

Null Hypothesis: DCPS has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.728355	0.2321
Test critical values: 1% level	-4.243644	
5% level	-3.544284	
10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(DCPS)
 Method: Least Squares
 Date: 07/15/16 Time: 11:01
 Sample (adjusted): 2 36
 Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DCPS(-1)	-0.382329	0.140132	-2.728355	0.0103
C	5.249723	2.458614	2.135237	0.0405
@TREND(1)	0.029626	0.084620	0.350100	0.7286

R-squared	0.190033	Mean dependent var	0.039272
Adjusted R-squared	0.139410	S.D. dependent var	5.318242
S.E. of regression	4.933627	Akaike info criterion	6.111842
Sum squared resid	778.9015	Schwarz criterion	6.245158
Log likelihood	-103.9572	Hannan-Quinn criter.	6.157863
F-statistic	3.753889	Durbin-Watson stat	1.590154
Prob(F-statistic)	0.034315		

Null Hypothesis: D(DCPS) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.238271	0.0008
Test critical values: 1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(DCPS,2)
 Method: Least Squares
 Date: 07/15/16 Time: 11:02

Sample (adjusted): 3 36
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DCPS(-1))	-0.934047	0.178312	-5.238271	0.0000
C	0.003800	2.023085	0.001879	0.9985
@TREND(1)	-0.003672	0.096604	-0.038007	0.9699
R-squared	0.469685	Mean dependent var	-0.129563	
Adjusted R-squared	0.435472	S.D. dependent var	7.351445	
S.E. of regression	5.523516	Akaike info criterion	6.340004	
Sum squared resid	945.7861	Schwarz criterion	6.474682	
Log likelihood	-104.7801	Hannan-Quinn criter.	6.385933	
F-statistic	13.72794	Durbin-Watson stat	1.991446	
Prob(F-statistic)	0.000054			

Null Hypothesis: DPS has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.770258	0.6975
Test critical values: 1% level	-4.243644	
5% level	-3.544284	
10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DPS)
Method: Least Squares
Date: 07/15/16 Time: 11:03
Sample (adjusted): 2 36
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPS(-1)	-0.200688	0.113366	-1.770258	0.0862
C	-1.48E+12	1.16E+12	-1.273044	0.2122
@TREND(1)	1.52E+11	7.16E+10	2.116755	0.0421
R-squared	0.125922	Mean dependent var	5.64E+11	
Adjusted R-squared	0.071292	S.D. dependent var	3.09E+12	
S.E. of regression	2.98E+12	Akaike info criterion	60.36339	
Sum squared resid	2.84E+26	Schwarz criterion	60.49671	
Log likelihood	-1053.359	Hannan-Quinn criter.	60.40941	
F-statistic	2.304999	Durbin-Watson stat	2.676179	
Prob(F-statistic)	0.116093			

Null Hypothesis: D(DPS) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.734730	0.0000
Test critical values: 1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(DPS,2)
 Method: Least Squares
 Date: 07/15/16 Time: 11:04
 Sample (adjusted): 3 36
 Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DPS(-1))	-1.515212	0.155650	-9.734730	0.0000
C	-9.65E+11	1.00E+12	-0.962266	0.3434
@TREND(1)	1.00E+11	4.89E+10	2.048568	0.0491
R-squared	0.753580	Mean dependent var	-1.70E+10	
Adjusted R-squared	0.737682	S.D. dependent var	5.32E+12	
S.E. of regression	2.72E+12	Akaike info criterion	60.18742	
Sum squared resid	2.30E+26	Schwarz criterion	60.32210	
Log likelihood	-1020.186	Hannan-Quinn criter.	60.23335	
F-statistic	47.40081	Durbin-Watson stat	1.768097	
Prob(F-statistic)	0.000000			

Null Hypothesis: GDPPC has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.606899	0.7698
Test critical values: 1% level	-4.243644	
5% level	-3.544284	
10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(GDPPC)
 Method: Least Squares
 Date: 07/15/16 Time: 11:05
 Sample (adjusted): 2 36

