CURRENT ACCOUNT BALANCE, INFLATION, INDUSTRY AND SUSTAINABLE DEVELOPMENT IN JORDAN

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Abstract

The study aims at measuring the impact of the current account on inflation in Jordan. In order to achieve that goal, the study presents theoretical and econometric framework for an economic model that includes the determinants of inflation where current account deficit is one of them. The study finds out that the increase in current account deficit affects domestic inflation negatively in the long run. This result would be attributed to the fact that current account deficit absorbs big part of the excess in the domestic demand, in addition to the long run flexibility of the economy to produce substitutes for imported goods. However, in the short run, it was found that current account deficit affects domestic inflation positively. It was found that for this period there is no enough flexibility for the Jordanian economy to produce enough goods to substitute imports, which leads to inflation.

Key words: Current Account, Inflation, trade balance, Jordanian economy.
JEL classification: E30, F10.

1. Introduction

The performance of the balance of payments (BOP) with all of its components dominates the movement of macroeconomic variables. Changes and imbalances that occur in the items of BOP influence the internal balance of the economy. For example, trade balance is one of the most important sections of the current account, which in turn represents an important part of BOP. International trade plays an important role in most international economies through import and export activities. These activities, in turn, affect the commodity, labor, monetary and financial markets.

The increase in deficit of trade balance caused by rising imports can lead to higher domestic inflation level due to the impact of imported inflation on domestic price levels. The effect of current account is not limited to trade balance. In fact, the other components of current account affect the local economy, such as: current transfers and the balance of services. Current transfers, represented mainly in foreign aid and workers' remittances, help to provide the necessary liquidity to support the economic development plans and production projects, as well as to satisfy consumers' needs, which in turn positively affect economic growth.

Jordan is a small developing country that follows an open economic policy. This kind of openness makes the country vulnerable to external shocks. In fact, Jordan heavily depends on imports to stimulate the economic development process, not to mention that its export activities are limited and can barely compete abroad. These exports are concentrated in some extractive industries, such as phosphates, potash, and some seasonal agricultural products. Another problem appears in the light of Jordan pegging the exchange rate against the dollar, leading to neutralizing the exchange rate as a tool to absorb the impact of external shocks on the local economy. Thereby, the main goal of this

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study is to analyze the impact of the development of the current account on the local inflation, and to assist in determining the appropriate economic policies to minimize any negative repercussions on the local economy.

The importance of this study lies in the fact that it sheds light on a major and important problem in the Jordanian economy: the deficit of the current account balance on local inflation. Therefore, this study measures the impact of the current account's development on local inflation in the Jordanian economy during the period (1990-2014).

The remainder of the research continues as follows: Section 2 describes literature review related to this study. Sections 3 and 4 present the theoretical framework and the methodology, respectively. Section 5 explains the econometric analysis. Section 6 discusses the empirical results. Finally, section 7 concludes the study with some policy implications.

2. Literature Review

Researchers generally focused on studying the components of the BOP or studying inflation. The authors didn't find any study, to the best of their knowledge, (especially on the Jordanian economy), that combines these two components together. One exception was Sayed (1989) who looks into the correlation between the current account deficit and inflation in the Egyptian economy for the period (1975-1985). Sayed concluded that the various measures of inflation are consistent with their findings on the continuous increase of the general price level with the development that is happening in the current account deficit in the Egyptian economy.

The following is an overview of some of the studies that have examined these two components separately:

The results of Central Bank of Iceland (2000) have shown that the increase in the budget deficit is associated with a rise in inflation rates. This association led to the adaptation of a higher interest rates and deflationary fiscal policy to control the situation and to reach a safe economic environment. Alkhatib (2006) attempted to prove the hypothesis that the growth of exports is the growth valve of Jordan by using monthly data for the period (1997-2003). The results of the study supported that hypothesis.

