```
. set mem 500m
(512000k)

. use "C:\income_demo_5years.dta", clear

. tsset code_numeric year_numeric
       panel variable:  code_numeric (strongly balanced)
        time variable:  year_numeric, 31 to 41
                delta:  1 unit

. sort code_numeric year_numeric

. tab year, gen (yr)

       year |      Freq.     Percent        Cum.
------------+-----------------------------------
       1950 |        211        9.09        9.09
       1955 |        211        9.09       18.18
       1960 |        211        9.09       27.27
       1965 |        211        9.09       36.36
       1970 |        211        9.09       45.45
       1975 |        211        9.09       54.55
       1980 |        211        9.09       63.64
       1985 |        211        9.09       72.73
       1990 |        211        9.09       81.82
       1995 |        211        9.09       90.91
       2000 |        211        9.09      100.00
------------+-----------------------------------
      Total |      2,321      100.00

. tab code, gen(cd)

       code |      Freq.     Percent        Cum.
------------+-----------------------------------
        ADO |         11        0.47        0.47
        AFG |         11        0.47        0.95
        AGO |         11        0.47        1.42
        ALB |         11        0.47        1.90
        ARE |         11        0.47        2.37
        ARG |         11        0.47        2.84
        ARM |         11        0.47        3.32
        ATG |         11        0.47        3.79
        AUS |         11        0.47        4.27
        AUT |         11        0.47        4.74
        AZE |         11        0.47        5.21
        BAD |         11        0.47        5.69
        BAV |         11        0.47        6.16
        BDI |         11        0.47        6.64
        BEL |         11        0.47        7.11
        BEN |         11        0.47        7.58
        BFA |         11        0.47        8.06
        BGD |         11        0.47        8.53
        BGR |         11        0.47        9.00
        BHR |         11        0.47        9.48
        BHS |         11        0.47        9.95
        BIH |         11        0.47       10.43
        BLR |         11        0.47       10.90
        BLZ |         11        0.47       11.37
        BOL |         11        0.47       11.85
        BRA |         11        0.47       12.32
        BRB |         11        0.47       12.80
        BRN |         11        0.47       13.27
        BTN |         11        0.47       13.74
        BWA |         11        0.47       14.22
        CAF |         11        0.47       14.69
        CAN |         11        0.47       15.17
        CHE |         11        0.47       15.64
        CHL |         11        0.47       16.11
        CHN |         11        0.47       16.59
        CIV |         11        0.47       17.06
        CMR |         11        0.47       17.54
        COG |         11        0.47       18.01
        COL |         11        0.47       18.48
        COM |         11        0.47       18.96
```

CPV	11	0.47	19.43
CRI	11	0.47	19.91
CUB	11	0.47	20.38
CYP	11	0.47	20.85
CZE	11	0.47	21.33
CZE_1	11	0.47	21.80
DEU	11	0.47	22.27
DEU_E	11	0.47	22.75
DEU_W	11	0.47	23.22
DJI	11	0.47	23.70
DMA	11	0.47	24.17
DNK	11	0.47	24.64
DOM	11	0.47	25.12
DZA	11	0.47	25.59
ECU	11	0.47	26.07
EGY	11	0.47	26.54
ERI	11	0.47	27.01
ESP	11	0.47	27.49
EST	11	0.47	27.96
ETH	11	0.47	28.44
ETH_1	11	0.47	28.91
ETM	11	0.47	29.38
FIN	11	0.47	29.86
FJI	11	0.47	30.33
FRA	11	0.47	30.81
GAB	11	0.47	31.28
GBR	11	0.47	31.75
GCL	11	0.47	32.23
GEO	11	0.47	32.70
GHA	11	0.47	33.18
GIN	11	0.47	33.65
GMB	11	0.47	34.12
GNB	11	0.47	34.60
GNQ	11	0.47	35.07
GRC	11	0.47	35.55
GRD	11	0.47	36.02
GTM	11	0.47	36.49
GUY	11	0.47	36.97
HND	11	0.47	37.44
HRV	11	0.47	37.91
HTI	11	0.47	38.39
HUN	11	0.47	38.86
IDN	11	0.47	39.34
IND	11	0.47	39.81
IRL	11	0.47	40.28
IRN	11	0.47	40.76
IRQ	11	0.47	41.23
ISL	11	0.47	41.71
ISR	11	0.47	42.18
ITA	11	0.47	42.65
JAM	11	0.47	43.13
JOR	11	0.47	43.60
JPN	11	0.47	44.08
KAZ	11	0.47	44.55
KEN	11	0.47	45.02
KGZ	11	0.47	45.50
KHM	11	0.47	45.97
KIR	11	0.47	46.45
KNA	11	0.47	46.92
KOE	11	0.47	47.39
KOR	11	0.47	47.87
KWT	11	0.47	48.34
LAO	11	0.47	48.82
LBN	11	0.47	49.29
LBR	11	0.47	49.76
LBY	11	0.47	50.24
LCA	11	0.47	50.71
LIE	11	0.47	51.18
LKA	11	0.47	51.66
LSO	11	0.47	52.13
LTU	11	0.47	52.61
LUX	11	0.47	53.08
LVA	11	0.47	53.55
MAR	11	0.47	54.03
MDA	11	0.47	54.50

MDG	11	0.47	54.98
MDV	11	0.47	55.45
MEX	11	0.47	55.92
MKD	11	0.47	56.40
MLI	11	0.47	56.87
MLT	11	0.47	57.35
MMR	11	0.47	57.82
MNG	11	0.47	58.29
MOD	11	0.47	58.77
MOZ	11	0.47	59.24
MRT	11	0.47	59.72
MUS	11	0.47	60.19
