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Econ 312
Final Project

Examination of State Lotteries

Introduction:

In this project I used panel data of state lotteries, state finances, and state demographics to predict a model for the lottery revenue as a percent of total state revenue. First, I looked at the explanatory variables to see what factors contribute most to state lotteries. Then, I looked at the state dummies to determine if any of the states varied significantly from each other.

Data:

In this project I used a balanced panel of data that describes state lotteries, state finances, state demographics, and state politics from 1967 to 2002. [1]

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. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3
DIGS4 OTHTAXREV STDEBT EDUCSPEND ELECTYR ALL3D ALL3R STPOP UNEMP PCINC PER65
PERHS PERCOLL

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |      1728        24.5    13.85741          1         48
        YEAR |      1728      1984.5     10.3913       1967       2002
 LOTTPERTREV |      1728    1.751003    4.943031          0   89.09923
   ADMINCOST |      1724    18.00338    43.96478          0     676.23
     LOTTOYR |      1728    5.366898    8.205644          0         36
-------------+--------------------------------------------------------
       PRIZE |      1728    153.3481    354.0908          0   3000.904
      GAMBST |      1728    .1070602    .3092793          0          1
     GAMBIND |      1728    .1244213    .3301571          0          1
       DIGS3 |      1680    .2511905     .433827          0          1
       DIGS4 |      1680    .1642857    .4029796          0          7
-------------+--------------------------------------------------------
   OTHTAXREV |      1726    4865.306    7763.084       57.8      90454
      STDEBT |      1728    4983.627     9074.54         16   87978.79
   EDUCSPEND |      1728    30876.25    47387.19      471.4   541158.8
     ELECTYR |      1724    .2743619    .4463217          0          1
       ALL3D |      1724    .3056845    .4608304          0          1
-------------+--------------------------------------------------------
       ALL3R |      1724    .1600928    .3667985          0          1
       STPOP |      1728     4905.93    5171.805        319   35116.03
       UNEMP |      1724    5.727494    2.079443        1.4         18
       PCINC |      1724    14223.81    8719.081       2001      42550
       PER65 |      1728     .116375    .0207519   .0594495      .1858
-------------+--------------------------------------------------------
```

[1] Most of the data I used was provided by Jon Rourke; some of the data I found myself (State and Indian Reservation Gambling).

PERHS	1728	70.58157	12.23859	35.22329	92.6
PERCOLL	1728	17.43914	5.890086	2.5	38.7

Variable Explanation-

- YEAR: the year, 1967-2002
- ID: an ID number assigned to each state
- LOTPERTREV: lottery revenues as a percentage of total state revenue
- ADMINCOST: the administrative cost of the lottery, in thousands of dollars
- LOTTOYR: the number of years since lottery adoption
- PRIZE: the total size of the lottery prizes offered, in thousands of dollars
- GAMBST: dummy variable for presence of state-legalized gambling
- GAMBIND: dummy variable for presence of gambling on Indian Reservations
- DIGS3: dummy variable for presence of a “pick 3” style game
- DIGS4: dummy variable for presence of a “pick 4 style game
- OTHTAXREV: all tax revenue derived from non-lottery sources, in thousands of dollars
- STDEBT: state debt, in thousands of dollars
- EDUCSPEND: state expenditures on education, in thousands of dollars
- ELECTYR: dummy variable indicating if the year is an election year or not
- ALL3R: dummy variable indicating if the state senate, house, and governor are all Republicans
- ALL3D: dummy variable indicating if the state senate, house, and governor are all Democrats

- STPOP: state population, in thousands
- UNEMP: unemployment rate
- PCINC: individual per capita income in each state
- PER65: percent of the population over the age of 65
- PERHS: percent of the population with a high school degree
- PERCOLL: percent of the population with a college degree

Theory:

To start, the dependent variable used in this regression is lottery revenues as a percentage of total state revenues. Originally I was just using lottery revenue however this yielded an unrealistically high r-squared value because the time trend was picking up most of the variation. I converted the dependent variable into lottery revenue as a percentage of state revenues to avoid this issue.

The rest of the variables selected can be divided into four categories: lottery characteristics, state finances, state politics, and state demographics. For lottery characteristics, I included the variable for the administrative cost of the lottery because the administrative cost is an indicator of the size of the lottery system (more games means more administration), and also of a cost to running a lottery. Lottery year signifies the number of years since the lottery was adopted. This could be important as the longer a lottery has had to develop, the more efficient it could become at generating revenue. The total amount of lottery prizes given out is another variable, as the size of the payout is an incentive for people to play the lottery.

I also included two dummy variables: one for the presence of state sanctioned gambling, one for the presence of Indian Reservations in a state with a casino or other gaming. The idea is that Indian Reservations provide competition with the lottery to provide the optimal amount of gambling in a state (looking at gambling as a good that is supplied in a supply demand model). State sanctioned gambling could provide an indicator of the states level of permissiveness of

gambling, and like Indian reservations provides competition for a state lottery; this suggests that the effects of state sanctioned gambling would be mixed. The pick four and pick three style games are included as explanatory variables as they are known to generate more revenue as they have higher payouts and more people chose to play.

In terms of state finance, I have included two variables: state debt in a certain year and state expenditures on education in a given year. State debt could indicate that states are in such a financial situation that they need to maximize the output of all of their revenue sources. Often in state lotteries, the profits are earmarked for education, so it would be interesting to test if states that choose to spend more on education are more likely to raise revenue through a lottery.

For state politics I have three potential variables: election year, all democratic government, or all republican government. The variable for election year is not used in this regression, as it is more relevant for lottery adoption, not lottery revenues once a lottery is installed in the state. The other two states indicate that the governor, state house and state senate are all of one party either Republicans or Democrats. There is not the potential for a dummy variable trap here, as split legislatures and mismatches between the governor and the legislature are not uncommon. However, like the election year variable, political party dominance is not as relevant to lottery revenues as they are to lottery adoption. The all three Republican can potentially proxy for social conservatism (looking at the 1970s onwards), so it may be informative in our regression.

Our demographic information includes the state population. This is fairly straightforward: more people in a state mean more potential consumers to play the lottery. The state unemployment rate is informative as lotteries are generally considered to be a regressive tax as more people from lower socioeconomic backgrounds tend to play lotteries, and unemployment could proxy for this effect. The same logic holds for average individual per capita income by state.

Additional demographic information includes the percent of the population over the age of 65, as it has been shown empirically that a lot of individuals over the age of 65 play the lottery. The two education indicators, percent of the population

with a high school degree and the percent of the population with a college degree, are a different way of addressing the socioeconomic aspect of the lottery. We would expect people to play less lottery the more educated they are (particularly if they have taken a microeconomics class and have seen the odds of winning the lottery calculated accurately).

Methodology:

This data is panel data, and as such I knew it would be most appropriate to use a fixed or random effects model. My intuition is that the model would be best as a fixed effects model as our data sample included 48 out of 50 states, a near full measure of the total population of states (with each state being an individual in the population). I confirmed this with a Hausman Specification test. From there I performed a fixed effects model both with and without the dummy variables for the individual states.

Results:

After performing a fixed effects model, I found several variables were significant in the general model, as well as several of the state dummies. When we look at variables that pertain to lottery characteristics[2], the administrative cost of the lottery was significant at all levels of alpha with a p-value of 0.000. Administrative cost had a coefficient of .0232, indicating a positive relationship between the cost to administer the lottery and its revenues as a percent of state income, and that increasing administrative costs would increase the lottery revenue as a percent of state revenues by 2%. This could be explained because a larger lottery would be more expensive to administer, and would also generate more revenue.

[2] In this grouping of variables years since the adoption of the lottery was not significant (p-value of 0.2835), and had a coefficient of .0255.

Additionally, the size of the lottery prize was significant at all levels of alpha with a p-value of 0.000, and a coefficient of .0055. This indicates a positive relationship between the monetary amount of the prize offered, and the lottery revenues, and that a one thousand dollar increase in the prize offered should increase the amount of revenue as a percent of state revenues by 0.5%. This makes sense as more people will be incentivized to play (and play more) if the payoff is larger (Expected Value=probability*outcome).

Both Indian Nations reservations' and state sanctioned gambling had a significant effect at the 5 percent level on lottery revenue as a percent of state income. Interestingly they seemed to have the opposite effects: the presence of state sanctioned gambling should increase the lottery revenue (0.6494), whereas the presence of Indian Nations reservation gambling in the state borders decreases lottery revenues (-0.6637). This makes sense if we consider state sanctioned gambling as not only competition for gambling (considering that lotteries and casinos are competing to provide people with the optimal supply of opportunities to gamble), but as a marker of a state's permissiveness of these sorts of activities. For example in very socially conservative states like Alabama, there is no lottery and no state sanctioned gambling. Indian Reservation gambling does not indicate permissiveness, and solely provides competition for a state sanctioned lottery.

Unexpectedly, the presence of a select 4-digit style game demonstrated a negative relationship that is significant at all levels.[3] The variable had a coefficient of -0.7129. This is interesting as this is the opposite effect to what we would expect, as these games generally have larger payouts, and it is shown that more people play this game. Potentially some specific characteristic of this game could create a negative relationship (i.e. high administrative costs, more expensive prizes).

[3] Interestingly the 3-digit style game was not significant, but had a positive coefficient of 0.4593.

For the state financial data[4], state debt is significant at the one percent, five percent and ten percent levels of significance. However, the coefficient that is produced is nearly zero, suggesting that the relationship between the direness of states finances and lottery revenue is slim. Potentially state debt is not the best marker of state finance, or lottery revenues are a fairly ineffective balm for this sort of aliment.

Several variables are significant when we consider state demographics. The size of the state population is significant at all levels, however the coefficient is close to zero (-0.0005), suggesting that the number of potential participants does not affect lottery revenues. This could mean that the number of people is less important than the specific qualities of these people; that is confirmed by the other demographic variables.

Unemployment is significant at the 10 percent level, and personal per capita income is significant at all levels. Unemployment has a coefficient of .0740, meaning that for every 1% increase in unemployment, the lottery revenues as a percent of state revenue increases by 7.4%. Per capita income has a value of essentially zero (.0001), suggesting that individuals' income does not directly affect lottery revenues. Higher unemployment causing higher lottery revenues is consistent with studies that find that lotteries are a socially regressive tax.

Finally, percent of people with a high school degree and percent of people with a college degree were both significant at the 5% level. For every extra percent of people with a high school degree in a state, the lottery revenue as a percentage of state revenue increased by 4.2%. For every extra percent of people with a college degree in a state, the lottery revenue as a percentage of state revenue decreased by 21%. This is the strong relationship we have found in this model.

[4] The variable Education Spending was not significant and had a coefficient that was basically zero. This is not surprising as the relationship between education spending and lottery revenues is tenuous and suggestive.

Using the full model with dummy variables for each state, we can see that we have some states vary significantly from the others. This information has been organized into a table:

State	Coefficient	Negative/Positive	P-Value
Arkansas	-1.5654	Negative	0.014
California	11.1073	Positive	0.000
Colorado	1.2928	Positive	0.097
Connecticut	1.7407	Positive	0.011
Florida	3.5241	Positive	0.000
Georgia	1.1405	Positive	0.082
Idaho	-1.641	Negative	0.017
Illinois	4.5334	Positive	0.000
Maryland	3.4687	Positive	0.000
Massachusetts	3.8090	Positive	0.000
Michigan	2.8415	Positive	0.000
Montana	-1.4589	Negative	0.034
Nebraska	-1.4658	Negative	0.033
Nevada	-3.4278	Negative	0.000
New Jersey	3.5571	Positive	0.000
New York	7.5571	Positive	0.000
North Carolina	1.5834	Positive	0.011
North Dakota	-1.4648	Negative	0.025
Ohio	2.5516	Positive	0.002
Pennsylvania	4.2691	Positive	0.000
Texas	7.5400	Positive	0.000
Virginia	1.9566	Positive	0.006
West Virginia	-1.3552	Negative	0.042
Wyoming	-2.5031	Negative	0.001

Of the 48 states, half of them vary significantly. Of those most of the states do have a lottery, with Arkansas, North Carolina, North Dakota and Wyoming being the exceptions. Interestingly many of the states with a significant variable have a very high administrative cost, including large standouts like California and Illinois.[5]

Validity:

External Validity:

[5] See Appendix 4

As always, we must consider omitted variable bias in the model. Two variables I was not able to access, but would have included in the model if I could would be the percent of the state population that belong to a conservative Christian religious organization and the size neighboring state lotteries. The first variable would be interesting because in the origination of state lotteries conservative Christian groups were chief opponents of the lottery due to their religious beliefs and created a fair opposition in many places. I was not able to obtain this variable due to the difficulties in getting an accurate metric of "conservative" and the dearth of surveys conducted that ask questions of this nature. The size of neighboring state lotteries is known to affect the size of a state's lottery. I could have calculated this information by average the lottery revenues of the surrounding states, however this would have been a very time-intensive method that I could not accomplish in two weeks. A study that would have been interesting to do would be to limit the variables to states with a lottery and see if the results would be different.

This data is limited temporally to 1967-2002. Due to the dates of adoption of the lottery in the US (1967 is the first) we can only look forward from there. If we were able to add the most recent years of economic recession we may see interesting results, however income did not have a very strong effect indicating that lottery as a good is not very clearly normal or inferior, so the change this additional data might effect is questionable.

Internal Validity:[6]

I was concerned with heteroskedacisty and multicollinearity when assessing the internal validity of this model. I performed all analysis using the model with the full dummy variables, because from there it was possible to perform OLS based postestimation tests (like hettest and vif) that are not available with xtreg. I performed a Bretsch-Pagan test for heteroskedascity, and found that the model was heteroskedastic, and then applied robust standard errors to correct the problem. In

[6] See Appendix 2

order to assess multicollinearity, I looked at variance inflation factors and found that the variable "other tax revenues" was had a very high vif value. On further assessment I realized this variable was probably highly correlated with several others and excluded it.

Additionally I had to choose between a fixed effects and random effects model. In order to do this I performed a Hausman specification test, and found that the random effects model was not consistent, and chose to use the fixed effects model. [7]

The r-squared value for our regression is very reasonable at .49, indicating that about 50% of the variation in state lottery revenues as a percent of total state revenues is explained by our independent variables.

[7] See Appendix 1

Appendix 1: Fixed vs. Random Effects Model

First, I performed two regressions with the data, one as a fixed effects model, and one as a random effects model:

	Fixed Effects Model	**Random Effects Model**
VARIABLES	LOTTPERTREV	LOTTPERTREV
ADMINCOST	0.0231***	0.0237***
	-0.00224	-0.00218
LOTTOYR	0.0211	0.0717***
	-0.024	-0.0168
PRIZE	0.00552***	0.00686***
	-0.000407	-0.000352
GAMBST	0.738**	0.476*
	-0.314	-0.243
GAMBIND	-0.694***	-0.431*
	-0.269	-0.247
DIGS3	0.464	0.354
	-0.291	-0.271
DIGS4	-0.714***	-0.664***
	-0.242	-0.215
OTHTAXREV	0.000136*	-0.000111**
	-7.28E-05	-5.64E-05
STDEBT	-0.000109***	-9.53e-05***
	-2.20E-05	-1.81E-05
EDUCSPEND	-2.27e-05**	-1.47e-05*
	-1.05E-05	-7.74E-06
ALL3R	0.025	-0.0966
	-0.201	-0.188
STPOP	-0.000574***	6.45e-05**
	-7.34E-05	-2.55E-05
UNEMP	0.0798*	0.0496
	-0.0415	-0.0336
PCINC	0.000158***	4.49e-05*
	-3.67E-05	-2.49E-05
PER65	-0.103	4.756
	-8.541	-4.163
PERHS	0.0495**	-0.00348
	-0.0212	-0.0126
PERCOLL	-0.233***	0.0267
	-0.0522	-0.0331
Constant	1.465	-0.786
	-1.147	-0.701
Observations	1,674	1,674
R-squared	0.492	
Number of ID	48	48

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In order to determine the best model, I performed a Hausman specification test:

