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THE IMPACT OF DEFICIT FINANCING ON ECONOMIC STABILITY: THE CASE OF JORDAN

This study examines the effect of deficit financing on economic stability in Jordan during the period 2005-2017, using quarterly data by employing the Vector Error Correction Model (VECM) after seasonally adjusting the variables. This paper is unique as it is the first of its kind that tackles the issue of stability in Jordan. It provides empirical evidence that external borrowing (EBDT) and domestic bank financing (BANK) negatively affect economic stability in Jordan. The bank effect is due to crowding out the private sector. External borrowing negative impact is driven by the current high level of outstanding public debt, 98 percent of GDP. Public debt is mainly channeled to finance current expenditures at the expense of capital expenditures, which has a minimal impact on growth. Interest rate (REPO) effect is in line with the finance theory as higher rates lead to lower growth. Non-bank financing (NonBank), although not statistically significant, exhibits the right sign as it has a positive effect. Future research may extend this work by including other macroeconomic variables such as current account deficit, money supply and direct foreign investment.

Key words: Budget Deficit, Crowding out, Public Expenditure, Vector Error Correction Model.

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1. Introduction

The impact of deficit financing on economic stability has been the major focus among scholars and economic researchers in both developed and developing countries. The importance of deficit financing stems mainly from its impact on economic growth and thereby on economic stability. According to Mordi (2006), economic stability can be achieved through constant growth rates and low inflation rates. Stability is also viewed as the achievement of price stability, sustained economic growth and maintaining full employment (Gbosi 2002).

According to Keynes (1936), when government spends more than its revenue, it can be used as a fiscal policy tool to tackle unemployment and depression, thereby stimulating the economy. However, too much deficit financing may result in crowding out the private sector as the government competes with the private sector for limited available funds. In practice, the deficit can be financed from bank sources, non-bank sources and external sources. Keeping in mind that domestic borrowing involves the absorption of funds by the government that otherwise would be available to the private sector (Okelo, Momanyi, Lucas and Aila, 2013) and leads to an upward pressure on interest rate levels. It is well established in the literature that the level of crowding out depends on the level of budget deficit financed through the banking system as opposed to non-banking system (see for example Emran and Farazi 2009 and Snyder 2011).

When it comes to Jordan, it is worth mentioning that the country is small and with limited natural resources. It depends heavily on foreign sources namely foreign grants and loans to finance its development needs. It suffers since its establishment from a chronic budget deficit, which is usually financed from external and internal sources. Due to the global financial crisis of 2007 and the Arab Spring of 2011, also the Syrian crises and the influx of more than 1.5 million refugees, the economy started to suffer severely as financial aid, current account deficit, real growth, foreign investment, budget deficit and public debt worsened sharply. Jordan came back to the reform programs with the IMF and World Bank in 2012 in order to resume macroeconomic stabilization.

Jordan's deficit financing shows that more than 60 percent is coming from internal sources during the period of the study. For example, internal financing increased from an average of 60 percent during 2000-2009 to 68 percent on average, during 2010-2012. In 2015, it reached 62.5 percent and remained above 60 percent thereafter. Given that the ongoing IMF adjustment program aims at achieving stability, our question is whether the policy of budget financing complies with the program's goals, in particular the macroeconomic stability. We are puzzled and motivated by the fact that during the period 2005-2010, the country witnessed

high real growth rates, more than 6 percent on average despite the dominance of internal financing, an average of more than 60 percent. While during 2011-2017, real growth declined sharply to 2 percent even though internal financing remained the major source of financing, also more than 60 percent (Central Bank of Jordan, Yearly Statistical Bulletin 2017).

The purpose of this study is to examine the impact of budget deficit financing on economic stability, measured as GDP growth, in Jordan during the period 2005-2017 using quarterly data. To our knowledge, no single study examined the effect of budget financing on economic stability in Jordan. As such, this is our contribution because of the important implications that it may have on economic growth as a proxy for stability. The authors believe that the outcome of this study may help attract policy makers attention in designing their future financing means of budget deficit in such a way to stimulate growth without discouraging the private sector activities.

