Student: Alan Danque

Date: 20191102

Description:

Results and screenshots of Final Project

Results:

/Users/alandanque/anaconda/bin/python /Users/alandanque/DSC530/ThinkStats2-master/code/DSC530\_Final\_Project\_Government\_Tertiary\_Spending\_vs\_GDP.py

Regression Analysis & Prediction

OLS Regression Results

==============================================================================

Dep. Variable: GDP R-squared: 0.853

Model: OLS Adj. R-squared: 0.852

Method: Least Squares F-statistic: 821.2

Date: Tue, 05 Nov 2019 Prob (F-statistic): 1.23e-176

Time: 21:06:22 Log-Likelihood: -4460.1

No. Observations: 430 AIC: 8928.

Df Residuals: 426 BIC: 8944.

Df Model: 3

Covariance Type: nonrobust

=======================================================================================

coef std err t P>|t| [0.025 0.975]

---------------------------------------------------------------------------------------

Intercept 4671.6765 586.351 7.967 0.000 3519.175 5824.178

POPULATIONTOTAL 0.0002 5.07e-05 3.290 0.001 6.72e-05 0.000

LABORFORCE -0.0003 9.31e-05 -2.796 0.005 -0.000 -7.73e-05

TertiaryExpenditure 2.1538 0.044 49.355 0.000 2.068 2.240

==============================================================================

Omnibus: 4.283 Durbin-Watson: 0.240

Prob(Omnibus): 0.117 Jarque-Bera (JB): 4.403

Skew: 0.154 Prob(JB): 0.111

Kurtosis: 3.389 Cond. No. 1.65e+08

==============================================================================

Warnings:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

[2] The condition number is large, 1.65e+08. This might indicate that there are

strong multicollinearity or other numerical problems.

Predicted GDP Value

0 119172.924384

dtype: float64

Testing Correlation - Chapter 9

GDP data1: mean=22027.874 stdv=20142.409

TertiaryExpenditure data2: mean=7323.381 stdv=8744.288

Testing Covariance

[[4.06662372e+08 1.61679311e+08]

[1.61679311e+08 7.66408011e+07]]

Testing Pearson's Correlation

Pearsons correlation: 0.916

Testing Spearmans's R Correlation

Spearmans correlation: 0.944

Mode test

GDP Mode is / are: 454.0

Tertiary Expenditure Mode is / are: 869.0, 1298.0, 746.0, 435.0

Permuatation Test in Differences in Means Chapter 9

1457

705

11604186.696636925

31983175.79007092

20378989.093434

[ 0. 0. 0. ... 6367953. 6414745. 6415863.]

0.0

/Users/alandanque/DSC530/ThinkStats2-master/code/DSC530\_Final\_Project\_Government\_Tertiary\_Spending\_vs\_GDP.py:308: MatplotlibDeprecationWarning:

The 'normed' kwarg was deprecated in Matplotlib 2.1 and will be removed in 3.1. Use 'density' instead.

plt.hist(outcomes, normed=True, cumulative=True, label='CDF', histtype='step', alpha=0.8, color='k')

/Users/alandanque/DSC530/ThinkStats2-master/code/DSC530\_Final\_Project\_Government\_Tertiary\_Spending\_vs\_GDP.py:229: MatplotlibDeprecationWarning:

The 'normed' kwarg was deprecated in Matplotlib 2.1 and will be removed in 3.1. Use 'density' instead.

plt.hist(outcomes, normed=True, cumulative=True, label='CDF', histtype='step', alpha=0.8, color='k')

Parieto Distribution Here

['Argentina', 'Austria', 'Bolivia', 'Brazil', 'Bulgaria', 'Canada', 'Chad', 'Chile', 'China', 'Colombia', 'Cuba', 'Czech Republic', 'Denmark', 'El Salvador', 'Estonia', 'Greece', 'Hungary', 'Ireland', 'Israel', 'Italy', 'Japan', 'South Korea', 'Kyrgyzstan', 'Latvia', 'Madagascar', 'Mali', 'Malta', 'Mexico', 'Morocco', 'Netherlands', 'Norway', 'Oman', 'Poland', 'Saudi Arabia', 'Spain', 'Sweden', 'Switzerland', 'Thailand', 'Togo', 'United Kingdom', 'United States', 'Cambodia', 'Germany', 'Peru', 'Senegal', 'United Arab Emirates']

[1372.0, 13745.0, 448.0, 1953.0, 0.0, 0.0, 0.0, 0.0, 778.0, 831.0, 1988.0, 1974.0, 21538.0, 0.0, 1319.0, 3239.0, 1606.0, 7339.0, 5594.0, 5813.0, 4614.0, 799.0, 62.0, 851.0, 0.0, 601.0, 0.0, 2383.0, 1342.0, 12346.0, 16343.0, 0.0, 916.0, 0.0, 3038.0, 15109.0, 20223.0, 0.0, 0.0, 6374.0, 8921.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Second Pareto

Histogram Mean and Variance for Labor force population pct analysis vs 1996 1997 1998 1999

(0.4424628000028833, 0.005124630561992366)

Tails

Largest value: 0.5752990719066978

Smallest value: 0.26942276456581793

0.43531225895785053

No mode found

(0.4449428219303639, 0.0051884157161808785)

Histogram Mean and Variance for Labor force population pct analysis vs 1996 1997 1998 1999

(0.4449428219303639, 0.0051884157161808785)

Tails

Largest value: 0.5769249940044306

Smallest value: 0.2698009332323785

0.4372671379109659

No mode found

(0.44713221822046395, 0.005117031915679767)

Histogram Mean and Variance for Labor force population pct analysis vs 1996 1997 1998 1999

(0.44713221822046395, 0.005117031915679767)

Tails

Largest value: 0.5774816000837403

Smallest value: 0.2703103363072431

0.4437835969812743

No mode found

(0.4493971017126186, 0.005100155090029307)

Histogram Mean and Variance for Labor force population pct analysis vs 1996 1997 1998 1999

(0.4493971017126186, 0.005100155090029307)

Tails

Largest value: 0.578935944952444

Smallest value: 0.2709205781132912

0.4510247307165127

No mode found

Generating Mode Here LaborData1

No mode found

Histogram Mean and Variance for Government tertiary spending analysis vs 1996 1997 1998 1999

(0.0, 0.0)

Tails

Largest value: 0.0

Smallest value: 0.0

0.0

Mode is / are: 0.0

(0.0, 0.0)

Histogram Mean and Variance for Government tertiary spending analysis vs 1996 1997 1998 1999

(0.0, 0.0)

Tails

Largest value: 0.0

Smallest value: 0.0

0.0

Mode is / are: 0.0

(4269.934782608696, 29929723.9305293)

Histogram Mean and Variance for Government tertiary spending analysis vs 1996 1997 1998 1999

(4269.934782608696, 29929723.9305293)

Tails

Largest value: 20453.0

Smallest value: 0.0

1661.0

Mode is / are: 0.0

(3553.4565217391305, 31267580.726370525)

Histogram Mean and Variance for Government tertiary spending analysis vs 1996 1997 1998 1999

(3553.4565217391305, 31267580.726370525)

Tails

Largest value: 21538.0

Smallest value: 0.0

883.5

Mode is / are: 0.0

Histogram Mean and Variance for GDP per Capita Analysis vs 1996 1997 1998 1999

(12534.717391304348, 173581868.59404534)

