ملحق رقم (1)

البيانات الأصلية العملة غير موحدة (بالجنية والدينار)

obs	N	CT	I	POP	R	S
1970	1	496.5	95.6	12687	1	66.7
1971	2	559.5	89.6	13210	4	34.3
1972	3	684.3	76.1	13754	4	17.5
1973	4	776.5	105.2	14071	6	54.2
1974	5	1026.5	229.3	14650	6	103.3
1975	6	1378.5	265	15253	8	-8
1976	7	1576.7	427.5	15882	8	95.5
1977	8	2105.3	399.7	16536	8	14.3
1978	9	2710.1	413.7	16956	8	-88.5
1979	10	3012.8	431.4	17172	8	71.4
1980	11	3981.9	379	18362	8	-89
1981	12	5152.8	241.3	19079	10	344.9
1982	13	6458	1606.6	19829	10	153.9
1983	14	9445.9	1530.3	20210	12	-750.9
1984	15	11073.5	1627	20530	14	-345.6
1985	16	15947	693.1	20882	16	-1459.6
1986	17	19362.5	2403	21085	16	-604.8
1987	18	32552.4	4728.3	21290	19	1400
1988	19	41489.6	7162.6	21724	20	1950.6
1989	20	74217.3	11000.4	22394	22	3903.6
1990	21	101233.1	10266	23079	29	1663
1991	22	174169.4	25888.9	23780	28	5017.8
1992	23	362764.4	73052.3	24495	32.9	51506.2
1993	24	836743	187960	25222	27.2	73713
1994	25	1660369	426439	25961	27	91203.7
1995	26	342669.4	89404.6	26688	28	44338.2
1996	27	989034	140908.2	27875	30	-27645.4
1997	28	1531664.3	284293.7	28627	41.7	-14605.2
1998	29	1968824.9	575137.7	29496	36.3	129468.2
1999	30	2492075.3	442450.8	30326	28	102766.3
2000	31	3079157.5	326772.1	31081	25.7	-97770.2
2001	32	3524059.7	678747.2	31913	15.2	196236.1
2002	33	4038230.6	1042639.4	32769	14.9	646714.3
2003	34	4790137.6	988014.2	33648	16.2	659322.4
2004	35	5778952.6	1306962.5	34512	11.3	977124
2005	36	7791218.9	1675635	353982	11	650820.2
2006	37	8908680.3	2079352.4	363072	11.3	718945.6
2007	38	9541562.2	2216531.1	37270	11.8	1085539.7

المصدر:

1- بنك السودان المركزي .

2- الجهاز المركزي للإحصاء .

3- وزارة المالية والاقتصاد الوطني .

4- ديوان الضرائب الإدارة العامة للتخطيط والتنمية والبحوث والتشريع والإحصاء .

ملحق رقم (1)

تابع البيانات الأصلية العملة غير موحدة (بالجنية والدينار)

obs	T	Y
1970	16.5	562.9
1971	18.5	592
1972	25.8	701.3
1973	25.8	828.7
1974	25.8	1123.9
1975	43.3	1361.3
1976	43.3	1661.8
1977	51.6	2108.3
1978	59.3	2594.8
1979	87.8	3007.5
1980	117.9	3583
1981	141.3	4450.6
1982	209.3	6275.3
1983	272.8	8408.5
1984	301.9	10214.9
1985	319.9	13561.9
1986	469.6	17803.3
1987	654.4	33167.5
1988	922.7	42463.7
1989	1685.7	76615.1
1990	2809.5	101720.7
1991	6859.5	178336.5
1992	6859.5	396304
1993	4164.3	886656
1994	8344.5	1736976
1995	6607.7	382856.5
1996	20009.5	956783.8
1997	32972.9	1497138.9
1998	45793.9	2027200.9
1999	52323.9	2492202.3
2000	81389.7	2921803.3
2001	121962.5	3623801.3
2002	141722.9	4513132.4
2003	172317.9	5262681.2
2004	213388	6465975.7
2005	951000	8089810.2
2006	95123.9	9354560.6
2007	109700	10550045.8

