if (incjudge == 1 & priorcon == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorarr priorcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                     F( 21,   635) =       2.89
                                                     Prob > F      =     0.0000
Total (centered) SS     =    167.9791976             Centered R2   =    -0.0003
Total (uncentered) SS   =            350             Uncentered R2 =     0.5199
Residual SS             =     168.021914             Root MSE      =      .4997

------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
------------------------------------------------------------------------------
     toserve |   .0060999   .0086395     0.71   0.480    -.0081108    .0203106
      probat |   .0015172   .0060099     0.25   0.801    -.0083682    .0114027
         age |  -.0146632   .0126835    -1.16   0.248    -.0355258    .0061993
       agesq |   .0000698   .0001635     0.43   0.670    -.0001992    .0003388
      female |   .0540469    .088454     0.61   0.541     -.091447    .1995408
    nonblack |  -.4283895   .1473937    -2.91   0.004    -.6708306   -.1859484
    priorarr |           0  (omitted)
 priordrugarr |  -.0006955    .096789    -0.01   0.994    -.1598991    .1585082
  priorfelarr |    .104028   .0965004     1.08   0.281     -.054701    .2627569
priorfeldru~r |  -.0946424   .0815884    -1.16   0.246    -.2288433    .0395585
    priorcon |           0  (omitted)
 priordrugcon |   .0394937   .0786437     0.50   0.616    -.0898637    .1688511
  priorfelcon |  -.0868636   .0800346    -1.09   0.278    -.2185089    .0447816
priorfeldru~n |   .0556821    .087699     0.63   0.525      -.08857    .1999342
         pwid |   -.019912    .073026    -0.27   0.785    -.1400292    .1002052
         dist |  -.0365164   .0910518    -0.40   0.688    -.1862832    .1132505
    marijuana |   .1754021   .0742124     2.36   0.018     .0533335    .2974707
      cocaine |   .0742167    .073919     1.00   0.315    -.0473693    .1958027
        crack |   .1563036   .0840217     1.86   0.063     .0181002     .294507
```

heroin	**.1716307**	**.0784694**	**2.19**	**0.029**	**.0425601**	**.3007013**
pcp	**-.0347584**	**.1233182**	**-0.28**	**0.778**	**-.2375987**	**.168082**
otherdrug	**-.0251773**	**.1343664**	**-0.19**	**0.851**	**-.2461903**	**.1958357**
nondrug	**-.0154492**	**.0525658**	**-0.29**	**0.769**	**-.1019122**	**.0710138**
_cons	**.7496733**	**.268099**	**2.80**	**0.005**	**.3086897**	**1.190657**

Underidentification test (Kleibergen-Paap rk LM statistic): **14.274**
Chi-sq(**7**) P-val = **0.0465**

Weak identification test (Cragg-Donald Wald F statistic): **1.930**
(Kleibergen-Paap rk Wald F statistic): **1.875**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **8.698**
Chi-sq(**6**) P-val = **0.1913**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priordrugarr priorfelarr priorfeldrugarr priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: priorarr priorcon calendar9

```
. ivreg2 laterarr (toserve = calendar1 calendar2 calendar3 calendar4 calendar5
> calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon == 1),
> robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                       F(  1,   635) =       0.25
                                                       Prob > F      =     0.6149
Total (centered) SS     =    167.9791976              Centered R2   =    -0.0523
Total (uncentered) SS   =            350              Uncentered R2 =     0.4950
Residual SS             =    176.7623346              Root MSE      =     .5125
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**.0040922**	**.0081185**	**0.50**	**0.614**	**-.0092615**	**.0174459**
_cons	**.4828183**	**.0772627**	**6.25**	**0.000**	**.3557325**	**.6099041**

Underidentification test (Kleibergen-Paap rk LM statistic): **17.391**
Chi-sq(**8**) P-val = **0.0263**

Weak identification test (Cragg-Donald Wald F statistic): **2.245**
(Kleibergen-Paap rk Wald F statistic): **2.315**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **20.25**

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           9.983
                                                    Chi-sq(    7) P-val =    0.1895
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr (probat = calendar1 calendar2 calendar3 calendar4 calendar5 c
> alendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon == 1), r
> obust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                     F(  1,   635) =       0.16
                                                     Prob > F      =     0.6922
Total (centered) SS     =    167.9791976             Centered R2   =     0.0050
Total (uncentered) SS   =            350             Uncentered R2 =     0.5224
Residual SS             =    167.1463398             Root MSE      =      .4984

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0023994   .0060498     0.40   0.692    -.0075516    .0123504
       _cons |   .4974028   .0598986     8.30   0.000     .3988783    .5959273
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):              39.335
                                                    Chi-sq(    8) P-val =    0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                 5.111
                        (Kleibergen-Paap rk Wald F statistic):             5.467
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          11.191
                                                    Chi-sq(    7) P-val =    0.1305
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterarr (toserve probat = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon
> == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      636              Number of obs =        673
                                                     F(  2,   635) =       0.30
                                                     Prob > F      =     0.7419
Total (centered) SS     =    167.9791976              Centered R2   =    -0.0685
Total (uncentered) SS   =            350              Uncentered R2 =     0.4872
Residual SS             =    179.4777142              Root MSE      =      .5164

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0056778   .0085235     0.67   0.505    -.0083421    .0196978
      probat |   .0037707   .0065299     0.58   0.564      -.00697    .0145114
       _cons |   .4327822   .1143916     3.78   0.000     .2446247    .6209396
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                14.138
                                                     Chi-sq(    7) P-val =     0.0488
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                   2.130
                         (Kleibergen-Paap rk Wald F statistic):             1.891
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):           9.727
                                                     Chi-sq(    6) P-val =     0.1366
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //D2: Partition--Defendants Who Have No Prior Conviction
.
. reg laterarr toserve age agesq female nonblack priorarr priordrugarr priorfel
> arr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid di
> st marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & p
> riorcon == 0), robust cluster(clusterid) level(90)
note: priorcon omitted because of collinearity
note: priordrugcon omitted because of collinearity
note: priorfelcon omitted because of collinearity
note: priorfeldrugcon omitted because of collinearity

Linear regression                               Number of obs =       330
                                                F( 18,   318) =      3.12
                                                Prob > F      =    0.0000
                                                R-squared     =    0.1344
                                                Root MSE      =    .47771

                                  (Std. Err. adjusted for    319 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
------------------------------------------------------------------------------
    toserve |  -.0055955   .0037044    -1.51   0.132    -.0117065    .0005155
        age |  -.0577314   .0212612    -2.72   0.007    -.0928052   -.0226576
      agesq |   .0006578   .0003096     2.12   0.034     .0001471    .0011685
     female |  -.0742397   .0881218    -0.84   0.400    -.2196107    .0711312
   nonblack |  -.0388395   .1441983    -0.27   0.788    -.2767175    .1990386
   priorarr |  -.0559112   .0885175    -0.63   0.528     -.201935    .0901125
priordrugarr|  -.0072465   .0904383    -0.08   0.936    -.1564389    .1419459
 priorfelarr|   .1658627   .0918159     1.81   0.072     .0143978    .3173276
priorfeldru~r|  -.1411436   .1165365    -1.21   0.227    -.3333891    .0511019
   priorcon |          0  (omitted)
priordrugcon|          0  (omitted)
 priorfelcon|          0  (omitted)
priorfeldru~n|          0  (omitted)
       pwid |   .0893849   .1038614     0.86   0.390     -.081951    .2607209
       dist |    .115589   .1015266     1.14   0.256    -.0518952    .2830733
  marijuana |  -.0011425   .0821434    -0.01   0.989    -.1366511    .1343661
    cocaine |  -.1241957   .0986725    -1.26   0.209    -.2869717    .0385804
      crack |  -.1492696   .1056309    -1.41   0.159    -.3235246    .0249854
     heroin |  -.0568557   .0993866    -0.57   0.568    -.2208097    .1070983
        pcp |   .1857987   .1252677     1.48   0.139    -.0208504    .3924477
  otherdrug |   .0092257   .1724292     0.05   0.957    -.2752238    .2936752
    nondrug |   .0906961   .1022554     0.89   0.376    -.0779905    .2593826
      _cons |   1.583799   .3662113     4.32   0.000     .9796753    2.187923
------------------------------------------------------------------------------