MWI	11	0.47	60.66
MYS	11	0.47	61.14
NAM	11	0.47	61.61
NER	11	0.47	62.09
NGA	11	0.47	62.56
NIC	11	0.47	63.03
NLD	11	0.47	63.51
NOR	11	0.47	63.98
NPL	11	0.47	64.45
NZL	11	0.47	64.93
OFS	11	0.47	65.40
OMN	11	0.47	65.88
PAK	11	0.47	66.35
PAK_1	11	0.47	66.82
PAN	11	0.47	67.30
PAP	11	0.47	67.77
PER	11	0.47	68.25
PHL	11	0.47	68.72
PMA	11	0.47	69.19
PNG	11	0.47	69.67
POL	11	0.47	70.14
PRK	11	0.47	70.62
PRT	11	0.47	71.09
PRY	11	0.47	71.56
QAT	11	0.47	72.04
ROM	11	0.47	72.51
RUS	11	0.47	72.99
RWA	11	0.47	73.46
SAR	11	0.47	73.93
SAU	11	0.47	74.41
SAX	11	0.47	74.88
SDN	11	0.47	75.36
SEN	11	0.47	75.83
SER	11	0.47	76.30
SGP	11	0.47	76.78
SIC	11	0.47	77.25
SLB	11	0.47	77.73
SLE	11	0.47	78.20
SLV	11	0.47	78.67
SOM	11	0.47	79.15
STP	11	0.47	79.62
SUR	11	0.47	80.09
SVK	11	0.47	80.57
SVN	11	0.47	81.04
SWE	11	0.47	81.52
SWZ	11	0.47	81.99
SYC	11	0.47	82.46
SYR	11	0.47	82.94
TCD	11	0.47	83.41
TGO	11	0.47	83.89
THA	11	0.47	84.36
TJK	11	0.47	84.83
TKM	11	0.47	85.31
TON	11	0.47	85.78
TTO	11	0.47	86.26
TUN	11	0.47	86.73
TUR	11	0.47	87.20
TUS	11	0.47	87.68
TWN	11	0.47	88.15
TZA	11	0.47	88.63
UGA	11	0.47	89.10
UKR	11	0.47	89.57
UPC	11	0.47	90.05

```
        URY |         11        0.47       90.52
        USA |         11        0.47       91.00
        USS |         11        0.47       91.47
        UZB |         11        0.47       91.94
        VCT |         11        0.47       92.42
        VEN |         11        0.47       92.89
        VNM |         11        0.47       93.36
      VNM_N |         11        0.47       93.84
      VNM_S |         11        0.47       94.31
        VUT |         11        0.47       94.79
        WRT |         11        0.47       95.26
        WSM |         11        0.47       95.73
        YEM |         11        0.47       96.21
      YEM_N |         11        0.47       96.68
      YEM_S |         11        0.47       97.16
        YUG |         11        0.47       97.63
      YUG_1 |         11        0.47       98.10
        ZAF |         11        0.47       98.58
        ZAR |         11        0.47       99.05
        ZMB |         11        0.47       99.53
        ZWE |         11        0.47      100.00
------------+-----------------------------------
      Total |      2,321      100.00
```

```
. set matsize 800

. reg fhpolrigaug L.(fhpolrigaug lrgdpch) yr* if sample==1, cluster(code)

Linear regression                               Number of obs =       945
                                                F( 10,   149) =    423.18
                                                Prob > F      =    0.0000
                                                R-squared     =    0.7251
                                                Root MSE      =    .19154

                                    (Std. Err. adjusted for 150 clusters in code)
------------------------------------------------------------------------------
             |               Robust
 fhpolrigaug |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 fhpolrigaug |
         L1. |   .7063698   .0354523    19.92   0.000     .6363157     .776424
     lrgdpch |
         L1. |   .0723185   .0099233     7.29   0.000     .0527099     .091927
         yr1 |  (dropped)
         yr2 |  (dropped)
         yr3 |   .0828789   .0223588     3.71   0.000     .0386976    .1270603
         yr4 |  (dropped)
         yr5 |  -.1164879   .0275596    -4.23   0.000    -.1709462   -.0620297
         yr6 |  -.0288746   .0232886    -1.24   0.217    -.0748931    .0171439
         yr7 |   .0327633   .0264883     1.24   0.218     -.019578    .0851045
         yr8 |   .0102571   .0214184     0.48   0.633     -.032066    .0525802
         yr9 |   .0302538   .0203212     1.49   0.139    -.0099011    .0704087
        yr10 |   .0505942   .0279474     1.81   0.072    -.0046302    .1058187
        yr11 |   .0266158   .0193275     1.38   0.171    -.0115756    .0648071
       _cons |  -.4297435   .0612981    -7.01   0.000    -.5508693   -.3086177
------------------------------------------------------------------------------

. predict yhat7
(option xb assumed; fitted values)
(1327 missing values generated)

. sum yhat7

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       yhat7 |       994    .5722429    .3074383  -.0311632   1.064837

. truncreg fhpolrigaug L.(fhpolrigaug lrgdpch) yr* if sample==1, cluster(code) ll(0) ul(1
> )
note: yr1 dropped because of collinearity
note: yr2 dropped because of collinearity
note: yr5 dropped because of collinearity
(note: 340 obs. truncated)
```

```
Fitting full model:

Iteration 0:   log pseudolikelihood =  177.44132
Iteration 1:   log pseudolikelihood =  201.01046