حيث أن :-

n = حجم العينة

obs = السنة

CT = الاستهلاك

I = الاستثمار

POP = السكان

R = سعر الفائدة

S = الادخار

T = الضريبة

EXCH = سعر الصرف

Y = الدخل القومي

ملحق رقم (2)

البيانات موحدة بالجنية

obs	Y	CT	I	S	T
1970	562.9	496.5	95.6	66.7	16.5
1971	592	559.5	89.6	34.3	18.5
1972	701.3	684.3	76.1	17.5	25.8
1973	828.7	776.5	105.2	54.2	25.8
1974	1123.9	1026.5	229.3	103.3	25.8
1975	1361.3	1378.5	265	-8	43.3
1976	1661.8	1576.7	427.5	95.5	43.3
1977	2108.3	2105.3	399.7	14.3	51.6
1978	2594.8	2710.1	413.7	-88.5	59.3
1979	3007.5	3012.8	431.4	71.4	87.8
1980	3583	3981.9	379	-89	117.9
1981	4450.6	5152.8	241.3	344.9	141.3
1982	6275.3	6458	1606.6	153.9	209.3
1983	8408.5	9445.9	1530.3	-750.9	272.8
1984	10214.9	11073.5	1627	-345.6	301.9
1985	13561.9	15947	693.1	-1459.6	319.9
1986	17803.3	19362.5	2403	-604.8	469.6
1987	33167.5	32552.4	4728.3	1400	654.4
1988	42463.7	41489.6	7162.6	1950.6	922.7
1989	76615.1	74217.3	11000.4	3903.6	1685.7
1990	101720.7	101233.1	10266	1663	2809.5
1991	178336.5	174169.4	25888.9	5017.8	6859.5
1992	396304	362764.4	73052.3	51506.2	6859.5
1993	886656	836743	187960	73713	4164.3
1994	1736976	1660369	426439	91203.7	8344.5
1995	3828565	3426694	894046	443382	6607.7
1996	9567838	9890340	1409082	-276454	20009.5
1997	14971389	15316643	2842937	-146052	32972.9
1998	20272009	19688249	5751377	1294682	45793.9
1999	24922023	24920753	4424508	1027663	523239
2000	29218033	30791575	3267721	-977702	813897
2001	36238013	35240597	6787472	1962361	1219625
2002	45131324	40382306	10426394	6467143	1417229
2003	52626812	47901376	9880142	6593224	1723179
2004	64659757	57789526	13069625	9771240	2133880
2005	80898102	77912189	16756350	6508202	9510000
2006	93545606	89086803	20793524	7189456	951239
2007	105500458	95415622	22165311	1085539.7	1097000

ملاحظة :-

- تحويل الدينار الى جنية بالقسمة على عشرة .

ملحق رقم (3)