. reg laterarr probat age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & pr
> iorcon == 0), robust cluster(clusterid) level(90)
note: priorcon omitted because of collinearity
note: priordrugcon omitted because of collinearity
note: priorfelcon omitted because of collinearity
note: priorfeldrugcon omitted because of collinearity

Linear regression                               Number of obs =       330
                                                F( 18,   318) =      2.78
                                                Prob > F      =    0.0002
                                                R-squared     =    0.1306
                                                Root MSE      =    .47874
```

(Std. Err. adjusted for **319** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
probat	**-.0015877**	**.0021565**	**-0.74**	**0.462**	**-.0051452**	**.0019698**
age	**-.0589788**	**.0211206**	**-2.79**	**0.006**	**-.0938206**	**-.024137**
agesq	**.0006721**	**.0003076**	**2.18**	**0.030**	**.0001645**	**.0011796**
female	**-.0641227**	**.0885675**	**-0.72**	**0.470**	**-.210229**	**.0819836**
nonblack	**-.0320537**	**.142479**	**-0.22**	**0.822**	**-.2670954**	**.2029881**
priorarr	**-.0504301**	**.0881558**	**-0.57**	**0.568**	**-.1958572**	**.0949969**
priordrugarr	**-.0058245**	**.0896712**	**-0.06**	**0.948**	**-.1537515**	**.1421025**
priorfelarr	**.1376778**	**.0918256**	**1.50**	**0.135**	**-.0138032**	**.2891588**
priorfeldru~r	**-.1153045**	**.1160626**	**-0.99**	**0.321**	**-.3067681**	**.0761592**
priorcon	**0**	(omitted)				
priordrugcon	**0**	(omitted)				
priorfelcon	**0**	(omitted)				
priorfeldru~n	**0**	(omitted)				
pwid	**.080601**	**.103257**	**0.78**	**0.436**	**-.0897378**	**.2509398**
dist	**.1174878**	**.102814**	**1.14**	**0.254**	**-.0521203**	**.2870959**
marijuana	**.0091864**	**.0834948**	**0.11**	**0.912**	**-.1285515**	**.1469243**
cocaine	**-.1341977**	**.0989363**	**-1.36**	**0.176**	**-.2974088**	**.0290135**
crack	**-.1534682**	**.1075999**	**-1.43**	**0.155**	**-.3309714**	**.0240349**
heroin	**-.0751209**	**.0982614**	**-0.76**	**0.445**	**-.2372186**	**.0869769**
pcp	**.1756787**	**.1277094**	**1.38**	**0.170**	**-.0349982**	**.3863557**
otherdrug	**-.0129874**	**.1763924**	**-0.07**	**0.941**	**-.3039747**	**.278**
nondrug	**.0794465**	**.1029167**	**0.77**	**0.441**	**-.090331**	**.2492239**
_cons	**1.625048**	**.3627548**	**4.48**	**0.000**	**1.026626**	**2.22347**

```
. reg laterarr toserve probat age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge =
> = 1 & priorcon == 0), robust cluster(clusterid) level(90)
note: priorcon omitted because of collinearity
note: priordrugcon omitted because of collinearity
note: priorfelcon omitted because of collinearity
note: priorfeldrugcon omitted because of collinearity

Linear regression                                   Number of obs =        330
                                                    F( 19,   318) =       2.92
                                                    Prob > F      =     0.0001
                                                    R-squared     =     0.1366
                                                    Root MSE      =     .47787
```

(Std. Err. adjusted for **319** clusters in clusterid)

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	**-.0059949**	**.0038071**	**-1.57**	**0.116**	**-.0122754**	**.0002856**
probat	**-.0019339**	**.0021778**	**-0.89**	**0.375**	**-.0055264**	**.0016587**
age	**-.0579676**	**.0212769**	**-2.72**	**0.007**	**-.0930672**	**-.0228681**
agesq	**.0006569**	**.0003096**	**2.12**	**0.035**	**.0001461**	**.0011677**
female	**-.0778899**	**.0892634**	**-0.87**	**0.384**	**-.225144**	**.0693643**
nonblack	**-.0526871**	**.1429239**	**-0.37**	**0.713**	**-.2884629**	**.1830887**
priorarr	**-.0554522**	**.0884882**	**-0.63**	**0.531**	**-.2014276**	**.0905232**
priordrugarr	**-.0095185**	**.0904053**	**-0.11**	**0.916**	**-.1586564**	**.1396195**
priorfelarr	**.1563177**	**.0928291**	**1.68**	**0.093**	**.0031814**	**.309454**
priorfeldru~r	**-.1337985**	**.1164222**	**-1.15**	**0.251**	**-.3258555**	**.0582585**
priorcon	**0**	(omitted)				
priordrugcon	**0**	(omitted)				
priorfelcon	**0**	(omitted)				
priorfeldru~n	**0**	(omitted)				
pwid	**.0912883**	**.1039938**	**0.88**	**0.381**	**-.0802661**	**.2628426**
dist	**.1282049**	**.1032493**	**1.24**	**0.215**	**-.0421212**	**.298531**
marijuana	**.0097407**	**.0829147**	**0.12**	**0.907**	**-.1270403**	**.1465217**

cocaine	-.1154317	.0987821	-1.17	0.243	-.2783885	.0475251
crack	-.1414177	.1065658	-1.33	0.185	-.3172151	.0343796
heroin	-.0502936	.0994652	-0.51	0.613	-.2143772	.11379
pcp	.1958665	.1267936	1.54	0.123	-.0132998	.4050327
otherdrug	.023226	.1707702	0.14	0.892	-.2584867	.3049386
nondrug	.0911846	.1019049	0.89	0.372	-.0769238	.2592929
_cons	1.601221	.3664229	4.37	0.000	.9967478	2.205694

```
. reg laterarr toserve if (incjudge == 1 & priorcon == 0), robust cluster(clust
> erid) level(90)

Linear regression                                      Number of obs =       330
                                                       F(  1,   318) =      0.78
                                                       Prob > F      =    0.3793
                                                       R-squared     =    0.0022
                                                       Root MSE      =    .49941

                                    (Std. Err. adjusted for    319 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	-.0034404	.003908	-0.88	0.379	-.0098873	.0030065
_cons	.5477818	.0294671	18.59	0.000	.4991711	.5963925

```
. reg laterarr probat if (incjudge == 1 & priorcon == 0), robust cluster(cluste
> rid) level(90)

Linear regression                                      Number of obs =       330
                                                       F(  1,   318) =      0.00
                                                       Prob > F      =    0.9545
                                                       R-squared     =    0.0000
                                                       Root MSE      =    .49996

                                    (Std. Err. adjusted for    319 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
probat	.0001219	.0021365	0.06	0.955	-.0034026	.0036464
_cons	.5379234	.0374918	14.35	0.000	.4760747	.5997722

```
. reg laterarr toserve probat if (incjudge == 1 & priorcon == 0), robust cluste
> r(clusterid) level(90)

Linear regression                                      Number of obs =       330
                                                       F(  2,   318) =      0.39
                                                       Prob > F      =    0.6800
                                                       R-squared     =    0.0022
                                                       Root MSE      =    .50017