Iteration 2:   log pseudolikelihood =  201.83427
Iteration 3:   log pseudolikelihood =  201.83911
Iteration 4:   log pseudolikelihood =  201.83911

Truncated regression
Limit:         lower =          0                     Number of obs =    605
               upper =          1                     Wald chi2(10) = 270.11
Log pseudolikelihood =  201.83911                     Prob > chi2   = 0.0000

                                  (Std. Err. adjusted for 126 clusters in code)
------------------------------------------------------------------------------
             |               Robust
 fhpolrigaug |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 fhpolrigaug |
         L1. |   .8721572   .0622293    14.02   0.000       .75019    .9941244
     lrgdpch |
         L1. |   .0621951   .0187304     3.32   0.001     .0254841     .098906
         yr3 |   .3146943   .0716891     4.39   0.000     .1741862    .4552024
         yr4 |   .1293655   .0541258     2.39   0.017      .023281    .2354501
         yr6 |   .1018927   .0662277     1.54   0.124    -.0279113    .2316967
         yr7 |   .2101079   .0653713     3.21   0.001     .0819824    .3382334
         yr8 |   .1798012   .0579853     3.10   0.002      .066152    .2934503
         yr9 |   .1625811   .0595146     2.73   0.006     .0459347    .2792275
        yr10 |    .243096   .0678387     3.58   0.000     .1101347    .3760574
        yr11 |   .1542314   .0517881     2.98   0.003     .0527286    .2557342
       _cons |  -.5640733   .1496501    -3.77   0.000    -.8573821   -.2707645
-------------+----------------------------------------------------------------
      /sigma |   .2441854   .0146952    16.62   0.000     .2153833    .2729875
------------------------------------------------------------------------------

. predict yhat8
(option xb assumed; fitted values)
(1327 missing values generated)

. sum yhat8

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       yhat8 |       994    .5970672    .3592639  -.1025793   1.201586

. reg fhpolrigaug L.(fhpolrigaug lrgdpch) yr* cd* if sample==1, cluster(code)

Linear regression                               Number of obs =     945
                                                F(  9,   149) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.7959
                                                Root MSE      =  .18004

                                  (Std. Err. adjusted for 150 clusters in code)
------------------------------------------------------------------------------
             |               Robust
 fhpolrigaug |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 fhpolrigaug |
         L1. |   .3786284   .0509313     7.43   0.000     .2779875    .4792693
     lrgdpch |
         L1. |    .010415   .0345482     0.30   0.763    -.0578527    .0786827
         yr1 |  (dropped)
         yr2 |  (dropped)
         yr3 |   .0298411   .0219464     1.36   0.176    -.0135254    .0732075
         yr4 |  (dropped)
         yr5 |  -.1037843    .029461    -3.52   0.001    -.1619997   -.0455689
         yr6 |  -.0591819    .027349    -2.16   0.032    -.1132239   -.0051398
         yr7 |   .0012942    .031723     0.04   0.968    -.0613908    .0639792
         yr8 |  -.0036614   .0310058    -0.12   0.906    -.0649293    .0576065
         yr9 |   .0311864   .0268692     1.16   0.248    -.0219075    .0842803
        yr10 |    .071592    .037265     1.92   0.057    -.0020441    .1452281
        yr11 |   .0744071   .032845      2.27   0.025     .009505     .1393092
         cd1 |  (dropped)
```

cd2	(dropped)					
cd3	-.5199089	.0784049	-6.63	0.000	-.674838	-.3649797
cd4	-.3579789	.0558142	-6.41	0.000	-.4682685	-.2476892
cd5	(dropped)					
cd6	-.1041458	.0231692	-4.50	0.000	-.1499284	-.0583632
cd7	-.2926667	.0659635	-4.44	0.000	-.4230115	-.1623218
cd8	-.3020744	.016106	-18.76	0.000	-.3339001	-.2702487
cd9	.0680905	.0229495	2.97	0.004	.0227421	.113439
cd10	.071609	.018975	3.77	0.000	.034114	.1091039
cd11	-.4992511	.0762514	-6.55	0.000	-.649925	-.3485773
cd12	(dropped)					
cd13	(dropped)					
cd14	-.5117031	.1025869	-4.99	0.000	-.7144162	-.30899
cd15	.0697154	.0195047	3.57	0.000	.031174	.1082568
cd16	-.3471815	.0878305	-3.95	0.000	-.5207357	-.1736273
cd17	-.3410606	.0987502	-3.45	0.001	-.5361923	-.1459288
cd18	-.1748977	.0844949	-2.07	0.040	-.3418607	-.0079347
cd19	-.0968242	.0242443	-3.99	0.000	-.1447312	-.0489172
cd20	(dropped)					
cd21	(dropped)					
cd22	(dropped)					
cd23	-.5720731	.0458042	-12.49	0.000	-.6625828	-.4815635
cd24	.0244864	.0301576	0.81	0.418	-.0351054	.0840782
cd25	-.1677591	.0527477	-3.18	0.002	-.2719892	-.0635291
cd26	-.1451829	.0349459	-4.15	0.000	-.2142364	-.0761294
