الملحق رقم (1): يوضح متغيرات النموذج .

obs	الإستهلاك (CO)	سعر الصرف (ER)	التضخم (INF)	السكان (POP)	الادخار (S)	الدخل المتاح (YD)
1985	15947	0.025	46.33	20882	-1459.6	14487.4
1986	19362.5	0.025	29.04	21085	-604.8	18757.7
1987	32552.4	0.045	24.98	21290	1400	33952.4
1988	41489.6	0.045	49.14	21724	1950.6	43440.2
1989	74217.3	0.045	74.08	22394	3903.6	78120.9
1990	101233.1	0.045	67.4	23079	1663	102896.1
1991	174169.4	0.045	123.7	23780	5017.8	179187.2
1992	362764.4	0.1	117.6	24495	51506.2	414270.6
1993	836743	0.1328	101.3	25222	73713	910456
1994	1660369	0.216	116.8	25961	91203.7	1751573
1995	3426694	0.4	69.4	26688	443382.4	3870076
1996	989034	1.2464	129.3	27875	-27645.4	961388.6
1997	1531664	1.5765	46.4	28627	-14605.2	1517059
1998	1968825	1.9945	16.9	29496	129468.2	2098293
1999	2492075	2.516	16.2	30326	102766.3	2594842
2000	3079158	2.5714	3	31081	-97770.2	2981387
2001	3524060	2.587	4.9	31913	196236.1	3720296
2002	4038231	2.6334	8.3	32769	6467.1	4415806
2003	4790138	2.6082	7.7	33648	6593.2	5110609
2004	5778953	2.5826	8.5	34512	9771.2	6338115
2005	7791219	2.4358	8.5	35398	6508.2	7839031
2006	8314761	2.1715	7.2	36307	7189.5	8991763
2007	9683488	2.0159	8.1	37270	1079765	10763253
2008	10469542	2.0913	14.3	38193	7977.2	12084777
2009	11666764	2.2359	11.2	38984	770202.7	12436967
2010	12380023	2.2373	13	39924	2515796	14895819
2011	14671210	2.4851	18.1	39984	31937.5	17027970
2012	204777.9	4.4	35.1	35055.7	6764.8	211542.7

المصدر : تقرير بنك السودان المركزى(1983-2012م)

الملحق رقم (2): يوضح سكون واستقرار الاستهلاك (co) .

-3.7076	1% Critical Value*	-3.455528	PP Test Statistic
-2.9798	5% Critical Value		
-2.6290	10% Critical Value		

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

(Newey-West suggests: 3)	Lag truncation for Bartlett kernel: 3
7.69E+12	Residual variance with no correction
7.51E+12	Residual variance with correction

Phillips-Perron Test Equation
Dependent Variable: D(CO,2)
Method: Least Squares
Date: 01/01/10 Time: 04:33
Sample(adjusted): 1987 2012
Included observations: 26 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0014	-3.601315	0.664365	-2.392586	D(CO(-1))
0.2546	1.167282	678569.6	792081.8	C

-556532.6	Mean dependent var	0.350816	R-squared
3508846.	S.D. dependent var	0.323766	Adjusted R-squared
32.66206	Akaike info criterion	2885445.	S.E. of regression
32.75884	Schwarz criterion	2.00E+14	Sum squared resid
12.96947	F-statistic	-422.6068	Log likelihood
0.001433	Prob(F-statistic)	1.266094	Durbin-Watson stat

الملحق رقم (3): يوضح سكون واستقرار التضخم (inf) .

-3.7204	1% Critical Value*	-3.446907	ADF Test Statistic
-2.9850	5% Critical Value		
-2.6318	10% Critical Value		

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INF,2)
Method: Least Squares
Date: 01/01/10 Time: 09:55
Sample(adjusted): 1988 2012
Included observations: 25 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0023	-3.446907	0.349780	-1.205660	D(INF(-1))
0.6257	-0.494701	0.212433	-0.105091	D(INF(-1),2)
0.9415	0.074216	5.509930	0.408923	C
0.842400	Mean dependent var		0.673752	R-squared
46.09765	S.D. dependent var		0.644093	Adjusted R-squared
9.578481	Akaike info criterion		27.50090	S.E. of regression
9.724746	Schwarz criterion		16638.59	Sum squared resid
22.71671	F-statistic		-116.7310	Log likelihood
0.000004	Prob(F-statistic)		1.968711	Durbin-Watson stat

الملحق رقم (4): يوضح سكون واستقرار حجم السكان (pop) .