                                    (Std. Err. adjusted for    319 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf. Interval]	
toserve	-.0034536	.0039442	-0.88	0.382	-.0099603	.0030531
probat	-.0000671	.0021519	-0.03	0.975	-.0036171	.0034829
_cons	.5486232	.0395441	13.87	0.000	.4833889	.6138575

```
.
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) i
> f (incjudge == 1 & priorcon == 0), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorcon priordrugcon priorfelcon priorfeldrugcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =       330
                                                     F( 18,   318) =      2.63
                                                     Prob > F      =    0.0004
Total (centered) SS     =    81.98787879              Centered R2   =    0.0313
Total (uncentered) SS   =            178              Uncentered R2 =    0.5538
Residual SS             =    79.42228197              Root MSE      =     .4906

------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0192129   .0173848     1.11   0.269    -.0093826    .0478083
         age |  -.0621434   .0207245    -3.00   0.003    -.0962323   -.0280546
       agesq |   .0007205   .0003025     2.38   0.017     .0002229    .0012181
      female |  -.0193164   .0946172    -0.20   0.838    -.1749479     .136315
    nonblack |    .037197   .1523582     0.24   0.807    -.2134099    .2878039
    priorarr |  -.0345339   .0876836    -0.39   0.694    -.1787605    .1096927
 priordrugarr |   .0065213   .0873822     0.07   0.941    -.1372096    .1502523
  priorfelarr |   .0806409   .1037584     0.78   0.437    -.0900265    .2513083
priorfeldru~r |  -.0581817   .1288504    -0.45   0.652    -.2701217    .1537583
     priorcon |          0  (omitted)
 priordrugcon |          0  (omitted)
  priorfelcon |          0  (omitted)
priorfeldru~n |          0  (omitted)
         pwid |   .0460515   .1114071     0.41   0.679    -.1371968    .2292998
         dist |   .0801606   .1109659     0.72   0.470     -.102362    .2626833
    marijuana |   .0046937   .0857905     0.05   0.956    -.1364191    .1458066
      cocaine |  -.1962214   .1128316    -1.74   0.082    -.3818129   -.0106298
        crack |  -.1938535   .1188468    -1.63   0.103    -.3893391     .001632
       heroin |  -.1559176   .1207453    -1.29   0.197     -.354526    .0426907
          pcp |   .1087956    .147126     0.74   0.460    -.1332052    .3507964
    otherdrug |  -.1319476   .2392185    -0.55   0.581     -.525427    .2615317
      nondrug |   .0419011   .1112218     0.38   0.706    -.1410425    .2248446
        _cons |   1.696651   .3601081     4.71   0.000     1.104326    2.288976
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                14.765
                                                      Chi-sq(  8) P-val =  0.0639
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                  2.956
                         (Kleibergen-Paap rk Wald F statistic):            1.982
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
                                         10% maximal IV relative bias      11.39
                                         20% maximal IV relative bias       6.69
                                         30% maximal IV relative bias       4.99
                                         10% maximal IV size               33.84
                                         15% maximal IV size               18.54
                                         20% maximal IV size               13.24
                                         25% maximal IV size               10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):          12.213
```

```
                                                  Chi-sq(    7) P-val =     0.0938
------------------------------------------------------------------------------
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    priorcon priordrugcon priorfelcon priorfeldrugcon
                      calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if
>  (incjudge == 1 & priorcon == 0), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorcon priordrugcon priorfelcon priorfeldrugcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =        330
                                                     F( 18,   318) =       2.82
                                                     Prob > F      =     0.0001
Total (centered) SS     =    81.98787879             Centered R2   =     0.1261
Total (uncentered) SS   =            178             Uncentered R2 =     0.5975
Residual SS             =    71.65109141             Root MSE      =       .466

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0011676   .0087104     0.13   0.893    -.0131597    .0154949
         age |   -.058541   .0206103    -2.84   0.005     -.092442   -.0246401
       agesq |   .0006719   .0002994     2.24   0.025     .0001795    .0011643
      female |  -.0601819   .0870126    -0.69   0.489    -.2033049    .0829412
    nonblack |  -.0140678    .153227    -0.09   0.927    -.2661038    .2379682
    priorarr |  -.0515746   .0858751    -0.60   0.548    -.1928265    .0896773
 priordrugarr|  -.0029032   .0875995    -0.03   0.974    -.1469915    .1411851
  priorfelarr|   .1532324   .1024453     1.50   0.135    -.0152751    .3217398
priorfeldru~r|  -.1276728   .1184846    -1.08   0.281    -.3225627    .0672171
     priorcon|          0  (omitted)
 priordrugcon|          0  (omitted)
  priorfelcon|          0  (omitted)
priorfeldru~n|          0  (omitted)
         pwid|   .0788831   .1010259     0.78   0.435    -.0872896    .2450559
         dist|   .1003255   .1146299     0.88   0.381     -.088224     .288875
    marijuana|  -.0064538   .0926686    -0.07   0.944    -.1588801    .1459724
      cocaine|  -.1450323    .098376    -1.47   0.140    -.3068464    .0167818
        crack|  -.1636328   .1066997    -1.53   0.125    -.3391382    .0118726
       heroin|  -.0821982    .097018    -0.85   0.397    -.2417785    .0773821
          pcp|   .1631006   .1279699     1.27   0.202    -.0473911    .3735922
    otherdrug|  -.0296966   .1824677    -0.16   0.871    -.3298292     .270436
      nondrug|   .0798698   .1009415     0.79   0.429    -.0861642    .2459037
        _cons|   1.597637   .3656219     4.37   0.000     .9962427    2.199032
------------------------------------------------------------------------------
Underidentification test (Kleibergen-Paap rk LM statistic):              17.450
                                                  Chi-sq(    8) P-val =     0.0257
------------------------------------------------------------------------------
Weak identification test (Cragg-Donald Wald F statistic):                 2.570
                         (Kleibergen-Paap rk Wald F statistic):           2.289
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias     20.25
```

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          14.668
                                                 Chi-sq(    7) P-val =     0.0405
------------------------------------------------------------------------------
Instrumented:         probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    priorcon priordrugcon priorfelcon priorfeldrugcon
                      calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if (incjudge == 1 & priorcon == 0), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       priorcon priordrugcon priorfelcon priorfeldrugcon calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =        330
                                                     F( 19,   318) =       2.39
                                                     Prob > F      =     0.0011
Total (centered) SS     =    81.98787879             Centered R2   =     0.0057
Total (uncentered) SS   =            178             Uncentered R2 =     0.5420
Residual SS             =    81.51999708             Root MSE      =       .497

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0215103   .0191515     1.12   0.261    -.0099911    .0530117
      probat |  -.0034263   .0101336    -0.34   0.735    -.0200946    .0132421
         age |  -.0630964   .0210544    -3.00   0.003    -.0977279   -.0284649
       agesq |   .0007265    .000305     2.38   0.017     .0002249    .0012282
      female |  -.0191306   .0952574    -0.20   0.841    -.1758151    .1375539
    nonblack |   .0218731   .1584054     0.14   0.890    -.2386806    .2824268
    priorarr |  -.0311311   .0876078    -0.36   0.722    -.1752331    .1129709
 priordrugarr |   .0041637   .0879206     0.05   0.962    -.1404528    .1487802
  priorfelarr |   .0534069   .1343535     0.40   0.691     -.167585    .2743987
priorfeldru~r |  -.035119   .1470638    -0.24   0.811    -.2770175    .2067795
     priorcon |          0  (omitted)
 priordrugcon |          0  (omitted)
  priorfelcon |          0  (omitted)
priorfeldru~n |          0  (omitted)
         pwid |   .0441747   .1137768     0.39   0.698    -.1429714    .2313209
         dist |    .098221   .1275715     0.77   0.441    -.1116154    .3080574
    marijuana |   .0246827   .1065488     0.23   0.817    -.1505746    .1999399
      cocaine |  -.1894185   .1160789    -1.63   0.103    -.3803513    .0015143
        crack |  -.1853427   .1251485    -1.48   0.139    -.3911937    .0205083
```

```
      heroin |  -.1562908   .1230077    -1.27   0.204    -.3586205     .046039
         pcp |   .1173055   .1530747     0.77   0.443    -.1344799     .369091
    otherdrug |  -.1242433   .2470599    -0.50   0.615    -.5306207    .2821341
      nondrug |    .036856   .1128238     0.33   0.744    -.1487227    .2224346
        _cons |   1.741187   .3838021     4.54   0.000     1.109889    2.372485
------------------------------------------------------------------------------

Underidentification test  (Kleibergen-Paap rk LM statistic):              11.239
                                                  Chi-sq(    7) P-val =    0.1285
------------------------------------------------------------------------------