البيانات موحدة بالدولار

obs	CT	I	S	T	Y
1970	1380.27	265.768	185.426	45.87	1564.862
1971	1605.765	257.152	98.441	53.095	1699.04
1972	1710.75	190.25	43.75	64.5	1753.25
1973	1941.25	263	135.5	64.5	2071.75
1974	2566.25	573.25	258.25	64.5	2809.75
1975	3446.25	662.5	-20	108.25	3403.25
1976	3941.75	1068.75	238.75	108.25	4154.5
1977	5263.25	999.25	35.75	129	5270.75
1978	6775.25	1034.25	-221.25	148.25	6487
1979	6025.6	862.8	142.8	175.6	6015
1980	7963.8	758	-178	235.8	7166
1981	5719.608	267.843	382.839	156.843	4940.166
1982	4972.66	1237.082	118.503	161.161	4831.981
1983	7273.343	1178.331	-578.193	210.056	6474.545
1984	8526.595	1252.79	-266.112	232.463	7865.473
1985	6378.8	277.24	-583.84	127.96	5424.76
1986	7745	961.2	-241.92	187.84	7121.32
1987	13020.96	1891.32	560	261.76	13267
1988	9127.712	1575.772	429.132	202.994	9342.014
1989	16327.806	2420.088	858.792	370.854	16855.322
1990	22271.282	2258.52	365.86	618.09	22378.554
1991	12191.858	1812.223	351.246	480.165	12483.555
1992	2720.733	547.89225	386.2965	51.44625	2972.28
1993	3849.0178	864.616	339.0798	19.15578	4078.6176
1994	4150.9225	1066.0975	228.00925	20.86125	4342.44
1995	4112.0328	1072.8552	532.0584	7.92924	4594.278
1996	6923.238	986.3574	-193.5178	14.00665	6697.4866
1997	9189.9858	1705.7622	-87.6312	19.78374	8982.8334
1998	7875.2996	2300.5508	517.8728	18.31756	8108.8036
1999	9968.3012	1769.8032	411.0652	209.2956	9968.8092
2000	12316.63	1307.0884	-391.0808	325.5588	11687.2132
2001	14096.2388	2714.9888	784.9444	487.85	14495.2052
2002	16152.9224	4170.5576	2586.8572	566.8916	18052.5296
2003	19160.5504	3952.0568	2637.2896	689.2716	21050.7248
2004	23115.8104	5227.85	3908.496	853.552	25863.9028
2005	31164.8756	6702.54	2603.2808	3804	32359.2408
2006	35634.7212	8317.4096	2875.7824	380.4956	37418.2424
2007	38166.2488	8866.1244	434.21588	438.8	42200.1832

ملاحظة :-

- البيانات موحدة بالدولار بضرب الجنية فى سعر الصرف .

ملحق رقم (4)

اختبار استقرار السلسلة لـCT

Augmented Dickey-Fuller Unit Root Test on D(CT)

ADF Test Statistic	-4.653253	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CT,2)
Method: Least Squares
Date: 01/18/09 Time: 14:47
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CT(-1))	-1.009230	0.216887	-4.653253	0.0001
D(CT(-1),2)	0.270998	0.172654	1.569603	0.1263
C	1017.697	636.6783	1.598447	0.1198

R-squared	0.438332	Mean dependent var	69.32979
Adjusted R-squared	0.403228	S.D. dependent var	4633.681
S.E. of regression	3579.567	Akaike info criterion	19.28569
Sum squared resid	4.10E+08	Schwarz criterion	19.41900
Log likelihood	-334.4995	F-statistic	12.48658
Durbin-Watson stat	1.809414	Prob(F-statistic)	0.000098

ملحق رقم (5)

اختبار استقرار السلسلة لـ Y_t

Augmented Dickey-Fuller Unit Root Test on D(Y)

ADF Test Statistic	-4.139641	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(Y,2)
Method: Least Squares
Date: 01/18/09 Time: 14:50
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y(-1))	-0.909189	0.219630	-4.139641	0.0002
D(Y(-1),2)	0.204328	0.177761	1.149452	0.2589
C	1034.199	648.2473	1.595378	0.1205

R-squared	0.393070	Mean dependent var	135.0780
Adjusted R-squared	0.355136	S.D. dependent var	4520.145
S.E. of regression	3629.829	Akaike info criterion	19.31358
Sum squared resid	4.22E+08	Schwarz criterion	19.44689
Log likelihood	-334.9876	F-statistic	10.36217
Durbin-Watson stat	1.834768	Prob(F-statistic)	0.000339

ملحق رقم (6)

اختبار استقرار السلسلة لـ T

Augmented Dickey-Fuller Unit Root Test on T

ADF Test Statistic	-3.059596	1% Critical Value*	-3.6228
		5% Critical Value	-2.9446
		10% Critical Value	-2.6105