This paper is organized as follows, in section 2 is the literature review, section 3 presents the methodology, section 4 presents the empirical results and section 5 concludes with policy recommendations.

2. Literature Review

John Maynard Keynes (1936) laid the foundations for the relationship between government spending and economic growth, as he believes that public expenditure stimulates output growth while internal financing can crowd out the private sector. Keynes argues that public spending stimulates economic development through its impact on consumption and investment demands. This study utilizes the Keynesian approach similar to Bazza et al. (2018), Al-Shatti (2014); Bakare, Adesanya and Bolarinwa, (2014); Okelo, Momanyi, Lucas and Alia, (2013); Okoro, (2013) and many others. Several empirical researches investigated the effect of government deficit financing on economic stability. They are summarized as follows:

Erkin (1998) examines the relationship between government deficit financing and economic growth in New Zealand and shows that higher government spending does not increase consumption but raises private investment, which leads to accelerating economic growth. Njera and Randa (2002) study the external macroeconomic implication of fiscal deficit in Kenya and report that fiscal policy has an important impact on external balance, thanks to the constraints that the government is facing in financing its needs. Bamidele and Englama (1998) conclude that excessive and prolonged deficit financing through the creation of high-powered

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money hurts macroeconomic stability, which may lead to weakening the level of investment and thereby stifles growth. Likewise, Shojai (1999) finds that deficit spending financed by the central bank can cause inefficiency in financial markets and leads to high inflation in developing countries. Moreover, it distorts real exchange rate, which in turn hurts the international competitiveness.

Okoye and Akenbor (2010) investigate the effect of deficit financing on socio-economic activities in Nigeria during the period 1997-2007 using Pearson Product Moment Correlation coefficient to test the significance of the relationship between deficit financing and economic growth and social community services. The study reveals that deficit financing has a positive and significant impact on economic activity in Nigeria. Paiko (2012) examines the impact of government expenditures and budget deficit financing on private investment in Nigeria. The findings reveal a negative relationship between deficit financing and private investment due to the crowding out effect.

Abu Shihab (2014) examines the causal relationship between economic growth and fiscal policy in Jordan using the Granger methodology for the period 2000-2012. The author reports a causal relationship running from economic growth to budget deficit only. Eze and Ogiji (2016) examine the implications of deficit financing on economic stability in Nigeria for the period 1970-2013. They conclude that external financing, non-bank financing and exchange rate have significant and positive implication on economic stability, measured as GDP growth, while ways and means source (printing money), bank source and interest rate have negative implications on stability. In addition, Onwe (2014) reports that government deficit financing through external sources and non-bank financing boosts economic stability, while bank financing and ways and means source reduce economic growth thereby causing instability in the economy.

Bazza et al. (2018) examine the effect of deficit financing on economic growth in Nigeria for the period 1981-2016 using data from the Central Bank of Nigeria Statistical Bulletin. The study uses the Augmented Dickey Fuller technique to test for the stationarity properties of the time series variables and the ARDL technique for the regression analysis. The results show that domestic financing, exchange rate and domestic private investment have negative and significant impact on growth while interest rate, surprisingly, has a positive impact.

It can be concluded from the above literature review that bank financing, interest rate and printing money have negative impact on economic growth while external financing and non-bank financing have positive impacts.

2.1 Hypotheses testing

The following are the null hypotheses for our policy variables.

H_{01}: External borrowing negatively affects economic stability.

H_{02}: Bank borrowing positively affects economic stability.

H_{03}: Nonbank borrowing negatively affects economic stability.

3. Methodology

This paper examines the effect of deficit financing on economic stability in Jordan covering the period 2005 – 2017 using quarterly data. The variables are seasonally adjusted (except interest rate) using X13 methodology. Real GDP is the dependent variable and external debt, domestic debt and interest rate are the explanatory variables. Interest rate is a control variable. Domestic borrowing is decomposed into bank and non-bank sources as illustrated in Figure 1: Domestic Financing (Million JDs) and repurchase agreement rate (REPO) is used as a proxy for interest rate.