Weak identification test  (Cragg-Donald Wald F statistic):                 1.490
                          (Kleibergen-Paap rk Wald F statistic):           1.409
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      17.70
                                         10% maximal IV relative bias      10.22
                                         20% maximal IV relative bias       6.20
                                         30% maximal IV relative bias       4.73
                                         10% maximal IV size               25.64
                                         15% maximal IV size               14.31
                                         20% maximal IV size               10.41
                                         25% maximal IV size                8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic  (overidentification test of all instruments):         11.039
                                                  Chi-sq(    6) P-val =    0.0872
------------------------------------------------------------------------------

Instrumented:         toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    priorcon priordrugcon priorfelcon priorfeldrugcon
                      calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr (toserve = calendar1 calendar2 calendar3 calendar4 calendar5
> calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon == 0),
> robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =       330
                                                       F(  1,   318) =      0.79
                                                       Prob > F      =    0.3748
Total (centered) SS     =    81.98787879              Centered R2   =   -0.0694
Total (uncentered) SS   =            178              Uncentered R2 =    0.5074
Residual SS             =    87.67711651              Root MSE      =    .5154

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0161503   .0181145     0.89   0.373    -.0136454    .0459459
       _cons |   .5000194   .0495494    10.09   0.000      .418518    .5815208
------------------------------------------------------------------------------

Underidentification test  (Kleibergen-Paap rk LM statistic):              13.722
                                                  Chi-sq(    8) P-val =    0.0893
------------------------------------------------------------------------------

Weak identification test  (Cragg-Donald Wald F statistic):                 2.975
                          (Kleibergen-Paap rk Wald F statistic):           2.038
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      20.25
```

```
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          17.178
                                                 Chi-sq(    7) P-val =     0.0163
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr (probat = calendar1 calendar2 calendar3 calendar4 calendar5 c
> alendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon == 0), r
> obust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =        330
                                                     F(  1,   318) =         0.01
                                                     Prob > F      =       0.9160
Total (centered) SS     =    81.98787879             Centered R2   =      -0.0004
Total (uncentered) SS   =            178             Uncentered R2 =       0.5392
Residual SS             =    82.01793174             Root MSE      =       .4985

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0008728   .0082444     0.11   0.916    -.012688    .0144336
       _cons |   .5288648    .102574     5.16   0.000     .3601456    .6975841
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):               18.320
                                                 Chi-sq(    8) P-val =     0.0190
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                  2.989
                          (Kleibergen-Paap rk Wald F statistic):            2.617
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                          10% maximal IV relative bias        11.39
                                          20% maximal IV relative bias         6.69
                                          30% maximal IV relative bias         4.99
                                          10% maximal IV size                 33.84
                                          15% maximal IV size                 18.54
                                          20% maximal IV size                 13.24
                                          25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):          18.403
                                                 Chi-sq(    7) P-val =     0.0103
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
```

```
Dropped collinear:    calendar9
```

```
. ivreg2 laterarr (toserve probat = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & priorcon
> == 0), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      319              Number of obs =        330
                                                     F(  2,   318) =       0.46
                                                     Prob > F      =     0.6337
Total (centered) SS     =    81.98787879              Centered R2   =    -0.1307
Total (uncentered) SS   =            178              Uncentered R2 =     0.4792
Residual SS             =    92.70636708              Root MSE      =        .53

------------------------------------------------------------------------------
             |               Robust
   laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |   .0208076   .0216701     0.96   0.337    -.0148365    .0564518
      probat |  -.0047739   .0102137    -0.47   0.640    -.0215739    .0120262
       _cons |   .5462552   .1087338     5.02   0.000      .367404    .7251063
------------------------------------------------------------------------------

Underidentification test (Kleibergen-Paap rk LM statistic):                8.954
                                                     Chi-sq(    7) P-val =     0.2560
------------------------------------------------------------------------------

Weak identification test (Cragg-Donald Wald F statistic):                  1.259
                         (Kleibergen-Paap rk Wald F statistic):            1.161
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias      17.70
                                         10% maximal IV relative bias      10.22
                                         20% maximal IV relative bias       6.20
                                         30% maximal IV relative bias       4.73
                                         10% maximal IV size               25.64
                                         15% maximal IV size               14.31
                                         20% maximal IV size               10.41
                                         25% maximal IV size                8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------

Hansen J statistic (overidentification test of all instruments):          15.799
                                                     Chi-sq(    6) P-val =     0.0149
------------------------------------------------------------------------------

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------
```

```
.
. //E: Partition--Only Convicted Defendants
.
. reg laterarr toserve age agesq female nonblack priorarr priordrugarr priorfel
> arr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid di
> st marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & c
> onviction == 1), robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         743
                                                F( 22,   693) =        5.51
                                                Prob > F      =      0.0000
                                                R-squared     =      0.1140
                                                Root MSE      =        .478

                                (Std. Err. adjusted for    694 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0057117   .0011727    -4.87   0.000    -.0076432   -.0037803
         age |  -.0308032   .0106025    -2.91   0.004    -.0482661   -.0133402
       agesq |   .0002825   .0001388     2.04   0.042     .0000539    .0005111
      female |  -.0564048   .0701459    -0.80   0.422     -.171939    .0591295
    nonblack |  -.2424316   .1031391    -2.35   0.019    -.4123073   -.0725559
    priorarr |  -.0497709   .0848043    -0.59   0.557    -.1894482    .0899065
 priordrugarr|  -.0231704   .0743693    -0.31   0.755    -.1456608    .0993199
  priorfelarr|   .1940196    .070758     2.74   0.006     .0774773    .3105619
priorfeldru~r|  -.1137765   .0762861    -1.49   0.136    -.2394239    .0118709
     priorcon|   .0524102   .0802533     0.65   0.514    -.0797714    .1845918
 priordrugcon|   .0677322   .0771186     0.88   0.380    -.0592865    .1947509
  priorfelcon|  -.1053072   .0762134    -1.38   0.167     -.230835    .0202205
priorfeldru~n|   .1339507   .0859547     1.56   0.120    -.0076214    .2755228
         pwid|  -.0049707   .0645526    -0.08   0.939    -.1112925    .1013511
         dist|   .0108848   .0661928     0.16   0.869    -.0981384     .119908
    marijuana|   .1102402   .0590863     1.87   0.062     .0129217    .2075587
      cocaine|  -.0148865   .0656405    -0.23   0.821    -.1230001     .093227
        crack|   .0448837   .0713918     0.63   0.530    -.0727026      .16247
       heroin|   .0744304    .070671     1.05   0.293    -.0419686    .1908295
          pcp|   .1229695    .103386     1.19   0.235     -.047313     .293252
    otherdrug|  -.1004724   .1137557    -0.88   0.377    -.2878344    .0868895
      nondrug|  -.0008663   .0504325    -0.02   0.986    -.0839314    .0821989
       _cons |   1.104544   .2031269     5.44   0.000     .7699823    1.439105
------------------------------------------------------------------------------

. reg laterarr probat age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge == 1 & co
> nviction == 1), robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         743
                                                F( 22,   693) =        4.60
                                                Prob > F      =      0.0000
                                                R-squared     =      0.0988
                                                Root MSE      =      .48209

                                (Std. Err. adjusted for    694 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0037285   .0013545     2.75   0.006     .0014976    .0059593
         age |  -.0290712   .0107615    -2.70   0.007    -.0467959   -.0113465
       agesq |   .0002661    .000141     1.89   0.059     .0000339    .0004983
      female |  -.0403235    .069737    -0.58   0.563    -.1551842    .0745373
    nonblack |  -.2331625   .1063365    -2.19   0.029    -.4083045   -.0580204
    priorarr |  -.0478564   .0844828    -0.57   0.571    -.1870043    .0912915
 priordrugarr|   -.015408   .0744796    -0.21   0.836    -.1380801     .107264
```

priorfelarr	.1911582	.0708848	2.70	0.007	.0744069	.3079094
priorfeldru~r	-.1112852	.0763146	-1.46	0.145	-.2369796	.0144092
priorcon	.0416014	.0804198	0.52	0.605	-.0908544	.1740572
priordrugcon	.0626	.0779046	0.80	0.422	-.0657131	.1909132
priorfelcon	-.1245319	.0765288	-1.63	0.104	-.2505791	.0015154
priorfeldru~n	.1278562	.0862187	1.48	0.139	-.0141508	.2698632
pwid	-.0068597	.0647473	-0.11	0.916	-.1135021	.0997826
dist	-.0046745	.066915	-0.07	0.944	-.1148872	.1055382
marijuana	.1088687	.0601352	1.81	0.071	.0098228	.2079146
cocaine	-.034065	.0664694	-0.51	0.608	-.1435438	.0754139
crack	.0301657	.0721092	0.42	0.676	-.0886022	.1489335
heroin	.0525168	.070978	0.74	0.460	-.0643879	.1694215
pcp	.0902311	.1029698	0.88	0.381	-.0793658	.259828
otherdrug	-.1012677	.1158016	-0.87	0.382	-.2919993	.0894639
nondrug	.0051656	.0514115	0.10	0.920	-.079512	.0898431
_cons	1.00591	.2079053	4.84	0.000	.6634782	1.348341