```
. quietly xtreg LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIGS4
OTHTAXREV STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL, fe


. estimates store fe

. quietly xtreg LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIGS4
OTHTAXREV STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL, re

. estimates store re

. hausman fe re

Note: the rank of the differenced variance matrix (10) does not equal the number
        of coefficients being tested (17); be sure this is what you expect, or
        there may be problems computing the test.  Examine the output of your
        estimators for anything unexpected and possibly consider scaling your
        variables so that the coefficients are on a similar scale.

                ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       fe           re         Difference          S.E.
-------------+------------------------------------------------------------
   ADMINCOST |    .0231094     .0237168       -.0006074        .0005107
     LOTTOYR |     .021061     .0717388       -.0506778         .017096
       PRIZE |    .0055246     .0068588       -.0013342        .0002038
      GAMBST |    .7378677     .4755287         .262339        .1984223
     GAMBIND |   -.6938102     -.431446       -.2623642         .105369
       DIGS3 |    .4643516     .3538629        .1104887        .1062923
       DIGS4 |   -.7144802    -.6644308       -.0500494        .1100279
   OTHTAXREV |     .000136     -.000111         .000247        .0000461
      STDEBT |   -.0001091    -.0000953       -.0000137        .0000127
   EDUCSPEND |   -.0000227    -.0000147       -7.93e-06        7.07e-06
        ALL3R |    .0250368    -.0965643        .1216011        .0695553
       STPOP |   -.0005739     .0000645       -.0006384        .0000688
       UNEMP |    .0798143     .0495803         .030234        .0242906
       PCINC |    .0001578     .0000449        .0001129        .0000269
       PER65 |   -.1034179     4.756149       -4.859567         7.45708
       PERHS |    .0495496    -.0034806        .0530301        .0169859
     PERCOLL |   -.2327589     .0266684       -.2594273        .0403531
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                 chi2(10) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       93.93
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

This test indicates that the coefficients between the two models are significantly different and do not converge asymptotically to normal, suggesting the random effects estimator is inconsistent. Thus we will use the fixed effects model.