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPPC(-1)	-0.064813	0.040334	-1.606899	0.1179
C	-6.48E+11	6.70E+11	-0.967999	0.3403
@TREND(1)	2.15E+11	6.32E+10	3.409154	0.0018
R-squared	0.381233	Mean dependent var		1.27E+12
Adjusted R-squared	0.342560	S.D. dependent var		2.25E+12
S.E. of regression	1.83E+12	Akaike info criterion		59.38608
Sum squared resid	1.07E+26	Schwarz criterion		59.51940
Log likelihood	-1036.256	Hannan-Quinn criter.		59.43210
F-statistic	9.857866	Durbin-Watson stat		1.775776
Prob(F-statistic)	0.000462			

Null Hypothesis: D(GDPPC) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.896502	0.0020
Test critical values: 1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDPPC,2)

Method: Least Squares

Date: 07/15/16 Time: 11:05

Sample (adjusted): 3 36

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPPC(-1))	-1.022266	0.208775	-4.896502	0.0000
C	-7.93E+11	7.61E+11	-1.041449	0.3057
@TREND(1)	1.20E+11	4.64E+10	2.578342	0.0149
R-squared	0.450380	Mean dependent var		2.41E+10
Adjusted R-squared	0.414920	S.D. dependent var		2.47E+12
S.E. of regression	1.89E+12	Akaike info criterion		59.45948
Sum squared resid	1.11E+26	Schwarz criterion		59.59416
Log likelihood	-1007.811	Hannan-Quinn criter.		59.50541
F-statistic	12.70128	Durbin-Watson stat		1.734236
Prob(F-statistic)	0.000094			

Null Hypothesis: HHC has a unit root

Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.700599	0.2425
Test critical values: 1% level	-4.243644	
5% level	-3.544284	
10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(HHC)
Method: Least Squares
Date: 07/15/16 Time: 11:06
Sample (adjusted): 2 36
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HHC(-1)	-0.316819	0.117314	-2.700599	0.0110
C	1.60E+12	1.57E+12	1.015163	0.3176
@TREND(1)	3.64E+11	1.20E+11	3.030849	0.0048
R-squared	0.223979	Mean dependent var	7.65E+11	
Adjusted R-squared	0.175478	S.D. dependent var	4.13E+12	
S.E. of regression	3.75E+12	Akaike info criterion	60.82668	
Sum squared resid	4.51E+26	Schwarz criterion	60.95999	
Log likelihood	-1061.467	Hannan-Quinn criter.	60.87270	
F-statistic	4.617999	Durbin-Watson stat	2.915112	
Prob(F-statistic)	0.017297			

Null Hypothesis: D(HHC) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.35241	0.0000
Test critical values: 1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(HHC,2)
Method: Least Squares
Date: 07/15/16 Time: 11:07
Sample (adjusted): 3 36
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HHC(-1))	-1.660924	0.134462	-12.35241	0.0000
C	-1.54E+12	1.16E+12	-1.326428	0.1944
@TREND(1)	1.50E+11	5.64E+10	2.663913	0.0121
R-squared	0.831165	Mean dependent var	6.52E+10	
Adjusted R-squared	0.820272	S.D. dependent var	7.46E+12	
S.E. of regression	3.16E+12	Akaike info criterion	60.48655	
Sum squared resid	3.10E+26	Schwarz criterion	60.62123	
Log likelihood	-1025.271	Hannan-Quinn criter.	60.53248	
F-statistic	76.30539	Durbin-Watson stat	2.067331	
Prob(F-statistic)	0.000000			