Tails

Largest value: 46676.0

Smallest value: 221.0

5937.5

No mode found

(12115.673913043478, 152261576.9588847)

Histogram Mean and Variance for GDP per Capita Analysis vs 1996 1997 1998 1999

(12115.673913043478, 152261576.9588847)

Tails

Largest value: 40417.0

Smallest value: 206.0

5888.5

No mode found

(12044.717391304348, 152228301.37665406)

Histogram Mean and Variance for GDP per Capita Analysis vs 1996 1997 1998 1999

(12044.717391304348, 152228301.37665406)

Tails

Largest value: 41497.0

Smallest value: 224.0

5866.5

No mode found

(12333.45652173913, 161272817.98724008)

Histogram Mean and Variance for GDP per Capita Analysis vs 1996 1997 1998 1999

(12333.45652173913, 161272817.98724008)

Tails

Largest value: 40581.0

Smallest value: 190.0

6042.0

No mode found

Histogram Mean and Variance for GDP per market analysis vs 1996 1997 1998 1999

(553290492955.6086, 1.9204851535219334e+24)

Tails

Largest value: 8100000000000.0

Smallest value: 1465448290.0

103580054639.0

No mode found

(551280923216.674, 2.003310706037306e+24)

Histogram Mean and Variance for GDP per market analysis vs 1996 1997 1998 1999

(551280923216.674, 2.003310706037306e+24)

Tails

Largest value: 8610000000000.0

Smallest value: 1498950899.0

111000000000.0

No mode found

(554256703399.6522, 2.1242721285923752e+24)

Histogram Mean and Variance for GDP per market analysis vs 1996 1997 1998 1999

(554256703399.6522, 2.1242721285923752e+24)

Tails

Largest value: 9090000000000.0

Smallest value: 1587345951.0

106221869970.5

No mode found

(578939994210.8478, 2.4248737821474526e+24)

Histogram Mean and Variance for GDP per market analysis vs 1996 1997 1998 1999

(578939994210.8478, 2.4248737821474526e+24)

Tails

Largest value: 9660000000000.0

Smallest value: 1249062025.0

107845969795.5

Mode is / are: 162000000000.0

Histogram Mean and Variance for Population analysis vs 1996 1997 1998 1999

(57271145.45652174, 3.2296449169304348e+16)

Tails

Largest value: 1217550000.0

Smallest value: 379905.0

10784906.0

No mode found

(57857401.43478261, 3.2969438625494628e+16)

Histogram Mean and Variance for Population analysis vs 1996 1997 1998 1999

(57857401.43478261, 3.2969438625494628e+16)

Tails

Largest value: 1230075000.0

Smallest value: 382791.0

10837621.0

No mode found

(58422128.19565217, 3.361467657357353e+16)

Histogram Mean and Variance for Population analysis vs 1996 1997 1998 1999

(58422128.19565217, 3.361467657357353e+16)

Tails

Largest value: 1241935000.0

Smallest value: 385287.0

10892303.0

No mode found

(58961432.282608695, 3.421039239581956e+16)

Histogram Mean and Variance for Population analysis vs 1996 1997 1998 1999

(58961432.282608695, 3.421039239581956e+16)

Tails

Largest value: 1252735000.0

Smallest value: 387578.0

10935851.0

No mode found

Histogram Mean and Variance for Labor analysis vs 1996 1997 1998 1999

(29427480.739130434, 1.0592781133157438e+16)

Tails

Largest value: 700455385.0

Smallest value: 148398.0

4677791.0

No mode found

(29888669.5, 1.0877076752409818e+16)

Histogram Mean and Variance for Labor analysis vs 1996 1997 1998 1999

(29888669.5, 1.0877076752409818e+16)

Tails

Largest value: 709661012.0

Smallest value: 150191.0

4790162.0

No mode found

(30247746.47826087, 1.1111741755268954e+16)

Histogram Mean and Variance for Labor analysis vs 1996 1997 1998 1999

(30247746.47826087, 1.1111741755268954e+16)

Tails

Largest value: 717194611.0

Smallest value: 152133.0

4962228.0

No mode found

(30624378.02173913, 1.136409368002776e+16)

Histogram Mean and Variance for Labor analysis vs 1996 1997 1998 1999

(30624378.02173913, 1.136409368002776e+16)

Tails

Largest value: 725253321.0

Smallest value: 154199.0

5012943.0

No mode found

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 1996 1997 1998 1999

(0.0, 0.0)

Tails

Largest value: 0.0

Smallest value: 0.0

0.0

Mode is / are: 0.0

(15.108695652173912, 2418.183837429113)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 1996 1997 1998 1999

(15.108695652173912, 2418.183837429113)

Tails

Largest value: 264.0

Smallest value: 0.0

0.0

Mode is / are: 0.0

(58.08695652173913, 6709.514177693762)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 1996 1997 1998 1999

(58.08695652173913, 6709.514177693762)

Tails

Largest value: 442.0

Smallest value: 0.0

34.5

Mode is / are: 0.0

(28.282608695652176, 1166.9853497164463)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 1996 1997 1998 1999

(28.282608695652176, 1166.9853497164463)

Tails

Largest value: 187.0

Smallest value: 0.0

24.0

Mode is / are: 0.0

Parieto Distribution Here

['Argentina', 'Austria', 'Bolivia', 'Brazil', 'Bulgaria', 'Canada', 'Chad', 'Chile', 'China', 'Colombia', 'Cuba', 'Czech Republic', 'Denmark', 'El Salvador', 'Estonia', 'Greece', 'Hungary', 'Ireland', 'Israel', 'Italy', 'Japan', 'South Korea', 'Kyrgyzstan', 'Latvia', 'Madagascar', 'Mali', 'Malta', 'Mexico', 'Morocco', 'Netherlands', 'Norway', 'Oman', 'Poland', 'Saudi Arabia', 'Spain', 'Sweden', 'Switzerland', 'Thailand', 'Togo', 'United Kingdom', 'United States', 'Cambodia', 'Germany', 'Peru', 'Senegal', 'United Arab Emirates']

[347.0, 14361.0, 329.0, 0.0, 722.0, 0.0, 0.0, 695.0, 0.0, 0.0, 0.0, 2980.0, 26336.0, 274.0, 1576.0, 3814.0, 2617.0, 9457.0, 4940.0, 6135.0, 6112.0, 1186.0, 85.0, 694.0, 0.0, 0.0, 0.0, 2788.0, 0.0, 14502.0, 24285.0, 0.0, 1119.0, 0.0, 4767.0, 15807.0, 28392.0, 0.0, 0.0, 7405.0, 9652.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Second Pareto

Histogram Mean and Variance for Labor force population pct analysis vs 2000 2001 2002 2003

(0.45111168608581187, 0.005073152093850727)

Tails

Largest value: 0.5819946208158271

Smallest value: 0.2716520069403858

0.45337986482391834

No mode found

(0.454323432600116, 0.00514653922776677)

Histogram Mean and Variance for Labor force population pct analysis vs 2000 2001 2002 2003

(0.454323432600116, 0.00514653922776677)

Tails

Largest value: 0.5823576931241892

Smallest value: 0.2717840148520471

0.45946188450474057

No mode found

(0.45738608562997013, 0.005267545017870846)

Histogram Mean and Variance for Labor force population pct analysis vs 2000 2001 2002 2003

(0.45738608562997013, 0.005267545017870846)