The imbalances that affect BOP will inevitably affect the internal balance of the economy and other economic variables. Some economists have pointed out that economic growth depends on the quality of economic policies, financial development, foreign aid, in addition to the disruption of the exchange rate and the BOP. Inflation rate is also affected by international economy factors and local economic factors, such as economic policy and exchange rate system, the financial system, and economic integration (Klaus and Hebbel, 2010).

Rawahneh (2011) studied the dynamics of inflation in Jordan during the period (2000-2010). The study aimed to examine the most important internal and external factors affecting the dynamics of inflation in Jordan using quarterly data. The study found that the dynamics of local inflation in the short term is proportionally and largely affected by imported inflation, national exports, workers' remittances, external shocks, and credit facilities. It also discovered an adverse effect of GDP growth on the dynamics of inflation in the short term. Some other studies have found that trade and economic openness weaken the control of the money supply growth and local inflation. They also pointed out the significant and positive impact of international trade, fiscal and economic openness, and foreign aid on economic growth (Chude and Chude, 2015).

Accordingly, we can say that the economic variables, such as inflation and economic growth tend to be significantly affected by changes in items of the BOP. In turn, these items are affected by other conditions and external economic factors. For example,

the global rise in oil prices increases the imports bill, and since the economy depends heavily on the imports of petroleum products, this leads to high current account deficit and then to an increase in the level of local prices.

Trade deficit in Jordan is not due to a high level of imports per head, in comparison with World average and with many countries, but to a low level of exports per head. Accordingly to Guisan (2008) and (2014), Guisan et al (2014), and to Sandri et al (2016) it is important to have into account that industrial development is of uppermost importance to reach convergence of Jordan with World average or with more advanced countries, due to its positive effects on non industrial development, exports per head and diminution of trade deficit.

One of the most important ways to diminish trade deficits is to increase industrial development and exports per head. Usually is better to increase exports per head instead of diminishing imports per head, particularly in countries with low levels of imports per head as it is the case of Jordan. We must have into account that imports of complementary inputs have also a positive impact on economic development, but in order to be sustainable (avoiding trade deficits) the increase of imports per head should be accompanied by an increase in industrial production and exports per head.

Table 7 in Guisan (2008) shows the evolution of Manufacturing real value-added in MENA countries for the period 1999-2006, and the positive correlation between Manufacturing and Services. Real value-added evolved in Manufacturing evolved, for 1999-2006, from 228 to 377 Dollars at prices and exchange rates of year 2000, in Jordan, with a value in year 2006 much below the World average that evolved from 912 to 1050 in the same period. Guisan (2017) shows that the comparison in purchasing power parities for the period 2000-2010 shows a value of manufacturing per head in Jordan also below World average.

3. Theoretical framework

The disruption of the overall economic balance is a key constraint on the future economic development. This disruption is represented in a disproportional malfunction between the size of the available resources and the size of the actual needs of the national economy. The picture of the imbalance becomes clear in two important areas, namely: external imbalances (the BOP), and the imbalance between the aggregate demand and aggregate supply structure (inflation) (Sayed, 1989). It should be pointed out that the current account is mainly caused by several factors, including: imports and exports of goods and services, and current transfers (workers' remittances and foreign aid). Each of these factors influences the current account and inflation as follows:

First, imports can affect local inflation in two ways, namely: they proportionally affect local inflation through what is known as “Imported Inflation Phenomenon”. This process occurs due to structural imbalances in some economies, leading to the emergence of multiple gaps; such as food and energy gaps, which push countries to resort to imports. On the other hand, imports affect domestic inflation conversely through allowing current account to contain part of the surplus of the domestic demand; this will lead to a decrease in inflation.

Second: Exports: in case exports were reduced, either because the demand on national products has decreased, or because of low competitiveness in international markets, eventually, revenues of this sector will be low. Consequently, the government gets lower income on taxes applied on exporters and employees in this sector; this will undermine the government ability of funding its expenditures. Then the government, in the short

term, will depend on loans and injecting the economy with new seigniorage for financing its budget deficit, this will increase economic inflationary pressure (Zaki, 1980).