```
. reg laterarr toserve probat age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if (incjudge =
> = 1 & conviction == 1), robust cluster(clusterid) level(90)

Linear regression                               Number of obs =         743
                                                F( 23,   693) =        5.59
                                                Prob > F      =      0.0000
                                                R-squared     =      0.1155
                                                Root MSE      =      .47793

                                  (Std. Err. adjusted for    694 clusters in clusterid)
```

laterarr	Coef.	Robust Std. Err.	t	P>|t|	[90% Conf.	Interval]
toserve	-.0051291	.0012141	-4.22	0.000	-.0071288	-.0031294
probat	.0016269	.0014522	1.12	0.263	-.0007651	.0040188
age	-.0296502	.0106632	-2.78	0.006	-.0472132	-.0120873
agesq	.0002693	.0001392	1.93	0.054	.00004	.0004986
female	-.058932	.0702132	-0.84	0.402	-.1745771	.0567131
nonblack	-.2342487	.1034347	-2.26	0.024	-.4046114	-.063886
priorarr	-.0508222	.0846214	-0.60	0.548	-.1901983	.0885539
priordrugarr	-.0223264	.0744456	-0.30	0.764	-.1449424	.1002895
priorfelarr	.2007549	.0712688	2.82	0.005	.0833713	.3181385
priorfeldru~r	-.116633	.0764689	-1.53	0.128	-.2425816	.0093156
priorcon	.0525142	.0801849	0.65	0.513	-.0795548	.1845833
priordrugcon	.0680658	.0773098	0.88	0.379	-.0592677	.1953993
priorfelcon	-.1101786	.0765942	-1.44	0.151	-.2363334	.0159762
priorfeldru~n	.1399922	.0861424	1.63	0.105	-.001889	.2818735
pwid	-.0063184	.0644418	-0.10	0.922	-.1124577	.0998208
dist	.003876	.0664117	0.06	0.953	-.1055078	.1132598
marijuana	.1057373	.0593668	1.78	0.075	.0079568	.2035178
cocaine	-.0228888	.0658951	-0.35	0.728	-.1314218	.0856441
crack	.0365624	.0716169	0.51	0.610	-.0813946	.1545193
heroin	.0655619	.0708244	0.93	0.355	-.0510899	.1822137
pcp	.1180025	.1029963	1.15	0.252	-.0516382	.2876431
otherdrug	-.1043836	.1145647	-0.91	0.363	-.293078	.0843108
nondrug	.0024776	.0508879	0.05	0.961	-.0813375	.0862928
_cons	1.064391	.2070501	5.14	0.000	.7233676	1.405413

```
. reg laterarr toserve if (incjudge == 1 & conviction == 1), robust cluster(clu
> sterid) level(90)

Linear regression                                      Number of obs =         743
                                                       F(  1,   693) =       21.21
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0185
                                                       Root MSE      =      .49592

                                (Std. Err. adjusted for    694 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0046701   .0010141    -4.61   0.000    -.0063403   -.0029999
       _cons |   .5536474   .0213971    25.87   0.000     .5184053    .5888896
------------------------------------------------------------------------------

. reg laterarr probat if (incjudge == 1 & conviction == 1), robust cluster(clus
> terid) level(90)

Linear regression                                      Number of obs =         743
                                                       F(  1,   693) =        7.50
                                                       Prob > F      =      0.0063
                                                       R-squared     =      0.0099
                                                       Root MSE      =      .49809

                                (Std. Err. adjusted for    694 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |   .0036643   .0013378     2.74   0.006     .0014608    .0058677
       _cons |   .4591201   .0259166    17.72   0.000     .4164341    .5018062
------------------------------------------------------------------------------

. reg laterarr toserve probat if (incjudge == 1 & conviction == 1), robust clus
> ter(clusterid) level(90)

Linear regression                                      Number of obs =         743
                                                       F(  2,   693) =       11.44
                                                       Prob > F      =      0.0000
                                                       R-squared     =      0.0206
                                                       Root MSE      =      .49573

                                (Std. Err. adjusted for    694 clusters in clusterid)
------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      t    P>|t|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
     toserve |  -.0039277   .0010846    -3.62   0.000    -.0057142   -.0021413
      probat |   .0018581   .0014618     1.27   0.204    -.0005496    .0042658
       _cons |   .5208757   .0325535    16.00   0.000     .4672583    .5744931
------------------------------------------------------------------------------
```

```
.
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) i
> f (incjudge == 1 & conviction == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694              Number of obs =        743
                                                     F( 22,   693) =       3.88
                                                     Prob > F      =     0.0000
Total (centered) SS     =    185.6742934             Centered R2   =     0.0904
Total (uncentered) SS   =            379             Uncentered R2 =     0.5544
Residual SS             =    168.8928038             Root MSE      =      .4768
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	-.0000786	.0062553	-0.01	0.990	-.0103676	.0102104
age	-.0319748	.0106633	-3.00	0.003	-.0495144	-.0144353
agesq	.0003004	.0001404	2.14	0.032	.0000694	.0005313
female	-.0282508	.0746851	-0.38	0.705	-.1510968	.0945952
nonblack	-.2546396	.1061408	-2.40	0.016	-.4292257	-.0800535
priorarr	-.0442053	.083841	-0.53	0.598	-.1821114	.0937008
priordrugarr	-.0156689	.0736122	-0.21	0.831	-.1367501	.1054124
priorfelarr	.1704682	.0733091	2.33	0.020	.0498855	.2910509
priorfeldru~r	-.1021435	.0758308	-1.35	0.178	-.2268741	.0225871
priorcon	.038191	.0806132	0.47	0.636	-.094406	.170788
priordrugcon	.0601423	.0770927	0.78	0.435	-.0666639	.1869486
priorfelcon	-.115682	.0758332	-1.53	0.127	-.2404165	.0090526
priorfeldru~n	.1082843	.0894338	1.21	0.226	-.0388212	.2553899
pwid	-.0034264	.0643802	-0.05	0.958	-.1093224	.1024696
dist	.0115331	.0664371	0.17	0.862	-.0977462	.1208124
marijuana	.121758	.0604108	2.02	0.044	.0223912	.2211249
cocaine	-.0159659	.0654148	-0.24	0.807	-.1235636	.0916318
crack	.0504865	.0710887	0.71	0.478	-.0664439	.167417
heroin	.0723858	.0704747	1.03	0.304	-.0435348	.1883063
pcp	.0954828	.108448	0.88	0.379	-.0828984	.2738639
otherdrug	-.0899585	.1130896	-0.80	0.426	-.2759742	.0960573
nondrug	-.0029667	.049887	-0.06	0.953	-.0850235	.0790901
_cons	1.096036	.2029064	5.40	0.000	.7622842	1.429787

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                25.725
                                                      Chi-sq(   8) P-val =    0.0012
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   3.700
                          (Kleibergen-Paap rk Wald F statistic):             3.752
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
                                         10% maximal IV relative bias       11.39
                                         20% maximal IV relative bias        6.69
                                         30% maximal IV relative bias        4.99
                                         10% maximal IV size                33.84
                                         15% maximal IV size                18.54
                                         20% maximal IV size                13.24
                                         25% maximal IV size                10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           17.872
```

Chi-sq(7) P-val = **0.0126**