Null Hypothesis: INTRT has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.841819	0.1929
Test critical values: 1% level	-4.243644	
5% level	-3.544284	
10% level	-3.204699	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INTRT)
Method: Least Squares
Date: 07/15/16 Time: 11:08
Sample (adjusted): 2 36
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INTRT(-1)	-0.361772	0.127303	-2.841819	0.0077
C	5.380810	1.933454	2.783004	0.0090
@TREND(1)	-0.035240	0.053397	-0.659965	0.5140
R-squared	0.212202	Mean dependent var	0.157143	
Adjusted R-squared	0.162965	S.D. dependent var	3.485964	
S.E. of regression	3.189296	Akaike info criterion	5.239294	
Sum squared resid	325.4914	Schwarz criterion	5.372609	
Log likelihood	-88.68764	Hannan-Quinn criter.	5.285314	
F-statistic	4.309777	Durbin-Watson stat	2.231061	
Prob(F-statistic)	0.022011			

Null Hypothesis: D(INTRT) has a unit root
Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic - based on SIC, maxlag=0)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.534719	0.0000
Test critical values: 1% level	-4.252879	
5% level	-3.548490	
10% level	-3.207094	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(INTRT,2)

Method: Least Squares

Date: 07/15/16 Time: 11:09

Sample (adjusted): 3 36

Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INTRT(-1))	-1.293933	0.171729	-7.534719	0.0000
C	1.257013	1.278526	0.983173	0.3331
@TREND(1)	-0.056838	0.061013	-0.931570	0.3588
R-squared	0.646813	Mean dependent var		0.012941
Adjusted R-squared	0.624026	S.D. dependent var		5.647547
S.E. of regression	3.462889	Akaike info criterion		5.406181
Sum squared resid	371.7396	Schwarz criterion		5.540860
Log likelihood	-88.90507	Hannan-Quinn criter.		5.452110
F-statistic	28.38606	Durbin-Watson stat		2.207260
Prob(F-statistic)	0.000000			

Date: 07/15/16 Time: 11:12

Sample (adjusted): 3 36

Included observations: 34 after adjustments

Trend assumption: Linear deterministic trend

Series: DPS DCPS GDPPC HHC INTRT

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.645477	82.01482	69.81889	0.0039
At most 1	0.570825	46.75747	47.85613	0.0632
At most 2	0.275026	17.99716	29.79707	0.5663
At most 3	0.175398	7.062081	15.49471	0.5704
At most 4	0.014745	0.505048	3.841466	0.4773

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.645477	35.25736	33.87687	0.0340
At most 1 *	0.570825	28.76030	27.58434	0.0352
At most 2	0.275026	10.93508	21.13162	0.6538
At most 3	0.175398	6.557033	14.26460	0.5428
At most 4	0.014745	0.505048	3.841466	0.4773

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

DPS	DCPS	GDPPC	HHC	INTRT
6.83E-13	0.205423	-4.18E-13	1.69E-13	0.183695
-7.92E-14	-0.218354	9.42E-14	-1.47E-13	-0.256253
-4.97E-15	-0.088841	-1.43E-13	2.96E-13	0.180614
2.68E-13	0.060881	-3.73E-13	3.93E-13	-0.116695
-3.02E-13	-0.037217	8.89E-14	-7.24E-14	-0.034493

Unrestricted Adjustment Coefficients (alpha):

D(DPS)	-1.38E+12	-7.62E+11	-6.32E+11	5.22E+10	6.12E+10
D(DCPS)	-0.847630	2.357810	1.898499	-0.293410	-0.061566
D(GDPPC)	-2.61E+11	-7.40E+11	3.97E+11	1.38E+11	-1.62E+11
D(HHC)	1.04E+12	-2.87E+10	2.60E+11	-6.87E+11	-2.52E+11
D(INTRT)	-0.208165	1.332039	-0.976817	0.572304	-0.144449

1 Cointegrating Equation(s): Log likelihood -3205.975

Normalized cointegrating coefficients (standard error in parentheses)

DPS	DCPS	GDPPC	HHC	INTRT
1.000000	3.01E+11	-0.612421	0.247385	2.69E+11
	(4.6E+10)	(0.05718)	(0.09272)	(7.3E+10)

