

.2015

(2011 - 1980)

*

(VAR)

.(2011 - 1980)

(ADF)

.

.

.

:

VAR

. 2014/9/4 :

.2015

. 2013/10/29 :

*

©

(2011-1980)

**The Impact of External Public Debt on the Jordanian Trade Balance
during the Period**

(2011 - 1980)

Khalid Ali al-Majali

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Abstract

This study aims at presenting the impact of public debt on the Jordanian trade balance during the period (1980 - 2011). In order to achieve the above goal the (VAR) unrestricted Vector of Autoregression model has been applied to the data, Augmented Dickey Fuller (ADF) has been also used so as to test the stationarity of the data, and the Granger causality test has been applied to clarify the relationship among all variables of the study.

The Study concluded that there is a negative relation between the public debt and trade balance.

Keywords: Gross Domestic Product, Public Debt, Trade Balance, VAR.

:

) 1989

.(2002

(2011-1980)

.2

(Ricardian Equivalence Hypothesis)

(Miller, 1989)

$$Y = C + I + G \dots (1)$$

: C :Y :
: G :I

$$Y = C + S + T \dots (2)$$

: T : S :
(2) (1)

$$I = S + (T - G) \dots (3)$$

$$Y = C + I + G + X - M \dots (4)$$

:M :X :

$$Y = C + S + T + u \dots (5)$$

: u

$$I + (X - M - u) = S + (T - G) \dots (6)$$

(5) (4)
(X - M - u)

IF

$$I + IF = S + (T - G) \dots (7)$$

: (6)

(2011-1980)

I + X = S + M(8) : (2007)

:
(Mohanty, Stephen, Zampolli , 2011)

%85

(Rother and Checherita. 2010)

(U)

%80-70

. %100-90

(Arellano. 2009)

.2015

(1995)

(1991)
1988 – 1967

(1987)

(1992)

(1997)

(2013)
2011-1999

(2011-1980)

2001

%60

.(2002)

.(2007)

.2015

.(2008)

Compensator Finance

(2011-1980)

(2008)

:

(Gharaibah, 1987)

(1986)

1989-1987

1998-1992

:

: .1

%65

%35

(2010)

.2015

: .2

: .3

%4.1

.1990

.4

(1)

(1)

			/	
1668-	1164.8	606.82	38.2-	1980
1583.8-	1970.5	1472.29	39.1	1985
2178.6-	2760.9	6101.7	49.6	1990
2101.3-	4714.7	5877.9	15.2	1995
2042.5-	5998.5	6278.5	120-	2000
2396.9-	8925.4	11462.33	977-	2005
1980.9-	18762	7493.77	1447-	2010

2011-1980

:

:

:

(2011-1980)

1973-1967	
.	1967
1982-1974	
%34.4	
.	%24.6
1988-1983	
.	
1988	
:(1996)	
.	%25 .1
.	.2
.	%4-
%5	1988 .3
.	.1986 %0.8
.1988	.4
.	1988
.	()
.	1989

.(Bader & Magableh, 2009)

:

(2)

1980	409	.1
%17.3	1987	1.2
%163	3.8	1988 .2
		%215
4.3	% 4.7	1993-1990 .3
	%108	1993
		1989 5.4
		.1993-1989
5		2007-1994 .4
	.2007	%43 1994 %108
3.6	%30	2008 .5
	2008- 2003	
(2005)	
.2006		
	.2008	

(2011-1980)

(2)

GDP					GDP				
105.10%	4912.2	5.10%	5164.3	1996	35.10%	1164.8	-	409	1980
97.30%	5137.4	-3.20%	4998.1	1997	38.20%	1448.7	35.40%	553.9	1981
95.10%	5609.9	6.70%	5333.7	1998	41.50%	1649.9	23.50%	684.3	1982
95.40%	5778.2	3.30%	5510.1	1999	46.90%	1786.6	22.40%	837.8	1983
84.10%	5998.5	-8.50%	5043.5	2000	51.80%	1909.7	18.10%	989.3	1984
78.10%	6363.7	-1.50%	4969.77	2001	55.70%	1970.5	11%	1097.9	1985
78.60%	6794	7.70%	5350.44	2002	52.10%	2240.5	6.30%	1167	1986
74.60%	7228.7	0.80%	5391.81	2003	53.20%	2286.7	4.20%	1216	1987
66.10%	8090.7	-0.80%	5348.76	2004	163.30%	2349.5	215.50%	3836.9	1988
56.70%	8925.4	-5.50%	5056.66	2005	223.00%	2425.4	41%	5409.4	1989
48.60%	10675.4	2.70%	5186.5	2006	183.40%	2760.9	-6.40%	5064.3	1990
43.30%	12131.2	-1.30%	5253.29	2007	167.60%	2958	-2.10%	4958.7	1991
23.30%	15593.4	-30.70%	3640.16	2008	126.80%	3611.6	-7.70%	4577.6	1992
22.90%	16912.2	6.30%	3868.96	2009	108.90%	3885.2	-7.60%	4229.6	1993
24.60%	18762	19.20%	4610.81	2010	108.30%	4359.2	11.60%	4720.5	1994
21.90%	20476.6	-2.70%	4486.75	2011	104.20%	4714.7	4.10%	4911.8	1995