Appendix 2: Validity Testing the Fixed Effects Model:

In order to perform most of the validity assessments, I converted the xtreg format of the fixed effects model into a xi: reg model, which includes dummy variables for the state ID numbers, and yields the same coefficients for variables as the xtreg model:

```
. xi: reg LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIGS4 OTHTAXR
> EV STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL i.ID
i.ID              _IID_1-48           (naturally coded; _IID_1 omitted)

      Source |       SS       df       MS              Number of obs =    1674
-------------+------------------------------           F( 64,  1609) =   33.82
       Model |  13711.0132    64  214.234581           Prob > F      =  0.0000
    Residual |  10192.8407  1609  6.33489169           R-squared     =  0.5736
-------------+------------------------------           Adj R-squared =  0.5566
       Total |  23903.8539  1673  14.2880179           Root MSE      =  2.5169

------------------------------------------------------------------------------
 LOTTPERTREV |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   ADMINCOST |   .0231094   .0022372    10.33   0.000     .0187212    .0274976
     LOTTOYR |    .021061   .0239901     0.88   0.380     -.025994     .068116
       PRIZE |   .0055246   .0004065    13.59   0.000     .0047272     .006322
      GAMBST |   .7378677   .3139316     2.35   0.019       .12211    1.353625
     GAMBIND |  -.6938102   .2685535    -2.58   0.010    -1.220561   -.1670588
       DIGS3 |   .4643516   .2911182     1.60   0.111    -.1066592    1.035362
       DIGS4 |  -.7144802   .2417643    -2.96   0.003    -1.188686   -.2402741
   OTHTAXREV |    .000136   .0000728     1.87   0.062    -6.84e-06    .0002788
      STDEBT |  -.0001091    .000022    -4.95   0.000    -.0001523   -.0000658
   EDUCSPEND |  -.0000227   .0000105    -2.16   0.031    -.0000432   -2.13e-06
       ALL3R |   .0250368   .2005489     0.12   0.901    -.3683277    .4184013
       STPOP |  -.0005739   .0000734    -7.82   0.000    -.0007179   -.0004299
       UNEMP |   .0798143   .0414634     1.92   0.054    -.0015137    .1611423
       PCINC |   .0001578   .0000367     4.31   0.000     .0000859    .0002297
       PER65 |  -.1034179   8.540502    -0.01   0.990     -16.8551    16.64826
       PERHS |   .0495496   .0211647     2.34   0.019     .0080363    .0910628
     PERCOLL |  -.2327589   .0521735    -4.46   0.000     -.335094   -.1304238
      _IID_2 |  -.2254783   .6758424    -0.33   0.739    -1.551102    1.100146
      _IID_3 |  -1.693642   .6416991    -2.64   0.008    -2.952296   -.4349878
      _IID_4 |   11.05734    1.30295     8.49   0.000     8.501683      13.613
      _IID_5 |   1.141393    .781766     1.46   0.144    -.3919937     2.67478
      _IID_6 |   1.640865   .6844617     2.40   0.017     .2983344    2.983395
      _IID_7 |  -.5379635   .6809582    -0.79   0.430    -1.873622    .7976948
      _IID_8 |   3.546658   .8776535     4.04   0.000     1.825193    5.268122
      _IID_9 |   1.083966   .6566009     1.65   0.099    -.2039169    2.371849
     _IID_10 |  -1.901082   .7011819    -2.71   0.007    -3.276408   -.5257561
     _IID_11 |   4.450886   .8545575     5.21   0.000     2.774723    6.127049
     _IID_12 |   .1875354   .6728838     0.28   0.781    -1.132286    1.507356
     _IID_13 |  -1.208597   .6991758    -1.73   0.084    -2.579988    .1627941
     _IID_14 |  -.7305271   .6874444    -1.06   0.288    -2.078908    .6178536
     _IID_15 |  -.0947484   .6182719    -0.15   0.878    -1.307451    1.117955
     _IID_16 |   .3601271    .627631     0.57   0.566     -.870933    1.591187
     _IID_17 |  -1.252077   .6907769    -1.81   0.070    -2.606994    .1028404
     _IID_18 |   3.350592   .7356786     4.55   0.000     1.907603    4.793581
     _IID_19 |   3.716982   .7919723     4.69   0.000     2.163577    5.270388
     _IID_20 |   2.741917   .7735868     3.54   0.000     1.224573    4.259261
```

```
      _IID_21 |  -.0552468   .6750412    -0.08   0.935    -1.379299    1.268806
      _IID_22 |  -.8046057   .6165457    -1.31   0.192    -2.013923    .4047113
      _IID_23 |   .2279448   .6485133     0.35   0.725    -1.044075    1.499964
      _IID_24 |  -1.648225    .694574    -2.37   0.018    -3.010589   -.2858598
      _IID_25 |  -1.650833   .6928303    -2.38   0.017    -3.009777   -.2918881
      _IID_26 |  -3.890802   .8100608    -4.80   0.000    -5.479687   -2.301917
      _IID_27 |  -.0934414   .7701219    -0.12   0.903    -1.603989    1.417106
      _IID_28 |   3.491842   .7515442     4.65   0.000     2.017734    4.965951
      _IID_29 |  -1.183097   .6892487    -1.72   0.086    -2.535017    .1688222
      _IID_30 |   7.518176   1.170622     6.42   0.000     5.222071    9.814281
      _IID_31 |   1.533708   .6240851     2.46   0.014     .3096032    2.757814
      _IID_32 |  -1.634078   .6595147    -2.48   0.013    -2.927676   -.3404802
      _IID_33 |   2.606572   .8399485     3.10   0.002     .9590637     4.25408
      _IID_34 |  -.5697666   .6360183    -0.90   0.370    -1.817278    .6777447
      _IID_35 |   .0605373   .6828963     0.09   0.929    -1.278922    1.399997
      _IID_36 |   4.185863   .8825047     4.74   0.000     2.454884    5.916843
      _IID_37 |   .0566833   .6801307     0.08   0.934    -1.277352    1.390718
      _IID_38 |  -.2013678   .6262911    -0.32   0.748      -1.4298    1.027064
      _IID_39 |  -1.266819   .7030415    -1.80   0.072    -2.645792    .1121544
      _IID_40 |  -.0334678   .6135303    -0.05   0.957     -1.23687    1.169935
      _IID_41 |   7.841867   .9354058     8.38   0.000     6.007126    9.676609
      _IID_42 |  -.9795556   .8273883    -1.18   0.237    -2.602428    .6433165
      _IID_43 |  -.3967549   .7006118    -0.57   0.571    -1.770962    .9774527
      _IID_44 |    1.94417    .706201     2.75   0.006     .5589999    3.329341
      _IID_45 |  -.4052385   .7656176    -0.53   0.597    -1.906951    1.096474
      _IID_46 |  -1.073327    .683044    -1.57   0.116    -2.413077    .2664222
      _IID_47 |   .1247667   .6623326     0.19   0.851    -1.174359    1.423892
      _IID_48 |  -2.826222   .7616813    -3.71   0.000    -4.320214    -1.33223
        _cons |   .7027669    1.10985     0.63   0.527    -1.474137    2.879671
------------------------------------------------------------------------------
```

Heteroskedacisty:

First, I performed a Breusch-Pagan test for heteroskedascity:

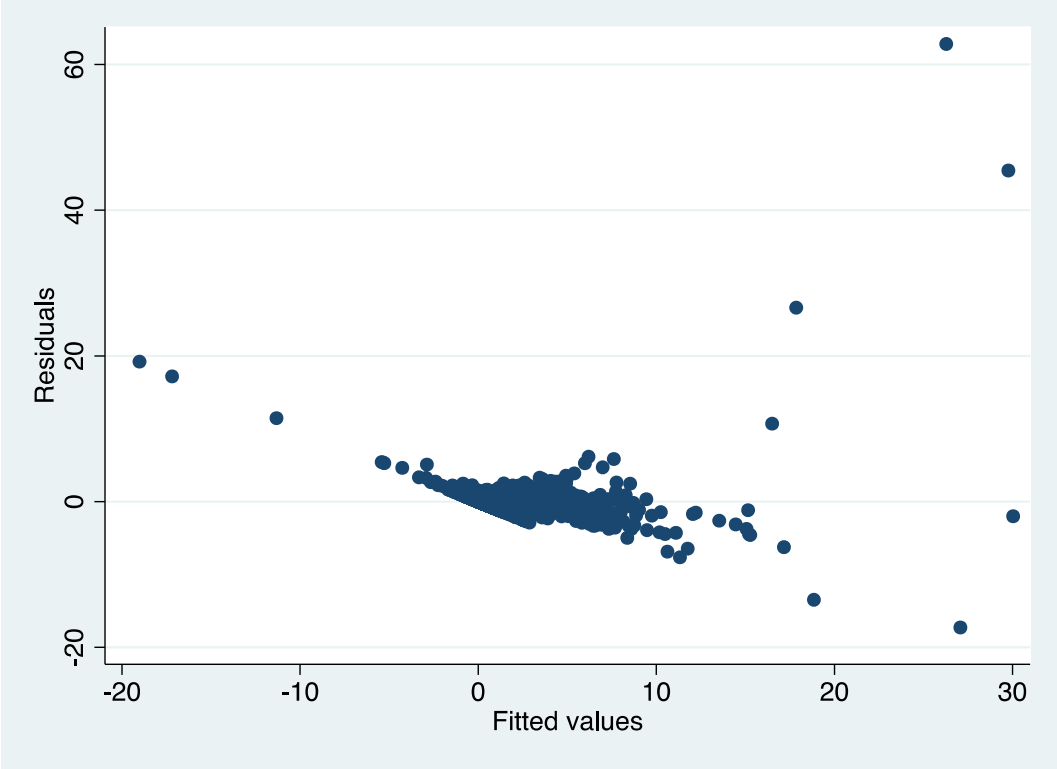
```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of LOTTPERTREV

         chi2(1)      = 29048.70
         Prob > chi2  =   0.0000
```

This test indicates that there is a large issue with heteroskedasitcity as the chi-squared value is incredibly high.