Adjustment coefficients (standard error in parentheses)

D(DPS)	-0.941858
	(0.25559)
D(DCPS)	-5.79E-13
	(6.4E-13)
D(GDPPC)	-0.178147
	(0.24446)
D(HHC)	0.711119
	(0.36768)
D(INTRT)	-1.42E-13
	(4.1E-13)

2 Cointegrating Equation(s): Log likelihood -3191.595

Normalized cointegrating coefficients (standard error in parentheses)				
DPS	DCPS	GDPPC	HHC	INTRT
1.000000	0.000000	-0.541623 (0.09536)	0.049995 (0.15443)	-9.44E+10 (1.1E+11)
0.000000	1.000000	-2.35E-13 (2.4E-13)	6.56E-13 (3.8E-13)	1.207785 (0.26791)

Adjustment coefficients (standard error in parentheses)		
D(DPS)	-0.881559 (0.23677)	-1.17E+11 (1.0E+11)
D(DCPS)	-7.65E-13 (5.7E-13)	-0.688960 (0.24767)
D(GDPPC)	-0.119585 (0.22583)	1.08E+11 (9.9E+10)
D(HHC)	0.713388 (0.37012)	2.20E+11 (1.6E+11)
D(INTRT)	-2.48E-13 (3.8E-13)	-0.333618 (0.16430)

3 Cointegrating Equation(s): Log likelihood -3186.127

Normalized cointegrating coefficients (standard error in parentheses)				
DPS	DCPS	GDPPC	HHC	INTRT
1.000000	0.000000	0.000000	-1.105862 (0.18699)	-1.03E+12 (3.6E+11)
0.000000	1.000000	0.000000	1.54E-13 (1.4E-13)	0.800769 (0.27136)
0.000000	0.000000	1.000000	-2.134061 (0.31071)	-1.73E+12 (6.0E+11)

Adjustment coefficients (standard error in parentheses)		
D(DPS)	-0.878415 (0.22152)	-6.10E+10 (1.0E+11)
D(DCPS)	-7.75E-13 (5.1E-13)	-0.857625 (0.23168)
D(GDPPC)	-0.121558 (0.21965)	7.26E+10 (1.0E+11)
D(HHC)	0.712094 (0.36853)	1.97E+11 (1.7E+11)
D(INTRT)	-2.43E-13 (3.5E-13)	-0.246836 (0.16097)

4 Cointegrating Equation(s): Log likelihood -3182.849

Normalized cointegrating coefficients (standard error in parentheses)				
DPS	DCPS	GDPPC	HHC	INTRT
1.000000	0.000000	0.000000	0.000000	4.03E+12 (1.3E+12)
0.000000	1.000000	0.000000	0.000000	0.096435 (0.34831)
0.000000	0.000000	1.000000	0.000000	8.04E+12 (2.5E+12)
0.000000	0.000000	0.000000	1.000000	4.58E+12

(1.3E+12)

Adjustment coefficients (standard error in parentheses)

D(DPS)	-0.864452 (0.23762)	-5.78E+10 (1.0E+11)	0.575723 (0.18874)	-0.287650 (0.17411)
D(DCPS)	-8.53E-13 (5.4E-13)	-0.875488 (0.23535)	4.15E-13 (4.3E-13)	-4.33E-14 (4.0E-13)
D(GDPPC)	-0.084508 (0.23491)	8.11E+10 (1.0E+11)	-0.068816 (0.18659)	0.236617 (0.17212)
D(HHC)	0.528268 (0.38331)	1.55E+11 (1.7E+11)	-0.219147 (0.30446)	-0.012405 (0.28086)
D(INTRT)	-8.95E-14 (3.7E-13)	-0.211994 (0.16019)	1.38E-13 (2.9E-13)	-2.96E-13 (2.7E-13)