3.1 The Model:

$$\text{RGDP}_t = \beta_0 + \beta_1 \text{EDBT}_t + \beta_2 \text{Bank}_t + \beta_3 \text{NonBank}_t + \beta_4 \text{REPO}_t + \mu_t \qquad (1)$$

Where:

RGDP: Real Gross Domestic Product

EDBT: Government Borrowing from Abroad

Bank: Government Borrowing from Domestic Banks

NonBank: Government Borrowing from Domestic None Bank Sources

REPO: Repurchase Agreement Rate.

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4. Empirical Results

4.1 Unit root test

The process of (VECM) test starts by first testing whether all the time series are nonstationary at the level. To determine the stationary properties of the series, we use the Augmented Dickey-Fuller (ADF) unit root test, which takes three forms:

First: unit root test with intercept

$$\text{RGDP}_t = \alpha + \delta \, \text{RGDP}_{t-1} + \mu_t \tag{2}$$

Second: unit root test with intercept and trend

$$\text{RGDP}_t = \alpha + \beta T + \delta \, \text{RGDP}_{t-1} + \mu_t \tag{3}$$

Third: unit root test without intercept and trend

$$\text{RGDP}_t = \delta \, \text{RGDP}_{t-1} + \mu_t \tag{4}$$

Where RGDP_t is the dependent variable, which represents real gross domestic product, RGDP_{t-1} is the independent variable that is one-year lag of the dependent variable, T is the trend term and μ is the error term.

The null hypothesis states that each series has a unit root. Table 1: Augmented Dickey-Fuller Test (ADF) indicates that all variables (RGDP, NonBank, Bank, EDBT and REPO) have unit root and are first difference stationary that is integrated of order 1. They do not therefore produce spurious regression outcomes. This makes them eligible for the Johansen cointegration test.

4.2 Cointegration Test

Based on the above findings, ADF results suggest that all the variables are integrated of order 1, if the variables have a long run relationship then Vector Error Correction Model VECM is considered more appropriate to estimate the parameters.

First, the optimal lags need to be chosen, by using lag length criteria tests. Based on Schwarz IC and Hannan – Quinn IC below, one lag only is used to esti-

mate the model using VECM methodology (Table 2: Lag Order Selection). **Second**, having established the presence of stationarity in the differenced series, we then test whether the series share the same unit root (cointegrated). Cointegrated variables, if disturbed, will not drift apart from each other and thus possess a long-run equilibrium relationship. A non-stationary variable, by definition, tends to wander extensively over time, but a group of non-stationary variables may have the property that a particular linear combination would keep them together, that is, they do not drift too far apart.

Therefore, before running VECM, we need to test if the variables have a long run relationship (cointegrated) by using the Johanson Cointegration test. We assume the presence of quadratic trend in data, which includes intercept and trend in the cointegrated equation and a linear trend in the VAR part as well. The calculated values of the Trace test and Max-Eigen Statistic are greater than their respective critical value at the 5 percent significance level for the null hypothesis, which states that there is no cointegration (None) as presented in Table 3: Cointegration Tests. This hypothesis is rejected which indicates that there is a cointegration relationship between the dependent variable and the independent variables. The Trace test indicates the presence of 2 cointegrated equations while the Max-eigenvalue test suggests only one cointegrated equation in the model. For simplicity, the study uses the Max-eigenvalue result of one cointegrated equation.