This is visually confirmed by a plot of residuals vs. fitted values:



Because of this, I will use vce(conventional) standard errors in the regression.

Multicollinearity:

In order to test for Mulitcollinearity, I ran the vif command:

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
   OTHTAXREV |     78.68    0.012709
   EDUCSPEND |     58.63    0.017056
       STPOP |     37.53    0.026643
       PCINC |     25.05    0.039919
     PERCOLL |     23.53    0.042498
       PERHS |     17.32    0.057734
      STDEBT |      9.64    0.103766
     LOTTOYR |      9.44    0.105886
      _IID_4 |      9.18    0.108891
       PER65 |      8.29    0.120616
     _IID_30 |      7.41    0.134901
       PRIZE |      4.90    0.203964
     _IID_41 |      4.73    0.211275
     _IID_36 |      4.21    0.237363
       DIGS3 |      4.19    0.238718
```

_IID_8	4.17	0.239995
_IID_11	3.84	0.260429
_IID_33	3.82	0.262025
_IID_42	3.70	0.270040
_IID_26	3.55	0.281717
_IID_19	3.39	0.294732
_IID_5	3.31	0.302478
_IID_20	3.24	0.308908
_IID_27	3.21	0.311694
_IID_48	3.14	0.318641
_IID_45	3.08	0.324450
_IID_28	3.06	0.327294
_IID_18	2.93	0.341563
_IID_44	2.70	0.370673
_IID_39	2.67	0.374012
_IID_10	2.66	0.375999
_IID_43	2.66	0.376611
_IID_13	2.64	0.378159
_IID_25	2.60	0.385118
_IID_17	2.58	0.387411
_IID_29	2.57	0.389131
_IID_14	2.56	0.391176
_IID_24	2.54	0.394217
_IID_6	2.53	0.394593
_IID_46	2.52	0.396233
_IID_35	2.52	0.396404
_IID_7	2.51	0.398664
_IID_37	2.50	0.399634
DIGS4	2.50	0.400702
_IID_21	2.46	0.405683
_IID_12	2.45	0.408289
_IID_2	2.40	0.416371
GAMBST	2.36	0.423060
_IID_32	2.35	0.425010
ADMINCOST	2.34	0.427595
_IID_9	2.33	0.428790
_IID_47	2.31	0.433530
_IID_23	2.28	0.439552
_IID_3	2.23	0.448936
_IID_34	2.19	0.456992
_IID_16	2.13	0.469287
_IID_38	2.12	0.471298
_IID_31	2.11	0.474635
_IID_22	2.06	0.486314
_IID_40	2.04	0.491106
_IID_15	2.01	0.497523
UNEMP	2.00	0.498870
GAMBIND	1.89	0.528787
ALL3R	1.41	0.708323
Mean VIF	6.75	

This indicates that there is a severe amount of multicollinearity with the other tax revenue variable. This makes sense as our dependent variable is lottery revenues as a percent of total state revenues, and other tax revenue would be included in this. Additionally revenues would determine things like education spending. From here on, we will drop the variable “other tax revenue” from our model.

Appendix 3: Final Fixed Effects Model

Here is the result of the final Fixed Effects Model performed with the xtreg command:

```
. xtreg LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIGS4 STDEBT ED
> UCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL, fe vce(conventional)

Fixed-effects (within) regression               Number of obs      =      1674
Group variable: ID                              Number of groups   =        48

R-sq:  within  = 0.4908                         Obs per group: min =        34
       between = 0.0011                                        avg =      34.9
       overall = 0.2172                                        max =        35

                                                F(16,1610)         =     96.97
corr(u_i, Xb)  = -0.5585                        Prob > F           =    0.0000

------------------------------------------------------------------------------
 LOTTPERTREV |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   ADMINCOST |    .023224   .0022381    10.38   0.000     .0188341    .0276139
     LOTTOYR |   .0255399   .0238883     1.07   0.285    -.0213156    .0723953
       PRIZE |    .005548   .0004067    13.64   0.000     .0047503    .0063456
      GAMBST |   .6493515   .3105726     2.09   0.037     .0401824    1.258521
     GAMBIND |  -.6637632   .2682781    -2.47   0.013    -1.189974   -.1375522
       DIGS3 |   .4593692   .2913308     1.58   0.115    -.1120583    1.030797
       DIGS4 |  -.7129161   .2419496    -2.95   0.003    -1.187485   -.2383468
      STDEBT |  -.0000863   .0000184    -4.69   0.000    -.0001223   -.0000502
   EDUCSPEND |  -5.55e-06   5.07e-06    -1.09   0.274    -.0000155    4.39e-06
      ALL3R |   .0068222   .2004663     0.03   0.973    -.3863801    .4000245
      STPOP |  -.0005479   .0000721    -7.59   0.000    -.0006894   -.0004064
      UNEMP |   .0739786   .0413775     1.79   0.074    -.0071808    .1551379
      PCINC |   .0001505   .0000365     4.13   0.000      .000079     .000222
      PER65 |   2.392911   8.441764     0.28   0.777    -14.16509    18.95091
      PERHS |   .0424551   .0208371     2.04   0.042     .0015845    .0833257
     PERCOLL |  -.2149786   .0513371    -4.19   0.000     -.315673   -.1142841
       _cons |   1.380398   1.146811     1.20   0.229    -.8690022    3.629798
-------------+----------------------------------------------------------------
     sigma_u |  2.7424399
     sigma_e |  2.5188648
         rho |  .54241762   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(47, 1610) =     3.97            Prob > F = 0.0000

.
```

We can also perform this with xi: reg, which creates a dummy for each state[8]. Originally this was done with the state ID number, but to make this table more informative, I will replace the ID with the name of the state:

[8] Robust standard errors have a different syntax with this command, but the values of the non-state dummy variables are the same.

```
. xi: reg LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIGS4  STDEBT
>  EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL i.ID
i.ID              _IID_1-48           (naturally coded; _IID_1 omitted)

      Source |       SS       df       MS              Number of obs =    1674
-------------+------------------------------           F( 63,  1610) =   34.25
       Model |  13688.9189    63  217.284427           Prob > F      =  0.0000
    Residual |   10214.935  1610  6.34468013           R-squared     =  0.5727
-------------+------------------------------           Adj R-squared =  0.5559
       Total |  23903.8539  1673  14.2880179           Root MSE      =  2.5189