cd27	.0578382	.0159443	3.63	0.000	.0263321	.0893443
cd28	(dropped)					
cd29	(dropped)					
cd30	-.006307	.044336	-0.14	0.887	-.0939155	.0813016
cd31	-.3838508	.0727056	-5.28	0.000	-.527518	-.2401836
cd32	.0676807	.0239319	2.83	0.005	.020391	.1149705
cd33	.0657354	.0301715	2.18	0.031	.0061161	.1253547
cd34	-.1402358	.0315547	-4.44	0.000	-.2025884	-.0778832
cd35	-.495832	.0885144	-5.60	0.000	-.6707377	-.3209263
cd36	-.4198164	.0663443	-6.33	0.000	-.5509136	-.2887192
cd37	-.4551175	.0682376	-6.67	0.000	-.5899559	-.3202791
cd38	-.4233834	.0820095	-5.16	0.000	-.5854352	-.2613315
cd39	-.1016038	.0384953	-2.64	0.009	-.177671	-.0255366
cd40	-.3684672	.0660912	-5.58	0.000	-.4990644	-.23787
cd41	-.1816937	.0635624	-2.86	0.005	-.3072938	-.0560935
cd42	.0721882	.0312651	2.31	0.022	.010408	.1339685
cd43	-.6193624	.0517226	-11.97	0.000	-.721567	-.5171578
cd44	-.0014757	.0210118	-0.07	0.944	-.0429953	.0400439
cd45	(dropped)					
cd46	(dropped)					
cd47	-.0032979	.0178837	-0.18	0.854	-.0386362	.0320405
cd48	(dropped)					
cd49	(dropped)					
cd50	(dropped)					
cd51	.0049153	.0321789	0.15	0.879	-.0586705	.0685011
cd52	.0675682	.0242082	2.79	0.006	.0197324	.1154039
cd53	-.110737	.0543986	-2.04	0.044	-.2182293	-.0032447
cd54	-.424316	.0500866	-8.47	0.000	-.5232878	-.3253442
cd55	-.1735486	.047287	-3.67	0.000	-.2669884	-.0801088
cd56	-.3589605	.063548	-5.65	0.000	-.4845322	-.2333887
cd57	(dropped)					
cd58	-.115814	.0249823	-4.64	0.000	-.1651793	-.0664487
cd59	.0687555	.0209045	3.29	0.001	.027448	.110063
cd60	-.4440626	.1143805	-3.88	0.000	-.6700801	-.2180451
cd61	-.4438998	.1050036	-4.23	0.000	-.6513883	-.2364112
cd62	(dropped)					
cd63	.0199641	.0181661	1.10	0.274	-.0159324	.0558606
cd64	-.2518164	.0366391	-6.87	0.000	-.3242158	-.179417
cd65	.0571322	.0190471	3.00	0.003	.0194949	.0947694
cd66	-.3784442	.0364695	-10.38	0.000	-.4505084	-.3063801
cd67	.0681967	.0197359	3.46	0.001	.0291983	.1071951
cd68	(dropped)					
cd69	(dropped)					
cd70	-.2975564	.0847462	-3.51	0.001	-.4650161	-.1300967
cd71	-.4981142	.0670554	-7.43	0.000	-.6306166	-.3656118
cd72	-.2662664	.0783801	-3.40	0.001	-.4211466	-.1113863
cd73	-.3175371	.1083589	-2.93	0.004	-.5316558	-.1034185
cd74	-.5406811	.0730337	-7.40	0.000	-.6849966	-.3963656
cd75	-.0302727	.0176669	-1.71	0.089	-.0651829	.0046374
cd76	.0545232	.0402184	1.36	0.177	-.0249489	.1339953

cd77	-.1775607	.0466189	-3.81	0.000	-.2696803	-.0854412
cd78	-.2037526	.0564916	-3.61	0.000	-.3153807	-.0921245
cd79	-.1745863	.0619123	-2.82	0.005	-.2969258	-.0522468
cd80	.0291937	.0341649	0.85	0.394	-.0383165	.0967039
cd81	-.3912664	.09116	-4.29	0.000	-.5713997	-.211133
cd82	-.1459888	.0286696	-5.09	0.000	-.2026404	-.0893373
cd83	-.3289485	.0741033	-4.44	0.000	-.4753777	-.1825193
cd84	-.025204	.0747449	-0.34	0.736	-.1729008	.1224928
cd85	.0685612	.0164853	4.16	0.000	.035986	.1011364
cd86	-.3735972	.0488954	-7.64	0.000	-.4702151	-.2769794
cd87	(dropped)					
cd88	.0692242	.0204577	3.38	0.001	.0287996	.1096488
cd89	.0100838	.0156365	0.64	0.520	-.0208142	.0409818
cd90	.0670097	.0177473	3.78	0.000	.0319407	.1020786
cd91	.008262	.0396264	0.21	0.835	-.0700403	.0865643
cd92	-.3395994	.0559529	-6.07	0.000	-.4501631	-.2290358
cd93	.048278	.0164497	2.93	0.004	.0157732	.0807829
cd94	-.5093849	.0518038	-9.83	0.000	-.61175	-.4070199
cd95	-.4121676	.0868825	-4.74	0.000	-.5838486	-.2404866
cd96	-.6270789	.0626766	-10.00	0.000	-.7509287	-.5032291
cd97	-.4929247	.094417	-5.22	0.000	-.679494	-.3063554
cd98	(dropped)					
cd99	.0201485	.017399	1.16	0.249	-.0142323	.0545292
cd100	(dropped)					
cd101	-.1824916	.0408111	-4.47	0.000	-.2631348	-.1018484
cd102	(dropped)					
cd103	(dropped)					
cd104	-.5039707	.0598669	-8.42	0.000	-.6222685	-.385673
cd105	(dropped)					
cd106	(dropped)					
cd107	.0578389	.0357242	1.62	0.108	-.0127526	.1284305
cd108	(dropped)					
cd109	-.0871079	.0604324	-1.44	0.152	-.2065232	.0323073
cd110	-.285602	.0843571	-3.39	0.001	-.4522928	-.1189112
cd111	.0075832	.0251548	0.30	0.763	-.0421229	.0572894
cd112	.0424151	.0258076	1.64	0.102	-.0085811	.0934113
cd113	.0711227	.0282618	2.52	0.013	.0152771	.1269684
cd114	-.2901833	.0571348	-5.08	0.000	-.4030824	-.1772843
cd115	.0402629	.0647298	0.62	0.535	-.087644	.1681697
cd116	-.2031609	.08225	-2.47	0.015	-.365688	-.0406337
cd117	(dropped)					
cd118	-.1831805	.0289583	-6.33	0.000	-.2404026	-.1259584
cd119	-.299756	.0451866	-6.63	0.000	-.3890452	-.2104667
cd120	-.3345193	.0948117	-3.53	0.001	-.5218685	-.1471701
cd121	.0003533	.0011718	0.30	0.763	-.0019623	.0026688
cd122	(dropped)					
cd123	(dropped)					
cd124	(dropped)					
cd125	-.3105589	.0913869	-3.40	0.001	-.4911406	-.1299772
cd126	-.4523469	.0769802	-5.88	0.000	-.6044609	-.3002329