Tails

Largest value: 0.5883223579164424

Smallest value: 0.2722723886364459

0.4641020874558157

No mode found

(0.46033800913251693, 0.0052227393130414275)

Histogram Mean and Variance for Labor force population pct analysis vs 2000 2001 2002 2003

(0.46033800913251693, 0.0052227393130414275)

Tails

Largest value: 0.6042702005274281

Smallest value: 0.2726439901348824

0.4711579693808812

No mode found

Generating Mode Here LaborData1

No mode found

Histogram Mean and Variance for Government tertiary spending analysis vs 2000 2001 2002 2003

(3063.478260869565, 26608736.206049133)

Tails

Largest value: 21048.0

Smallest value: 0.0

727.5

Mode is / are: 0.0

(3366.521739130435, 29668666.032136105)

Histogram Mean and Variance for Government tertiary spending analysis vs 2000 2001 2002 2003

(3366.521739130435, 29668666.032136105)

Tails

Largest value: 22627.0

Smallest value: 0.0

716.0

Mode is / are: 0.0

(3785.1739130434785, 36281756.88279772)

Histogram Mean and Variance for Government tertiary spending analysis vs 2000 2001 2002 2003

(3785.1739130434785, 36281756.88279772)

Tails

Largest value: 23913.0

Smallest value: 0.0

755.5

Mode is / are: 0.0

(4160.369565217391, 51395674.05907371)

Histogram Mean and Variance for Government tertiary spending analysis vs 2000 2001 2002 2003

(4160.369565217391, 51395674.05907371)

Tails

Largest value: 28392.0

Smallest value: 0.0

520.5

Mode is / are: 0.0

Histogram Mean and Variance for GDP per Capita Analysis vs 2000 2001 2002 2003

(12376.217391304348, 159877268.73534974)

Tails

Largest value: 38532.0

Smallest value: 166.0

6365.5

No mode found

(12275.608695652174, 154403071.02079394)

Histogram Mean and Variance for GDP per Capita Analysis vs 2000 2001 2002 2003

(12275.608695652174, 154403071.02079394)

Tails

Largest value: 38549.0

Smallest value: 197.0

6820.0

No mode found

(12948.239130434782, 175722591.2254253)

Histogram Mean and Variance for GDP per Capita Analysis vs 2000 2001 2002 2003

(12948.239130434782, 175722591.2254253)

Tails

Largest value: 43061.0

Smallest value: 220.0

6885.5

No mode found

(15074.239130434782, 239235405.2689036)

Histogram Mean and Variance for GDP per Capita Analysis vs 2000 2001 2002 2003

(15074.239130434782, 239235405.2689036)

Tails

Largest value: 50111.0

Smallest value: 292.0

7798.5

No mode found

Histogram Mean and Variance for GDP per market analysis vs 2000 2001 2002 2003

(599827396667.0652, 2.7284835026429656e+24)

Tails

Largest value: 10300000000000.0

Smallest value: 1294250233.0

115000000000.0

No mode found

(595295493068.5869, 2.7571806716422065e+24)

Histogram Mean and Variance for GDP per market analysis vs 2000 2001 2002 2003

(595295493068.5869, 2.7571806716422065e+24)

Tails

Largest value: 10600000000000.0

Smallest value: 1332328999.0

114500000000.0

No mode found

(615953765484.1522, 2.9282849205698176e+24)

Histogram Mean and Variance for GDP per market analysis vs 2000 2001 2002 2003

(615953765484.1522, 2.9282849205698176e+24)

Tails

Largest value: 11000000000000.0

Smallest value: 1474630207.0

115500000000.0

No mode found

(682606019278.6522, 3.2653596330943706e+24)

Histogram Mean and Variance for GDP per market analysis vs 2000 2001 2002 2003

(682606019278.6522, 3.2653596330943706e+24)

Tails

Largest value: 11500000000000.0

Smallest value: 1673690430.0

127500000000.0

Mode is / are: 218000000000.0

Histogram Mean and Variance for Population analysis vs 2000 2001 2002 2003

(59473846.76086956, 3.476395241966935e+16)

Tails

Largest value: 1262645000.0

Smallest value: 390087.0

11059213.0

No mode found

(59973521.97826087, 3.5281312478588156e+16)

Histogram Mean and Variance for Population analysis vs 2000 2001 2002 2003

(59973521.97826087, 3.5281312478588156e+16)

Tails

Largest value: 1271850000.0

Smallest value: 393028.0

11239900.0

No mode found

(60458951.23913044, 3.5765605961313588e+16)

Histogram Mean and Variance for Population analysis vs 2000 2001 2002 2003

(60458951.23913044, 3.5765605961313588e+16)

Tails

Largest value: 1280400000.0

Smallest value: 395969.0

11428463.5

No mode found

(60936484.36956522, 3.622102592946262e+16)

Histogram Mean and Variance for Population analysis vs 2000 2001 2002 2003

(60936484.36956522, 3.622102592946262e+16)

Tails

Largest value: 1288400000.0

Smallest value: 398582.0

11625006.5

No mode found

Histogram Mean and Variance for Labor analysis vs 2000 2001 2002 2003

(31044662.347826086, 1.1666958968345626e+16)

Tails

Largest value: 734852598.0

Smallest value: 156207.0

5014300.5

No mode found

(31367521.804347824, 1.1851000115729568e+16)

Histogram Mean and Variance for Labor analysis vs 2000 2001 2002 2003

(31367521.804347824, 1.1851000115729568e+16)

Tails

Largest value: 740671632.0

Smallest value: 159652.0

4974725.0

No mode found

(31731725.413043477, 1.206414172485615e+16)

Histogram Mean and Variance for Labor analysis vs 2000 2001 2002 2003

(31731725.413043477, 1.206414172485615e+16)

Tails

Largest value: 747357274.0

Smallest value: 160263.0

5002009.0

No mode found

(32078646.36956522, 1.2287150523469072e+16)

Histogram Mean and Variance for Labor analysis vs 2000 2001 2002 2003

(32078646.36956522, 1.2287150523469072e+16)

Tails

Largest value: 754391191.0

Smallest value: 161289.0

5023352.5

No mode found

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2000 2001 2002 2003

(20.891304347826086, 596.8360113421548)

Tails

Largest value: 100.0

Smallest value: 0.0

17.0

Mode is / are: 0.0

(18.956521739130434, 425.04158790170146)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2000 2001 2002 2003

(18.956521739130434, 425.04158790170146)

Tails

Largest value: 89.0

Smallest value: 0.0

17.5

Mode is / are: 0.0

(20.847826086956523, 471.34640831758037)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2000 2001 2002 2003

(20.847826086956523, 471.34640831758037)

Tails

Largest value: 98.0

Smallest value: 0.0

19.0

Mode is / are: 0.0

(16.5, 311.4673913043478)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2000 2001 2002 2003

(16.5, 311.4673913043478)

Tails

Largest value: 65.0

Smallest value: 0.0

13.5

Mode is / are: 0.0

Parieto Distribution Here

['Argentina', 'Austria', 'Bolivia', 'Brazil', 'Bulgaria', 'Canada', 'Chad', 'Chile', 'China', 'Colombia', 'Cuba', 'Czech Republic', 'Denmark', 'El Salvador', 'Estonia', 'Greece', 'Hungary', 'Ireland', 'Israel', 'Italy', 'Japan', 'South Korea', 'Kyrgyzstan', 'Latvia', 'Madagascar', 'Mali', 'Malta', 'Mexico', 'Morocco', 'Netherlands', 'Norway', 'Oman', 'Poland', 'Saudi Arabia', 'Spain', 'Sweden', 'Switzerland', 'Thailand', 'Togo', 'United Kingdom', 'United States', 'Cambodia', 'Germany', 'Peru', 'Senegal', 'United Arab Emirates']