------------------------------------------------------------------------------
 LOTTPERTREV |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   ADMINCOST |    .023224   .0022381    10.38   0.000     .0188341    .0276139
     LOTTOYR |   .0255399   .0238883     1.07   0.285    -.0213156    .0723953
       PRIZE |    .005548   .0004067    13.64   0.000     .0047503    .0063456
      GAMBST |   .6493515   .3105726     2.09   0.037     .0401824    1.258521
     GAMBIND |  -.6637632   .2682781    -2.47   0.013    -1.189974   -.1375522
       DIGS3 |   .4593692   .2913308     1.58   0.115    -.1120583    1.030797
       DIGS4 |  -.7129161   .2419496    -2.95   0.003    -1.187485   -.2383468
      STDEBT |  -.0000863   .0000184    -4.69   0.000    -.0001223   -.0000502
   EDUCSPEND |  -5.55e-06   5.07e-06    -1.09   0.274    -.0000155    4.39e-06
      ALL3R |   .0068222   .2004663     0.03   0.973    -.3863801    .4000245
      STPOP |  -.0005479   .0000721    -7.59   0.000    -.0006894   -.0004064
      UNEMP |   .0739786   .0413775     1.79   0.074    -.0071808    .1551379
      PCINC |   .0001505   .0000365     4.13   0.000      .000079     .000222
      PER65 |   2.392911   8.441764     0.28   0.777    -14.16509    18.95091
      PERHS |   .0424551   .0208371     2.04   0.042     .0015845    .0833257
     PERCOLL |  -.2149786   .0513371    -4.19   0.000     -.315673   -.1142841
     Arizona|    -.03655   .6687442    -0.05   0.956    -1.348251    1.275151
     Arkansa|   -1.56546   .6385106    -2.45   0.014    -2.817859   -.3130606
     Califor|   11.10736   1.303681     8.52   0.000      8.55027    13.66445
     Colorad|   1.292837   .7781492     1.66   0.097    -.2334546    2.819129
     Connect|   1.740798   .6828937     2.55   0.011     .4013444    3.080253
     Delawar|  -.3497525   .6739794    -0.52   0.604    -1.671722    .9722167
     Florida|   3.524051   .8782478     4.01   0.000     1.801422     5.24668
     Georgia|   1.140522   .6564087     1.74   0.082    -.1469836    2.428027
       Idaho|   -1.64258   .6879146    -2.39   0.017    -2.991882   -.2932776
    Illinois|   4.533378   .8540742     5.31   0.000     2.858164    6.208592
     Indiana|   .3549818   .6673984     0.53   0.595    -.9540792    1.664043
        Iowa|  -1.044562   .6941723    -1.50   0.133    -2.406138    .3170147
      Kansas|  -.6018809   .6845126    -0.88   0.379     -1.94451    .7407485
    Kentucky|  -.0106097   .6171045    -0.02   0.986    -1.221022    1.199803
    Louisian|   .3990417   .6277694     0.64   0.525    -.8322895    1.630373
       Maine|  -1.097734    .686345    -1.60   0.110    -2.443958     .248489
    Maryland|   3.468788   .7335172     4.73   0.000     2.030039    4.907537
    Massachu|   3.809034   .7910474     4.82   0.000     2.257443    5.360625
    Michigan|   2.841521   .7723421     3.68   0.000     1.326619    4.356423
    Minnesot|   .1582732   .6658022     0.24   0.812    -1.147657    1.464203
    Mississi|  -.6800193   .6133992    -1.11   0.268    -1.883164    .5231256
    Missouri|   .3038783   .6477372     0.47   0.639    -.9666184    1.574375
     Montana|  -1.458927   .6876687    -2.12   0.034    -2.807747   -.1101067
    Nebraska|   -1.46587   .6862443    -2.14   0.033    -2.811896   -.1198436
      Nevada|  -3.427778   .7717816    -4.44   0.000     -4.94158   -1.913976
    New Hamp|  -.0101791    .769424    -0.01   0.989    -1.519357    1.498999
    New Jers|   3.557193   .7513089     4.73   0.000     2.083547    5.030839
    New Mexi|  -.9995552   .6827327    -1.46   0.143    -2.338693    .3395831
    New York|   7.353253   1.168188     6.29   0.000     5.061924    9.644582
    N Caroli|   1.583494    .623997     2.54   0.011     .3595618    2.807425
    N Dakota|  -1.464847   .6537641    -2.24   0.025    -2.747165   -.1825286
```

Ohio	2.551627	.8400813	3.04	0.002	.9038588	4.199395
Oklahoma	-.4711058	.6343099	-0.74	0.458	-1.715266	.773054
Oregon	.0752091	.6833785	0.11	0.912	-1.265196	1.415614
Pennsylv	4.26916	.8820576	4.84	0.000	2.539058	5.999262
Rhode Is	.1070668	.6801202	0.16	0.875	-1.226947	1.441081
S Caroli	-.0883944	.6238442	-0.14	0.887	-1.312026	1.135238
S Dakota	-1.079697	.6964022	-1.55	0.121	-2.445647	.2862536
Tennesse	.0683463	.6115753	0.11	0.911	-1.131221	1.267914
Texas	7.54009	.9220543	8.18	0.000	5.731537	9.348643
Utah	-.7656142	.8200521	-0.93	0.351	-2.374096	.8428676
Vermont	-.2851108	.6985957	-0.41	0.683	-1.655363	1.085142
Virginia	1.95669	.7067145	2.77	0.006	.5705133	3.342867
Washingt	.1373873	.7088884	0.19	0.846	-1.253054	1.527828
W Virgin	-1.355215	.6666721	-2.03	0.042	-2.662852	-.047579
Wisconsi	.3374541	.6529718	0.52	0.605	-.94331	1.618218
Wyoming	-2.503067	.7423385	-3.37	0.001	-3.959118	-1.047015
Alabam	.5083906	1.105812	0.46	0.646	-1.660592	2.677374

Appendix 4: Comparing State Data

Here is the information for our general model:

```
. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |      1728        24.5    13.85741          1         48
        YEAR |      1728      1984.5     10.3913       1967       2002
 LOTTPERTREV |      1728    1.751003    4.943031          0   89.09923
   ADMINCOST |      1724    18.00338    43.96478          0     676.23
     LOTTOYR |      1728    5.366898    8.205644          0         36
-------------+--------------------------------------------------------
       PRIZE |      1728    153.3481    354.0908          0   3000.904
      GAMBST |      1728    .1070602    .3092793          0          1
     GAMBIND |      1728    .1244213    .3301571          0          1
       DIGS3 |      1680    .2511905     .433827          0          1
       DIGS4 |      1680    .1642857    .4029796          0          7
-------------+--------------------------------------------------------
      STDEBT |      1728    4983.627     9074.54         16   87978.79
   EDUCSPEND |      1728    30876.25    47387.19      471.4   541158.8
       ALL3R |      1724    .1600928    .3667985          0          1
       STPOP |      1728     4905.93    5171.805        319   35116.03
       UNEMP |      1724    5.727494    2.079443        1.4         18
-------------+--------------------------------------------------------
       PCINC |      1724    14223.81    8719.081       2001      42550
       PER65 |      1728     .116375    .0207519   .0594495      .1858
       PERHS |      1728    70.58157    12.23859   35.22329       92.6
     PERCOLL |      1728    17.43914    5.890086        2.5       38.7
```

Here is a summary of variables specified for each state:

State	Lottery?	PERCOLL	ADMINCOST	UNEMP
Arkansas	No	Lower	n/a	Higher
California	Yes	Higher	Very High	Higher
Colorado	Yes	Higher	Higher	Average
Connecticut	Yes	Higher	Higher	Average
Florida	Yes	Lower	Very High	Average
Georgia	Yes	Lower	Higher	Average
Idaho	Yes	Lower	Lower	Average
Illinois	Yes	Higher	Higher	Higher
Maryland	Yes	Higher	Higher	Average
Massachusetts	Yes	Higher	Higher	Average
Michigan	Yes	Lower	Higher	Average
Montana	Yes	Higher	Much Lower	Average
Nebraska	Yes	Lower	Much Lower	Lower
Nevada	No	Lower	n/a	Higher
New Jersey	Yes	Higher	Higher	Higher
New York	Yes	Higher	Very High	Higher
North Carolina	No	Lower	n/a	Lower

North Dakota	No	Average	n/a	Lower
Ohio	Yes	Average	Much Higher	Average
Pennsylvania	Yes	Lower	Average	Higher
Texas	Yes	Average	Average	Average
Virginia	Yes	Higher	Average	Lower
West Virginia	Yes	Lower	Much Lower	Higher
Wyoming	No	Higher	n/a	Lower

```
. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==3

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           3           0         3          3
        YEAR |        36      1984.5    10.53565      1967       2002
 LOTTPERTREV |        36           0           0         0          0
   ADMINCOST |        36           0           0         0          0
     LOTTOYR |        36           0           0         0          0
-------------+--------------------------------------------------------
       PRIZE |        36           0           0         0          0
      GAMBST |        36           0           0         0          0
     GAMBIND |        36           0           0         0          0
       DIGS3 |        35           0           0         0          0
       DIGS4 |        35           0           0         0          0
-------------+--------------------------------------------------------
      STDEBT |        36    1234.962     1322.49       101   6405.164
   EDUCSPEND |        36    15951.92    15310.57    1924.58   68114.34
       ALL3R |        36           0           0         0          0
       STPOP |        36    2422.847    647.0495      1926   5306.966
       UNEMP |        36    6.330556    1.879486       1.4       10.1
-------------+--------------------------------------------------------
       PCINC |        36    11602.58    7201.795      2219      26055
       PER65 |        36    .1371315    .0104442      .1126      .1498
       PERHS |        36    60.92953    13.12268   36.58145       83.8
     PERCOLL |        36    12.03984    4.240133   6.062915       24.4

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==4

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           4           0         4          4
        YEAR |        36      1984.5    10.53565      1967       2002
 LOTTPERTREV |        36    3.073636    9.851516         0   53.77304
   ADMINCOST |        36    81.59525    94.72504         0     359.02
     LOTTOYR |        36        4.25    5.693982         0         17
-------------+--------------------------------------------------------
       PRIZE |        36    523.3004    586.6697         0     1503.8
      GAMBST |        36           0           0         0          0
     GAMBIND |        36    .1111111    .3187276         0          1
       DIGS3 |        35    .2857143    .4583492         0          1
       DIGS4 |        35           0           0         0          0
-------------+--------------------------------------------------------
      STDEBT |        36    20521.22     17635.3   2841.828   57170.07
   EDUCSPEND |        36    172321.6    135225.7   15668.15   499085.9
       ALL3R |        35    .0571429    .2355041         0          1
       STPOP |        36     24554.4    7361.034    643.786      33872
       UNEMP |        35    7.045714    1.611784        4.4        9.9
-------------+--------------------------------------------------------
```