Vector Error Correction Estimates

Date: 07/15/16 Time: 11:14

Sample (adjusted): 3 36

Included observations: 34 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
DPS(-1)	1.000000
DCPS(-1)	3.01E+11 (4.6E+10) [6.52709]
GDPPC(-1)	-0.612421 (0.05718) [-10.7110]
HHC(-1)	0.247385 (0.09272) [2.66802]
INTRT(-1)	2.69E+11 (7.3E+10) [3.67763]
C	1.35E+12

Error Correction:	D(DPS)	D(DCPS)	D(GDPPC)	D(HHC)	D(INTRT)
CointEq1	-0.941858 (0.25559) [-3.68503]	-5.79E-13 (6.4E-13) [-0.89929]	-0.178147 (0.24446) [-0.72873]	0.711119 (0.36768) [1.93409]	-1.42E-13 (4.1E-13) [-0.34405]
D(DPS(-1))	-0.242156 (0.21123) [-1.14640]	-1.20E-13 (5.3E-13) [-0.22637]	0.142398 (0.20203) [0.70482]	0.303734 (0.30386) [0.99957]	4.51E-13 (3.4E-13) [1.32172]
D(DCPS(-1))	-1.33E+11 (8.6E+10)	0.170968 (0.21608)	-1.96E+10 (8.2E+10)	8.70E+10 (1.2E+11)	0.027536 (0.13871)

	[-1.55468]	[0.79122]	[-0.23850]	[0.70482]	[0.19852]
D(GDPPC(-1))	-0.466993 (0.27250) [-1.71375]	-7.66E-14 (6.9E-13) [-0.11170]	0.114241 (0.26063) [0.43832]	0.962771 (0.39200) [2.45606]	-6.54E-13 (4.4E-13) [-1.48497]
D(HHC(-1))	0.261598 (0.13855) [1.88810]	-5.08E-13 (3.5E-13) [-1.45700]	0.220004 (0.13252) [1.66017]	-0.470332 (0.19931) [-2.35979]	3.06E-13 (2.2E-13) [1.36552]
D(INTRT(-1))	1.11E+11 (1.2E+11) [0.90013]	0.243935 (0.30996) [0.78700]	4.80E+10 (1.2E+11) [0.40717]	-8.64E+10 (1.8E+11) [-0.48798]	-0.247835 (0.19897) [-1.24561]
C	1.17E+12 (5.0E+11) [2.32841]	0.427507 (1.26452) [0.33808]	9.86E+11 (4.8E+11) [2.05159]	-3.84E+11 (7.2E+11) [-0.53093]	0.602996 (0.81172) [0.74286]
R-squared	0.602740	0.141558	0.240718	0.541179	0.186578
Adj. R-squared	0.514460	-0.049207	0.071989	0.439219	0.005818
Sum sq. resids	1.29E+26	815.5507	1.18E+26	2.66E+26	336.0575
S.E. equation	2.18E+12	5.495960	2.09E+12	3.14E+12	3.527970
F-statistic	6.827605	0.742053	1.426653	5.307756	1.032187
Log likelihood	-1010.333	-102.2615	-1008.820	-1022.697	-87.18958
Akaike AIC	59.84313	6.427145	59.75409	60.57038	5.540564
Schwarz SC	60.15738	6.741395	60.06835	60.88463	5.854814
Mean dependent	5.80E+11	-0.059504	1.39E+12	7.72E+11	0.161765
S.D. dependent	3.13E+12	5.365534	2.17E+12	4.19E+12	3.538279
Determinant resid covariance (dof adj.)	1.74E+76				
Determinant resid covariance	5.49E+75				
Log likelihood	-3205.975				
Akaike information criterion	190.9397				
Schwarz criterion	192.7354				

Dependent Variable: D(DPS)

Method: Least Squares

Date: 07/15/16 Time: 11:24

Sample (adjusted): 3 36

Included observations: 34 after adjustments

D(DPS) = C(1)*(DPS(-1) + 300982331803*DCPS(-1) - 0.612421140483

*GDPPC(-1) + 0.247385277505*HHC(-1) + 269146722863*INTRT(-1)

