Journal Homepage: -www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/7644
DOI URL: http://dx.doi.org/10.21474/IJAR01/7644

RESEARCH ARTICLE

THE RELATIONSHIP BETWEEN BUDGET DEFICIT AND INFLATION IN SYRIA FOR THE PERIOD (1990-2010).

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Manuscript Info

Manuscript History

Received: 02 July 2018
Final Accepted: 04 August 2018
Published: September 2018

Keywords:-
budget deficit, inflation, Syria, Johanson co-integration, Vector error correction.

Abstract

Government budget deficit has been one of the most critical issues in the countries' historical economic problems. The budget deficit-inflation relationship is not always obvious and it varies between countries. This paper investigates the long-run and the short-run relationship between budget deficit and inflation in Syria, by using annual data for the period of 1990-2010. We employ johanson test approach of co-integration to investigate the long-run relationship between budget deficit and inflation within the Vector error-correction model (VECM). The empirical results suggest that there is significant and positive long-run relationship between budget deficit and inflation in Syria, while it does not exist on the short-run.

Introduction:-

The relationship between budget deficit and inflation is a controversial issue. The importance of this relationship has led to a large body of literature which examines the question of whether economies with large and persistent fiscal deficits have high inflation rates.Much extensive theoretical and empirical literature has been developed to examine the relationship between the budget deficit and inflation. At a theoretical level, the classical theory attributes sustained price inflation to excessive growth in the quantity of money in circulation. For this reason, the classical theory is sometimes called the "quantity theory of money," even though it is a theory of inflation, not a theory of money. More specifically, Classics see inflation as a monetary phenomenon and argue that the basic factor that determines the general level of prices is money (Koyuncu, 2014). Accordingly, This theory says that fiscal deficits cause inflation because governments that run persistent fiscal deficits tend, over time, to resort to money creation to finance the deficits (Tiwari, et al., 2012).

The Keynesian approach suggests that the cause of the inflation is the excessive demand oppressions, which emerge under the assumption that the economy is at full employment. Excessive demand at the level of full employment will lead to more profit for the firms while nominal wages are fixed. In order to meet the growing demand, the labor demand of the firms will increase and the wages will rise. This will increase the general level of prices and will lead to inflation (Koyuncu, 2014). According to this opinion, Keynesian economic proposes that an increase in budget deficit causes an increase in real interest rate, which results in crowding out of private investment and a high level of general prices. When monetary deficits are financed, it means that there is an excess demand in the economy, which creates inflation (Adinevand, 2015).

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According to the monetarist (and neo-classical) approach, changes in the inflation rate are highly correlated to changes in the money supply. The money supply link of causality rests on Milton Friedman's famous theory of money, which dictates that inflation is always and everywhere a monetary phenomenon. Normally, the budget deficit on its own does not cause inflationary pressures, but rather affects the price level through the impact on money aggregates and public expectations, which in turn trigger movements in prices. (Makochekanwa, 2011). In the monetarists view, governments can control inflation by simply controlling money supply (Mansfield, et al., 2001).

On the other hand, a fiscal theory of price level (FTPL) claims that, it is fiscal, not monetary policy that determines the price level and becomes the nominal anchor. The FTPL theory challenges the conventional wisdom uttered by the monetarist, which has been put forward by Woodford (1994, 1995 and 1996), Sims (1994, 1998) and Canzoneri et al. (2001). On the basis of FTPL approach, which is called as financier approach, the budget deficits may be the most important source of macroeconomic instability of budget deficits. It has been expressed that the supply of money is not the main element that determines the inflation, but also budget deficit has a significant impact on inflation. According to FTPL approach, monetary and fiscal policies should be conducted consistent with each other for the implementation of an effective economic policy. (Koyuncu, 2014)

According to a study carried out by Sergent and Wallace (1981), those governments that are running a persistent deficit have to- sooner or later- finance those deficits with increasing money creation that produces inflation in the long-run (Pelesai; Oyinpreye, 2013)