cd127	.0142717	.0230467	0.62	0.537	-.0312689	.0598124
cd128	-.3489821	.1075843	-3.24	0.001	-.5615701	-.1363941
cd129	-.1877023	.0370708	-5.06	0.000	-.2609547	-.1144499
cd130	-.0905969	.041278	-2.19	0.030	-.1721627	-.009031
cd131	-.3979803	.084468	-4.71	0.000	-.5648901	-.2310705
cd132	-.3465667	.0849882	-4.08	0.000	-.5145045	-.1786289
cd133	-.2287068	.0492526	-4.64	0.000	-.3260306	-.1313831
cd134	.0690779	.0207578	3.33	0.001	.0280602	.1100955
cd135	.0692891	.0203268	3.41	0.001	.029123	.1094552
cd136	-.2139198	.0883696	-2.42	0.017	-.3885394	-.0393003
cd137	.0689134	.0211034	3.27	0.001	.0272129	.1106139
cd138	(dropped)					
cd139	(dropped)					
cd140	-.3436753	.0778966	-4.41	0.000	-.4976001	-.1897505
cd141	-.0370144	.0942619	-0.39	0.695	-.2232772	.1492484
cd142	-.2156945	.0420117	-5.13	0.000	-.2987102	-.1326787
cd143	(dropped)					
cd144	-.1850268	.0374091	-4.95	0.000	-.2589476	-.1111059
cd145	-.1328349	.0506634	-2.62	0.010	-.2329465	-.0327233
cd146	(dropped)					
cd147	-.037067	.045543	-0.81	0.417	-.1270606	.0529266
cd148	-.0388096	.0290839	-1.33	0.184	-.0962799	.0186606
cd149	(dropped)					
cd150	-.0855673	.0245397	-3.49	0.001	-.1340581	-.0370764
cd151	-.2702835	.0465597	-5.81	0.000	-.3622861	-.178281

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       cd152 |  (dropped)
       cd153 |  -.3693226    .063246    -5.84   0.000    -.4942975   -.2443476
       cd154 |  -.5343401   .0270069   -19.79   0.000     -.587706   -.4809742
       cd155 |  -.4928846   .0960907    -5.13   0.000    -.6827611   -.3030081
       cd156 |  (dropped)
       cd157 |  (dropped)
       cd158 |  (dropped)
       cd159 |  (dropped)
       cd160 |  -.2017067   .0743312    -2.71   0.007    -.3485861   -.0548274
       cd161 |  (dropped)
       cd162 |  -.3325875   .0272371   -12.21   0.000    -.3864084   -.2787667
       cd163 |  (dropped)
       cd164 |  (dropped)
       cd165 |  -.3602454   .0819717    -4.39   0.000    -.5222226   -.1982682
       cd166 |  -.1058523   .0383852    -2.76   0.007    -.1817019   -.0300026
       cd167 |  (dropped)
       cd168 |  -.1955588   .0852211    -2.29   0.023    -.3639567   -.0271608
       cd169 |  (dropped)
       cd170 |   .0663557   .0140057     4.74   0.000     .0386801    .0940312
       cd171 |   .0001475   .0004892     0.30   0.763    -.0008192    .0011142
       cd172 |   .0567098   .0224648     2.52   0.013     .0123191    .1011004
       cd173 |  (dropped)
       cd174 |  -.2794285   .0354946    -7.87   0.000    -.3495662   -.2092908
       cd175 |  -.4823119   .0649139    -7.43   0.000    -.6105827   -.3540411
       cd176 |   -.453518   .0866828    -5.23   0.000    -.6248043   -.2822318
       cd177 |  -.4561739   .0873196    -5.22   0.000    -.6287186   -.2836292
       cd178 |  -.1698342   .0573808    -2.96   0.004    -.2832193    -.056449
       cd179 |  (dropped)
       cd180 |  (dropped)
       cd181 |  (dropped)
       cd182 |   .0176349   .0178382     0.99   0.324    -.0176135    .0528834
       cd183 |  -.4283821   .0500937    -8.55   0.000    -.5273679   -.3293963
       cd184 |  -.1688539   .0375461    -4.50   0.000    -.2430456   -.0946623
       cd185 |  (dropped)
       cd186 |  -.2022478   .0384761    -5.26   0.000    -.2782771   -.1262185
       cd187 |  -.3747526   .1097942    -3.41   0.001    -.5917073   -.1577978
       cd188 |  -.4269645    .105422    -4.05   0.000    -.6352797   -.2186493
       cd189 |  -.3635897   .0385001    -9.44   0.000    -.4396664   -.2875131
       cd190 |  (dropped)
       cd191 |  -.0614401   .0212193    -2.90   0.004    -.1033697   -.0195104
       cd192 |   .0579535   .0279037     2.08   0.040     .0028155    .1130915
       cd193 |  (dropped)
       cd194 |  -.6044527   .0773808    -7.81   0.000    -.7573581   -.4515473
       cd195 |  -.0359397   .0347026    -1.04   0.302    -.1045126    .0326332
       cd196 |  -.0180765    .017993    -1.00   0.317     -.053631     .017478
       cd197 |  -.5964252   .0947961    -6.29   0.000    -.7837435   -.4091068
       cd198 |  (dropped)
       cd199 |  (dropped)
       cd200 |  (dropped)
       cd201 |  (dropped)
       cd202 |  (dropped)
       cd203 |  -.3544529   .0986369    -3.59   0.000    -.5493606   -.1595451
       cd204 |  (dropped)
       cd205 |  (dropped)
       cd206 |  (dropped)
       cd207 |  (dropped)
       cd208 |  -.1446979   .0266896    -5.42   0.000     -.197437   -.0919588
       cd209 |  -.4867877    .101096    -4.82   0.000    -.6865547   -.2870206
       cd210 |  -.3199279   .0823411    -3.89   0.000     -.482635   -.1572207
       cd211 |  -.3423845    .059507    -5.75   0.000    -.4599712   -.2247978
       _cons |    .448379   .3140852     1.43   0.156    -.1722575    1.069015