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(T)
Method: Least Squares
Date: 01/18/09 Time: 14:52
Sample(adjusted): 1972 2007
Included observations: 36 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
T(-1)	-0.641212	0.209574	-3.059596	0.0044
D(T(-1))	-0.143844	0.171601	-0.838245	0.4079
C	219.2044	123.3242	1.777464	0.0847

R-squared	0.388228	Mean dependent var	10.71403
Adjusted R-squared	0.351151	S.D. dependent var	772.4272
S.E. of regression	622.1991	Akaike info criterion	15.78405
Sum squared resid	12775345	Schwarz criterion	15.91601
Log likelihood	-281.1129	F-statistic	10.47084
Durbin-Watson stat	2.007142	Prob(F-statistic)	0.000301

ملحق رقم (7)

اختبار استقرار السلسلة لـ S

Augmented Dickey-Fuller Unit Root Test on D(S,2)

ADF Test Statistic	-5.716797	1% Critical Value*	-3.6353
		5% Critical Value	-2.9499
		10% Critical Value	-2.6133

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S,3)
Method: Least Squares
Date: 01/18/09 Time: 14:54
Sample(adjusted): 1974 2007
Included observations: 34 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(S(-1),2)	-1.979566	0.346272	-5.716797	0.0000
D(S(-1),3)	0.167933	0.198390	0.846479	0.4038
C	-72.71579	140.0846	-0.519085	0.6074

R-squared	0.804519	Mean dependent var	-84.13262
Adjusted R-squared	0.791907	S.D. dependent var	1788.857
S.E. of regression	816.0259	Akaike info criterion	16.33087
Sum squared resid	20642845	Schwarz criterion	16.46555
Log likelihood	-274.6247	F-statistic	63.79163
Durbin-Watson stat	1.868128	Prob(F-statistic)	0.000000

ملحق رقم (8)

اختبار استقرار السلسلة لـ POP

Augmented Dickey-Fuller Unit Root Test on POP

ADF Test Statistic	-5.577442	1% Critical Value*	-3.6228
		5% Critical Value	-2.9446
		10% Critical Value	-2.6105

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(POP)
Method: Least Squares
Date: 01/18/09 Time: 14:55
Sample(adjusted): 1972 2007
Included observations: 36 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POP(-1)	-0.966819	0.173345	-5.577442	0.0000
D(POP(-1))	1.002684	0.255386	3.926154	0.0004
C	30908.63	11079.94	2.789602	0.0087

R-squared	0.485243	Mean dependent var	668.3333
Adjusted R-squared	0.454045	S.D. dependent var	77143.71
S.E. of regression	57000.53	Akaike info criterion	24.81916
Sum squared resid	1.07E+11	Schwarz criterion	24.95112
Log likelihood	-443.7450	F-statistic	15.55393
Durbin-Watson stat	1.914889	Prob(F-statistic)	0.000017

ملحق رقم (9)

اختبار استقرار السلسلة لـ I

Augmented Dickey-Fuller Unit Root Test on D(I)

ADF Test Statistic	-3.645328	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I,2)
Method: Least Squares
Date: 01/18/09 Time: 14:57
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	-0.844641	0.231705	-3.645328	0.0009
D(I(-1),2)	0.053934	0.187398	0.287803	0.7754
C	209.6023	128.6339	1.629449	0.1130

R-squared	0.401656	Mean dependent var	17.58905
Adjusted R-squared	0.364259	S.D. dependent var	885.4474
S.E. of regression	705.9969	Akaike info criterion	16.03892
Sum squared resid	15949814	Schwarz criterion	16.17223
Log likelihood	-277.6810	F-statistic	10.74046
Durbin-Watson stat	1.991375	Prob(F-statistic)	0.000270

ملحق رقم (10)

اختبار استقرار السلسلة لـ R

Augmented Dickey-Fuller Unit Root Test on D(R)