Sargent and Walace (1985) maintain that financing government budget deficit by money creation causes higher inflation. But it should be mentioned that there is ambiguity with respect to the relation between budget deficit and inflation because deficit can be financed by borrowing as well as through money creation. This theory suggests that the strength of the relationship between government budget deficits and inflation depends on whether monetary policy is independent or dependent relative to fiscal policy (Ahmad; Jamshidbaygi, 2011). Sargent and Walace identified two types of coordinations between monetary and fiscal authorities that are effective in controlling inflation. The first type of coordination is the monetary authority's dominant. Here, the monetary authorities announce the growth in monetary base as well as the fiscal policy sets of its budget by considering the revenue created by monetary policy. The second type of coordination is the dominance of the fiscal authorities. Here, the fiscal authorities announce the amount of money needed for the budget from monetary authorities, through seigniorage or bond sales. The latter type of coordination provides an insight to inflation problemsthat are led by fiscal imbalances. Therefore, the fiscal authorities sometimes demand more revenue than tolerable amounts, which creates inflation (Pelesai; Oyinpreye, 2013).

Thus, it is possible to say that in countries where seigniorage is an important component of government finance, we are likely to find that government budget deficits and inflation are empirically linked. In countries with independent monetary authorities, the link between deficits and inflation is likely to be weaker (Ahmad; Jamshidbaygi, 2011).

The deficit-inflation relationship is also discussed by considering direct effects of inflation on budget deficit. In fact, the "budget deficit-inflation" link appears to exhibit a two-way interaction, i.e. not only budget deficit produces inflationary pressure through its impact on money and expectations, but also high inflation has a feedback effect that pushing up budget deficit.

Prammer and Reiss (2015) said that there are many channels through which inflation influences the real budget deficit. The most often cited channel manifests itself in an increasing in government expenditure.

In general, inflation has rising effect on budget deficit by rising nominal interest rate. According to the"Fischer Effect", nominal interest rate consists of real interest rate and expected inflation rate. If the inflation expectation increases, it causes a rise in nominal interest rate, which leads the public debt to go up. Interest payment covers the big part of public payment in developing countries. If interest rate increases, it leads interest payment to rise as well as the Debt/GDP ratio, and thereby increasing fiscal deficit. (Tiwari; Tiwari, 2011)

On the other hand, this process works through significant effects of inflation on tax revenues through lags in tax collection. The problem lies in the fact that the time of tax obligations' accrual and the time of actual payment do not coincide, with payment usually made at a later date. In view of this, high inflation during such a time lag reduces

the real tax burden. We may therefore have the following self-strengthening phenomenon: persistence of budget deficit props up inflation, which in turn lowers real tax revenues; a fall in the real tax revenues then necessitates further increase in budget deficit and so on. In economic literature, this is usually referred to as the Olivera-Tanzi effect (Piontkivsky. et al., 2001)

Together with the effects regarding the increase of government expenditure and the reduction of revenues, in conjectural situations and in the short-run, inflation can also have positive effects in this respect. In the case of highly indebted countries, inflation can diminish the burden of public debt as a real value, even if this effect only occurs concerning the debt contracted in national currency. Nevertheless, for the same indebted countries, nominal interest rates increase with the rise of inflation rate, leading to an increase in the debt expenditures reflected in the budget, which increase the budget deficit (Boariu; Bilan, 2007).

To face public deficits, governments are confronted with the choice between different sources of financing. There exist four main different ways of financing budget deficit:

1. borrowing from the central bank (or "monetization" of the deficit).
2. borrowing from the rest of the banking system.
3. borrowing from the domestic non-bank sector.
4. borrowing from abroad.

All sources of financing fiscal deficit have their own drawbacks.
Borrowing from the central bank has no direct cost but carries a serious risk of inflation due to excess aggregate demand caused by an increase in money supply. Therefore, if the government borrows directly from central bank, it would besimilar to printing money. It is a very inflationary approach, and is not usually encouraged. Moreover, if the government has a loan from the central bank to finance its expenditures and meet financial difficulties, it has to issue some treasury bills in exchange for debt. If the government fails to collect revenues through tax or non-tax sources ,i.e, current revenues and cannot service the debt, the money stock may increase excessively, involving inflationary issuing of money. (Piontkivsky. et al., 2001)