------------------------------------------------------------------------------

. predict yhat9
(option xb assumed; fitted values)
(1327 missing values generated)

. sum yhat9

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       yhat9 |       994    .5741089    .3232081   -.052277   1.076689

. truncreg fhpolrigaug L.(fhpolrigaug lrgdpch) yr* cd* if sample==1, cluster(co
> de) ll(0) ul(1)
```

note: yr1 dropped because of collinearity
note: yr2 dropped because of collinearity
note: yr5 dropped because of collinearity
note: cd1 dropped because of collinearity
note: cd2 dropped because of collinearity
note: cd5 dropped because of collinearity
note: cd9 dropped because of collinearity
note: cd12 dropped because of collinearity
note: cd13 dropped because of collinearity
note: cd15 dropped because of collinearity
note: cd20 dropped because of collinearity
note: cd21 dropped because of collinearity
note: cd22 dropped because of collinearity
note: cd24 dropped because of collinearity
note: cd27 dropped because of collinearity
note: cd28 dropped because of collinearity
note: cd29 dropped because of collinearity
note: cd32 dropped because of collinearity
note: cd33 dropped because of collinearity
note: cd43 dropped because of collinearity
note: cd45 dropped because of collinearity
note: cd46 dropped because of collinearity
note: cd47 dropped because of collinearity
note: cd48 dropped because of collinearity
note: cd49 dropped because of collinearity
note: cd50 dropped because of collinearity
note: cd52 dropped because of collinearity
note: cd57 dropped because of collinearity
note: cd59 dropped because of collinearity
note: cd60 dropped because of collinearity
note: cd62 dropped because of collinearity
note: cd68 dropped because of collinearity
note: cd69 dropped because of collinearity
note: cd87 dropped because of collinearity
note: cd88 dropped because of collinearity
note: cd98 dropped because of collinearity
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note: cd111 dropped because of collinearity
note: cd113 dropped because of collinearity
note: cd117 dropped because of collinearity
note: cd121 dropped because of collinearity
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note: cd124 dropped because of collinearity
note: cd134 dropped because of collinearity
note: cd135 dropped because of collinearity
note: cd137 dropped because of collinearity
note: cd138 dropped because of collinearity
note: cd139 dropped because of collinearity
note: cd143 dropped because of collinearity
note: cd146 dropped because of collinearity
note: cd149 dropped because of collinearity
note: cd152 dropped because of collinearity
note: cd156 dropped because of collinearity
note: cd157 dropped because of collinearity
note: cd158 dropped because of collinearity
note: cd159 dropped because of collinearity
note: cd161 dropped because of collinearity
note: cd163 dropped because of collinearity
note: cd164 dropped because of collinearity
note: cd167 dropped because of collinearity
note: cd169 dropped because of collinearity
note: cd170 dropped because of collinearity
note: cd171 dropped because of collinearity
note: cd173 dropped because of collinearity
note: cd179 dropped because of collinearity
note: cd180 dropped because of collinearity
note: cd181 dropped because of collinearity

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note: cd185 dropped because of collinearity
note: cd190 dropped because of collinearity
note: cd193 dropped because of collinearity
note: cd194 dropped because of collinearity
note: cd197 dropped because of collinearity
note: cd198 dropped because of collinearity
note: cd199 dropped because of collinearity
note: cd200 dropped because of collinearity
note: cd201 dropped because of collinearity
note: cd202 dropped because of collinearity
note: cd204 dropped because of collinearity
note: cd205 dropped because of collinearity
note: cd206 dropped because of collinearity
note: cd207 dropped because of collinearity
(note: 340 obs. truncated)

Fitting full model:

Iteration 0:   log pseudolikelihood =  297.69433
Iteration 1:   log pseudolikelihood =  319.55012
Iteration 2:   log pseudolikelihood =  324.68938
Iteration 3:   log pseudolikelihood =   325.5904
Iteration 4:   log pseudolikelihood =  325.76146
Iteration 5:   log pseudolikelihood =  325.76467
Iteration 6:   log pseudolikelihood =  325.76467

Truncated regression
Limit:         lower =          0                     Number of obs =    605
               upper =          1                     Wald chi2(9)  =      .
Log pseudolikelihood =  325.76467                     Prob > chi2   =      .