Third: Current transfers: the reduction in transfers of workers' remittances or foreign aid will lead to decreasing financial resources available to the economy used for financing projects and developmental programs. This will lead to lower consumer and investment demand in addition to lower inflationary pressure.

In summary, current account deficit affects prices in two ways; in one hand it contains part of the domestic demand surplus through increasing imports, which will lessen inflationary pressure. On the other hand, it leads to increasing inflationary pressure by increasing imports and their prices while exports and their prices are reduced. In addition, lower current account decreases overall demand and lowers inflationary pressures. However, the eventual effect depends on which effect is the stronger. This relationship can be shown as the following:

$$CPI = f(CAD) \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

where *CPI* is inflation measured by the index of consumer prices and *CAD* represents the current account deficit.

An econometric model for imported inflation was developed by (Lemgurber, 1977) and was applied on the Brazilian economy. This model includes the transformation process from global inflation to domestic inflation. For instance, this model includes global price level as one of the variables that affects domestic price levels; this indicates the effect of imports prices on domestic price levels. This can be shown in the following equation:

$$P_t = P(WY_t, XR_t, WIR_t, G_t, DC_t, P_{t-1}, MB_t) \ldots\ldots\ldots\ldots (2)$$

where *P* is Consumer Price Index (*CPI*), *WY*: is the income for foreigners, *XR* is the nominal exchange rate (Jordanian dinar/ dollar), *WP* is foreign prices, *G* is government expenditure, *DC*: is domestic credit, P_{t-1}: is *CPI* in the previous period, *MB*: broad money supply (*M2*), and *t* the is current time.

The following equation was formed from equation 2 to understand the global prices change effect on the inflation of the Jordanian economy (Hunaiti, 1996), as follows:

$$P_t = \alpha^0 + \alpha^1 WP_t + \alpha^2 XR_t + \alpha^3 G_t + \alpha^4 MB_t + \alpha^5 P_{t-1} + U_t \ldots\ldots (3)$$

where α_i (i = 1, 2, .., 5) are parameters to be estimated and *U* is the error term.

As noticed from equation (3), imports prices (*WP*) are the only factor in the current account used in the econometric model. By using this variable as an independent variable, we want to reflect the role of imported inflation in domestic inflation. However, due to the fact that the other factors in the current account like: exports, current transfers might have an effect on domestic inflation, this study will use current account variable (*CA*) instead of global price levels variable to reflect and measure the connection between current account and inflation levels in Jordanian economy as the following:

$$P_t = \alpha^0 + \alpha^1 CA_t + \alpha^2 XR_t + \alpha^3 G_t + \alpha^4 MB_t + \alpha^5 P_{t-1} + U_t \ldots\ldots (4)$$

Inflation performance and current account analysis

The connection between current account and domestic inflation needs to be analyzed in order to find out more information about the actual effect of current account deficit on domestic inflation. The study period (1990-2014) will be divided into two sub-periods in order to facilitate the analyses and the comparison, as follows:

***First period*: (1990-2003)**

By following the development of the inflation rates through the period of (1990-2003), it is noticed as mentioned in the appendix that domestic inflation recorded high rates in 1990. It was 16.1% influenced by the repercussions of the economic crisis in 1989 that led to devaluation of the domestic currency in addition to the Gulf crisis effects in 1990. After that the inflation levels started to decrease until it reached 2.2% in 1995. That period of time witnessed the beginning of applying the economic reform program in the period (1992-1998) which included inflation rates reduction as one of the program's targets.

Although inflation rates increased to 6.6% in 1996 as a result of the increase in aggregate demand, it started to decrease until it reached 0.6% in 2000. After all, the rates were still low in that period as a result of the reforms applied by the government that were aimed at controlling inflation rates.