2011-1980

:

:

1987-1980

(3)

1988

%17.3

%215

1996-1989

%5

.2015

2011-2005		2004-1997	%0.56
%17.27	869.4	1987-1980	
%215.5	3836.9	1988	
%5	4879.5	1996-1989	
%0.56	5243.3	2004-1997	
%1.71-	4586.2	2011-2005	

.% 1.7

(3)

2011-1980

:

:

:

(2011-1980)

(4)

-1981

1980 1985

1986

.1980

1989

.1988

1990

1993

.1996 1998 1997

2003

(4)

-1605.1	2906.5	1301.4	1997	-543.3	714.8	171.5	1980
-1434.5	2712.4	1277.9	1998	-803.8	1046.4	242.6	1981
-1323.7	2622.5	1298.8	1999	-876.6	1141.1	264.5	1982
-1559.7	2908.3	1348.6	2000	-891.4	1102	210.6	1983
-1443.2	3077.2	1634	2001	-778.5	1069.2	290.7	1984

.2015

-1125.7	3213.9	2088.2	2002	-761.6	1072.5	310.9	1985
-1316.7	3650.8	2334.1	2003	-591.8	847.8	256	1986
-2431.2	5220.4	2789.2	2004	-596.9	912.6	315.7	1987
-3602.3	6654.7	3052.4	2005	-638.5	1020	381.5	1988
-3414.3	7300.5	3886.2	2006	-585.3	1222.9	637.6	1989
-4608.1	8704.6	4096.5	2007	-1008.6	1714.7	706.1	1990
-5167.9	10749.1	5581.2	2008	-979.5	1750.2	770.7	1991
-4448.8	8975.1	4526.3	2009	-1461.7	2291	829.3	1992
-4721.8	9711.9	4990.1	2010	-1585.2	2449.9	864.7	1993
-7000.9	12175.9	5175	2011	-1362.4	2357.6	995.2	1994
-8431.9	13517.4	5085.5	2012	-1347.1	2588.2	1241.1	1995
-1605.1	2906.5	1301.4	-	-1753.4	3041.6	1288.2	1996

2011-1980

:

:

:

2012-1980

(DEBT)

(GDP)

.(TB)

(VAR)

(2011-1980)

$$Y_t = c + A_1 Y_{t-1} + A_2 Y_{t-2} + \dots + A_p Y_{t-p} + e_t$$

VAR

:

(k*1) :C

. k : A_i

: e_t

.E-Views

:(Unit Root Test)

R2

.D-W

Dickey-

H0

Augmented Fuller (ADF)

H1

(5)

(DEBT)

.2015

(GDP)

.%5

(TB)

(ADF)

(5)

2nd Level			1 st Level			-2.986225 = %5		
-2.986225=%5			-2.986225 = %5			-2.986225 = %5		
	-3.961422	BT		0.408024	BT		3.342750	BT
-	-	-		-4.368686	DEBT		-2.179447	DEBT
	-10.65710	GDP		0.212218	GDP		8.364351	GDP

(Cusum Stability Test)

Cusum

(Structural Change)

(±2 S.E)

.(Greene,2003)

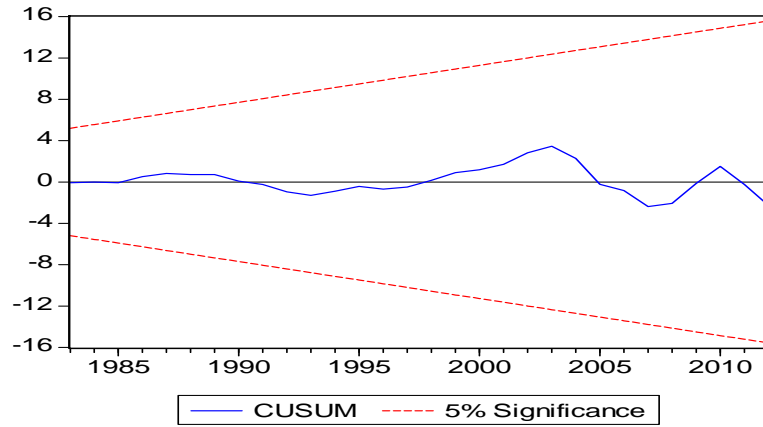
(1)

()

%5

(2011-1980)

(1)