```
       PCINC |        35    15735.26     8514.13       3878      32275
       PER65 |        36      .10172    .0115529   .0608898   .1393807
       PERHS |        36    74.15694    6.712346   59.27496       92.2
     PERCOLL |        36    20.56756    4.769739   12.36269       27.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==5

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           5           0         5          5
        YEAR |        36      1984.5    10.53565      1967       2002
 LOTTPERTREV |        36    1.167536    1.169809         0   3.062194
   ADMINCOST |        36    13.52956    14.56121         0      56.26
     LOTTOYR |        36    5.833333    6.855655         0         20
-------------+--------------------------------------------------------
       PRIZE |        36     75.9445    87.99508         0    238.855
      GAMBST |        36    .3333333    .4780914         0          1
     GAMBIND |        36    .3055556    .4671766         0          1
       DIGS3 |        35           0           0         0          0
       DIGS4 |        35           0           0         0          0
-------------+--------------------------------------------------------
      STDEBT |        36     3344.79    10220.85       119   62343.08
   EDUCSPEND |        36    34982.26    88118.67   2650.69   541158.8
      ALL3R |        36    .3888889    .4944132         0          1
      STPOP |        36    4005.137    5294.518      2012   34600.46
      UNEMP |        36    5.088889    1.377737       2.7        7.7
-------------+--------------------------------------------------------
      PCINC |        36    15597.56    9416.256      3142      32949
      PER65 |        36    .0927966    .0095164      .081   .1285163
      PERHS |        36    79.22193    8.270621   60.3198       90.4
     PERCOLL |        36     23.8882    6.033991   13.64943       38.7

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==6

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           6           0         6          6
        YEAR |        36      1984.5    10.53565      1967       2002
 LOTTPERTREV |        36    3.522169    2.165784         0   8.884637
   ADMINCOST |        36    23.16356    27.18387         0      88.43
     LOTTOYR |        36    13.77778    10.11678         0         31
-------------+--------------------------------------------------------
       PRIZE |        36    194.1169    185.7284         0    546.095
      GAMBST |        36           0           0         0          0
     GAMBIND |        36    .3055556    .4671766         0          1
       DIGS3 |        35    .5142857    .5070926         0          1
       DIGS4 |        35           0           0         0          0
-------------+--------------------------------------------------------
      STDEBT |        36    7449.104    5596.526      1295   18456.28
   EDUCSPEND |        36    16791.18    12885.85   2175.39   52875.41
      ALL3R |        36    .1111111    .3187276         0          1
      STPOP |        36    3189.252    249.9786   2710.079   4430.989
      UNEMP |        36    5.433333    1.789014       2.3        9.5
-------------+--------------------------------------------------------
      PCINC |        36    19201.33    11713.22      4195      40640
      PER65 |        36     .121815    .0184311     .0932      .1436
      PERHS |        36    73.18543    9.938279   52.33765       88.6
     PERCOLL |        36    22.87904    6.402676   12.40348       35.2
```

```
. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if STATE==Cali
> fornia
California not found
r(111);

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==8

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           8           0          8          8
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    3.763884    7.980985          0   44.47979
   ADMINCOST |        36    52.22042    65.43131          0     227.26
     LOTTOYR |        36    3.333333    4.898979          0         15
-------------+--------------------------------------------------------
       PRIZE |        36    422.0999    521.9774          0   1165.843
      GAMBST |        36           0           0          0          0
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35          .4    .4970501          0          1
       DIGS4 |        35    .2857143    .4583492          0          1
-------------+--------------------------------------------------------
      STDEBT |        36    6747.193    5902.317        824   18181.46
   EDUCSPEND |        36    54214.54    41390.47    5619.71   143606.6
      ALL3R |        36    .1111111    .3187276          0          1
      STPOP |        36    10341.34     3515.57    573.822      15982
      UNEMP |        36    5.772222    1.863884        2.4       10.7
-------------+--------------------------------------------------------
      PCINC |        36    14971.64    9086.968       2909      33723
      PER65 |        36    .1672263    .0216872   .0964092      .1858
      PERHS |        36     69.6028    10.42637   49.60032       87.6
     PERCOLL |        36    16.42869    5.850534        2.5       35.7

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==9

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36           9           0          9          9
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    1.708553    3.200066          0   12.72757
   ADMINCOST |        36    31.42622    60.06664          0     253.46
     LOTTOYR |        36        1.25    2.556504          0          9
-------------+--------------------------------------------------------
       PRIZE |        36    237.8725    435.7645          0   1308.235
      GAMBST |        36           0           0          0          0
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .2285714     .426043          0          1
       DIGS4 |        35    .1428571    .3550358          0          1
-------------+--------------------------------------------------------
      STDEBT |        36    3685.246     4402.23        728    20783.6
   EDUCSPEND |        36    40426.93    35535.28    5284.34   158497.2
      ALL3R |        36    .0277778    .1666667          0          1
      STPOP |        36    6147.745    2087.142   3460.503   16373.33
      UNEMP |        36    5.327778    1.400941        2.9        8.6
-------------+--------------------------------------------------------
      PCINC |        36    14075.61    9612.196       2655      42468
      PER65 |        36    .0970257    .0169995      .0753   .1732265
      PERHS |        36    63.34073    13.88006   38.00809         88
     PERCOLL |        36    16.60164    5.444376   8.323299       32.6
```

```
. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==10

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36          10           0         10         10
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    .6725562    .9620528          0   2.741746
   ADMINCOST |        36    5.155222    7.184984          0     18.305
     LOTTOYR |        36    2.527778    4.102167          0         13
-------------+--------------------------------------------------------
       PRIZE |        36    16.06733    22.62655          0      55.25
      GAMBST |        36           0           0          0          0
     GAMBIND |        36    .0277778    .1666667          0          1
       DIGS3 |        35    .0571429    .2355041          0          1
       DIGS4 |        35           0           0          0          0
-------------+--------------------------------------------------------
      STDEBT |        36    942.5216    1417.678         16   7520.051
   EDUCSPEND |        36    9351.809    18784.33     711.57   115221.9
       ALL3R |        36    .3611111    .4871361          0          1
       STPOP |        36    1166.502    1252.353        701   8405.677
       UNEMP |        36    5.797222    1.638377        3.6        9.8
-------------+--------------------------------------------------------
       PCINC |        36    12624.03    7755.439       2755      32090
       PER65 |        36     .106632    .0103608      .0913   .1306539
       PERHS |        36    74.95392     8.91763   56.12059       88.5
     PERCOLL |        36    16.23575    4.264962   9.136617       29.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==11

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36          11           0         11         11
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    3.332822    3.874747          0   21.60171
   ADMINCOST |        36    30.31594    30.01606          0     132.15
     LOTTOYR |        36    11.27778    9.464554          0         28
-------------+--------------------------------------------------------
       PRIZE |        36    419.0456    372.8767          0    866.658
      GAMBST |        36    .3333333    .4780914          0          1
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .5142857    .5070926          0          1
       DIGS4 |        35    .5428571    .5054327          0          1
-------------+--------------------------------------------------------
      STDEBT |        36    11107.92     8673.27       1227   28827.99
   EDUCSPEND |        36    53405.96    34385.86    9001.05   156430.6
       ALL3R |        35          .2    .4058397          0          1
       STPOP |        36    11343.17    1969.902   1227.024   16713.15
       UNEMP |        35    6.174286     2.11901        2.9       11.4
-------------+--------------------------------------------------------
       PCINC |        35    15710.31    9110.653       3785      32259
       PER65 |        36    .1161268    .0143094      .0973   .1708139
       PERHS |        36    70.64989    11.15732    48.9481       89.1
     PERCOLL |        36    18.27143     5.56766   9.414824       27.9