Current account has developed during that period; it was transformed from a deficit to a surplus. The reason behind that are the procedures implemented by the government along the economic reform program. The reforms focused on adjusting expenditure and controlling inflation rates. In addition, the reforms focused on improving the trade balance as well as the income balance and the current transfers. The highest surplus rate during the sample study was 11.8% of the GDP and was achieved in 2003. However, the highest deficit rate was at the beginning of the study in 1990, (16.4%) of the GDP.

***Second period*: (2004-2014)**

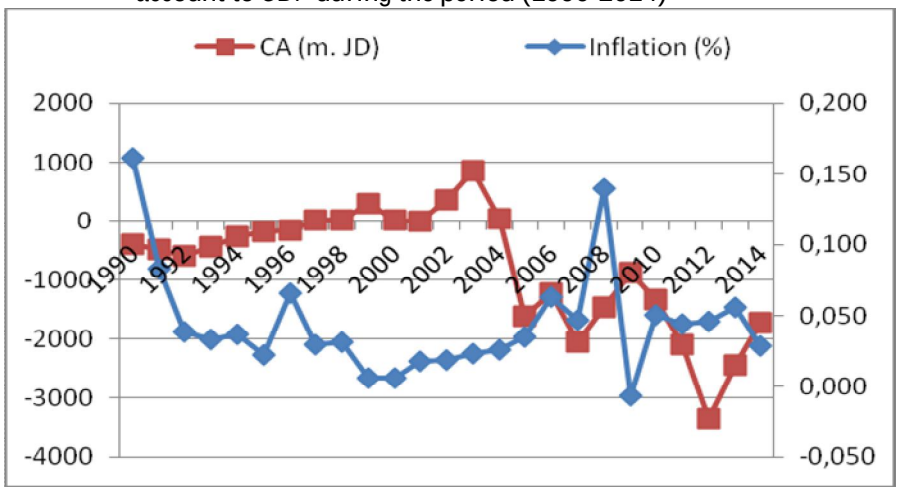
As noticed from appendix, the inflation rate was moderate at the beginning of this period. It was 2.6% in 2004 and increased to 6.3% in 2006. The government couldn't control inflation rates in this period because of the Iraqi war consequences in 2003, oil prices increased globally, oil flow suspension to Jordan, as well as thousands of Iraqi refugees coming to Jordan. These factors led to an increase in demand on housing, services and products, consequently increasing inflation rates.

Inflation rates continued to grow until it reached 13.9% affected by global prices increase, especially oil prices that were unprecedented high during the year 2008. Jordan was highly affected as it is fully depended on oil imports from outside. In 2009, there was a huge decrease in inflation rates, it reached a negative rate of 0.7%, then it increased again in 2010 to reach 5.1% affected by global oil prices increase.

Inflation rates in 2011 were high (5.6%) as a result of the Kingdom's affected by increasing oil prices and Egyptian gas flow suspension. In addition, political and regional situations led to hundreds of thousands of Syrian refugees coming to the Kingdom. These factors affected domestic demand and created a huge pressure on goods and services markets especially the housing sector. At the end, inflation rates increased. However, inflation rates decreased to 2.9% in 2014.

Current account in this period suffered from continuous deficits after a long surplus period (1997-2004) excluding a slight deficit in 2001 (0.3%) of the GDP. That was a result of economic and political situations Jordan was going through in that period that effected inflation and current account performance as well. Figure (1) shows the relationship between domestic inflation rates and current account percentage to GDP in the period of (1990-2014). The right vertical axis represents domestic inflation rates, the left vertical axis represents and current account (in millions of JD), and the horizontal axis represents time period.