+ 1.34576666356E+12) + C(2)*D(DPS(-1)) + C(3)*D(DCPS(-1)) +

C(4)

*D(GDPPC(-1)) + C(5)*D(HHC(-1)) + C(6)*D(INTRT(-1)) + C(7)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.941858	0.255590	-3.685033	0.0010
C(2)	-0.242156	0.211231	-1.146405	0.2617
C(3)	-1.33E+11	8.59E+10	-1.554678	0.1317
C(4)	-0.466994	0.272497	-1.713757	0.0980
C(5)	0.261598	0.138551	1.888098	0.0698

C(6)	1.11E+11	1.23E+11	0.900131	0.3760
C(7)	1.17E+12	5.02E+11	2.328409	0.0276
R-squared	0.602741	Mean dependent var	5.80E+11	
Adjusted R-squared	0.514461	S.D. dependent var	3.13E+12	
S.E. of regression	2.18E+12	Akaike info criterion	59.84313	
Sum squared resid	1.29E+26	Schwarz criterion	60.15738	
Log likelihood	-1010.333	Hannan-Quinn criter.	59.95030	
F-statistic	6.827612	Durbin-Watson stat	1.856504	
Prob(F-statistic)	0.000173			

Vector Error Correction Estimates

Date: 07/15/16 Time: 11:26

Sample (adjusted): 4 36

Included observations: 33 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1				
DPS(-1)	1.000000				
DCPS(-1)	-1.44E+11 (4.6E+10) [-3.14716]				
GDPPC(-1)	-0.438805 (0.04280) [-10.2514]				
HHC(-1)	-0.107641 (0.07618) [-1.41300]				
INTRT(-1)	-1.69E+11 (6.7E+10) [-2.53639]				
C	1.68E+13				
Error Correction:	D(DPS)	D(DCPS)	D(GDPPC)	D(HHC)	D(INTRT)
CointEq1	-0.849981 (0.13993) [-6.07435]	7.90E-13 (5.1E-13) [1.54794]	-0.347259 (0.19262) [-1.80286]	0.351021 (0.30247) [1.16051]	1.34E-13 (3.1E-13) [0.43140]
D(DPS(-1))	-0.506800 (0.16651) [-3.04366]	-3.98E-13 (6.1E-13) [-0.65489]	0.265064 (0.22920) [1.15645]	0.754149 (0.35993) [2.09528]	3.45E-13 (3.7E-13) [0.93082]
D(DPS(-2))	-0.355255 (0.16268) [-2.18372]	8.92E-13 (5.9E-13) [1.50353]	0.270121 (0.22394) [1.20624]	0.715000 (0.35166) [2.03324]	-8.93E-14 (3.6E-13) [-0.24641]
D(DCPS(-1))	-3.93E+11	0.342375	-6.84E+10	2.82E+11	0.079394