On the other hand, when a commercial bank lends the government, its cash and deposits with the central bank decrease. This results in a withdrawal of private purchasing power and an addition to public purchasing power simultaneously. In this way, the impact of government debt or expenditures is non-inflationary. Here there are two main points of concern. First, to know how the commercial banks get the cash to lend to the government, and second, how will banks' future operations be affected as a consequence of giving debt to the government? If a bank lends the government by investing in government securities and keeps no surplus cash, the required cash flows for loan subscriptions to the government may be attained by two ways: the proceeds of maturing loans or maturing investments in government securities. In this case, the new financial instruments replace the old ones and there would be no change in the aggregate volume of the bank's assets and liabilities. So, this channel would be non-inflationary. Conversely, the commercial banks may obtain cash through fresh deposits for investing in government securities to lend the government. With this mechanism, the acquisition of additional funds from depositors and loans to the government happen without lessening the bank's existing investment in government securities and existing volume of loans. Thus, this channel of providing debt to government is potentially inflationary. (Ahmad, et al., 2012)

When the government borrows from non-bank financial institutions (NBFIs), the result is inflationary. If the NBFIs invest by purchasing the government securities and face a shortage of liquidity, they have no option but to turn to the central bank. Again the central bank provides the link between governments borrowing and inflation. (Milo, 2012)

Alternatively, the impact of budget deficit on inflation when the government borrows from abroad crucially depends on the exchange rate regime.

If the central bank adheres to a fixed exchange regime, then any foreign borrowing must be sterilized in foreign exchange market so as to maintain the exchange rate at the prescribed level. But this means that the central bank has to increase the monetary base by buying up the excess supply of foreign exchange in return for additional reserves that are injected into the system.

Yet, when floating exchange rate regime dominates the economy, external borrowing allows the government to avoid the increase in monetary base and money supply, thus preventing inflationary developments. Among consequences of such policy are the appreciation of exchange rate and negative pressures on tradable goods sector due to the deterioration of its competitiveness in international markets (Piontkivsky. et al., 2001).

In Syria, it has been observed that inflation in recent years has crossed the threshold point. Indicators also show that fiscal imbalances have been the most important factor contributing to inflation. During (1990-199**6**) The average of inflation rate was 10.9% and the highest level was 15.33% in 1994, while the budget deficit rates fluctuated during this period due to the fluctuation of expenditure growth rates and public revenues, where it reached an average of 4.9% of GDP

In the second half of the 1990s, the Syrian government adopted a contractionary monetary policy that led to a decrease inflation to negative rates in 1998,1999 and 2000.This monetary policy was accompanied with acontractionary fiscal policy, which implied a reduction in public expenditure, and reduced budget deficitfrom 21.75 in 1995 to 12.89 billion SY in 2000, then turned into surplus in 2001 due to higher oil revenues that year.

The difficult political and economic conditions have negatively affected the deficit and inflation in the period between 2005-2010 and led to rise in consumer price levels from -3.9% in 2000 to 10.39 % in 2006 and reached its highest rate in 2008 (15.153%). The budget deficit rose from 18.73 in 2006 to 72.97 billion SY in 2009.

The acceleration of inflation and budget deficit has triggered renewed interest in exploring whether the large budget deficit is driving prices up in Syria.

Literature Review:-

The empirical evidence on government deficits is inconclusive due to the inconsistency of the theoretical framework and data sets**.**Several studies have been conducted to establish the relationship between budget deficit and inflation both in developed and developing countries. Some of these studies are hereby presented.

Helmy (2008)investigated the impact of budget deficit, its sources of financing on inflation in Egypt, by employing Johansen co-integration analysis and vector error correction model (VECM), based on the annual data from 1981 to 2006. The result showed that budget deficit and its sources of financing have a major impact on inflation in EGYPT.

Omoke and Oruta (2010) studied the causal long term relationship between budget deficit, money supply and inflation. They employed Vector Error Correction Model (VECM). The findings of the study revealed that there is a long-run relationship between the variables and that money supply Granger causes budget deficit

Ammama, etal., (2011)studied the impact of fiscal deficit on inflation in Pakistan for the period (1960 – 2010) Employing (Engle-Granger) Co-integration and Granger-causality test. The study concluded that budget deficit growth had a positive effect on increased price levels in Pakistan.

Habibullah, et al., (2011)investigated the long-run relationship between budget deficit and inflation in thirteen Asian developing countries based on annual data for the period 1950-1999using Engle-Granger Co-integration test and the error-correction model (ECM). The results indicated the existence of a long-run relationship between inflation and budget deficits. Thus, they conclude that budget deficits are inflationary in Asian developing countries

Afrin(2013) analyzed the government budget-inflation relationship in Bangladesh by using annual data for the period (1974-2010) employing ARDL co-integration approach. Empirical evidence suggested that there is a long-run relationship between government budget and price level in Bangladesh.