Figure 1: The relationship between domestic inflation and the ratio of current account to GDP during the period (1990-2014)



4. Methodology

Based on the theoretical analyses represented in section 3, the study uses the following logarithmic equation to measure current account development effects on domestic inflation for the Jordanian economy during the period (1990-2014):

$$LnCPI_t = \alpha_0 + \alpha_1 LnRCA_t + \alpha_2 LnRER_t + \alpha_3 LnRG_t + \alpha_4 LnRM_t + U_t \quad \ldots(5)$$

where *LnCPI* is the natural logarithm of Consumer Price Index, *LnRCA* is the natural logarithm of real current account, *LnRER* is the natural logarithm of real exchange rate, *LnRG* is the natural logarithm of real government expenditure, *LnRM* is the natural logarithm of real broad money supply (*M2*), *U* is the error term, α_i are the model's parameters, and *t* is current time.

The theoretical relationship between the four variables and the dependent variable are as the follows:

(1) α_1 measures the effect of current account deficit on domestic inflation. Theoretically, its sign is undetermined. The increase in the current account deficit can be a result of an increase in imports which leads to imported inflation. On the other hand, increasing imports could reduce the gap in domestic demand which leads to less inflation pressures. The deficit in the current account can be a result of low exports as well, which in turn leads to a low economic growth and price reduction. At the end, the final effect depends on the interaction of these factors.

(2) α_2 measures the real exchange rate of the Jordanian dinar effect on domestic inflation. It is expected to have a positive sign because when RER increases (depreciation), it means the need for more domestic currency in order to buy the foreign currency. This will lead to increasing imported goods prices, consequently more pressure on domestic inflation.

(3) α_3 measures government expenditure effect on domestic inflation. Its expected sign is positive because the high levels of government expenditures lead to increase the aggregate demand, and increased domestic prices.

(4) α_4 measures the money supply effect on domestic inflation. It's expected to be positive as the money supply increase leads to increasing aggregate demand, and causing inflation pressures on the domestic economy in case of fixed levels of aggregate supply.

5. Econometric analysis

This part of the study discusses measuring the impact of current account development on the local inflation in the Jordanian economy. It also shows the process of testing the stationarity of time series data using Augmented Dickey Fuller (ADF) test and Cointegration analysis by using Johansen method to test the relationship in the long term in case data are not stationary at the level but stationary on the first or second differences.

To achieve the objectives of this study, the time series stationarity test will be conducted because most of the time series of economic variables are non-stationary. Afterwards, if we use the Ordinary Least Squares (OLS) in the estimation, we may get false results or spurious regression despite its statistical significance (Charermza and Deadman, 1997).

If the time series is stationary at level; I(0), then OLS method can be used to estimate model parameters. However, if the time series was non-stationary at the level, we redo the test after taking the first difference. If it becomes stationary, it means that the data is integrated at the first difference; I(1). Now, if the series is non-stationary on the first difference, we redo the test after taking the second difference. If it was stationary, it means that the data are integrated at the second difference; I(2) (Gujarati, 2010). Now, if ADF test was conducted and all variables were stationary in their first differences and were non-stationary in their levels, this indicates a possibility of a relationship between the variables in the long term (Engle and Granger, 1987).

To test the relationship in the long term, Johansen test will be used to analyze cointegration relationship between the variables. It also presents the number of cointegration vectors in the model (Granger, 1986). However, there are two models to test for cointegration, namely: Trace and Maximum Eigen Value tests.

6. Empirical Results

The Model in equation (5) was used for this study to measure the impact of the current account development on inflation in the Jordanian economy, and the results were as follows:

Stationarity Test Results

As a first step for measuring the impact of the current account development on inflation in the Jordanian economy, the ADF test will be utilized to make sure that the data used in the estimate are stationary. The results of this test, and by using intercept and trend, show that all model variables are non-stationary, where the absolute values of (t-statistic) were less than the critical values derived from McKinnon table (McKinnon, 1991) at 5% significant level as shown in Table 1.

Table 1: The ADF test results for the variables at level

Variables	Critical values (5%)	t-statistic
LnCPI	-2.99	-1.91
LnRCA	-2.99	-2.11
LnRER	-2.99	-1.56
LnRG	-2.99	-2.67
LnRM	-2.99	2.85-

Upon redoing ADF test after taking the first difference, it was shown that the variables are all stationary, where the absolute values of (t-statistic) calculated for these

variables were higher than the critical values derived from McKinnon table at the level of 5% significance as shown in Table 2.