[1031.0, 21275.0, 0.0, 2131.0, 1038.0, 0.0, 0.0, 1133.0, 0.0, 0.0, 2019.0, 5137.0, 30588.0, 457.0, 3314.0, 0.0, 3288.0, 15603.0, 5288.0, 7887.0, 6875.0, 1957.0, 163.0, 2065.0, 540.0, 0.0, 7260.0, 3607.0, 0.0, 19121.0, 38886.0, 0.0, 1849.0, 0.0, 8055.0, 19361.0, 26865.0, 0.0, 615.0, 9814.0, 9700.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Second Pareto

Histogram Mean and Variance for Labor force population pct analysis vs 2004 2005 2006 2007

(0.4633232467929627, 0.005243956301607013)

Tails

Largest value: 0.6216866184874451

Smallest value: 0.2732473115919375

0.4767249719016492

No mode found

(0.4678698736661933, 0.005279017953663453)

Histogram Mean and Variance for Labor force population pct analysis vs 2004 2005 2006 2007

(0.4678698736661933, 0.005279017953663453)

Tails

Largest value: 0.6395583245733981

Smallest value: 0.28545922758316566

0.4826774220166613

No mode found

(0.4730381934497093, 0.005277780539592038)

Histogram Mean and Variance for Labor force population pct analysis vs 2004 2005 2006 2007

(0.4730381934497093, 0.005277780539592038)

Tails

Largest value: 0.6543958526006709

Smallest value: 0.289287233804137

0.4877083192636327

No mode found

(0.47747085352223506, 0.005313498724006508)

Histogram Mean and Variance for Labor force population pct analysis vs 2004 2005 2006 2007

(0.47747085352223506, 0.005313498724006508)

Tails

Largest value: 0.6708249594188813

Smallest value: 0.29548668524520494

0.49021077378638395

No mode found

Generating Mode Here LaborData1

No mode found

Histogram Mean and Variance for Government tertiary spending analysis vs 2004 2005 2006 2007

(4839.282608695652, 62064092.202741034)

Tails

Largest value: 30609.0

Smallest value: 0.0

1245.5

Mode is / are: 0.0

(4912.282608695652, 62253060.59404538)

Histogram Mean and Variance for Government tertiary spending analysis vs 2004 2005 2006 2007

(4912.282608695652, 62253060.59404538)

Tails

Largest value: 32077.0

Smallest value: 0.0

1591.0

Mode is / are: 0.0

(4872.260869565217, 66474179.93194705)

Histogram Mean and Variance for Government tertiary spending analysis vs 2004 2005 2006 2007

(4872.260869565217, 66474179.93194705)

Tails

Largest value: 32407.0

Smallest value: 0.0

842.5

Mode is / are: 0.0

(5585.260869565217, 80480865.62759924)

Histogram Mean and Variance for Government tertiary spending analysis vs 2004 2005 2006 2007

(5585.260869565217, 80480865.62759924)

Tails

Largest value: 38886.0

Smallest value: 0.0

1491.0

Mode is / are: 0.0

Histogram Mean and Variance for GDP per Capita Analysis vs 2004 2005 2006 2007

(17093.0, 303121741.6086956)

Tails

Largest value: 57570.0

Smallest value: 245.0

9489.5

No mode found

(18347.782608695652, 338134289.3875236)

Histogram Mean and Variance for GDP per Capita Analysis vs 2004 2005 2006 2007

(18347.782608695652, 338134289.3875236)

Tails

Largest value: 66775.0

Smallest value: 274.0

10771.5

No mode found

(19787.956521739132, 381535415.6068052)

Histogram Mean and Variance for GDP per Capita Analysis vs 2004 2005 2006 2007

(19787.956521739132, 381535415.6068052)

Tails

Largest value: 74114.0

Smallest value: 292.0

12021.0

No mode found

(22339.304347826088, 472900730.4725899)

Histogram Mean and Variance for GDP per Capita Analysis vs 2004 2005 2006 2007

(22339.304347826088, 472900730.4725899)

Tails

Largest value: 85170.0

Smallest value: 377.0

14924.5

No mode found

Histogram Mean and Variance for GDP per market analysis vs 2004 2005 2006 2007

(759792922957.826, 3.7805606230525216e+24)

Tails

Largest value: 12300000000000.0

Smallest value: 1937074572.0

156500000000.0

No mode found

(813030952739.174, 4.21058512892197e+24)

Histogram Mean and Variance for GDP per market analysis vs 2004 2005 2006 2007

(813030952739.174, 4.21058512892197e+24)

Tails

Largest value: 13100000000000.0

Smallest value: 2115154262.0

185000000000.0

No mode found

(870896207355.0869, 4.669422773818307e+24)

Histogram Mean and Variance for GDP per market analysis vs 2004 2005 2006 2007

(870896207355.0869, 4.669422773818307e+24)

Tails

Largest value: 13900000000000.0

Smallest value: 2202809251.0

222000000000.0

Mode is / are: 155000000000.0, 222000000000.0, 345000000000.0

(963002553504.1086, 5.170939117224492e+24)

Histogram Mean and Variance for GDP per market analysis vs 2004 2005 2006 2007

(963002553504.1086, 5.170939117224492e+24)

Tails

Largest value: 14500000000000.0

Smallest value: 2523462557.0

260500000000.0

No mode found

Histogram Mean and Variance for Population analysis vs 2004 2005 2006 2007

(61410960.69565217, 3.666275925174351e+16)

Tails

Largest value: 1296075000.0

Smallest value: 401268.0

11829423.5

No mode found

(61886600.69565217, 3.71051218292445e+16)

Histogram Mean and Variance for Population analysis vs 2004 2005 2006 2007

(61886600.69565217, 3.71051218292445e+16)

Tails

Largest value: 1303720000.0

Smallest value: 403834.0

12041508.0

No mode found

(62365075.86956522, 3.753253747853683e+16)

Histogram Mean and Variance for Population analysis vs 2004 2005 2006 2007

(62365075.86956522, 3.753253747853683e+16)

Tails

Largest value: 1311020000.0

Smallest value: 405308.0

12391913.5

No mode found

(62847565.56521739, 3.793790453686884e+16)

Histogram Mean and Variance for Population analysis vs 2004 2005 2006 2007

(62847565.56521739, 3.793790453686884e+16)

Tails

Largest value: 1317885000.0

Smallest value: 406724.0

12774581.5

No mode found

Histogram Mean and Variance for Labor analysis vs 2004 2005 2006 2007

(32471681.97826087, 1.249749728397439e+16)

Tails

Largest value: 760819579.0

Smallest value: 158414.0

5066468.0

No mode found

(32857191.673913043, 1.2683657005216158e+16)

Histogram Mean and Variance for Labor analysis vs 2004 2005 2006 2007

(32857191.673913043, 1.2683657005216158e+16)

Tails

Largest value: 766356401.0

Smallest value: 160698.0

5092977.0

No mode found

(33210474.347826086, 1.282252804985654e+16)