-3.7076	1% Critical Value*	-4.365089	ADF Test Statistic
-2.9798	5% Critical Value		
-2.6290	10% Critical Value		

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(POP)
Method: Least Squares
Date: 01/01/10 Time: 10:01
Sample(adjusted): 1987 2012
Included observations: 26 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0002	-4.365089	0.024100	-0.105198	POP(-1)
0.0000	6.228192	0.593613	3.697134	D(POP(-1))
0.1767	1.393683	706.9207	985.2231	C
537.3346	Mean dependent var		0.655091	R-squared
1137.921	S.D. dependent var		0.625099	Adjusted R-squared
16.03887	Akaike info criterion		696.7393	S.E. of regression
16.18403	Schwarz criterion		11165249	Sum squared resid
21.84217	F-statistic		-205.5053	Log likelihood
0.000005	Prob(F-statistic)		1.287372	Durbin-Watson stat

الملحق رقم (5): يوضح سكون واستقرار الادخار (S) .

-3.7076	1% Critical Value*	-3.306944	ADF Test Statistic
-2.9798	5% Critical Value		
-2.6290	10% Critical Value		

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S)
Method: Least Squares
Date: 01/01/10 Time: 10:04
Sample(adjusted): 1987 2012
Included observations: 26 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0031	-3.306944	0.274579	-0.908019	S(-1)
0.8378	0.206977	0.208121	0.043076	D(S(-1))
0.1383	1.535613	123044.7	188949.0	C
283.4462	Mean dependent var		0.436437	R-squared
710791.7	S.D. dependent var		0.387432	Adjusted R-squared
29.40422	Akaike info criterion		556313.5	S.E. of regression
29.54938	Schwarz criterion		7.12E+12	Sum squared resid
8.905888	F-statistic		-379.2548	Log likelihood
0.001367	Prob(F-statistic)		1.976776	Durbin-Watson stat

الملحق رقم (6): يوضح سكون واستقرار الدخل المتاح (yd)

-3.7204	1% Critical Value*	-3.162120	ADF Test Statistic
-2.9850	5% Critical Value		
-2.6318	10% Critical Value		

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(YD,2)
Method: Least Squares
Date: 01/01/10 Time: 10:13
Sample(adjusted): 1988 2012
Included observations: 25 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0045	-3.162120	0.952796	-3.012855	D(YD(-1))
0.1170	1.631644	0.714130	1.165206	D(YD(-1),2)
0.1803	1.383941	923023.3	1277410.	C
-673264.9	Mean dependent var		0.325343	R-squared
4049351.	S.D. dependent var		0.264010	Adjusted R-squared
33.07164	Akaike info criterion		3473932.	S.E. of regression
33.21790	Schwarz criterion		2.66E+14	Sum squared resid
5.304578	F-statistic		-410.3955	Log likelihood
0.013180	Prob(F-statistic)		1.226400	Durbin-Watson stat

الملحق رقم (7): يوضح سكون واستقرار سعر الصرف (ER) .

-4.3738	1% Critical Value*	-5.623310	ADF Test Statistic
-3.6027	5% Critical Value		
-3.2367	10% Critical Value		

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ER,2)
Method: Least Squares
Date: 01/04/10 Time: 14:45
Sample(adjusted): 1988 2012
Included observations: 25 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0000	-5.623310	0.356210	-2.003081	D(ER(-1))
0.1183	1.628617	0.205619	0.334874	D(ER(-1),2)
0.8443	0.198816	311575.9	61946.14	C
0.8276	-0.220564	18723.49	-4129.725	@TREND(1985)

0.075796	Mean dependent var	0.778291	R-squared
1340099.	S.D. dependent var	0.746619	Adjusted R-squared
29.82717	Akaike info criterion	674565.4	S.E. of regression
30.02219	Schwarz criterion	9.56E+12	Sum squared resid
24.57297	F-statistic	-368.8396	Log likelihood
0.000000	Prob(F-statistic)	2.169419	Durbin-Watson stat

الملحق رقم (8): يوضح اختبار التكامل المشترك باستخدام اختبار جوهانسون .