Table 2: The ADF test results for the variables at first difference

Variables	Critical values (5%)	t-statistic
LnCPI	-4.49*	-2.99
LnRCA	-4.40*	-2.99
LnRER	-3.86*	-2.99
LnRG	-4.26*	-2.99
LnRM	-3.94*	-2.99

(*): indicates significant at 5%.

The results show that the variables are stationary on the first difference. Therefore, using OLS method in estimation can lead to the inability to get rid of the specific trend because its coefficient is greater than zero, which affects the results of the estimation. However, the stochastic trend can be eliminated by taking the first difference, thus the study should test for cointegration among variables.

Cointegration Analysis Results

Variables are found stationary at their first difference according to the ADF test results. Accordingly, there might exist a cointegration relationship between the variables in the long term. Applying cointegration tests on equation 5 (the model of the effect of current account on the inflation) using Johansen method gives the results as shown in Table 3.

Table 3: The results of the Cointegration results

Null Hypothesis	Trace Statistic	Eigen value	Critical value (5%)	Prob.
No cointegration	108.29*	0.79	76.97	0.000
1 cointegration vector at max.	62.19*	0.65	54.08	0.002
2 cointegration vectors at max.	31.95	0.47	35.19	0.073
3 cointegration vectors at max.	14.23	0.31	20.26	0.126
4 cointegration vectors at max.	6.52	0.22	9.16	0.142

(*): indicates rejecting the null hypothesis at a level of 5%.

The results indicate rejection of the null hypothesis of the absence of cointegration, where the calculated values were greater than the critical values at the level of 5% significance level. The null hypothesis of the existence of one vector at the most has been rejected at significance level of 5%. On the other hand, the hypothesis that about the existence of two vectors at the most was accepted at significance level of 5%.

The rejection of the null hypothesis about the absence of cointegration, and the acceptance of the alternative one give evidence of cointegration between these variables and that they move together in the long term. The results of this vector are as follows:

$$LnCPI = -0.18 - 0.03\ LnRCA + 0.13\ LnRER - 0.02\ LnRG + 0.07\ LnRM \quad (6)$$

(-1.33) (-2.83) (3.37) (-1.24) (2.52) *t-value*

$R^2 = 0.81$ $F = 17.34$ $D.W = 2.05$

The results of cointegration vector indicate that the effect of current account deficit on domestic inflation was negative in the long term with a statistical significance level of 5%. An increase in the current account deficit by 1% leads to lower domestic inflation by 0.03% in the long term. We find that although the increase in the current account deficit might increase imported inflation, simultaneously this leads to absorb part

of the excess in domestic demand, which decreases inflationary pressures on the Jordanian economy in the long run.

Results of error correction model

The results of the cointegration analysis proved the existence of a relationship between the variables in the long term; this indicates the presence of the error correction term. Before applying the error correction model, Akaike information criterion (AIC) and Schwarz Bayesian Criteria (SBC) tests were used to choose the number of optimal lag periods. The results of these two tests show that the optimal lag period that gives the lowest values to these tests is one time period.

By using the error correction model with one lag time period, we have reached the results shown in Table 4. The lag values of inflation, current account deficit, exchange rate, government spending, and monetary supply values were statistically insignificant. Nevertheless, the short-term changes in these variables have an impact on inflation in the short term, as long as the value of the error correction term (ECT) is statistically significant (Choudry, 1995). The value of the error correction term was -0.37 and was statistically significant at the significance level of 5%. This means that the dependent variable needs 37% from next year to return to its equilibrium.