                                  (Std. Err. adjusted for 126 clusters in code)
------------------------------------------------------------------------------
             |               Robust
 fhpolrigaug |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
 fhpolrigaug |
         L1. |   .2884666   .0580812     4.97   0.000     .1746295    .4023037
     lrgdpch |
         L1. |  -.0111481   .0495765    -0.22   0.822    -.1083162      .08602
         yr3 |   .1307526   .0544915     2.40   0.016     .0239513    .2375539
         yr4 |   .0676176   .0472119     1.43   0.152     -.024916    .1601512
         yr6 |   .0069685   .0448336     0.16   0.876    -.0809039    .0948408
         yr7 |   .0951819   .0542634     1.75   0.079    -.0111723    .2015362
         yr8 |   .0900734   .0498425     1.81   0.071    -.0076161    .1877628
         yr9 |   .0939995   .0477341     1.97   0.049     .0004424    .1875566
        yr10 |   .1907577   .0569127     3.35   0.001     .0792108    .3023045
        yr11 |   .1640622   .0491613     3.34   0.001     .0677078    .2604166
         cd3 |  -.1482088   .0598101    -2.48   0.013    -.2654345   -.0309832
         cd4 |   .1552704   .0836394     1.86   0.063    -.0086599    .3192007
         cd6 |   .3732782   .1509895     2.47   0.013     .0773441    .6692122
         cd7 |   .2009853   .0726242     2.77   0.006     .0586446     .343326
         cd8 |   .2451449   .1570633     1.56   0.119    -.0626935    .5529833
        cd10 |   1.756893   .2071976     8.48   0.000     1.350793    2.162993
        cd11 |  -.1549438   .0745407    -2.08   0.038    -.3010409   -.0088467
        cd14 |  -.1562113   .0337936    -4.62   0.000    -.2224456    -.089977
        cd16 |    .283512   .0471803     6.01   0.000     .1910403    .3759838
        cd17 |   .1067727   .0354015     3.02   0.003      .037387    .1761584
        cd18 |   .2955153   .0462031     6.40   0.000      .204959    .3860716
        cd19 |   .5684126   .1287817     4.41   0.000     .3160052     .82082
        cd23 |  -.1926203   .1182385    -1.63   0.103    -.4243634    .0391229
        cd25 |   .3641092   .0946185     3.85   0.000     .1786603    .5495581
        cd26 |   .4001375   .1153606     3.47   0.001      .174035    .6262401
        cd30 |   .6262067    .093329     6.71   0.000     .4432851    .8091282
        cd31 |   .2241912   .0616475     3.64   0.000     .1033643     .345018
        cd34 |   .4149896   .1207188     3.44   0.001     .1783851    .6515941
        cd35 |  -.0813062   .0490577    -1.66   0.097    -.1774574     .014845
        cd36 |  -.0374452   .0800098    -0.47   0.640    -.1942615    .1193711
        cd37 |   .0241905   .0802638     0.30   0.763    -.1331236    .1815046
        cd38 |   .1131822   .0556437     2.03   0.042     .0041225    .2222418
        cd39 |   .4606548    .108726     4.24   0.000     .2475556    .6737539
        cd40 |   .0880868   .0719656     1.22   0.221    -.0529632    .2291369
        cd41 |   .0071284   .0712949     0.10   0.920     -.132607    .1468638
        cd42 |   .8506911   .1310447     6.49   0.000     .5938483    1.107534
        cd44 |   .5034759   .1218504     4.13   0.000     .2646534    .7422984
```

cd51	.6346384	.1132275	5.60	0.000	.4127166	.8565603
cd53	.3671693	.0861989	4.26	0.000	.1982225	.5361161
cd54	-.0011204	.1113811	-0.01	0.992	-.2194234	.2171826
cd55	.5090061	.1018308	5.00	0.000	.3094213	.7085908
cd56	.0817512	.0821014	1.00	0.319	-.0791646	.242667
cd58	.2282461	.1443953	1.58	0.114	-.0547635	.5112557
cd61	.0710591	.0447247	1.59	0.112	-.0165997	.1587179
cd63	.7874974	.167685	4.70	0.000	.4588409	1.116154
cd64	.2768085	.1113868	2.49	0.013	.0584945	.4951226
cd65	.8492608	.1640908	5.18	0.000	.5276488	1.170873
cd66	.0866841	.134702	0.64	0.520	-.177327	.3506951
cd67	4.040863	.4210223	9.60	0.000	3.215675	4.866052
cd70	.2804401	.0489297	5.73	0.000	.1845396	.3763407
cd71	-.1290817	.0819192	-1.58	0.115	-.2896404	.0314769
cd72	.5700399	.0655196	8.70	0.000	.4416239	.698456
cd73	.1011957	.0228049	4.44	0.000	.0564989	.1458926
cd74	.0082573	.1186932	0.07	0.945	-.2243771	.2408918
cd75	.5238125	.1438473	3.64	0.000	.2418771	.805748
cd76	.7130118	.1007386	7.08	0.000	.5155678	.9104558
cd77	.3336553	.0997769	3.34	0.001	.1380961	.5292145
cd78	.3036138	.0834692	3.64	0.000	.1400171	.4672105
cd79	.3868685	.0782452	4.94	0.000	.2335107	.5402262
cd80	.6647731	.1284303	5.18	0.000	.4130543	.9164919
cd81	.0453469	.0415098	1.09	0.275	-.0360109	.1267046
cd82	.2535888	.1398068	1.81	0.070	-.0204274	.5276051
cd83	.1648985	.0680465	2.42	0.015	.0315298	.2982672
cd84	.5873977	.0629474	9.33	0.000	.464023	.7107723
cd85	1.417564	.173852	8.15	0.000	1.076821	1.758308
cd86	.074896	.1078976	0.69	0.488	-.1365795	.2863715
cd89	.7520046	.1562808	4.81	0.000	.4456998	1.058309