ADF Test Statistic	-3.503843	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(R,2)
Method: Least Squares
Date: 01/18/09 Time: 15:07
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(R(-1))	-0.839810	0.239683	-3.503843	0.0014
D(R(-1),2)	-0.100595	0.174597	-0.576153	0.5685
C	0.181686	0.681959	0.266418	0.7916

R-squared	0.472392	Mean dependent var	0.014286
Adjusted R-squared	0.439416	S.D. dependent var	5.367667
S.E. of regression	4.018887	Akaike info criterion	5.701704
Sum squared resid	516.8466	Schwarz criterion	5.835019
Log likelihood	-96.77981	F-statistic	14.32553
Durbin-Watson stat	2.009206	Prob(F-statistic)	0.000036

ملحق رقم (11)

نتيجة دالة الاستهلاك

Dependent Variable: D(CT,1)
Method: Two-Stage Least Squares
Date: 01/18/09 Time: 09:23
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints
Instrument list: Y Y(-1) Y(-2) CT(-1) CT(-2) T POP S

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-41.39657	187.4649	-0.220823	0.8270
D(Y,1)	0.888689	0.052537	16.91536	0.0000
D(Y(-1),1)	-0.287762	0.502847	-0.572267	0.5721
D(Y(-2),1)	-0.092283	0.612330	-0.150709	0.8814
D(CT(-1),1)	0.297441	0.496229	0.599402	0.5541
D(CT(-2),1)	-0.163775	0.588407	-0.278336	0.7830
T	0.540276	0.435011	1.241983	0.2253
POP	0.001762	0.003429	0.513997	0.6116
D(S,2)	-0.308534	0.328079	-0.940426	0.3557

R-squared	0.953981	Mean dependent var	1041.586
Adjusted R-squared	0.939821	S.D. dependent var	3684.347
S.E. of regression	903.8194	Sum squared resid	21239126
F-statistic	69.89987	Durbin-Watson stat	1.729090
Prob(F-statistic)	0.000000		

ملحق رقم (12)

اختبار Q.Statistics

Correlogram of Residuals

Date: 01/18/09 Time: 17:05
Sample: 1973 2007
Included observations: 35

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. |* . |	. |* . |	1	0.121	0.121	0.5612	0.454
.**| . |	.**| . |	2	-0.243	-0.262	2.8771	0.237
. | . |	. |* . |	3	0.048	0.128	2.9722	0.396
.**| . |	***| . |	4	-0.225	-0.352	5.0889	0.278
.**| . |	. *| . |	5	-0.288	-0.162	8.6724	0.123

ملحق رقم (13)

النتيجة المعدلة لدالة الاستهلاك

Dependent Variable: D(LOG(CT),1)
Method: Two-Stage Least Squares
Date: 12/15/08 Time: 08:20
Sample(adjusted): 1972 2007
Included observations: 36 after adjusting endpoints
Instrument list: Y Y(-1) Y(-2) CT(-1) CT(-2) T POP S

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.588035	0.192439	3.055688	0.0045
D(Y,1)	9.90E-05	1.13E-05	8.738503	0.0000
D(LOG(CT(-1)),1)	0.216793	0.116172	1.866134	0.0712
LOG(T)	-0.125839	0.039200	-3.210132	0.0030

R-squared	0.670852	Mean dependent var	0.088010
Adjusted R-squared	0.639995	S.D. dependent var	0.371949
S.E. of regression	0.223171	Sum squared resid	1.593766
F-statistic	26.36531	Durbin-Watson stat	2.557525
Prob(F-statistic)	0.000000		

ملحق رقم (14)

اختبار Q.Statistics

Correlogram of Residuals

Date: 01/18/09 Time: 17:09
Sample: 1972 2007
Included observations: 36

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.**| . |	.**| . |	1	-0.300	-0.300	3.5145	0.061
. |* . |	. |* . |	2	0.158	0.075	4.5190	0.104
. |**. |	. |*** |	3	0.258	0.358	7.2716	0.064
. *| . |	. | . |	4	-0.181	-0.029	8.6718	0.070
. |* . |	. *| . |	5	0.076	-0.110	8.9288	0.112

ملحق رقم (15)

اختبار التكامل المشترك

Augmented Dickey-Fuller Unit Root Test on RESID01

ADF Test Statistic	-3.890690	1% Critical Value*	-3.6353
		5% Critical Value	-2.9499
		10% Critical Value	-2.6133

*MacKinnon critical values for rejection of hypothesis of a unit root.