Histogram Mean and Variance for Labor analysis vs 2004 2005 2006 2007

(33210474.347826086, 1.282252804985654e+16)

Tails

Largest value: 770372410.0

Smallest value: 163152.0

5117377.5

No mode found

(33532090.847826086, 1.295020947222966e+16)

Histogram Mean and Variance for Labor analysis vs 2004 2005 2006 2007

(33532090.847826086, 1.295020947222966e+16)

Tails

Largest value: 774185758.0

Smallest value: 167278.0

5119939.0

No mode found

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2004 2005 2006 2007

(24.565217391304348, 1628.6805293005689)

Tails

Largest value: 269.0

Smallest value: 0.0

21.0

Mode is / are: 0.0

(26.52173913043478, 1863.9017013232499)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2004 2005 2006 2007

(26.52173913043478, 1863.9017013232499)

Tails

Largest value: 258.0

Smallest value: 0.0

20.0

Mode is / are: 0.0

(18.58695652173913, 693.9815689981095)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2004 2005 2006 2007

(18.58695652173913, 693.9815689981095)

Tails

Largest value: 160.0

Smallest value: 0.0

14.0

Mode is / are: 0.0

(22.130434782608695, 892.2438563327034)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2004 2005 2006 2007

(22.130434782608695, 892.2438563327034)

Tails

Largest value: 143.0

Smallest value: 0.0

17.5

Mode is / are: 0.0

Parieto Distribution Here

['Argentina', 'Austria', 'Bolivia', 'Brazil', 'Bulgaria', 'Canada', 'Chad', 'Chile', 'China', 'Colombia', 'Cuba', 'Czech Republic', 'Denmark', 'El Salvador', 'Estonia', 'Greece', 'Hungary', 'Ireland', 'Israel', 'Italy', 'Japan', 'South Korea', 'Kyrgyzstan', 'Latvia', 'Madagascar', 'Mali', 'Malta', 'Mexico', 'Morocco', 'Netherlands', 'Norway', 'Oman', 'Poland', 'Saudi Arabia', 'Spain', 'Sweden', 'Switzerland', 'Thailand', 'Togo', 'United Kingdom', 'United States', 'Cambodia', 'Germany', 'Peru', 'Senegal', 'United Arab Emirates']

[2031.0, 17895.0, 0.0, 3631.0, 1217.0, 0.0, 1835.0, 2094.0, 0.0, 1666.0, 0.0, 5629.0, 31455.0, 413.0, 4219.0, 0.0, 3967.0, 15395.0, 6458.0, 9278.0, 10416.0, 0.0, 0.0, 2770.0, 433.0, 1292.0, 8964.0, 3664.0, 0.0, 18396.0, 41845.0, 0.0, 2796.0, 0.0, 8699.0, 22928.0, 35075.0, 1064.0, 420.0, 12278.0, 9713.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Second Pareto

Histogram Mean and Variance for Labor force population pct analysis vs 2008 2009 2010 2011

(0.48145893949760105, 0.005394547875943275)

Tails

Largest value: 0.686335683011332

Smallest value: 0.3017905585868583

0.49455274860771825

No mode found

(0.4828932677233452, 0.005285685509853594)

Histogram Mean and Variance for Labor force population pct analysis vs 2008 2009 2010 2011

(0.4828932677233452, 0.005285685509853594)

Tails

Largest value: 0.6992165676870465

Smallest value: 0.3081642560459925

0.4988987314011137

No mode found

(0.4840220604297105, 0.005086372850802795)

Histogram Mean and Variance for Labor force population pct analysis vs 2008 2009 2010 2011

(0.4840220604297105, 0.005086372850802795)

Tails

Largest value: 0.7123736077935029

Smallest value: 0.314541109483271

0.49740783154230106

No mode found

(0.4857089050196346, 0.004879895504218159)

Histogram Mean and Variance for Labor force population pct analysis vs 2008 2009 2010 2011

(0.4857089050196346, 0.004879895504218159)

Tails

Largest value: 0.7090952698047559

Smallest value: 0.3209015774108689

0.4936309628789016

No mode found

Generating Mode Here LaborData1

No mode found

Histogram Mean and Variance for Government tertiary spending analysis vs 2008 2009 2010 2011

(6217.804347826087, 97468778.63563322)

Tails

Largest value: 43697.0

Smallest value: 0.0

1550.0

Mode is / are: 0.0

(5940.326086956522, 84059992.82844992)

Histogram Mean and Variance for Government tertiary spending analysis vs 2008 2009 2010 2011

(5940.326086956522, 84059992.82844992)

Tails

Largest value: 38070.0

Smallest value: 0.0

1650.0

Mode is / are: 0.0

(5871.760869565217, 82151331.09499055)

Histogram Mean and Variance for Government tertiary spending analysis vs 2008 2009 2010 2011

(5871.760869565217, 82151331.09499055)

Tails

Largest value: 38135.0

Smallest value: 0.0

1765.5

Mode is / are: 0.0

(6259.478260869565, 94649565.11909261)

Histogram Mean and Variance for Government tertiary spending analysis vs 2008 2009 2010 2011

(6259.478260869565, 94649565.11909261)

Tails

Largest value: 41845.0

Smallest value: 0.0

1933.0

Mode is / are: 0.0

Histogram Mean and Variance for GDP per Capita Analysis vs 2008 2009 2010 2011

(24412.804347826088, 550036616.7225899)

Tails

Largest value: 97007.0

Smallest value: 470.0

17221.0

No mode found

(21639.695652173912, 429079699.03780705)

Histogram Mean and Variance for GDP per Capita Analysis vs 2008 2009 2010 2011

(21639.695652173912, 429079699.03780705)

Tails

Largest value: 80067.0

Smallest value: 415.0

13877.5

No mode found

(22650.739130434784, 461646752.2362949)

Histogram Mean and Variance for GDP per Capita Analysis vs 2008 2009 2010 2011

(22650.739130434784, 461646752.2362949)

Tails

Largest value: 87770.0

Smallest value: 412.0

13865.0

No mode found

(25047.304347826088, 574655306.2117203)

Histogram Mean and Variance for GDP per Capita Analysis vs 2008 2009 2010 2011

(25047.304347826088, 574655306.2117203)

Tails

Largest value: 100711.0

Smallest value: 454.0

16079.5

No mode found

Histogram Mean and Variance for GDP per market analysis vs 2008 2009 2010 2011

(1040285012552.7174, 5.532351357658548e+24)

Tails

Largest value: 14700000000000.0

Smallest value: 3163416242.0

283000000000.0

No mode found

(995362095986.3695, 5.404004633581112e+24)

Histogram Mean and Variance for GDP per market analysis vs 2008 2009 2010 2011

(995362095986.3695, 5.404004633581112e+24)

Tails

Largest value: 14400000000000.0

Smallest value: 3163000529.0

245000000000.0

No mode found

(1075262578288.3043, 6.055407696149895e+24)

Histogram Mean and Variance for GDP per market analysis vs 2008 2009 2010 2011

(1075262578288.3043, 6.055407696149895e+24)

Tails

Largest value: 15000000000000.0

Smallest value: 3172945645.0

288500000000.0

No mode found

(1183381470862.152, 6.876600874153939e+24)

Histogram Mean and Variance for GDP per market analysis vs 2008 2009 2010 2011

(1183381470862.152, 6.876600874153939e+24)