```
Instrumented:         toserve
Included instruments: age agesq female nonblack priorarr priordrugarr
                      priorfelarr priorfeldrugarr priorcon priordrugcon
                      priorfelcon priorfeldrugcon pwid dist marijuana cocaine
                      crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if
>  (incjudge == 1 & conviction == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694              Number of obs =        743
                                                     F( 22,   693) =       3.80
                                                     Prob > F      =     0.0000
Total (centered) SS     =    185.6742934             Centered R2   =     0.0776
Total (uncentered) SS   =            379             Uncentered R2 =     0.5481
Residual SS             =    171.2668155             Root MSE      =      .4801
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
probat	**-.0019757**	**.0043325**	**-0.46**	**0.648**	**-.0091021**	**.0051506**
age	**-.0335385**	**.0112054**	**-2.99**	**0.003**	**-.0519698**	**-.0151073**
agesq	**.0003189**	**.0001461**	**2.18**	**0.029**	**.0000786**	**.0005592**
female	**-.0212525**	**.0700961**	**-0.30**	**0.762**	**-.1365503**	**.0940454**
nonblack	**-.266281**	**.1108846**	**-2.40**	**0.016**	**-.44867**	**-.083892**
priorarr	**-.0421518**	**.0843101**	**-0.50**	**0.617**	**-.1808296**	**.096526**
priordrugarr	**-.015647**	**.0734171**	**-0.21**	**0.831**	**-.1364073**	**.1051134**
priorfelarr	**.1590017**	**.0736793**	**2.16**	**0.031**	**.0378101**	**.2801934**
priorfeldru~r	**-.0970509**	**.0756101**	**-1.28**	**0.199**	**-.2214185**	**.0273167**
priorcon	**.0360803**	**.079891**	**0.45**	**0.652**	**-.0953288**	**.1674893**
priordrugcon	**.058678**	**.0769019**	**0.76**	**0.445**	**-.0678144**	**.1851704**
priorfelcon	**-.1112138**	**.0764187**	**-1.46**	**0.146**	**-.2369114**	**.0144838**
priorfeldru~n	**.0973652**	**.0884068**	**1.10**	**0.271**	**-.0480511**	**.2427815**
pwid	**-.0015742**	**.0650481**	**-0.02**	**0.981**	**-.1085688**	**.1054205**
dist	**.0201355**	**.069355**	**0.29**	**0.772**	**-.0939434**	**.1342143**
marijuana	**.128834**	**.0613006**	**2.10**	**0.036**	**.0280034**	**.2296646**
cocaine	**-.0063981**	**.0683248**	**-0.09**	**0.925**	**-.1187823**	**.1059861**
crack	**.0613743**	**.0747891**	**0.82**	**0.412**	**-.0616429**	**.1843914**
heroin	**.0828708**	**.0743677**	**1.11**	**0.265**	**-.0394531**	**.2051948**
pcp	**.097679**	**.1044842**	**0.93**	**0.350**	**-.0741823**	**.2695402**
otherdrug	**-.0837412**	**.1134511**	**-0.74**	**0.460**	**-.2703517**	**.1028693**
nondrug	**-.0073208**	**.0509006**	**-0.14**	**0.886**	**-.0910448**	**.0764032**
_cons	**1.143612**	**.2309194**	**4.95**	**0.000**	**.7637834**	**1.523441**

```
Underidentification test (Kleibergen-Paap rk LM statistic):                72.100
                                                      Chi-sq( 8) P-val =    0.0000
```

```
Weak identification test (Cragg-Donald Wald F statistic):                   9.997
                         (Kleibergen-Paap rk Wald F statistic):            10.073
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       20.25
```

10% maximal IV relative bias	**11.39**
20% maximal IV relative bias	**6.69**
30% maximal IV relative bias	**4.99**
10% maximal IV size	**33.84**
15% maximal IV size	**18.54**
20% maximal IV size	**13.24**
25% maximal IV size	**10.50**

Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **17.398**
Chi-sq(**7**) P-val = **0.0150**

Instrumented: probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
> dar9) if (incjudge == 1 & conviction == 1), robust cluster(clusterid) level(9
> 0)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694              Number of obs =        743
                                                     F( 23,   693) =       3.64
                                                     Prob > F      =     0.0000
Total (centered) SS     =    185.6742934             Centered R2   =     0.0795
Total (uncentered) SS   =            379             Uncentered R2 =     0.5490
Residual SS             =    170.9192058             Root MSE      =      .4796
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	**-.0002036**	**.006329**	**-0.03**	**0.974**	**-.0106138**	**.0102066**
probat	**-.0019815**	**.0043297**	**-0.46**	**0.647**	**-.0091033**	**.0051402**
age	**-.0335007**	**.0112523**	**-2.98**	**0.003**	**-.052009**	**-.0149924**
agesq	**.0003183**	**.0001468**	**2.17**	**0.030**	**.0000768**	**.0005598**
female	**-.0222507**	**.0763089**	**-0.29**	**0.771**	**-.1477676**	**.1032662**
nonblack	**-.2658735**	**.1114232**	**-2.39**	**0.017**	**-.4491483**	**-.0825987**
priorarr	**-.0423472**	**.0843708**	**-0.50**	**0.616**	**-.1811247**	**.0964304**
priordrugarr	**-.0159184**	**.0738433**	**-0.22**	**0.829**	**-.1373798**	**.1055431**
priorfelarr	**.1598203**	**.077559**	**2.06**	**0.039**	**.0322472**	**.2873934**
priorfeldru~r	**-.0974569**	**.0764971**	**-1.27**	**0.203**	**-.2232834**	**.0283696**
priorcon	**.0365886**	**.0809918**	**0.45**	**0.651**	**-.0966311**	**.1698083**
priordrugcon	**.0589483**	**.0774749**	**0.76**	**0.447**	**-.0684865**	**.1863832**
priorfelcon	**-.1108252**	**.0772086**	**-1.44**	**0.151**	**-.2378221**	**.0161717**
priorfeldru~n	**.0982619**	**.0927882**	**1.06**	**0.290**	**-.0543611**	**.250885**
pwid	**-.0016246**	**.0650312**	**-0.02**	**0.980**	**-.1085914**	**.1053422**
dist	**.0201373**	**.0692778**	**0.29**	**0.771**	**-.0938146**	**.1340891**
marijuana	**.128438**	**.062491**	**2.06**	**0.040**	**.0256494**	**.2312266**
cocaine	**-.0063309**	**.068309**	**-0.09**	**0.926**	**-.1186893**	**.1060275**

crack	.0612035	.0747664	0.82	0.413	-.0617763	.1841834
heroin	.0829757	.0743723	1.12	0.265	-.0393559	.2053072
pcp	.0986801	.1097843	0.90	0.369	-.0818989	.2792592
otherdrug	-.0841034	.1137261	-0.74	0.460	-.2711662	.1029595
nondrug	-.0072576	.0509046	-0.14	0.887	-.0909883	.0764731
_cons	1.14406	.2309397	4.95	0.000	.7641978	1.523922

Underidentification test (Kleibergen-Paap rk LM statistic): **26.306**
Chi-sq(**7**) P-val = **0.0004**

Weak identification test (Cragg-Donald Wald F statistic): **3.489**
(Kleibergen-Paap rk Wald F statistic): **3.701**
Stock-Yogo weak ID test critical values: 5% maximal IV relative bias **17.70**
10% maximal IV relative bias **10.22**
20% maximal IV relative bias **6.20**
30% maximal IV relative bias **4.73**
10% maximal IV size **25.64**
15% maximal IV size **14.31**
20% maximal IV size **10.41**
25% maximal IV size **8.39**
Source: Stock-Yogo (2005). Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic (overidentification test of all instruments): **17.438**
Chi-sq(**6**) P-val = **0.0078**