	(6.5E+10)	(0.23621)	(8.9E+10)	(1.4E+11)	(0.14418)
	[-6.07068]	[1.44946]	[-0.76786]	[2.01694]	[0.55068]
D(DCPS(-2))	-3.51E+11	0.128667	-1.24E+10	2.62E+11	-0.220391
	(8.3E+10)	(0.30140)	(1.1E+11)	(1.8E+11)	(0.18397)
	[-4.24948]	[0.42690]	[-0.10922]	[1.46925]	[-1.19800]
D(GDPPC(-1))	-0.549778	9.13E-13	-0.180966	0.793342	-4.40E-13
	(0.21657)	(7.9E-13)	(0.29812)	(0.46814)	(4.8E-13)
	[-2.53855]	[1.15554]	[-0.60703]	[1.69467]	[-0.91168]
D(GDPPC(-2))	0.122503	1.65E-13	-0.160479	-0.570547	-2.99E-13
	(0.20489)	(7.5E-13)	(0.28203)	(0.44288)	(4.6E-13)
	[0.59791]	[0.22067]	[-0.56901]	[-1.28826]	[-0.65617]
D(HHC(-1))	-0.135760	-3.93E-13	0.131529	-0.274384	3.88E-13
	(0.12242)	(4.5E-13)	(0.16851)	(0.26462)	(2.7E-13)
	[-1.10897]	[-0.88093]	[0.78052]	[-1.03689]	[1.42305]
D(HHC(-2))	-0.302480	6.57E-13	0.087586	0.285561	1.23E-13
	(0.12324)	(4.5E-13)	(0.16964)	(0.26639)	(2.7E-13)
	[-2.45440]	[1.46119]	[0.51630]	[1.07195]	[0.44815]
D(INTRT(-1))	6.87E+09	-0.068863	2.13E+10	-7.31E+10	-0.430009
	(8.3E+10)	(0.30287)	(1.1E+11)	(1.8E+11)	(0.18486)
	[0.08280]	[-0.22737]	[0.18619]	[-0.40735]	[-2.32610]
D(INTRT(-2))	-2.63E+10	-0.136392	9.92E+10	-3.46E+10	-0.448287
	(8.0E+10)	(0.29226)	(1.1E+11)	(1.7E+11)	(0.17839)
	[-0.32790]	[-0.46668]	[0.89952]	[-0.19978]	[-2.51301]
C	2.10E+12	-2.135055	1.43E+12	-4.55E+11	0.740863
	(4.8E+11)	(1.73785)	(6.6E+11)	(1.0E+12)	(1.06073)
	[4.40737]	[-1.22856]	[2.17840]	[-0.44229]	[0.69844]
R-squared	0.855541	0.340840	0.419031	0.621417	0.433919
Adj. R-squared	0.779872	-0.004434	0.114714	0.423112	0.137400
Sum sq. resids	4.68E+25	622.4647	8.86E+25	2.19E+26	231.9004
S.E. equation	1.49E+12	5.444371	2.05E+12	3.23E+12	3.323082
F-statistic	11.30636	0.987159	1.376954	3.133643	1.463377
Log likelihood	-964.4011	-95.28843	-974.9465	-989.8390	-78.99668
Akaike AIC	59.17582	6.502329	59.81494	60.71752	5.514950
Schwarz SC	59.72001	7.046514	60.35912	61.26170	6.059135
Mean dependent	5.98E+11	-0.130808	1.44E+12	8.27E+11	0.106061
S.D. dependent	3.18E+12	5.432342	2.18E+12	4.25E+12	3.577967
Determinant resid covariance (dof adj.)		3.61E+75			
Determinant resid covariance		3.77E+74			
Log likelihood		-3067.485			
Akaike information criterion		189.8476			
Schwarz criterion		192.7952			

Dependent Variable: D(DPS)
Method: Least Squares

Date: 07/15/16 Time: 11:30

Sample (adjusted): 4 36

Included observations: 33 after adjustments

D(DPS) = C(1)*(DPS(-1) - 143705858971*DCPS(-1) - 0.438805121932
*GDPPC(-1) - 0.107640557534*HHC(-1) - 168688909888*INTRT(-