Date: 01/04/10 Time: 12:36
Sample: 1985 2012
Included observations: 26

Test assumption: Linear deterministic trend in the data

Series: ER INF POP S YD CO
Lags interval: 1 to 1

	Hypothesized No. of CE(s)	1 Percent Critical Value	5 Percent Critical Value	Likelihood Ratio	Eigenvalue
None **		103.18	94.15	146.9689	0.880064
At most 1 **		76.07	68.52	91.82813	0.793550
At most 2 *		54.46	47.21	50.80796	0.501460
At most 3 *		35.65	29.68	32.71009	0.485682
At most 4 *		20.04	15.41	15.42232	0.315174
At most 5 *		6.65	3.76	5.578958	0.193116

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 6 cointegrating equation(s) at 5% significance level

الملحق رقم (9): يوضح تقدير دالة الاستهلاك فى السودان للفترة (1985-2012 م)

Dependent Variable: CO
Method: Least Squares
Date: 01/01/10 Time: 14:16
Sample(adjusted): 1986 2012
Included observations: 27 after adjusting endpoints
Convergence achieved after 10 iterations

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0004	-4.264045	928612.9	-3959647.	C
0.0007	-4.014738	137818.2	-553304.0	ER
0.0002	4.474142	44.10361	197.3258	POP
0.0009	-3.897574	1512.659	-5895.699	INF
0.0000	17.79984	0.040248	0.716410	YD
0.0417	-2.176381	0.122525	-0.266662	S
0.0564	-2.024935	0.223614	-0.452804	AR(1)

4077908.	Mean dependent var	0.998093	R-squared
4438609.	S.D. dependent var	0.997521	Adjusted R-squared
27.66812	Akaike info criterion	220998.7	S.E. of regression
28.00407	Schwarz criterion	9.77E+11	Sum squared resid
1744.646	F-statistic	-366.5196	Log likelihood
0.000000	Prob(F-statistic)	2.031011	Durbin-Watson stat

-.45	Inverted AR Roots

الملحق رقم (10) يوضح اختبار (ARCH - Test:) لكشف مشكلة اختلاف التباين .

ARCH Test:

0.864851	Probability	0.029596	F-statistic
0.857976	Probability	0.032023	Obs*R-squared

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/03/10 Time: 06:47
Sample(adjusted): 1987 2012
Included observations: 26 after adjusting endpoints

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0250	2.390364	1.52E+10	3.62E+10	C
0.8649	0.172036	0.203496	0.035009	RESID^2(-1)

3.75E+10	Mean dependent var	0.001232	R-squared
6.68E+10	S.D. dependent var	-0.040384	Adjusted R-squared
52.80086	Akaike info criterion	6.81E+10	S.E. of regression
52.89763	Schwarz criterion	1.11E+23	Sum squared resid
0.029596	F-statistic	-684.4111	Log likelihood
0.864851	Prob(F-statistic)	1.994599	Durbin-Watson stat

الملحق رقم (11): يوضح مصفوفة الارتباطات بين المتغيرات المستقلة .

YD	S	POP	INF	ER	
0.030114174	-0.070162274	0.115409110	-0.162270629	1	ER
-0.527954107	-0.205211744	-0.599210952	1	-0.162270629	INF
0.873512741	0.432738541	1	-0.599210952	0.115409110	POP
0.549661089	1	0.432738541	-0.205211744	-0.070162274	S
1	0.549661089	0.873512741	-0.527954107	0.030114174	YD

الملحق رقم (12): يوضح اختبار القوة التنبؤية للنموذج باستخدام معامل ثايل (THEIL)