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==18

    Variable |       Obs        Mean    Std. Dev.       Min        Max
```

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-------------+--------------------------------------------------------
          ID |         36          18           0         18         18
        YEAR |         36      1984.5    10.53565       1967       2002
 LOTTPERTREV |         36    4.829782    3.116983          0   13.47737
   ADMINCOST |         36    33.04572    38.48695          0    133.072
     LOTTOYR |         36    12.91667    9.926516          0         30
-------------+--------------------------------------------------------
       PRIZE |         36    289.7574    236.1154          0    733.196
      GAMBST |         36           0           0          0          0
     GAMBIND |         36           0           0          0          0
       DIGS3 |         35    .5142857    .5070926          0          1
       DIGS4 |         35    .5428571    .5054327          0          1
-------------+--------------------------------------------------------
      STDEBT |         36    4970.053    3435.708        379   11365.16
   EDUCSPEND |         36    23770.14    15610.63    3165.63   55870.21
       ALL3R |         36           0           0          0          0
       STPOP |         36    4405.896    537.1733   2715.884       5296
       UNEMP |         36    5.122222    1.299255          3        8.4
-------------+--------------------------------------------------------
       PCINC |         36    16680.72     9644.04       3516      33872
       PER65 |         36    .0990203    .0153585      .0726   .1307471
       PERHS |         36     71.6573    11.09929   48.60646       87.5
     PERCOLL |         36     22.9193    6.332646    12.5276       34.7

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==19

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |         36          19           0         19         19
        YEAR |         36      1984.5    10.53565       1967       2002
 LOTTPERTREV |         36     7.72279    12.69542          0   75.20431
   ADMINCOST |         36    42.22053    49.33105          0     277.64
     LOTTOYR |         36    13.77778    10.11678          0         31
-------------+--------------------------------------------------------
       PRIZE |         36    809.4106    961.7463          0   3000.904
      GAMBST |         36           0           0          0          0
     GAMBIND |         36           0           0          0          0
       DIGS3 |         35    .5142857    .5070926          0          1
       DIGS4 |         35           0           0          0          0
-------------+--------------------------------------------------------
      STDEBT |         36    12877.03    11311.05       1801   38961.07
   EDUCSPEND |         36    25609.92    16660.51    3259.27   58705.54
       ALL3R |         36           0           0          0          0
       STPOP |         36    5655.427    845.5871    1284.47       6349
       UNEMP |         36       5.625    2.028986        2.6       11.2
-------------+--------------------------------------------------------
       PCINC |         36    17006.72    10459.49       3583      37992
       PER65 |         36    .1294628    .0108005      .1113   .1441754
       PERHS |         36     74.6074    9.136398   55.05827       85.9
     PERCOLL |         36    22.41664    6.893648   11.41817       33.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==20

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |         36          20           0         20         20
        YEAR |         36      1984.5    10.53565       1967       2002
 LOTTPERTREV |         36    3.210394    1.981871          0   8.613428
   ADMINCOST |         36    33.50814    26.26661          0     109.56
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    LOTTOYR |        36    12.91667    9.926516          0         30
------------+---------------------------------------------------------
      PRIZE |        36    401.0606     321.143          0     924.16
     GAMBST |        36    .1111111    .3187276          0          1
    GAMBIND |        36    .2777778    .4542568          0          1
      DIGS3 |        35    .5142857    .5070926          0          1
      DIGS4 |        35    .5428571    .5054327          0          1
------------+---------------------------------------------------------
     STDEBT |        36    6671.893    5284.545        930   19444.88
  EDUCSPEND |        36     59620.2    46481.79   12535.06   174605.3
      ALL3R |        36    .1388889    .3507362          0          1
      STPOP |        36    8998.076    1051.389   4482.646       9938
      UNEMP |        36    7.605556    3.053892        3.6       15.5
------------+---------------------------------------------------------
      PCINC |        36       14981    8771.946       3554      35355
      PER65 |        36    .1066221    .0151284      .0843   .1244399
      PERHS |        36    71.55097    11.00013   49.21753       88.1
    PERCOLL |        36    16.08048    5.330363   8.632358       35.7

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==24

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          24           0         24         24
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    .3287544    .4389718          0   1.147999
   ADMINCOST |        35      2.4268    3.156185          0      8.085
     LOTTOYR |        36    3.333333    4.898979          0         15
-------------+---------------------------------------------------------
      PRIZE |        36    5.874058    7.386494          0     18.149
     GAMBST |        36           0           0          0          0
    GAMBIND |        36    .3055556    .4671766          0          1
      DIGS3 |        35           0           0          0          0
      DIGS4 |        35           0           0          0          0
-------------+---------------------------------------------------------
     STDEBT |        36    1593.524    3624.078         78   21947.04
  EDUCSPEND |        36    10903.32     31559.3     767.88   191325.5
      ALL3R |        36    .1944444    .4013865          0          1
      STPOP |        36    1109.116    1572.041        694   10050.45
      UNEMP |        36    5.944444    1.253668        3.9        8.8
-------------+---------------------------------------------------------
      PCINC |        36    12370.39    6965.957       2805      29816
      PER65 |        36    .1164322    .0145253      .0959      .1347
      PERHS |        36    76.10644    9.799438   55.76584       89.6
    PERCOLL |        36     18.0404    4.640487   9.946514       25.2

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==25

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          25           0         25         25
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36     .286111     .556617          0   1.712264
   ADMINCOST |        36    3.939306    6.953793          0     16.703
     LOTTOYR |        36        1.25    2.556504          0          9
-------------+---------------------------------------------------------
      PRIZE |        36    9.362528    16.59942          0     42.618
     GAMBST |        36           0           0          0          0
    GAMBIND |        36    .2222222     .421637          0          1
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       DIGS3 |        35           0           0          0          0
       DIGS4 |        35           0           0          0          0
-------------+---------------------------------------------------------
      STDEBT |        36     1232.94    2092.432         53   11373.22
   EDUCSPEND |        36    11339.98    17119.15     922.28   88197.06
       ALL3R |        36           0           0          0          0
       STPOP |        36    1787.167    876.2791       1443   5637.309
       UNEMP |        36    3.363889    1.092089        2.1        6.1
-------------+---------------------------------------------------------
       PCINC |        36    14215.19    8598.908       2990      33322
       PER65 |        36    .1316396    .0069949   .1198754      .1425
       PERHS |        36    76.41507    9.827274   55.84628       92.2
     PERCOLL |        36     16.9171    4.832352   8.830649       30.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==26

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          26           0         26         26
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36           0           0          0          0
   ADMINCOST |        36           0           0          0          0
     LOTTOYR |        36           0           0          0          0
-------------+---------------------------------------------------------
       PRIZE |        36           0           0          0          0
      GAMBST |        36           1           0          1          1
     GAMBIND |        36    .1666667    .3779645          0          1
       DIGS3 |        35           0           0          0          0
       DIGS4 |        35           0           0          0          0
-------------+---------------------------------------------------------
      STDEBT |        36    1170.297    1119.219         18   4159.879
   EDUCSPEND |        36    7793.526    8120.458     596.63   39221.72
       ALL3R |        36    .0277778    .1666667          0          1
       STPOP |        36    1039.088    538.5071        436   2871.782
       UNEMP |        36    6.186111    1.625362        4.1       10.1
-------------+---------------------------------------------------------
       PCINC |        36    15769.94    8657.205       3660      31004
       PER65 |        36    .0957752    .0231928      .0596    .145768
       PERHS |        36    76.73764    6.969429    61.5775       90.2
     PERCOLL |        36    15.26068    3.283457   10.09788       22.8

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==28

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          28           0         28         28
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    5.477963    8.517512          0   48.47458
   ADMINCOST |        36    28.63072    24.45897          0     117.91
     LOTTOYR |        36    14.66667    10.27619          0         32
-------------+---------------------------------------------------------
       PRIZE |        36    420.7997    348.2898          0   1115.895
      GAMBST |        36    .6944444    .4671766          0          1
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .5142857    .5070926          0          1
       DIGS4 |        35    .5428571    .5054327          0          1
-------------+---------------------------------------------------------
      STDEBT |        36     12084.6    9436.721       1146   28938.28
   EDUCSPEND |        36    37775.49    28072.92    4284.14   96089.81
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       ALL3R |        36    .3055556    .4671766          0          1
       STPOP |        36    7241.914    1449.346    909.453       8414
       UNEMP |        36       6.125    1.774804        3.8       10.4
-------------+---------------------------------------------------------
       PCINC |        36    17845.86    10567.46       3892      36983
       PER65 |        36    .1188272    .0149282      .0935      .1377
       PERHS |        36    71.24769    11.52649   48.95833       89.7
     PERCOLL |        36    20.50857    6.156521   10.80698       30.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==30

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          30           0         30         30
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36     3.67756    10.31315          0   62.93654
   ADMINCOST |        36    52.41779    77.07579          0      464.8
     LOTTOYR |        36        17.5    10.53565          0         35
-------------+---------------------------------------------------------
       PRIZE |        36    720.3063    789.1086          0   2664.143
      GAMBST |        36           0           0          0          0
     GAMBIND |        36    .2777778    .4542568          0          1
       DIGS3 |        35    .5142857    .5070926          0          1
       DIGS4 |        35    .5428571    .5054327          0          1
-------------+---------------------------------------------------------
      STDEBT |        36    34197.18    24370.48       2069   78615.99
   EDUCSPEND |        36    97763.49    56779.29   24730.15   207052.5
       ALL3R |        36    .1666667    .3779645          0          1
       STPOP |        36    17322.27    3056.744   2173.491      18976
       UNEMP |        36    6.394444    1.718129        3.5       10.3