4.3 The Vector Error Correction Model (VECM)

Cointegration implies that although many developments can cause permanent changes in the individual elements of a group of series, there is some long-run equilibrium relation tying the individual components together. If the group is cointegrated, then it is not correct to fit a VAR to the differenced data (Hamilton 1994). As argued by Engle and Granger (1987), the VAR estimate with cointegrated data (without including the cointegration term) will be misspecified. It should be noted that the VAR model provides information about the short-run relations between the dependent and the independent variables only. However, another representation of VAR, the (VECM), can be used. It is a VAR model for data in different form augmented by the error correction term. In a VECM, the short-run dynamics of the variables in the group are influenced by the deviation from an equilibrium relationship. VECM is therefore an OLS technique, which offers short run and long run dynamics.

As indicated above, estimation of a VECM proceeds by first determining one or more cointegrating equations using the Johansen (1991) procedure. The first

difference of each endogenous variable is then regressed on a one period lag of the cointegrating equation(s) (the long run dynamics) and lagged first differences of all the endogenous variables in the system (the short run dynamics). The term (Z) represents a vector of the independent variables and (W) represents the long-term relationship or the error correction term (EC) in the following model:

$$\Delta RGDP_t = \beta_0 + \beta_i \Delta RGDP_{t\text{-}i} + \Omega i \Delta Z_{t\text{-}i} + \Theta_t W_{t\text{-}1} + V_t \tag{5}$$

Where the summation terms represent the short run relationships and the error correction term (Θ) represents the speed of adjustment of RGDP in response to changes in W. The term W, which is the vector of deviations from the long run relation, can be normalized and its long run equation can be expressed as:

$$EC_{t\text{-}1} = W_{t\text{-}1} = RGDP_{t\text{-}1} - \beta_0 - \beta_i Z_{t\text{-}1} \tag{6}$$

$$RGDP_t = \beta_0 + \beta_1 Z_t + \varepsilon_t \tag{7}$$

After establishing the existence of a long-term relationship between the dependent variable and the independent variables, the study applies VECM methodology. The VECM results reveal that the Error correction (EC) term is negative and statistically significant as shown in Table 4: Vector Error Correction Estimates. The speed of adjustment which is $1/EC = 1/0.25 = 4$ suggests that the speed of adjustment will take 4 periods (quarters) to go from short term to long term.   That is, if there is a departure in one direction from the long run equilibrium, the correction would have to be pulled back to the other direction and the equilibrium is retained. This coefficient, being significant and negative, indicates that our explanatory variables Granger cause real GDP.

In the short run, the coefficients of the independent variables indicate whether a short run causality running from bank financing, none bank financing, external borrowing, and interest rate to real GDP. Our results show that there is evidence that all the explanatory variables cause real GDP in the short run.

As the signs of the parameters are the opposite in the long run VECM results, the above findings show that domestic bank financing as well as external borrowing have statistically significant negative impacts on RGDP. While non-bank source has a positive impact on RGDP but it is not statistically significant. However, the size of the non-bank financing is much less than that of the bank financing. As expected, Interest rate (REPO) has a negative impact on RGDP. The negative impact of the bank financing on RGDP can be attributed to the crowding out effect.

Our results in terms of external financing show a negative impact on stability, contrary to those of Eze and Ogiji (2016) and Onwe (2014). The acceleration of external borrowing in Jordan during 2010-2017 was the result of the global financial crisis of 2008, the Arab Spring and the political instability in the region because the period 2010-2017 witnessed the worsening of foreign direct investment, budget deficit, foreign grants and current account. These developments led to a higher reliance on external borrowing. This may help explain the negative impact of external borrowing on economic stability keeping in mind that a large part of the external borrowing has been used to finance current expenditures rather than capital expenditures in the aftermath of the Arab Spring.

5. Conclusion and Recommendations

Our findings provide empirical evidence that the level of external borrowing and the domestic bank financing have negative impacts on economic stability in Jordan. We fail to reject the null hypothesis regarding external borrowing but are able to reject that of the bank borrowing. The bank effect is due to the crowding out of the private sector investments in the economy while the external borrowing negative impact is stemming from the fact that public debt reached unsustainable level and most of it is channeled to financing current expenditures at the expense of capital expenditures which has a minimal impact on growth. The effect of interest rate is in line with the finance theory as higher rates lead to lower growth. Nonbank financing positive impact is not statistically significant but its sign is also in line with economic theory.