Erkam and Cetinkaya(2014) investigated the relationship between budget deficit and inflation in Turkey based on monthly data of turkey from (2005- 2013) using VAR model and Granger-causality test. This study found no significant relation between fiscal deficits and inflation during this low inflation period in Turkey. .

Saysombath and Kyophilavong(2014) examined the nexus between inflation and budget deficit in the Lao PDR. Using annual data for the period (1980-2010). The study employed ARDL cointegration method in conjunction with

the structural VAR (SVAR) analysis to provide evidence for both the long and short-run dynamics between the variables. The study found no long-run relation between budget deficit and inflation in Laos.

Yien, et al., (2017)examined the dynamic relationship between inflation, external debt, domestic debt and exchange rate in Malaysia covering the period of (1960-2014) using johanson co-integration test and Granger-causality test. The analysis showed that domestic and external debt have a strong positive association with inflation, while there was a weak positive association between exchange rate and inflation. In Malaysia, inflation found to granger caused domestic debt, exchange rate granger caused inflation and domestic debt granger caused exchange rate. In the short-run, external debt is influencing inflation significantly.

Sanya and Sunday(2017) examined the relationship between budget deficit and inflation in the two largest economies in Africa (South Africa and Nigeria). Data for the study were quarterly from 1980-2014.The study used three estimation techniques, Johanson co-integration, VectorError Correction Model (VECM) and Granger Causality Test. The Johanson co-integration test showed two Co-integrating vector in both countries. Results from both impulse response function and variance decomposition showed that shocks emanating from budget deficit on inflation is positive and significant in both countries. Also, the major sources of inflation in both countries werebudget deficit and money supply. Granger Causality test showed uni-directional relationship between budget deficit and inflation in South Africa, while the causality that runs between budget deficit and inflation in Nigeria is bi-directional.

Methodology and Data Collection:-

Choice of Variables:-

In order to empirically examine the relationship between budget deficit and inflation, if any, our analysis includes four variables: The dependent variable inflation rate measured by GDP deflator, The Independent variables include budget deficit measured by (budget deficit/GDP), broad money (M2) , NEER nominal effective indirect exchange rate. The variables(GDP def, M2, NEER) were transformed into natural logarithm (ln) for the analysis throughout the study to minimize fluctuations in the series.

The data wascollected from the International Monetary Fund, WEO database, october 2016, Quarterly Bulletin of the Central Bank of Syria, and Bruegel database January 2017 in order to ensure consistent data series

Data:-

This paper uses annual data about the Syrian economy covering the period of 1990- 2010. The inflation equation was formulated as bellow:

$$\text{LN GDP DEF} = \text{f}\left(\frac{\text{DEF}}{\text{GDP}}, \text{LN M2}, \text{LN NEER}\right)$$

Summary statistics for the series are given in table1.

Table 1:-Descriptive statistics for variables:-

	LN_GDP_DEFLATOR	DEF_GDP	LN_M2_BI	LN_NEER
Mean	4.536461	3.400952	6.38198	4.885708
Median	4.60517	2.89	6.3736	4.755313
Maximum	5.246787	7.79	7.621215	5.68324
Minimum	3.811672	-2.3	4.902894	4.60517
Std. Dev.	0.456042	2.318928	0.829658	0.296899
Skewness	-0.053552	-0.099639	-0.143279	1.572361
Kurtosis	1.902447	3.401537	1.815221	4.843307
Jarque-Bera	1.064083	0.175826	1.300089	11.62617
Probability	0.587405	0.915841	0.522022	0.002988
Sum	95.26568	71.42	134.0216	102.5999
Sum Sq. Dev	4.159493	107.5486	13.76666	1.762983
Observations	21	21	21	21

Determination of the Stationarity of Data:-

In order to examine the long-run relationship between the budget deficit and inflation rate using co-integration technique,we have to establish the stationarity status of all the variables which have to be integrated in the same order. The Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests were used to establish the stationarity status of all the time series variables. The results in Table (2) and (3) show that the four variables GDP deflator ,Ln Deficit/GDP,Ln NEER and Ln M2 are integrated in order (1) and become stationary at first differences, therefore, the basic necessary condition for co-integration is satisfied