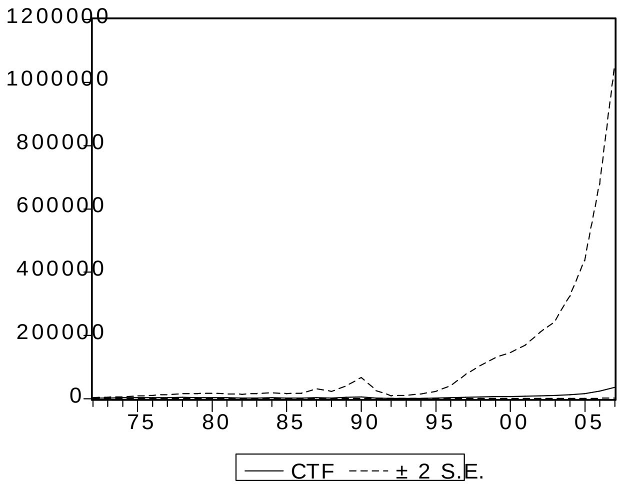
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID01)
Method: Least Squares
Date: 01/18/09 Time: 17:14
Sample(adjusted): 1974 2007
Included observations: 34 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.227444	0.315482	-3.890690	0.0005
D(RESID01(-1))	-0.063003	0.192946	-0.326534	0.7462
C	0.002162	0.037136	0.058221	0.9539

R-squared	0.646884	Mean dependent var	-0.008055
Adjusted R-squared	0.624102	S.D. dependent var	0.351221
S.E. of regression	0.215336	Akaike info criterion	-0.149141
Sum squared resid	1.437452	Schwarz criterion	-0.014462
Log likelihood	5.535399	F-statistic	28.39487
Durbin-Watson stat	1.955060	Prob(F-statistic)	0.000000

ملحق رقم (16)

اختبار ثيل للاستشراف



Forecast: CTF
Actual: CT
Forecast sample: 1970 2007
Adjusted sample: 1972 2007
Included observations: 36

Root Mean Squared Error	6764.073
Mean Absolute Error	5383.468
Mean Abs. Percent Error	51.35901
Theil Inequality Coefficient	0.294070
Bias Proportion	0.631806
Variance Proportion	0.110012
Covariance Proportion	0.258183

ملحق رقم (17)

نتيجة دالة الاستثمار

Dependent Variable: D(I,1)
Method: Two-Stage Least Squares
Date: 01/15/09 Time: 19:40
Sample(adjusted): 1972 2007
Included observations: 36 after adjusting endpoints
Instrument list: Y Y(-1) R

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	57.77002	124.2294	0.465027	0.6451
D(Y,1)	0.106787	0.028289	3.774848	0.0007
D(Y(-1),1)	0.070139	0.058400	1.200997	0.2386
D(R,1)	-39.80132	188.7931	-0.210820	0.8344

R-squared	0.420344	Mean dependent var	239.1381
Adjusted R-squared	0.366001	S.D. dependent var	691.8235
S.E. of regression	550.8580	Sum squared resid	9710224.
F-statistic	8.876997	Durbin-Watson stat	2.175030
Prob(F-statistic)	0.000200		

ملحق رقم (18)