Tails

Largest value: 15500000000000.0

Smallest value: 3756023160.0

311500000000.0

Mode is / are: 2620000000000.0

Histogram Mean and Variance for Population analysis vs 2008 2009 2010 2011

(63334054.02173913, 3.833958592822141e+16)

Tails

Largest value: 1324655000.0

Smallest value: 409379.0

13042233.0

No mode found

(63799507.93478261, 3.873234327754147e+16)

Histogram Mean and Variance for Population analysis vs 2008 2009 2010 2011

(63799507.93478261, 3.873234327754147e+16)

Tails

Largest value: 1331260000.0

Smallest value: 412477.0

13320562.5

No mode found

(64248837.95652174, 3.9118155474216936e+16)

Histogram Mean and Variance for Population analysis vs 2008 2009 2010 2011

(64248837.95652174, 3.9118155474216936e+16)

Tails

Largest value: 1337705000.0

Smallest value: 414508.0

13612484.5

No mode found

(64656178.93478261, 3.950041124474017e+16)

Histogram Mean and Variance for Population analysis vs 2008 2009 2010 2011

(64656178.93478261, 3.950041124474017e+16)

Tails

Largest value: 1344130000.0

Smallest value: 416268.0

13919398.0

No mode found

Histogram Mean and Variance for Labor analysis vs 2008 2009 2010 2011

(33851994.89130435, 1.3062641144045952e+16)

Tails

Largest value: 777396382.0

Smallest value: 169639.0

5141665.5

No mode found

(34075531.10869565, 1.312849505590181e+16)

Histogram Mean and Variance for Labor analysis vs 2008 2009 2010 2011

(34075531.10869565, 1.312849505590181e+16)

Tails

Largest value: 779406536.0

Smallest value: 172243.0

5305127.0

No mode found

(34211702.93478261, 1.3140519734199002e+16)

Histogram Mean and Variance for Labor analysis vs 2008 2009 2010 2011

(34211702.93478261, 1.3140519734199002e+16)

Tails

Largest value: 779951535.0

Smallest value: 176153.0

5566572.0

No mode found

(34400155.45652174, 1.3221024829212986e+16)

Histogram Mean and Variance for Labor analysis vs 2008 2009 2010 2011

(34400155.45652174, 1.3221024829212986e+16)

Tails

Largest value: 782572261.0

Smallest value: 180373.0

5785181.0

No mode found

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2008 2009 2010 2011

(21.73913043478261, 758.5406427221172)

Tails

Largest value: 143.0

Smallest value: 0.0

19.0

Mode is / are: 0.0

(28.717391304347824, 1232.3766540642716)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2008 2009 2010 2011

(28.717391304347824, 1232.3766540642716)

Tails

Largest value: 161.0

Smallest value: 0.0

20.0

Mode is / are: 0.0

(25.891304347826086, 1344.8360113421552)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2008 2009 2010 2011

(25.891304347826086, 1344.8360113421552)

Tails

Largest value: 210.0

Smallest value: 0.0

19.5

Mode is / are: 0.0

(26.369565217391305, 1318.79820415879)

Histogram Mean and Variance for Tertiary Spend GDP per Capita analysis vs 2008 2009 2010 2011

(26.369565217391305, 1318.79820415879)