1) +

1.68227637163E+13) + C(2)*D(DPS(-1)) + C(3)*D(DPS(-2)) + C(4)
*D(DCPS(-1)) + C(5)*D(DCPS(-2)) + C(6)*D(GDPPC(-1)) + C(7)
*D(GDPPC(-2)) + C(8)*D(HHC(-1)) + C(9)*D(HHC(-2)) + C(10)
*D(INTRT(-1)) + C(11)*D(INTRT(-2)) + C(12)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.849981	0.139930	-6.074349	0.0000
C(2)	-0.506800	0.166510	-3.043662	0.0062
C(3)	-0.355255	0.162683	-2.183722	0.0405
C(4)	-3.93E+11	6.47E+10	-6.070684	0.0000
C(5)	-3.51E+11	8.26E+10	-4.249483	0.0004
C(6)	-0.549778	0.216572	-2.538547	0.0191
C(7)	0.122503	0.204887	0.597905	0.5563
C(8)	-0.135760	0.122420	-1.108974	0.2800
C(9)	-0.302480	0.123240	-2.454404	0.0229
C(10)	6.87E+09	8.30E+10	0.082802	0.9348
C(11)	-2.63E+10	8.01E+10	-0.327902	0.7462
C(12)	2.10E+12	4.76E+11	4.407368	0.0002
R-squared	0.855541	Mean dependent var	5.98E+11	
Adjusted R-squared	0.779872	S.D. dependent var	3.18E+12	
S.E. of regression	1.49E+12	Akaike info criterion	59.17582	
Sum squared resid	4.68E+25	Schwarz criterion	59.72001	
Log likelihood	-964.4011	Hannan-Quinn criter.	59.35892	
F-statistic	11.30636	Durbin-Watson stat	1.361392	
Prob(F-statistic)	0.000002			

Pairwise Granger Causality Tests

Date: 07/15/16 Time: 11:34

Sample: 1 36

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
DCPS does not Granger Cause DPS	35	4.16836	0.0495
DPS does not Granger Cause DCPS		0.09141	0.7643
GDPPC does not Granger Cause DPS	35	19.5646	0.0001
DPS does not Granger Cause GDPPC		3.44704	0.0726
HHC does not Granger Cause DPS	35	18.5704	0.0001
DPS does not Granger Cause HHC		10.2349	0.0031
INTRT does not Granger Cause DPS	35	1.43846	0.2392
DPS does not Granger Cause INTRT		0.37844	0.5428
GDPPC does not Granger Cause DCPS	35	0.29912	0.5882

DCPS does not Granger Cause GDPPC		0.28671	0.5960
HHC does not Granger Cause DCPS	35	0.22745	0.6367
DCPS does not Granger Cause HHC		0.42118	0.5210
INTRT does not Granger Cause DCPS	35	0.21644	0.6449
DCPS does not Granger Cause INTRT		2.49373	0.1241
HHC does not Granger Cause GDPPC	35	4.56418	0.0404
GDPPC does not Granger Cause HHC		14.1015	0.0007
INTRT does not Granger Cause GDPPC	35	2.46526	0.1262
GDPPC does not Granger Cause INTRT		1.72149	0.1988
INTRT does not Granger Cause HHC	35	0.64974	0.4262
HHC does not Granger Cause INTRT		1.89464	0.1782

Pairwise Granger Causality Tests

Date: 07/15/16 Time: 11:36

Sample: 1 36

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
DCPS does not Granger Cause DPS	34	8.04046	0.0017
DPS does not Granger Cause DCPS		1.13787	0.3344
GDPPC does not Granger Cause DPS	34	7.15935	0.0030
DPS does not Granger Cause GDPPC		1.42485	0.2569
HHC does not Granger Cause DPS	34	5.43526	0.0099
DPS does not Granger Cause HHC		1.62350	0.2146
INTRT does not Granger Cause DPS	34	1.15500	0.3291
DPS does not Granger Cause INTRT		0.22425	0.8005
GDPPC does not Granger Cause DCPS	34	0.48407	0.6212
DCPS does not Granger Cause GDPPC		0.26703	0.7675
HHC does not Granger Cause DCPS	34	3.38994	0.0475
DCPS does not Granger Cause HHC		0.36164	0.6996
INTRT does not Granger Cause DCPS	34	0.60398	0.5534
DCPS does not Granger Cause INTRT		2.10053	0.1406
HHC does not Granger Cause GDPPC	34	2.53025	0.0971
GDPPC does not Granger Cause HHC		2.61512	0.0903
INTRT does not Granger Cause GDPPC	34	0.45562	0.6385
GDPPC does not Granger Cause INTRT		1.07363	0.3550
INTRT does not Granger Cause HHC	34	1.81699	0.1805
HHC does not Granger Cause INTRT		1.94883	0.1606