(X) (Y) (X) F
 : (Y)
 (H1: $\beta_1 \neq 0, \beta_2 \neq 0 \dots \beta_n \neq 0$) : (H0: $\beta_1 = \beta_2 = \beta_3 = \dots = \beta_n = 0$)
 (F)
 () (F) ()
 (X) (F)
 .(Engle and Granger,1987) (Y)

(6)

DEBT GDP
 %5 GDP DEBT
 %1 BP GDP
 .GDP DEBT

(6)

		F	
	0.06046	3.13164	
	0.20169	1.70376	
	0.00350	7.08321	
	0.00029	11.3006	
	0.91374	0.09053	
	0.99953	0.00047	

:

(7)

%100
%4.7 %94
 . % 0.35

 %19.6
 %8.0

(2011-1980)

%4.7

%75.7

(7)

Variance Decomposition of BT:			
Period	TB	GDP	DEBT
1	100.0000	0.000000	0.000000
2	94.97568	0.351760	4.672556
3	89.34484	2.617301	8.037858
4	85.26828	6.778332	7.953390
5	82.04688	10.62402	7.329104
6	81.22993	12.62906	6.141015
7	80.91137	13.75430	5.334331
8	79.46710	15.36918	5.163720
9	77.45481	17.53013	5.015052
10	75.71414	19.58490	4.700957

(8)

.2015

(8)

Variance Decomposition of GDP:

Period	BT	GDP	DEBT
1	100.0000	0.000000	0.000000
2	94.97568	1.441067	3.583250
3	89.34484	5.400747	5.254412
4	85.26828	9.753164	4.978558
5	82.04688	12.72327	5.229851
6	81.22993	14.13697	4.633098
7	80.91137	15.36870	3.719934
8	79.46710	17.42939	3.103509
9	77.45481	19.94798	2.597208
10	75.71414	22.15953	2.126335

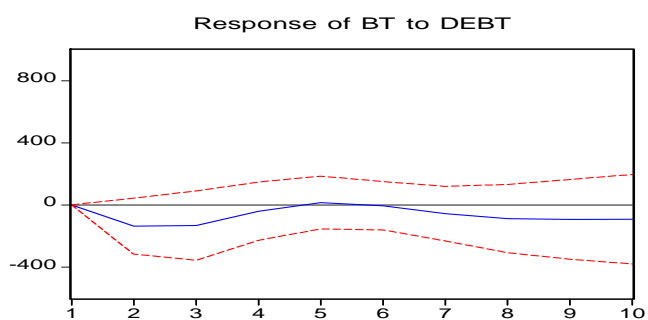
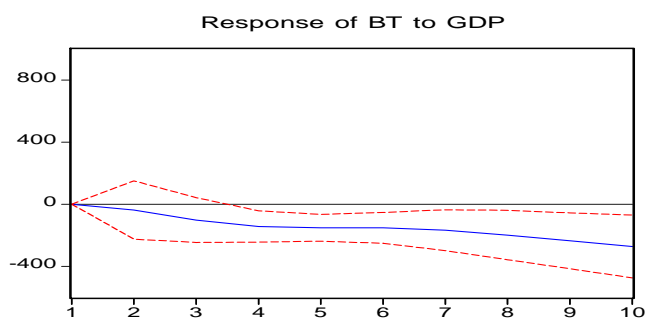
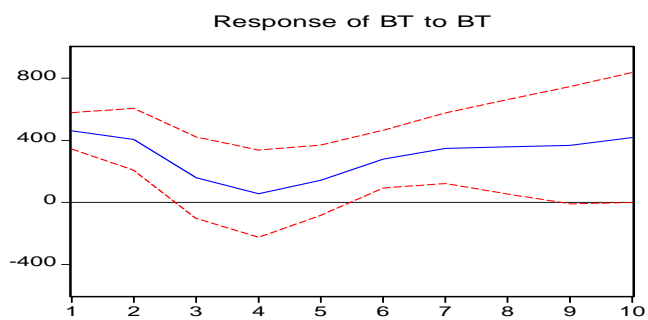
:

(2)

(2011-1980)

(2)

Response to Cholesky One S.D. Innovations ± 2 S.E.



606	13.4	2011		.1
	.%2108		1980	
%20			%80	
		2011-2001	.2000	
		.	%60	.2
				.3
				.4
				.5
DEBT GDP				.6
	%5		GDP DEBT	
		.%1	BP GDP	
				.7

(2011-1980)

: .1

.2

.3

.1989

<http://www.cbj.gov.jo/>

(1991) .

"

:

. 56-35 4 7 "

.(1997)

:

(2002).

(2010 -2000)

(2007) .

: (1996) .

(2002) .

(2008) .

(2008) .

(2007) .

() (1987)

/ (1985-1968) :

.1987 3 3

: 1995 .

56-25 (2) 7

(1992)

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