Table 2:-Augmented Dickey Fuller (ADF) Tests Statistics:-

Variables	At level		At first difference		Order of integration
	Trend and Intercept	Intercept	Trend and Intercept	Intercept	
Def/GDP	-1.644383(0)	-1.940220(0)	-3.327190(3)*	-5.008063(0)***	**Stationary At first difference**
LNGDP DEFLATOR	-2.363986(0)	-0.364203(0)	-4.471258(0)**	-4.590696(0)***	**Stationary At first difference**
LNNEER	-2.394467(2)	-2.807839(0)*	-4.019497(2)**	-4.346663(0)***	**Stationary At first difference**
LNM2	-2.489942(1)	-1.049656(1)	-3.079550(0)	-3.031015(0)**	**Stationary At first difference**

Notes:

1. *, **, *** indicate a significant level of 10%, 5%, 1%, respectively.
2. The numbers in parentheses indicate the (Bandwidth value) determined by (Newey-West) using the (Bartlett kernel Spectral Estmation Method).

Table 3:-Phillips-Perron (PP) TestsStatistics:-

Variables	At level		At first difference		Order of integration
	Trend and Intercept	Intercept	Trend and Intercept	Intercept	
Def/GDP	-1.564340(1)	-1.886155(1)	-5.385169(2)***	-5.008063(0)***	**Stationary At first difference**
LNGDP DEFLATOR	-2.363986(0)	-0.346729(2)	-4.544170(3)***	-4.672346(3)***	**Stationary At first difference**
LNNEER	-2.549556(6)	-3.941580(7)***	-5.068759(1)***	-4.346663(0)***	**Stationary At first difference**
LNM2	-2.256393(1)	-1.983397(1)	-3.043989(2)	-2.983659(2)*	**Stationary At first difference**

Notes:

1. *, **, *** indicate a significant level of 10%, 5%, 1%, respectively.
2. The numbers in parentheses indicate the (Bandwidth value) determined by (Newey-West) using the (Bartlett kernel Spectral Estmation Method).

Cointegration Analysis:-

The results of the unit root test shows that all the variables were random walk processes. It does not ,however, imply that the variables could not express long-run convergence, i.e. long-run equilibrium. Hence there is a need to subject the residuals generated from their long-run static regression to Augmented Dickey – Fuller test or Phillips-Perron test to see if they are stationarity. The stationarity ofthe residuals is an evidence of the convergence to long-run equilibrium among the integrated variables.

To ascertain whether there is co-integration among variables of interest, it is important to determine the optimal lag length of variables.Based on the (LR) criterion, the optimal lag length for the VAR system was found to be 1. This means that a variable in period (t) is affected by other variables of period (t-1).Result of lag length selection is reported in Table (4).

In order to evaluate the long-run relationship among non-stationary series, we have used the Johansen Test for Co-integration. A number of methods testing co-integration analysis have been proposed in the economic literature. After determining the appropriate form of the VAR and the optimal lag length for the system, the estimated co-integrating vector is given below

For the co-integration test to be applied, all data series must be stationary at the same level of integration. The ADF test for stationary shows that all variables are integrated of order (1) and they become stationary at first differences.

Table (4) presents the result of Johansen co-integration test. The null hypothesis is rejected at r = 0. It could not be rejected after r = 0. Consequently, it can be concluded that there is at most one co-integration relationship among the macro economic variables included in the model.

Table 4:-The result of the Johansen cointegration is presented

Johansen Cointegration Test				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.837757	58.71291	47.85613	0.0035
At most 1	0.630210	24.15841	29.79707	0.1938
At most 2	0.235238	5.256830	15.49471	0.7810
At most 3	0.008448	0.161202	3.841466	0.6880
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.837757	34.55450	27.58434	0.0054
At most 1	0.630210	18.90158	21.13162	0.0997
At most 2	0.235238	5.095627	14.26460	0.7297
At most 3	0.008448	0.161202	3.841466	0.6880

The estimated cointegrating vector is given below:

$$LN\ GDP\ DEF = (0.056)\frac{DEF}{GDP} + (0.233)LN\ M2 - (1.684)LN\ NEER$$

This equation shows that in the long-run, the budget deficit and money supply have a positive impact on inflation, while the effective nominal exchange rate affects negatively the general level of prices.