Instrumented: toserve probat
Included instruments: age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8
Dropped collinear: calendar9

```
. ivreg2 laterarr (toserve = calendar1 calendar2 calendar3 calendar4 calendar5
> calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & conviction == 1)
> , robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694              Number of obs =        743
                                                       F(  1,   693) =       0.03
                                                       Prob > F      =     0.8624
Total (centered) SS     =    185.6742934              Centered R2   =     0.0083
Total (uncentered) SS   =            379              Uncentered R2 =     0.5142
Residual SS             =     184.128238              Root MSE      =      .4978
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf.	Interval]
toserve	-.0012062	.0069455	-0.17	0.862	-.0126306	.0102181
_cons	.5213436	.0673301	7.74	0.000	.4105954	.6320918

Underidentification test (Kleibergen-Paap rk LM statistic): **21.196**
Chi-sq(**8**) P-val = **0.0066**

Weak identification test (Cragg-Donald Wald F statistic): **3.163**
(Kleibergen-Paap rk Wald F statistic): **3.039**

```
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
                                         20% maximal IV relative bias         6.69
                                         30% maximal IV relative bias         4.99
                                         10% maximal IV size                 33.84
                                         15% maximal IV size                 18.54
                                         20% maximal IV size                 13.24
                                         25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           19.975
                                                      Chi-sq(    7) P-val =    0.0056
------------------------------------------------------------------------------
Instrumented:         toserve
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
------------------------------------------------------------------------------

. ivreg2 laterarr (probat = calendar1 calendar2 calendar3 calendar4 calendar5 c
> alendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & conviction == 1),
>  robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694               Number of obs =        743
                                                      F(  1,   693) =       0.03
                                                      Prob > F      =     0.8612
Total (centered) SS     =    185.6742934              Centered R2   =    -0.0046
Total (uncentered) SS   =            379              Uncentered R2 =     0.5078
Residual SS             =    186.5299069              Root MSE      =       .501

------------------------------------------------------------------------------
             |               Robust
    laterarr |      Coef.   Std. Err.      z    P>|z|     [90% Conf. Interval]
-------------+----------------------------------------------------------------
      probat |  -.0007715   .0044037    -0.18   0.861    -.0080151     .006472
       _cons |   .5208273   .0638703     8.15   0.000       .41577    .6258846
------------------------------------------------------------------------------
Underidentification test  (Kleibergen-Paap rk LM statistic):                73.737
                                                      Chi-sq(    8) P-val =    0.0000
------------------------------------------------------------------------------
Weak identification test  (Cragg-Donald Wald F statistic):                   9.890
                          (Kleibergen-Paap rk Wald F statistic):            10.785
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias        20.25
                                         10% maximal IV relative bias        11.39
                                         20% maximal IV relative bias         6.69
                                         30% maximal IV relative bias         4.99
                                         10% maximal IV size                 33.84
                                         15% maximal IV size                 18.54
                                         20% maximal IV size                 13.24
                                         25% maximal IV size                 10.50
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.
------------------------------------------------------------------------------
Hansen J statistic  (overidentification test of all instruments):           19.551
                                                      Chi-sq(    7) P-val =    0.0066
------------------------------------------------------------------------------
Instrumented:         probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
```

```
                    calendar6 calendar7 calendar8
Dropped collinear:  calendar9
```

```
. ivreg2 laterarr (toserve probat = calendar1 calendar2 calendar3 calendar4 cal
> endar5 calendar6 calendar7 calendar8 calendar9) if (incjudge == 1 & convictio
> n == 1), robust cluster(clusterid) level(90)
Warning - collinearities detected
Vars dropped:       calendar9

IV (2SLS) estimation
--------------------

Estimates efficient for homoskedasticity only
Statistics robust to heteroskedasticity and clustering on clusterid

Number of clusters (clusterid) =      694              Number of obs =        743
                                                     F(  2,   693) =       0.03
                                                     Prob > F      =     0.9681
Total (centered) SS     =    185.6742934             Centered R2   =     0.0046
Total (uncentered) SS   =            379             Uncentered R2 =     0.5123
Residual SS             =    184.8248935             Root MSE      =      .4988
```

laterarr	Coef.	Robust Std. Err.	z	P>|z|	[90% Conf. Interval]	
toserve	**-.0012863**	**.0069856**	**-0.18**	**0.854**	**-.0127766**	**.010204**
probat	**-.000821**	**.0043952**	**-0.19**	**0.852**	**-.0080504**	**.0064084**
_cons	**.5335112**	**.0935518**	**5.70**	**0.000**	**.3796321**	**.6873902**

```
Underidentification test  (Kleibergen-Paap rk LM statistic):                21.489
                                                   Chi-sq(    7) P-val =     0.0031

Weak identification test  (Cragg-Donald Wald F statistic):                   3.010
                          (Kleibergen-Paap rk Wald F statistic):             2.988
Stock-Yogo weak ID test critical values:  5% maximal IV relative bias       17.70
                                         10% maximal IV relative bias       10.22
                                         20% maximal IV relative bias        6.20
                                         30% maximal IV relative bias        4.73
                                         10% maximal IV size                25.64
                                         15% maximal IV size                14.31
                                         20% maximal IV size                10.41
                                         25% maximal IV size                 8.39
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Cragg-Donald F statistic and i.i.d. errors.

Hansen J statistic  (overidentification test of all instruments):           19.772
                                                   Chi-sq(    6) P-val =     0.0030

Instrumented:         toserve probat
Excluded instruments: calendar1 calendar2 calendar3 calendar4 calendar5
                      calendar6 calendar7 calendar8
Dropped collinear:    calendar9
```

```
.
. //F: Hazard Rate Analysis
.
. //The idea is to generate simulated outcome data (correcting for incapacitati
> on) and then repeat
. //earlier 2SLS and LIML analyses using simulated outcomes
.
. set more off

.
. /* generate censoring indicator */
. gen fail=0

. replace fail=1 if fullreleasetorecid !=.
(1003 real changes made)

.
. /* create a survival time variable that topcodes missing data */
. /* note that it also codes failtime=1 if failtime==0 so as to avoid dropping
> cases when running streg below */
. gen failtime=fullreleasetorecid

. replace failtime=1600 if failtime==.
(0 real changes made)

. replace failtime=1 if failtime==0.
(44 real changes made)

.
. /* define survival data with topcode=1600 */
. stset failtime, failure(fail)

     failure event:   fail != 0 & fail < .
obs. time interval:   (0, failtime]
 exit on or before:   failure

------------------------------------------------------------------------------
     1003  total observations
        0  exclusions
------------------------------------------------------------------------------
     1003  observations remaining, representing
     1003  failures in single-record/single-failure data
  4550959  total analysis time at risk and under observation
                                        at risk from t =             0
                              earliest observed entry t =             0
                                   last observed exit t =          9999

.
. /* predicts cumulative survival given _t = failtime */
. streg age agesq female nonblack priorarr priordrugarr priorfelarr priorfeldru
> garr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marijuana co
> caine crack heroin pcp otherdrug nondrug if incjudge == 1, distribution(weibu
> ll) robust cluster(clusterid)

         failure _d:   fail
   analysis time _t:   failtime

Fitting constant-only model:

Iteration 0:   log pseudolikelihood =   -2384.7942
Iteration 1:   log pseudolikelihood =   -2166.9717
Iteration 2:   log pseudolikelihood =   -2146.5214
Iteration 3:   log pseudolikelihood =   -2146.4243
Iteration 4:   log pseudolikelihood =   -2146.4243

Fitting full model:
```

```
Iteration 0:   log pseudolikelihood =   -2146.4243
Iteration 1:   log pseudolikelihood =   -2118.6628
Iteration 2:   log pseudolikelihood =   -2118.0612
Iteration 3:   log pseudolikelihood =   -2118.0607
Iteration 4:   log pseudolikelihood =   -2118.0607

Weibull regression -- log relative-hazard form

No. of subjects      =          1003                 Number of obs   =       1003
No. of failures      =          1003
Time at risk         =    4550958.809
                                                     Wald chi2( 21)  =      78.55
Log pseudolikelihood =    -2118.0607                 Prob > chi2     =     0.0000