These results suggest that government budget deficit has a negative effect on Jordan economic stability regardless of how it is financed. As for the implications, the government is clearly in urgent need to minimize its deficit. On the expenditure front, the size of the government should be optimized mainly by transferring part of its functions to the private sector such as public works functions, reforming health services and education system. On the revenue front, raising taxes is not an option at this stage, rather the government should focus on reforming the tax system to be more efficient and equitable. In this stage, the government must lower the tax rates, broaden the tax base and fight tax evasion and avoidance. The tax system should target attracting foreign investment to finance the current account deficit on one side and help in stimulating growth rates on the other. Future research may extend this work by incorporating other macroeconomic variables including current account deficit, money supply and foreign direct investment.
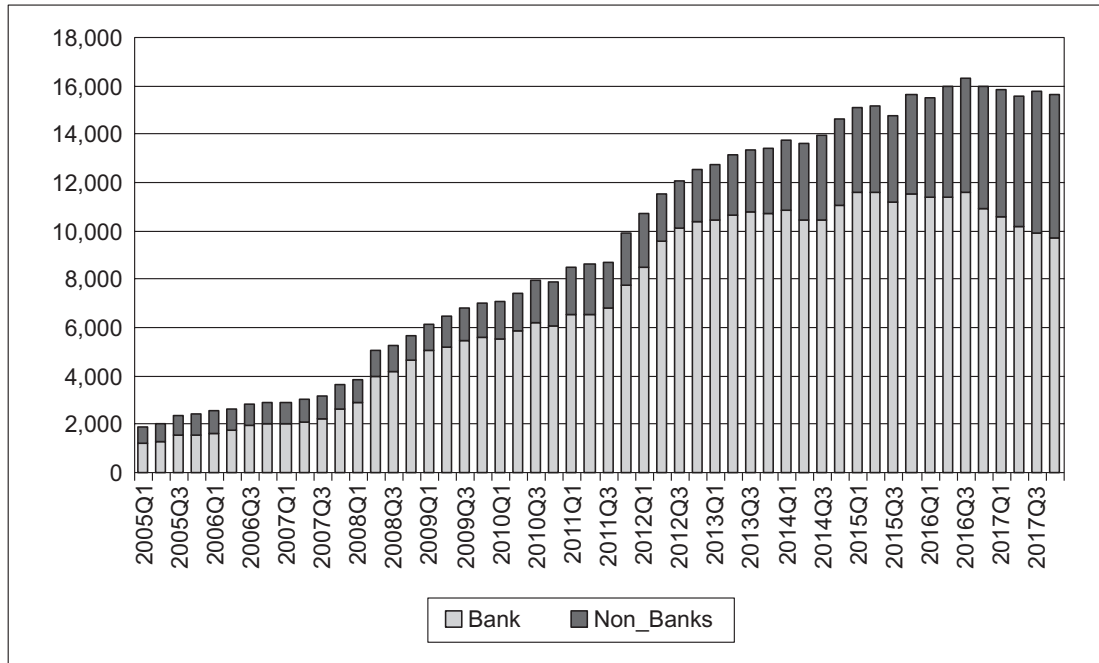
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Appendices

Figure 1:

DOMESTIC FINANCING (MILLION JDS)

Source: Central Bank of Jordan, Monthly Statistical Bulletin

Table 1:

AUGMENTED DICKEY-FULLER TESTS (ADF)

Null Hypothesis: RGDP has a unit root
Exogenous: Constant
Lag Length: 4 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.883413	0.0549
Test critical values:	1% level	-3.577723	
	5% level	-2.925169	
	10% level	-2.600658	

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

Null Hypothesis: NONBANK has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		3.096197	1.0000
Test critical values:	1% level	-3.565430	
	5% level	-2.919952	
	10% level	-2.597905	