اختبار Q.Statistics

Correlogram of Residuals

Date: 01/18/09 Time: 17:29
Sample: 1972 2007
Included observations: 36

<table>
<tr><th>Autocorrelation</th><th>Partial Correlation</th><th></th><th>AC</th><th>PAC</th><th>Q-Stat</th><th>Prob</th></tr>
<tr><td>. *| . |</td><td>. *| . |</td><td>1</td><td>-0.095</td><td>-0.095</td><td>0.3527</td><td>0.553</td></tr>
<tr><td>***| . |</td><td>***| . |</td><td>2</td><td>-0.357</td><td>-0.369</td><td>5.4791</td><td>0.065</td></tr>
<tr><td>.**| . |</td><td>***| . |</td><td>3</td><td>-0.206</td><td>-0.336</td><td>7.2355</td><td>0.065</td></tr>
<tr><td>. |**. |</td><td>. | . |</td><td>4</td><td>0.255</td><td>0.030</td><td>10.006</td><td>0.040</td></tr>
<tr><td>. |* . |</td><td>. | . |</td><td>5</td><td>0.102</td><td>-0.043</td><td>10.466</td><td>0.063</td></tr>
</table>

ملحق رقم (19)

اختبار التكامل المشترك

Augmented Dickey-Fuller Unit Root Test on RESID01

ADF Test Statistic	-6.054984	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID01)
Method: Least Squares
Date: 01/18/09 Time: 17:33
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.523952	0.251686	-6.054984	0.0000
D(RESID01(-1))	0.361815	0.172334	2.099503	0.0437
C	133.5182	87.54611	1.525119	0.1371

R-squared	0.614921	Mean dependent var	-0.392701
Adjusted R-squared	0.590854	S.D. dependent var	787.4231
S.E. of regression	503.6715	Akaike info criterion	15.36354
Sum squared resid	8117919.	Schwarz criterion	15.49686
Log likelihood	-265.8620	F-statistic	25.54995
Durbin-Watson stat	2.097498	Prob(F-statistic)	0.000000

ملحق رقم (20)

النتيجة المعدلة لدالة الاستثمار

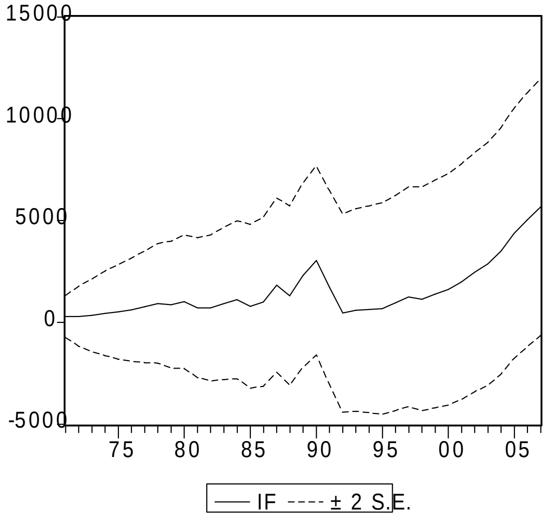
Dependent Variable: D(I,1)
Method: Two-Stage Least Squares
Date: 11/01/08 Time: 07:32
Sample(adjusted): 1971 2007
Included observations: 37 after adjusting endpoints
Instrument list: Y Y(-1) R

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y,1)	0.133121	0.022884	5.817255	0.0000

R-squared	0.423245	Mean dependent var	232.4421
Adjusted R-squared	0.423245	S.D. dependent var	683.3621
S.E. of regression	518.9752	Sum squared resid	9696070.
Durbin-Watson stat	2.174435		

ملحق رقم (21)

اختبار ثيل للاستشراف



Forecast: IF
Actual: I
Forecast sample: 1970 2007
Adjusted sample: 1971 2007
Included observations: 37

Root Mean Squared Error	1016.075
Mean Absolute Error	606.3087
Mean Abs. Percent Error	33.39426
Theil Inequality Coefficient	0.207701
Bias Proportion	0.213619
Variance Proportion	0.608845
Covariance Proportion	0.177536

ملحق رقم (22)