The relationship between the GDP deflator and budget deficit as a percentage of GDP is positive in the long-run. 1% increase in the budget deficit as a percentage of GDP will result in an increase in GDP def by 0.056%, while the most positive variable on inflation is the money supply, where an increase in money supply of 1% will lead to a rise

in inflation by 0.2%. There is a negative relationship in the long run between the effective nominal exchange rate and inflation, the depreciation of the NEER by 1% leads inflation to increase by 1.684%

Vector Error Correction Model (VECM):-

Since the variables appeared to have a long-run relationship with each other, a Vector Error Correction Model (VECM) provides the means by which the short-run observed behavior of variables is associated with their long-run equilibrium growth paths. As there are four variables in the co-integrating system, the error correction model is given by the following equations

D(LN_GDP_DEFLATOR) = C(1)*(LN_GDP_DEFLATOR(-1) - 0.0564177931307*DEF_GDP(-1) - 0.23361169427*LN_M2_BI(-1) + 1.68426956562*LN_NEER(-1) - 11.0453654501) + C(2)*D(LN_GDP_DEFLATOR(-1)) + C(3)*D(DEF_GDP(-1)) + C(4)*D(LN_M2_BI(-1)) + C(5)*D(LN_NEER(-1)) + C(6)

In the VECM, the coefficient on the lagged value of the errors (representing the long- run relationship) determines the speed of the short-run dynamic adjustment process or the size of correction in the short-run towards the long-run relationship between the variables. The table (5) shows the results of VECM estimation.

Table 5:-The results of VECM estimation

Dependent Variable: D(LN_GDP_DEFLATOR)				
Method: Least Squares				
Sample (adjusted): 3 21				
Included observations: 19 after adjustments				
D(LN_GDP_DEFLATOR) = C(1)*(LN_GDP_DEFLATOR(-1) -				
0.0564177931307*DEF_GDP(-1) - 0.23361169427*LN_M2_BI(-1) +				
1.68426956562*LN_NEER(-1) - 11.0453654501) + C(2)				
*D(LN_GDP_DEFLATOR(-1)) + C(3)*D(DEF_GDP(-1)) + C(4)				
*D(LN_M2_BI(-1)) + C(5)*D(LN_NEER(-1)) + C(6)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.092565	0.052130	-1.775655	0.0992
C(2)	-0.194533	0.238393	-0.816021	0.4292
C(3)	-0.007224	0.006280	-1.150214	0.2708
C(4)	0.010112	0.253611	0.039871	0.9688
C(5)	0.105201	0.087440	1.203121	0.2504
C(6)	0.090223	0.042689	2.113483	0.0545

The variable C (1) refers to the long-run relationship between inflation and other variables, and the probability results of coefficients C2 to C6 show the short-term relationship between inflation and other variables. We find that the coefficients of C2 and C3 are negative but insignificant, the probability value is greater than 0.05, and the coefficients of C4-C5 are positive, indicating that the relationship between inflation and other variables is insignificant in the short-run, and the speed of adjustment towards the equilibrium is 9%.

This means that the financial theory of the general price level applies in Syria in the long-run only and not in the short-run. This can be explained by the fact that the government is able to find many sources of deficit funding without resorting to inflationary methods in the short-run. This is consistent with Sargent and Wallace (1981), who showed that the continued budget deficit has long-run inflationary effects but not necessarily in the short-run. The government may rely on other sources of debt (domestic or foreign) in the short-run without resorting to printing money to finance the deficit, but in the long run when the government reaches the maximum limit of borrowing, it will print money to meet the obligations of debt. Thus, the budget deficit is inflationary in the long-run, but it may not be as well as in the short-run.

Conclusion:-

The relationship between budget deficit and inflation is an important and controversial issue in the academic literature as well as in the economic policy field. The purpose of this paper was to investigate the short-run dynamics and the long-run relationship between the budget deficit and the inflation in the Syrian economy. After a review of theoretical and empirical literature of the relationship between budget deficit and the inflationary process, Johansen cointegration analysis and a vector error correction model (VECM) were utilized to empirically investigate the short-run dynamics and long-run relationship between the budget deficit and inflation from 1990-2010. The results showed that there was a positive and significant long-run relationship between budget deficit and inflation in Syria, but this relationship was insignificant in the short-run.

Keeping these results in view, it can be suggested that Syria must pay more attention to its borrowing strategy. It can be observed in the present economic situation that increasing money supply through deficit financing or printing new money adds to its inflationary pressure especially on the long-run.

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