-------------+---------------------------------------------------------
       PCINC |        36    17431.28    10552.37       3923      39077
       PER65 |        36    .1227044    .0103159      .1051   .1366107
       PERHS |        36    69.57355    10.13629   49.14899       86.6
     PERCOLL |        36    17.95336    7.442006    3.06539       30.7

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==31

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          31           0         31         31
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36           0           0          0          0
   ADMINCOST |        36           0           0          0          0
     LOTTOYR |        36           0           0          0          0
-------------+---------------------------------------------------------
       PRIZE |        36           0           0          0          0
      GAMBST |        36           0           0          0          0
     GAMBIND |        36         .25     .439155          0          1
       DIGS3 |        35           0           0          0          0
       DIGS4 |        35           0           0          0          0
-------------+---------------------------------------------------------
      STDEBT |        36    2692.186    2315.975        457   9336.374
   EDUCSPEND |        36    41254.25    30355.27    6307.31   112741.3
       ALL3R |        36    .0277778    .1666667          0          1
       STPOP |        36    5941.588     1365.88   1275.056       8049
       UNEMP |        36    4.927778    1.570007        2.9          9
-------------+---------------------------------------------------------
       PCINC |        36    13395.64    8657.976       2525      33985
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       PER65 |         36    .1068154    .0163787      .0749      .1252
       PERHS |         36    61.86111    14.53502    36.6249       90.2
     PERCOLL |         36    15.72638    5.474093   7.811492       30.1

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==32

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |         36          32           0         32         32
        YEAR |         36      1984.5    10.53565       1967       2002
 LOTTPERTREV |         36           0           0          0          0
   ADMINCOST |         36           0           0          0          0
     LOTTOYR |         36           0           0          0          0
-------------+--------------------------------------------------------
       PRIZE |         36           0           0          0          0
      GAMBST |         36           0           0          0          0
     GAMBIND |         36    .3055556    .4671766          0          1
       DIGS3 |         35           0           0          0          0
       DIGS4 |         35           0           0          0          0
-------------+--------------------------------------------------------
      STDEBT |         36    3594.549    14183.69         31   80384.89
   EDUCSPEND |         36    13569.19    41507.22     754.08   235685.4
      ALL3R |         36         .25     .439155          0          1
       STPOP |         36    1379.587    3309.609        615   19074.84
       UNEMP |         36    4.133333    1.112269        2.3        6.3
-------------+--------------------------------------------------------
       PCINC |         36    13362.08    8786.646       2592      39461
       PER65 |         36    .1271173     .014229      .1013       .148
       PERHS |         36    70.25148    11.37857   46.87667       85.9
     PERCOLL |         36    16.15913     5.55416   7.610063       31.4

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==33

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |         36          33           0         33         33
        YEAR |         36      1984.5    10.53565       1967       2002
 LOTTPERTREV |         36    3.245879    3.943565          0   22.67374
   ADMINCOST |         36    52.13264    58.89772          0    299.219
     LOTTOYR |         36    11.27778    9.464554          0         28
-------------+--------------------------------------------------------
       PRIZE |         36    512.9243    518.0522          0   1363.071
      GAMBST |         36           0           0          0          0
     GAMBIND |         36           0           0          0          0
       DIGS3 |         35    .5142857    .5070926          0          1
       DIGS4 |         35    .5428571    .5054327          0          1
-------------+--------------------------------------------------------
      STDEBT |         36    7303.244    4824.709       1150   18087.39
   EDUCSPEND |         36    55675.59    38268.52    6857.98   132484.8
      ALL3R |         36    .3055556    .4671766          0          1
       STPOP |         36    10526.06     1565.15   1855.059      11353
       UNEMP |         36         6.3    2.302793        2.7       12.5
-------------+--------------------------------------------------------
       PCINC |         36    14370.11    8171.131       3309      28400
       PER65 |         36    .1156813    .0154508      .0911      .1343
       PERHS |         36    70.99164    10.75532    49.8246         87
     PERCOLL |         36    15.62858    4.966275   8.576066       25.5

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
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> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==36

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36          36           0         36         36
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    4.789797    9.877015          0   60.26611
   ADMINCOST |        36    34.24739    30.80356          0     157.68
     LOTTOYR |        36    13.77778    10.11678          0         31
-------------+--------------------------------------------------------
       PRIZE |        36    459.0148    399.3612          0   1406.694
      GAMBST |        36           0           0          0          0
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .5142857    .5070926          0          1
       DIGS4 |        35    .5428571    .5054327          0          1
-------------+--------------------------------------------------------
      STDEBT |        36    8386.711    4686.475   1673.109   18594.98
   EDUCSPEND |        36    53529.52    33853.64    9429.56   127337.8
       ALL3R |        36    .3333333    .4780914          0          1
       STPOP |        36    11362.95    2318.351     634.11      12281
       UNEMP |        36    6.136111    2.059286        2.9       11.8
-------------+--------------------------------------------------------
       PCINC |        36    14804.08    8586.643       3246      29539
       PER65 |        36    .1362322    .0194444      .1047      .1591
       PERHS |        36    69.20026    11.76209    46.5796         89
     PERCOLL |        36    15.85553    5.117116    8.05114       25.3

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==41

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36          41           0         41         41
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    5.228517    17.58561          0   89.09923
   ADMINCOST |        36    33.67614    78.08788          0    317.955
     LOTTOYR |        36    1.527778     2.93244          0         10
-------------+--------------------------------------------------------
       PRIZE |        36    448.7741    751.5909          0   2151.737
      GAMBST |        36           0           0          0          0
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .2285714     .426043          0          1
       DIGS4 |        35           0           0          0          0
-------------+--------------------------------------------------------
      STDEBT |        36    5575.901      4787.5        723   19228.15
   EDUCSPEND |        36    83428.18    64751.07     7347.5   229139.1
       ALL3R |        36    .0277778    .1666667          0          1
       STPOP |        36    14545.83    4499.522    758.156      20852
       UNEMP |        36    5.505556    1.550289        2.7        8.9
-------------+--------------------------------------------------------
       PCINC |        36    13945.25    8310.076       2840      30859
       PER65 |        36    .0987396    .0120335      .0829   .1431315
       PERHS |        36    66.51197      10.848   45.04047       87.7
     PERCOLL |        36    17.85879    4.853795    10.0084       30.1

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==44

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
          ID |        36          44           0         44         44
```

```
       YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    1.863919    2.670366          0   10.98158
   ADMINCOST |        36    34.60503    46.99648          0    128.219
     LOTTOYR |        36    2.916667         4.5          0         14
-------------+---------------------------------------------------------
       PRIZE |        36    182.4692    244.0623          0    663.645
      GAMBST |        36           0           0          0          0
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .3714286    .4902409          0          1
       DIGS4 |        35    .2857143    .4583492          0          1
-------------+---------------------------------------------------------
      STDEBT |        36    4074.709    3664.066        259   12010.62
   EDUCSPEND |        36    33949.88    24148.73    4254.65   87187.96
       ALL3R |        36    .0277778    .1666667          0          1
       STPOP |        36    5582.608    943.9397    2279.59       7079
       UNEMP |        36    4.552778    1.254133        2.2        7.7
-------------+---------------------------------------------------------
       PCINC |        36    15149.67    9020.339       2967      31162
       PER65 |        36    .0980113    .0134489       .074    .124054
       PERHS |        36    68.15488    12.34036   44.83782         90
     PERCOLL |        36    21.02469    5.968909   11.13447       31.9

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==46

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          46           0         46         46
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36    1.053747    1.308973          0   5.308552
   ADMINCOST |        36    12.45361    33.59318          0     201.56
     LOTTOYR |        36        4.25    5.693982          0         17
-------------+---------------------------------------------------------
       PRIZE |        36    32.12869    41.19675          0     120.18
      GAMBST |        36         .25     .439155          0          1
     GAMBIND |        36           0           0          0          0
       DIGS3 |        35    .4285714    .5020964          0          1
       DIGS4 |        35    .4285714    .5020964          0          1
-------------+---------------------------------------------------------
      STDEBT |        36    2256.767     2113.09        386   12963.09
   EDUCSPEND |        36    39048.82    28135.23    5215.01   93859.65
       ALL3R |        36    .0277778    .1666667          0          1
       STPOP |        36    2007.915    894.2518       1746   7192.697
       UNEMP |        36    8.372222    3.201304        3.5         18
-------------+---------------------------------------------------------
       PCINC |        36    11670.42    7291.116       2417      32328
       PER65 |        36    .1280309    .0180314   .0859322      .1537
       PERHS |        36    61.01778     13.2797      38.27         91
     PERCOLL |        36    12.01063    5.021325   6.327802       30.6

. summarize ID YEAR LOTTPERTREV ADMINCOST LOTTOYR PRIZE GAMBST GAMBIND DIGS3 DIG
> S4 STDEBT EDUCSPEND ALL3R STPOP UNEMP PCINC PER65 PERHS PERCOLL if ID==48

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
          ID |        36          48           0         48         48
        YEAR |        36      1984.5    10.53565       1967       2002
 LOTTPERTREV |        36           0           0          0          0
   ADMINCOST |        36           0           0          0          0
     LOTTOYR |        36           0           0          0          0
-------------+---------------------------------------------------------
```

PRIZE	36	0	0	0	0
GAMBST	36	0	0	0	0
GAMBIND	36	0	0	0	0
DIGS3	35	0	0	0	0
DIGS4	35	0	0	0	0
STDEBT	36	990.1851	2304.434	38	13785.23
EDUCSPEND	36	6813.197	16284.91	558.18	98481.13
ALL3R	36	.4166667	.5	0	1
STPOP	36	667.8384	1160.078	319	7293.542
UNEMP	36	4.855556	1.616954	2.6	9
PCINC	36	14274.17	7923.59	3121	32793
PER65	36	.0967578	.0160445	.0766	.1534523
PERHS	36	78.65401	9.094908	59.54724	91.3
PERCOLL	36	17.50609	4.401524	10.93848	34.6

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