Tails

Largest value: 185.0

Smallest value: 0.0

20.0

Mode is / are: 0.0

1999

populationout & laborforceout 1999

Correlated test using Spearmans R

0.984582176996608

Strong correlation

Correlated test using Pearsons

0.9989964426499173

Strong correlation

LaborToPopulationPct & gdpcapitaout1 1999

Correlated test using Spearmans R

0.5205673758865248

Strong correlation

Correlated test using Pearsons

0.56936525769936

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 1999

Correlated test using Spearmans R

0.13634623534293042

Weak correlation

Correlated test using Pearsons

0.13634623534293042

Weak correlation

tertiaryedspendout1 & gdpmarketout1 1999

Correlated test using Spearmans R

0.11045393765132931

Weak correlation

Correlated test using Pearsons

-0.15351881871005557

Weak correlation

tertiaryedspendout1 & laborout1 1999

Correlated test using Spearmans R

0.040324210082936914

Weak correlation

Correlated test using Pearsons

-0.09801091412444307

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 1999

Correlated test using Spearmans R

0.05533402511872748

Weak correlation

Correlated test using Pearsons

0.021257248306250497

Weak correlation

2000

populationout & laborforceout 2000

Correlated test using Spearmans R

0.9848288621646623

Strong correlation

Correlated test using Pearsons

0.9989963771046821

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2000

Correlated test using Spearmans R

0.5224175146469318

Strong correlation

Correlated test using Pearsons

0.5693005183127416

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2000

Correlated test using Spearmans R

0.06108241997303963

Weak correlation

Correlated test using Pearsons

0.06108241997303963

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2000

Correlated test using Spearmans R

0.10918082816123419

Weak correlation

Correlated test using Pearsons

-0.1430238241887008

Weak correlation

tertiaryedspendout1 & laborout1 2000

Correlated test using Spearmans R

0.08500370276876404

Weak correlation

Correlated test using Pearsons

-0.08786845049418415

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2000

Correlated test using Spearmans R

0.12838605702325126

Weak correlation

Correlated test using Pearsons

0.06007874410892941

Weak correlation

2001

populationout & laborforceout 2001

Correlated test using Spearmans R

0.9838421214924451

Strong correlation

Correlated test using Pearsons

0.9989952517894943

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2001

Correlated test using Spearmans R

0.5009559050262103

Strong correlation

Correlated test using Pearsons

0.53825055109012

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2001

Correlated test using Spearmans R

0.07314108628139962

Weak correlation

Correlated test using Pearsons

0.07314108628139962

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2001

Correlated test using Spearmans R

0.12313142873112147

Weak correlation

Correlated test using Pearsons

-0.1452688165607885

Weak correlation

tertiaryedspendout1 & laborout1 2001

Correlated test using Spearmans R

0.06792580882481286

Weak correlation

Correlated test using Pearsons

-0.09921221965143939

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2001

Correlated test using Spearmans R

0.23806075103707977

Moderate correlation

Correlated test using Pearsons

0.09233227387288004

Weak correlation

2002

populationout & laborforceout 2002

Correlated test using Spearmans R

0.9813752698119026

Strong correlation

Correlated test using Pearsons

0.9990153988841641

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2002

Correlated test using Spearmans R

0.4914585260561209

Strong correlation

Correlated test using Pearsons

0.5343448675225458

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2002

Correlated test using Spearmans R

0.04901917767046077

Weak correlation

Correlated test using Pearsons

0.04901917767046077

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2002

Correlated test using Spearmans R

0.08303760826891113

Weak correlation

Correlated test using Pearsons

-0.14907390306751112

Weak correlation

tertiaryedspendout1 & laborout1 2002

Correlated test using Spearmans R

0.061697633354754075

Weak correlation

Correlated test using Pearsons

-0.10857461836134016

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2002

Correlated test using Spearmans R

0.11559499693392807

Weak correlation

Correlated test using Pearsons

-0.13546669417875784

Weak correlation

2003

populationout & laborforceout 2003

Correlated test using Spearmans R

0.9816219549799567

Strong correlation

Correlated test using Pearsons

0.9989827753011177

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2003

Correlated test using Spearmans R

0.4914585260561209

Strong correlation

Correlated test using Pearsons

0.5160680906576501

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2003

Correlated test using Spearmans R

0.20358674636040328

Moderate correlation

Correlated test using Pearsons

0.20358674636040328

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2003

Correlated test using Spearmans R

0.10086905417740258

Weak correlation

Correlated test using Pearsons

-0.13923122615050465

Weak correlation

tertiaryedspendout1 & laborout1 2003

Correlated test using Spearmans R

-0.05788438751371818

Weak correlation

Correlated test using Pearsons

-0.11410791623529946

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2003

Correlated test using Spearmans R

-0.033147011500878655

Weak correlation

Correlated test using Pearsons

-0.1697182145311285

Weak correlation

2004

populationout & laborforceout 2004

Correlated test using Spearmans R

0.9805118717237126

Strong correlation

Correlated test using Pearsons

0.999022229814254

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2004

Correlated test using Spearmans R

0.47493061979648465

Strong correlation

Correlated test using Pearsons

0.4958508792386499

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2004

Correlated test using Spearmans R

0.1397483167911821

Weak correlation

Correlated test using Pearsons

0.1397483167911821

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2004

Correlated test using Spearmans R

0.13799677119129264

Weak correlation

Correlated test using Pearsons

-0.15017758617216614

Weak correlation

tertiaryedspendout1 & laborout1 2004

Correlated test using Spearmans R

0.06818516799569763

Weak correlation

Correlated test using Pearsons

-0.10746028173787069

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2004

Correlated test using Spearmans R

0.24746197192781602

Moderate correlation

Correlated test using Pearsons

-0.0185990600048749

Weak correlation

2005

populationout & laborforceout 2005

Correlated test using Spearmans R

0.9810052420598211

Strong correlation

Correlated test using Pearsons

0.9990542257684252

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2005

Correlated test using Spearmans R

0.46641998149861236

Strong correlation

Correlated test using Pearsons

0.49228672699931564

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2005

Correlated test using Spearmans R

0.16758538078942564

Weak correlation

Correlated test using Pearsons

0.16758538078942564

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2005

Correlated test using Spearmans R

0.1435016287909453

Weak correlation

Correlated test using Pearsons

-0.14884409167933457

Weak correlation

tertiaryedspendout1 & laborout1 2005

Correlated test using Spearmans R

-0.003690756799767119

Weak correlation

Correlated test using Pearsons

-0.1068411968825327

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2005

Correlated test using Spearmans R

0.11049409260542799

Weak correlation

Correlated test using Pearsons

-0.03761861103591094

Weak correlation

2006

populationout & laborforceout 2006

Correlated test using Spearmans R

0.977304964539007

Strong correlation

Correlated test using Pearsons

0.9991069871521193

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2006

Correlated test using Spearmans R

0.4506321307431391

Strong correlation

Correlated test using Pearsons

0.4798447870177566

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2006

Correlated test using Spearmans R

0.12758349485259796

Weak correlation

Correlated test using Pearsons

0.12758349485259796

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2006

Correlated test using Spearmans R

0.1503983470231623

Weak correlation

Correlated test using Pearsons

-0.14244722098545926

Weak correlation

tertiaryedspendout1 & laborout1 2006

Correlated test using Spearmans R

0.06099330586422804

Weak correlation

Correlated test using Pearsons

-0.10291905078022688

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2006

Correlated test using Spearmans R

0.012795525452140811

Weak correlation

Correlated test using Pearsons

-0.13710089009339335

Weak correlation

2007

populationout & laborforceout 2007

Correlated test using Spearmans R

0.9770582793709527

Strong correlation

Correlated test using Pearsons

0.9991029344162892

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2007

Correlated test using Spearmans R

0.43496762257169286

Strong correlation

Correlated test using Pearsons

0.4693266466175041

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2007

Correlated test using Spearmans R

0.0630695848328435

Weak correlation

Correlated test using Pearsons

0.0630695848328435

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2007

Correlated test using Spearmans R

0.10106255152036063

Weak correlation

Correlated test using Pearsons

-0.15656320865862106

Weak correlation

tertiaryedspendout1 & laborout1 2007

Correlated test using Spearmans R

0.08783117008689693

Weak correlation

Correlated test using Pearsons

-0.11608684099745738

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2007

Correlated test using Spearmans R

0.15452197285980607

Weak correlation

Correlated test using Pearsons

-0.11375885000746659

Weak correlation

2008

populationout & laborforceout 2008

Correlated test using Spearmans R

0.9770582793709527

Strong correlation

Correlated test using Pearsons

0.9991301186951819

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2008

Correlated test using Spearmans R

0.4371877890841813

Strong correlation

Correlated test using Pearsons

0.4583256845761405

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2008

Correlated test using Spearmans R

0.012727328807426962

Weak correlation

Correlated test using Pearsons

0.012727328807426962

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2008

Correlated test using Spearmans R

0.08720110430435106