نتيجة دالة الضريبة

Dependent Variable: T				
Method: Two-Stage Least Squares				
Date: 10/30/08 Time: 19:54				
Sample(adjusted): 1971 2007				
Included observations: 37 after adjusting endpoints				
Instrument list: Y				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	125.3741	139.9554	0.895815	0.3765
D(Y,1)	0.182853	0.063078	2.898824	0.0064
R-squared	-0.366737	Mean dependent var		326.1932
Adjusted R-squared	-0.405786	S.D. dependent var		623.8799
S.E. of regression	739.7085	Sum squared resid		19150904
F-statistic	8.403179	Durbin-Watson stat		2.001404
Prob(F-statistic)	0.006427			

ملحق رقم (23)

النتيجة المعدلة لدالة الضريبة

Dependent Variable: T
Method: Two-Stage Least Squares
Date: 10/30/08 Time: 19:55
Sample(adjusted): 1971 2007
Included observations: 37 after adjusting endpoints
Instrument list: Y

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y,1)	0.210823	0.059274	3.556771	0.0011

R-squared	-0.644154	Mean dependent var	326.1932
Adjusted R-squared	-0.644154	S.D. dependent var	623.8799
S.E. of regression	799.9674	Sum squared resid	23038122
Durbin-Watson stat	1.957488		

ملحق رقم (24)

اختبار التكامل المشترك

Augmented Dickey-Fuller Unit Root Test on RESID01

ADF Test Statistic	-5.334485	1% Critical Value*	-3.6289
		5% Critical Value	-2.9472
		10% Critical Value	-2.6118

*MacKinnon critical values for rejection of hypothesis of a unit root.

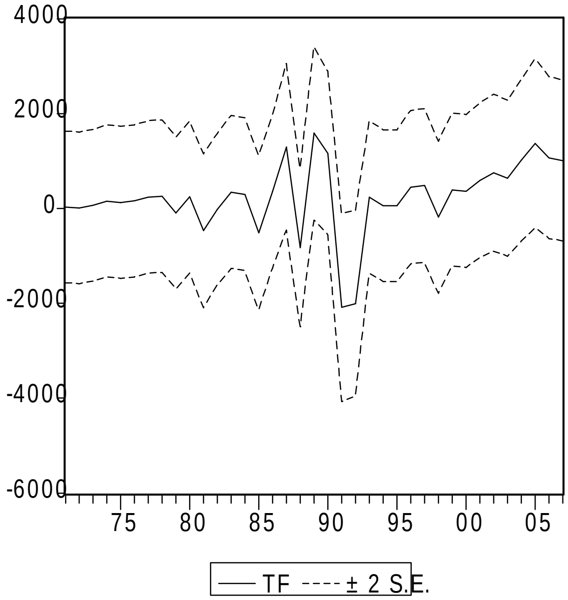
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID01)
Method: Least Squares
Date: 01/18/09 Time: 17:40
Sample(adjusted): 1973 2007
Included observations: 35 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.314992	0.246508	-5.334485	0.0000
D(RESID01(-1))	0.303480	0.173186	1.752333	0.0893
C	140.4240	139.5073	1.006571	0.3217

R-squared	0.540602	Mean dependent var	-17.78332
Adjusted R-squared	0.511890	S.D. dependent var	1151.533
S.E. of regression	804.5174	Akaike info criterion	16.30018
Sum squared resid	20711941	Schwarz criterion	16.43349
Log likelihood	-282.2531	F-statistic	18.82820
Durbin-Watson stat	1.953394	Prob(F-statistic)	0.000004

ملحق رقم (25)

اختبار ثيل للاستشراف



Forecast: TF
Actual: T
Forecast sample: 1970 2007
Adjusted sample: 1971 2007
Included observations: 37

Root Mean Squared Error	789.0830
Mean Absolute Error	454.1739
Mean Abs. Percent Error	448.9899
Theil Inequality Coefficient	0.532258
Bias Proportion	0.014390
Variance Proportion	0.029599
Covariance Proportion	0.956011