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

Null Hypothesis: BANK has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.755759	0.3978
Test critical values:	1% level	-3.565430	
	5% level	-2.919952	
	10% level	-2.597905	

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

Null Hypothesis: EDEBT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		1.790845	0.9997
Test critical values:	1% level	-3.565430	
	5% level	-2.919952	
	10% level	-2.597905	

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

Null Hypothesis: INTER has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.352113	0.5981
Test critical values:	1% level	-3.568308	
	5% level	-2.921175	
	10% level	-2.598551	

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

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Table 2:

LAG ORDER SELECTION

VAR Lag Order Selection Criteria
Endogenous variables: RGDP_D11 BANK_D11 NONBANK_D11 EDEBT_D11 REPO
Exogenous variables:
Date: 05/07/18   Time: 14:02
Sample: 2005Q1 2017Q4
Included observations: 46

Lag	LogL	LR	FPE	AIC	SC	HQ
1	-1130.411	NA	4.53e+15	50.23528	51.22910*	50.60757*
2	-1105.471	39.03763	4.69e+15	50.23786	52.22551	50.98244
3	-1086.612	25.41877	6.69e+15	50.50485	53.48633	51.62173
4	-1050.407	40.92658	4.95e+15	50.01771	53.99302	51.50688
5	-1003.158	43.14103*	2.66e+15*	49.05033*	54.01946	50.91180
6	-979.9068	16.17445	5.30e+15	49.12638	55.08935	51.36014

Table 3:

COINTEGRATION TESTS

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.715666	120.1325	79.34145	0.0000
At most 1 *	0.377283	57.25221	55.24578	0.0330
At most 2	0.311103	33.56903	35.01090	0.0708
At most 3	0.243456	14.93586	18.39771	0.1428
At most 4	0.019530	0.986144	3.841466	0.3207

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.715666	62.88029	37.16359	0.0000
At most 1	0.377283	23.68319	30.81507	0.2881
At most 2	0.311103	18.63316	24.25202	0.2324
At most 3	0.243456	13.94972	17.14769	0.1377
At most 4	0.019530	0.986144	3.841466	0.3207

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

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Table 4:

VECTOR ERROR CORRECTION ESTIMATES

Vector Error Correction Estimates
Date: 05/07/18   Time: 14:00
Sample (adjusted): 2005Q3 2017Q4
Included observations: 50 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
RGDP_D11(-1)	1.000000
BANK_D11(-1)	0.012651 (0.00578) [2.18744]
NONBANK_D11(-1)	-0.003833 (0.02271) [-0.16881]
EDEBT_D11(-1)	0.025334 (0.00534) [4.74002]
REPO(-1)	14.92682 (4.35859) [3.42469]
@TREND(05Q1)	-26.99931
C	-2111.647

Error Correction:	D(RGDP_D11)	D(BANK_D11)	D(NONBAN...	D(EDEBT_D...	D(REPO)
CointEq1	-0.252548 (0.07168) [-3.52343]	2.479483 (1.53254) [1.61789]	-0.511396 (0.59231) [-0.86339]	-3.381757 (1.71358) [-1.97350]	-0.006411 (0.00099) [-6.44895]

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Table 4:

VECTOR ERROR CORRECTION ESTIMATES/CONTINUED

D(RGDP_D11(-1))	0.270660	-3.538487	0.965111	1.106636	0.004888
	(0.13317)	(2.84731)	(1.10046)	(3.18367)	(0.00185)
	[2.03247]	[-1.24275]	[0.87701]	[0.34760]	[2.64624]
D(BANK_D11(-1))	-0.003948	0.024764	-0.124863	0.247580	9.23E-05
	(0.00765)	(0.16359)	(0.06322)	(0.18291)	(0.00011)
	[-0.51601]	[0.15138]	[-1.97491]	[1.35355]	[0.86977]
D(NONBANK_D11(-1))	-0.021393	-0.659219	-0.266873	0.322816	0.000389
	(0.01853)	(0.39622)	(0.15313)	(0.44302)	(0.00026)
	[-1.15447]	[-1.66379]	[-1.74274]	[0.72867]	[1.51263]
D(EDEBT_D11(-1))	0.001954	-0.420162	0.046337	0.133416	9.22E-05
	(0.00710)	(0.15191)	(0.05871)	(0.16985)	(9.9E-05)
	[0.27504]	[-2.76594]	[0.78924]	[0.78549]	[0.93518]
D(REPO(-1))	-29.69690	144.5254	-104.0348	-379.3792	-0.037567
	(8.78869)	(187.914)	(72.6270)	(210.112)	(0.12190)
	[-3.37899]	[0.76911]	[-1.43245]	[-1.80561]	[-0.30819]
C	31.54092	426.3249	-4.701774	-237.6944	-0.140781
	(7.38212)	(157.839)	(61.0036)	(176.485)	(0.10239)
	[4.27261]	[2.70101]	[-0.07707]	[-1.34683]	[-1.37498]
@TREND(05Q1)	-0.446602	-2.517938	4.955767	9.592638	-0.001245
	(0.20314)	(4.34348)	(1.67872)	(4.85658)	(0.00282)
	[-2.19845]	[-0.57971]	[2.95211]	[1.97518]	[-0.44177]
R-squared	0.447690	0.350560	0.375217	0.264496	0.647808
Adj. R-squared	0.355638	0.242320	0.271087	0.141912	0.589110
Sum sq. resids	10060.39	4599202.	687010.0	5750001.	1.935294
S.E. equation	15.47686	330.9151	127.8960	370.0065	0.214659
F-statistic	4.863464	3.238731	3.603337	2.157674	11.03617
Log likelihood	-203.5554	-356.6812	-309.1490	-362.2641	10.34717
Akaike AIC	8.462216	14.58725	12.68596	14.81056	-0.093887
Schwarz SC	8.768139	14.89317	12.99188	15.11649	0.212037
Mean dependent	23.21927	165.5195	104.2212	131.6032	0.010000
S.D. dependent	19.28049	380.1664	149.8025	399.4326	0.334877

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H. A. KASASBEH, M. ALZOUB: The impact of deficit financing on economic stability: The case of Jordan
EKONOMSKI PREGLED, 70 (5) 706-722 (2019)

UTJECAJ FINANCIRANJA DEFICITA NA EKONOMSKU STABILNOST:
SLUČAJ JORDANA

Sažetak

U ovom se radu ispituje utjecaj financiranja deficita na ekonomsku stabilnost u Jordanu u razdoblju od 2005. do 2017. godine, temeljem tromjesečnih podataka, korištenjem vektorskog modela korekcije pogreške (VECM) nakon sezonskog prilagođavanja varijabli. Ovaj je rad jedinstven jer je prvi takve vrste koji se bavi pitanjem stabilnosti u Jordanu. Rad pruža empirijske dokaze da vanjsko zaduživanje (EBDT) i financiranje domaćih banaka (BANK) negativno utječu na ekonomsku stabilnost u Jordanu. Učinak banke posljedica je istiskivanja privatnog sektora. Negativni utjecaj vanjskog zaduživanja utječe na trenutačno visoku razinu nepodmirenog javnog duga od 98 posto BDP-a. Javni dug uglavnom se usmjerava na financiranje tekućih rashoda na teret kapitalnih rashoda, što ima minimalan utjecaj na rast. Učinak kamatnih stopa (REPO) u skladu je s teorijom financija jer veće stope dovode do nižeg rasta. Nebankarsko financiranje (NonBank), iako nije statistički značajno, pokazuje pravi predznak, jer ima pozitivan učinak. Buduća istraživanja mogu proširiti ovaj rad uključivanjem ostalih makroekonomskih varijabli poput deficita tekućeg računa, novčane mase i izravnih stranih ulaganja.

Ključne riječi: proračunski deficit, istiskivanje, javni izdaci, vektorski model korekcije pogreške.