Weak correlation

Correlated test using Pearsons

-0.1558866664756027

Weak correlation

tertiaryedspendout1 & laborout1 2008

Correlated test using Spearmans R

0.04448264424773978

Weak correlation

Correlated test using Pearsons

-0.09651947877111867

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2008

Correlated test using Spearmans R

0.021939709960797152

Weak correlation

Correlated test using Pearsons

-0.01214272204372519

Weak correlation

2009

populationout & laborforceout 2009

Correlated test using Spearmans R

0.9749614554424916

Strong correlation

Correlated test using Pearsons

0.9991236779862691

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2009

Correlated test using Spearmans R

0.4239901325932778

Strong correlation

Correlated test using Pearsons

0.42365926369812157

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2009

Correlated test using Spearmans R

0.08770254798083214

Weak correlation

Correlated test using Pearsons

0.08770254798083214

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2009

Correlated test using Spearmans R

0.10242360155371719

Weak correlation

Correlated test using Pearsons

-0.1576229495551929

Weak correlation

tertiaryedspendout1 & laborout1 2009

Correlated test using Spearmans R

0.04447504744689425

Weak correlation

Correlated test using Pearsons

-0.0981161416428532

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2009

Correlated test using Spearmans R

-0.04012509171193161

Weak correlation

Correlated test using Pearsons

-0.050712248811979596

Weak correlation

2010

populationout & laborforceout 2010

Correlated test using Spearmans R

0.9786617329633055

Strong correlation

Correlated test using Pearsons

0.9990826308372974

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2010

Correlated test using Spearmans R

0.4338575393154487

Strong correlation

Correlated test using Pearsons

0.40266505733490016

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2010

Correlated test using Spearmans R

0.03696836830717207

Weak correlation

Correlated test using Pearsons

0.03696836830717207

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2010

Correlated test using Spearmans R

0.08705454472334068

Weak correlation

Correlated test using Pearsons

-0.16360496383852524

Weak correlation

tertiaryedspendout1 & laborout1 2010

Correlated test using Spearmans R

0.034457783023153596

Weak correlation

Correlated test using Pearsons

-0.09000157239458867

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2010

Correlated test using Spearmans R

0.14089334254939087

Weak correlation

Correlated test using Pearsons

-0.0033443662696405613

Weak correlation

2011

populationout & laborforceout 2011

Correlated test using Spearmans R

0.9834720937403639

Strong correlation

Correlated test using Pearsons

0.9990322239587058

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2011

Correlated test using Spearmans R

0.43373419673142155

Strong correlation

Correlated test using Pearsons

0.39723048898946417

tertiaryedspendout1 & gdpcapitaout1 2011

Correlated test using Spearmans R

0.04224059740361087

Weak correlation

Correlated test using Pearsons

0.04224059740361087

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2011

Correlated test using Spearmans R

0.044627029547931074

Weak correlation

Correlated test using Pearsons

-0.1629918938278113

Weak correlation

tertiaryedspendout1 & laborout1 2011

Correlated test using Spearmans R

-0.014875217807809475

Weak correlation

Correlated test using Pearsons

-0.09446453685567538

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2011

Correlated test using Spearmans R

0.029620719596585323

Weak correlation

Correlated test using Pearsons

-0.04404725348988303

Weak correlation

2012

populationout & laborforceout 2012

Correlated test using Spearmans R

0.985568917668825

Strong correlation

Correlated test using Pearsons

0.9990801731815351

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2012

Correlated test using Spearmans R

0.4283071230342275

Strong correlation

Correlated test using Pearsons

0.4107654975634598

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2012

Correlated test using Spearmans R

-0.13303795401998014

Weak correlation

Correlated test using Pearsons

-0.13303795401998014

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2012

Correlated test using Spearmans R

0.08305070705274792

Weak correlation

Correlated test using Pearsons

-0.10534748322694595

Weak correlation

tertiaryedspendout1 & laborout1 2012

Correlated test using Spearmans R

0.09566186870591892

Weak correlation

Correlated test using Pearsons

-0.049106337830849674

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2012

Correlated test using Spearmans R

0.07260347605921381

Weak correlation

Correlated test using Pearsons

-0.013276587696402418

Weak correlation

2013

populationout & laborforceout 2013

Correlated test using Spearmans R

0.9851988899167436

Strong correlation

Correlated test using Pearsons

0.999105287737899

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2013

Correlated test using Spearmans R

0.43533765032377425

Strong correlation

Correlated test using Pearsons

0.4141653543616261

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2013

Correlated test using Spearmans R

0.05852414311394404

Weak correlation

Correlated test using Pearsons

0.05852414311394404

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2013

Correlated test using Spearmans R

0.20877787986215404

Moderate correlation

Correlated test using Pearsons

-0.08434934345071808

Weak correlation

tertiaryedspendout1 & laborout1 2013

Correlated test using Spearmans R

0.15391925349372348

Weak correlation

Correlated test using Pearsons

-0.04174885938795737

Weak correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2013

Correlated test using Spearmans R

0.09741336493439914

Weak correlation

Correlated test using Pearsons

-0.009765838424108757

Weak correlation

2014

populationout & laborforceout 2014

Correlated test using Spearmans R

0.9829787234042553

Strong correlation

Correlated test using Pearsons

0.9991246621482017

Strong correlation

LaborToPopulationPct & gdpcapitaout1 2014

Correlated test using Spearmans R

0.43139068763490596

Strong correlation

Correlated test using Pearsons

0.41089313899035346

Strong correlation

tertiaryedspendout1 & gdpcapitaout1 2014

Correlated test using Spearmans R

-0.01902197066828994

Weak correlation

Correlated test using Pearsons

-0.01902197066828994

Weak correlation

tertiaryedspendout1 & gdpmarketout1 2014

Correlated test using Spearmans R

0.2823628306540653

Moderate correlation

Correlated test using Pearsons

0.4308869166603785

Strong correlation

Moderate correlation

tertiaryedspendout1 & laborout1 2014

Correlated test using Spearmans R

0.2748587504821711

Moderate correlation

Correlated test using Pearsons

0.8960009726056732

Strong correlation

Moderate correlation

populationout1 & tertiaryedspendpergdpcapitaout1 2014

Correlated test using Spearmans R

0.013528843054945928

Weak correlation

Correlated test using Pearsons

0.019517839662866212

Weak correlation

Listing those variables with more than 0.20 / -0.20 correlations

1999

Population total

Labor force total

0.984582176996608

0.9989964426499173

1999

LaborToPopulationPct Calc

GDP per capita current US

0.5205673758865248

0.56936525769936

2000

Population total

Labor force total

0.9848288621646623

0.9989963771046821

2000

LaborToPopulationPct Calc

GDP per capita current US

0.5224175146469318

0.5693005183127416

2001

Population total

Labor force total

0.9838421214924451

0.9989952517894943

2001

LaborToPopulationPct Calc

GDP per capita current US

0.5009559050262103

0.53825055109012

2002

Population total

Labor force total

0.9813752698119026

0.9990153988841641

2002

LaborToPopulationPct Calc

GDP per capita current US

0.4914585260561209

0.5343448675225458

2003

Population total

Labor force total

0.9816219549799567

0.9989827753011177

2003

LaborToPopulationPct Calc

GDP per capita current US

0.4914585260561209

0.5160680906576501

2004

Population total

Labor force total

0.9805118717237126

0.999022229814254

2004

LaborToPopulationPct Calc

GDP per capita current US

0.47493061979648465

0.4958508792386499

2005

Population total

Labor force total

0.9810052420598211

0.9990542257684252

2005

LaborToPopulationPct Calc

GDP per capita current US

0.46641998149861236

0.49228672699931564

2006

Population total

Labor force total

0.977304964539007

0.9991069871521193

2006

LaborToPopulationPct Calc

GDP per capita current US

0.4506321307431391

0.4798447870177566

2007

Population total

Labor force total

0.9770582793709527

0.9991029344162892

2007

LaborToPopulationPct Calc

GDP per capita current US

0.43496762257169286

0.4693266466175041

2008

Population total

Labor force total

0.9770582793709527

0.9991301186951819

2008

LaborToPopulationPct Calc

GDP per capita current US

0.4371877890841813

0.4583256845761405

2009

Population total

Labor force total

0.9749614554424916

0.9991236779862691

2009

LaborToPopulationPct Calc

GDP per capita current US

0.4239901325932778

0.42365926369812157

2010

Population total

Labor force total

0.9786617329633055

0.9990826308372974

2010

LaborToPopulationPct Calc

GDP per capita current US

0.4338575393154487

0.40266505733490016

2011

Population total

Labor force total

0.9834720937403639

0.9990322239587058

2011

LaborToPopulationPct Calc

GDP per capita current US

0.43373419673142155

0.39723048898946417

2012

Population total

Labor force total

0.985568917668825

0.9990801731815351

2012

LaborToPopulationPct Calc

GDP per capita current US

0.4283071230342275

0.4107654975634598

2013

Population total

Labor force total

0.9851988899167436

0.999105287737899

2013

LaborToPopulationPct Calc

GDP per capita current US

0.43533765032377425

0.4141653543616261

2014

Population total

Labor force total

0.9829787234042553

0.9991246621482017

2014

LaborToPopulationPct Calc

GDP per capita current US

0.43139068763490596

0.41089313899035346

2014

Government expenditure per tertiary student US

GDP at market prices current US

0.2823628306540653

0.4308869166603785

2014

Government expenditure per tertiary student US

Labor force total

0.2748587504821711

0.8960009726056732

PLOTS START HERE

PLOT1 Done

PLOT2 Done

PLOT3 Done

PLOT4 Done

Covariance Tests

shape of matrix x and y: (0, 2)

shape of covariance matrix: (0, 0)

[]

Hypothesis Test Two-Sided Test

Ttest\_indResult(statistic=nan, pvalue=nan)

Ttest\_indResult(statistic=nan, pvalue=nan)

Process finished with exit code 0