cd90	1.721376	.2010581	8.56	0.000	1.327309	2.115442
cd91	.5916746	.1063128	5.57	0.000	.3833053	.8000439
cd92	.1122943	.0941635	1.19	0.233	-.0722627	.2968514
cd93	.820801	.1538069	5.34	0.000	.5193451	1.122257
cd94	-.1440967	.1212979	-1.19	0.235	-.3818362	.0936429
cd95	.0440148	.048663	0.90	0.366	-.0513628	.1393925
cd96	-.2493671	.0797761	-3.13	0.002	-.4057254	-.0930087
cd97	-.1617156	.0468967	-3.45	0.001	-.2536314	-.0697997
cd101	.3340855	.1082049	3.09	0.002	.1220079	.5461632
cd104	-.1621094	.1011286	-1.60	0.109	-.3603178	.036099
cd109	.4703446	.0775756	6.06	0.000	.3182991	.6223901
cd110	.15796	.0499567	3.16	0.002	.0600468	.2558733
cd112	.8324405	.1830235	4.55	0.000	.473721	1.19116
cd114	.1888051	.0878676	2.15	0.032	.0165877	.3610225
cd115	.6529248	.0772962	8.45	0.000	.501427	.8044226
cd116	.2817268	.049416	5.70	0.000	.1848733	.3785803
cd118	.3465652	.1310956	2.64	0.008	.0896226	.6035078
cd119	.2085736	.1063178	1.96	0.050	.0001945	.4169527
cd120	.3159673	.0382085	8.27	0.000	.24108	.3908546
cd125	.1994856	.0343393	5.81	0.000	.1321819	.2667893
cd126	.0254571	.060342	0.42	0.673	-.0928111	.1437253
cd127	.675286	.1264681	5.34	0.000	.427413	.923159
cd128	.243053	.0250916	9.69	0.000	.1938744	.2922316
cd129	.3437135	.1120545	3.07	0.002	.1240907	.5633362
cd130	.5502039	.1061497	5.18	0.000	.3421544	.7582534
cd131	.1121565	.049102	2.28	0.022	.0159183	.2083947
cd132	.2549314	.0511556	4.98	0.000	.1546683	.3551945
cd133	.2684909	.0981527	2.74	0.006	.0761152	.4608666
cd136	.2540653	.0424766	5.98	0.000	.1708126	.337318
cd140	.2028453	.0573631	3.54	0.000	.0904157	.3152749
cd141	.4533455	.0549	8.26	0.000	.3457435	.5609475
cd142	.3723119	.1112277	3.35	0.001	.1543096	.5903143
cd144	.4231565	.1136616	3.72	0.000	.2003839	.6459291
cd145	.3990471	.091509	4.36	0.000	.2196929	.5784014
cd147	.6113975	.1003528	6.09	0.000	.4147096	.8080853
cd148	.3811995	.1339392	2.85	0.004	.1186835	.6437155
cd150	.3055278	.1264273	2.42	0.016	.0577348	.5533208
cd151	.2201116	.1049995	2.10	0.036	.0143163	.4259068
cd153	.2425936	.1011269	2.40	0.016	.0443884	.4407987
cd154	-.0189923	.1297072	-0.15	0.884	-.2732136	.2352291
cd155	-.0771842	.0504304	-1.53	0.126	-.176026	.0216576
cd160	.2768475	.0600823	4.61	0.000	.1590883	.3946067
cd162	.1749812	.1515173	1.15	0.248	-.1219872	.4719496
cd165	.1420465	.0546985	2.60	0.009	.0348394	.2492536
cd166	.4377184	.111008	3.94	0.000	.2201467	.6552901

```
       cd168 |    .058369   .0518429     1.13   0.260    -.0432413    .1599793
       cd172 |   .6861849   .1846294     3.72   0.000     .3243179    1.048052
       cd174 |   .2131987   .1382399     1.54   0.123    -.0577466     .484144
       cd175 |   .0213292   .0838881     0.25   0.799    -.1430884    .1857468
       cd176 |  -.0064315   .0475237    -0.14   0.892    -.0995762    .0867132
       cd177 |  -.0396294   .0470684    -0.84   0.400    -.1318818     .052623
       cd178 |   .3875925   .0851383     4.55   0.000     .2207245    .5544604
       cd182 |    .663396   .1425238     4.65   0.000     .3840544    .9427375
       cd183 |  -.0186301   .1063762    -0.18   0.861    -.2271235    .1898633
       cd184 |   .3623453   .1115885     3.25   0.001     .1436358    .5810548
       cd186 |   .2227705   .1182909     1.88   0.060    -.0090753    .4546163
       cd187 |   .0072151   .0244223     0.30   0.768    -.0406517     .055082
       cd188 |   .0251268   .0244777     1.03   0.305    -.0228486    .0731022
       cd189 |   .1612762   .1101851     1.46   0.143    -.0546825    .3772349
       cd191 |   .3670479    .135036     2.72   0.007     .1023823    .6317136
       cd192 |   1.059248   .1935813     5.47   0.000     .6798358     1.43866
       cd195 |   .5694247   .1106783     5.14   0.000     .3524993    .7863502
       cd196 |   .5188214   .1527495     3.40   0.001     .2194379    .8182049
       cd203 |   .0655695   .0344811     1.90   0.057    -.0020123    .1331513
       cd208 |   .3028737   .1386864     2.18   0.029     .0310535     .574694
       cd209 |   .0451446   .0487308     0.93   0.354     -.050366    .1406552
       cd210 |   .1340683   .0489839     2.74   0.006     .0380617     .230075
       cd211 |   .1179919   .0849377     1.39   0.165     -.048483    .2844667
       _cons |   .0769567   .3032478     0.25   0.800     -.517398    .6713114
-------------+----------------------------------------------------------------
      /sigma |   .1849849   .0102799    17.99   0.000     .1648366    .2051332
------------------------------------------------------------------------------

. predict yhat10
(option xb assumed; fitted values)
(1327 missing values generated)

. sum yhat10

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
      yhat10 |       994    .5862049    .5502794  -.1474585   4.487616
```