                              (Std. Err. adjusted for    927 clusters in clusterid)
```

_t	Haz. Ratio	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
age	.9562889	.0149634	-2.86	0.004	.9274063	.9860709
agesq	1.00039	.0001957	1.99	0.046	1.000006	1.000773
female	.8921326	.0748231	-1.36	0.174	.7569013	1.051525
nonblack	.6903431	.0853558	-3.00	0.003	.5417765	.8796498
priorarr	.8403297	.1054477	-1.39	0.166	.6571095	1.074637
priordrugarr	1.045974	.1170449	0.40	0.688	.8399845	1.302479
priorfelarr	1.410561	.1693436	2.87	0.004	1.114812	1.784769
priorfeldru~r	.7614206	.0928815	-2.23	0.025	.5995029	.9670702
priorcon	1.043667	.1241179	0.36	0.719	.8266719	1.317623
priordrugcon	1.180083	.145063	1.35	0.178	.9274225	1.501576
priorfelcon	.8664616	.1044593	-1.19	0.234	.6841161	1.09741
priorfeldru~n	1.119669	.1465465	0.86	0.388	.8663261	1.447099
pwid	1.010098	.1135641	0.09	0.929	.8103335	1.259108
dist	1.036573	.1163079	0.32	0.749	.8319389	1.291541
marijuana	1.303316	.138251	2.50	0.013	1.058662	1.604509
cocaine	1.119237	.1141181	1.10	0.269	.9165008	1.366819
crack	1.229362	.1505322	1.69	0.092	.9670579	1.562814
heroin	1.245618	.1349429	2.03	0.043	1.007328	1.540278
pcp	1.42193	.2646627	1.89	0.059	.98729	2.047914
otherdrug	1.058779	.1598748	0.38	0.705	.7875431	1.423429
nondrug	1.053797	.090487	0.61	0.542	.8905669	1.246946
_cons	.0153915	.0052933	-12.14	0.000	.0078441	.0302007
/ln_p	-.5005639	.0252993	-19.79	0.000	-.5501495	-.4509782
p	.6061888	.0153361			.5768635	.6370047
1/p	1.649651	.041735			1.569847	1.733512

```
. predict cs, csurv

. rename cs cs1

.
. /* replaces _t with 1461 instead of failtime */
. replace _t = 1461
(1003 real changes made)
```

```
. predict cs, csurv

.
. /* runs new regressions */
. /* note that this one can use either LIML or 2SLS, so check the defaults for
> ivreg2 */
.
. gen laterarrsim = 0

. gen beta = 0

. gen stderror = 0

. gen beta2 = 0

. gen stderror2 = 0

.
. gen counter = 0

.
. forvalues i = 1(1)1000 {
  2. quietly replace counter = counter + 1
  3. quietly replace laterarrsim = floor(uniform() + 1 - cs)
  4. quietly replace laterarrsim = 1 if laterarr == 1
  5. quietly replace laterarrsim = 0 if laterarr == 0 & incarcerate == 0
  6.
. quietly ivreg2 laterarrsim age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = cale
> ndar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 c
> alendar9) if incjudge == 1, robust cluster(clusterid) liml
  7. quietly replace beta = _b[toserve] if _n==counter
  8. quietly replace stderror = _se[toserve] if _n==counter
  9.
. quietly ivreg2 laterarrsim age agesq female nonblack priorarr priordrugarr pr
> iorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon p
> wid dist marijuana cocaine crack heroin pcp otherdrug nondrug (toserve = cale
> ndar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 c
> alendar9) if incjudge == 1, robust cluster(clusterid)
 10. quietly replace beta2 = _b[toserve] if _n==counter
 11. quietly replace stderror2 = _se[toserve] if _n==counter
 12.
. }

. /* Print out results: LIML(beta) LIML(SE) 2SLS(beta) 2SLS(SE) */
. sum beta stderror beta2 stderror2 if _n <= counter
```

Variable	Obs	Mean	Std. Dev.	Min	Max
beta	**1000**	**.0299843**	**.0068125**	**.0031336**	**.0552457**
stderror	**1000**	**.018741**	**.004784**	**.0107404**	**.0455869**
beta2	**1000**	**.0168167**	**.0041416**	**.0018357**	**.0288025**
stderror2	**1000**	**.0081321**	**.0003725**	**.0071504**	**.0096816**

```
.
.
. /* uncomment lines below in order to get percentiles */
. gen t=beta/stderror
(3 missing values generated)

. gen t2=beta2/stderror2
(3 missing values generated)

.
. * tab t
. * tab t2
.
. /* Hausman test comparing instrumental variables and OLS estimates of specifi
> c deterrence effects
> * note that including agesq causes Stata to give a warning, but excluding age
> sq has no effect on the test
>
> ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve = calendar1 calen
> dar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) i
> f incjudge == 1, robust cluster(clusterid)
> est store instrumental_variables
> reg    laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug  toserve if incjudge == 1,
>  robust cluster(clusterid)
> est store OLS
>
> * Note from the Stata Manual:
> *     "The order of computing the two estimators may be reversed. You have to
>  be careful, though, to specify to hausman the
> *     models in the order "always consistent" first and "efficient under H0"
> second."
>
> hausman instrumental_variables OLS,force
>
> * results
> *  (b-B)     sqrt(diag(V_b-V_B))
> * .0142088        .0081353
>
> * chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)
> *         = .0142088^2 / .0081353^2 = 3.05
>
> * repeat test, with probation instead of toserve
> ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (probat = calendar1 calend
> ar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9) if
>  incjudge == 1, robust cluster(clusterid)
> est store instrumental_variables
> reg laterarr probat age agesq female nonblack priorarr priordrugarr priorfela
> rr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dis
> t marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge == 1, robu
> st cluster(clusterid)
> est store OLS
>
> hausman instrumental_variables OLS,force
>
>
> * repeat test, with probation and toserve
>
> ivreg2 laterarr age agesq female nonblack priorarr priordrugarr priorfelarr p
> riorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist ma
> rijuana cocaine crack heroin pcp otherdrug nondrug (toserve probat = calendar
> 1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 calendar8 calen
```

```
> dar9) if incjudge == 1, robust cluster(clusterid)
> est store instrumental_variables
> reg laterarr toserve probat age agesq female nonblack priorarr priordrugarr p
> riorfelarr priorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon
> pwid dist marijuana cocaine crack heroin pcp otherdrug nondrug if incjudge ==
>  1, robust cluster(clusterid)
> est store OLS
>
> hausman instrumental_variables OLS,force
>
> * Tests of significance based on reduced form regression of later arrest on c
> alendar assignment
> * The tests are done three ways: regression with clustering, regression witho
> ut clustering, and random effects regression
> set more off
>
> reg laterarr calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 cale
> ndar7 calendar8 calendar9 if incjudge == 1, robust cluster(clusterid)
> test  calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 c
> alendar8 calendar9
>
> reg laterarr age agesq female nonblack priorarr priordrugarr priorfelarr prio
> rfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marij
> uana cocaine crack heroin pcp otherdrug nondrug calendar1 calendar2 calendar3
>  calendar4 calendar5 calendar6 calendar7 calendar8 calendar9 if incjudge == 1
> , robust cluster(clusterid)
> test  calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 c
> alendar8 calendar9
>
>
> reg laterarr calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 cale
> ndar7 calendar8 calendar9 if incjudge == 1
> test  calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 c
> alendar8 calendar9
>
> reg laterarr age agesq female nonblack priorarr priordrugarr priorfelarr prio
> rfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist marij
> uana cocaine crack heroin pcp otherdrug nondrug calendar1 calendar2 calendar3
>  calendar4 calendar5 calendar6 calendar7 calendar8 calendar9 if incjudge == 1
> test  calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 calendar7 c
> alendar8 calendar9
>
>
> iis clusterid
> xtreg  laterarr calendar1 calendar2 calendar3 calendar4 calendar5 calendar6 c
> alendar7 calendar8 calendar9, re
> test  calendar1 calendar2 calendar3 calendar4 calendar5  calendar7 calendar8
> calendar9
>
> xtreg laterarr age agesq female nonblack priorarr priordrugarr priorfelarr pr
> iorfeldrugarr priorcon priordrugcon priorfelcon priorfeldrugcon pwid dist mar
> ijuana cocaine crack heroin pcp otherdrug nondrug calendar1 calendar2 calenda
> r3 calendar4 calendar5 calendar6 calendar7 calendar8 calendar9, re
> test  calendar1 calendar2 calendar3 calendar4 calendar5  calendar7 calendar8
> calendar9
>

end of do-file
```