Table 4: The results of the Error Correction Model

Variables	Estimates	t-statistic
ECT	-0.37	-2.87*
D(*CPI*(-1))	-0.14	-1.74
D(*LnRCA*(-1))	0.02	1.69
D(*LnRER*(-1))	0.09	1.28
D(*LnRG*(-1))	0.04	0.85
D(*LnRM*(-1))	0.06	0.39
Constant	-0.009	-0.21

(*): indicates significant at 5%. - Independent variable is *CPI*, R^2=0.81, F=17.34, D.W=2.05.

The results of lag coefficients show that if the current account deficit is rising by 1% in the previous year, it will lead to higher inflation rate in the current year by 0.02%. This result contradicts what was found for the long run effect of current account effect. Specifically, an increase in the current account will cause an increase in inflation in the short run but it will decrease it in the long run. It appears that the economy doesn't have enough flexibility in the short run to avoid increases in the prices of imported prices; however, this flexibility is available in the long run.

In the short-term, the results of error correction model have shown that the exchange rate proportionally affects inflation. The increase in the currency exchange rate by 1% in the previous year will lead to an increase in inflation by 0.09% in the current year. The reason behind this result is attributed to the fact of pegging the Jordanian dinar to the dollar will prevent it absorb the impact of changes happen in international economies on the local economy. This result is consistent with the impact of the exchange rate on inflation in the long term, where the relationship was also proportional and statistically significant (equation 6). The higher value of the exchange rate of the Jordanian dinar (depreciation) by 1% will lead to higher domestic inflation by 0.13 % due to the fact that an increase in the dinar exchange rate in the current period will implicitly lead to higher import prices, which leads to high level of prices in the local market and then increased inflation in the long term.

In the short term, the results of error correction model show that government spending proportionally affects domestic inflation, as increased government spending by 1% in the previous year will lead to increased inflation by 0.04% in the current year. Part

of this goes to the increased in government spending stimulates aggregate demand, and this will lead to inflationary pressures in the short term because of the lack of flexibility in the production ability in the short term. This result contradicts what has been found in the long term, as the impact of government spending on domestic inflation was negative but was statistically insignificant. This suggests that the increase in government spending does not affect domestic inflation in the long term. It can be attributed to the fact that an increase in government capital spending may be largely concentrated in spending on the infrastructure needed to support the development process, leading to the existence of productive projects working to generate enough production to cope with the excess of domestic demand. Eventually, this eases the inflationary pressures.

Finally, the results of error correction model in the short term have shown that money supply has a direct proportional effect on domestic inflation. An increase in money supply by 1% in the previous year will lead to an increase in domestic inflation by 0.06% in the current year. This is due to the fact that an increased money supply will lead to increased liquidity in the economy, leading to increased the aggregate demand, and because production process lacks flexibility in the short term, this, in turn, will lead to inflationary pressures. The impact of money supply on the domestic inflation is also directly proportional in the long term and is statistically significant. An increase in money supply by 1% will lead to increased domestic inflation by 0.07% in the long term, which is consistent with the quantity theory of money in this field.

7. Conclusion

This study has attempted to measure the impact of current account development on domestic inflation in the Jordanian economy during the period (1990-2014). Based on the results of the econometric analysis of the economic model, it was concluded that the current account impact on domestic inflation in the long run was inverse and statistically significant; as an increase in the current account deficit by 1% leads to lower domestic inflation by 0.03% in the long term. Although the increase in imports and their prices increases the current account deficit and increases the imported inflation, however, this increase in the current account deficit leads to absorb an important part of domestic demand excess, which dampens domestic inflationary pressures. In addition, the economy has adequate ability and flexibility in the long run to produce and use goods that are alternative to imported goods, thus easing the impact of imported inflation on domestic inflation and satisfying part of the domestic demand surplus, alleviating inflationary pressures in the long term.

In the short-term, the results of the error correction model have shown that short-term changes in the current account proportionally affect the domestic inflation, as an increase in current account deficit by 1% in the previous year leads to higher inflation by (0.02%) in the current year. This also means that an increase in the current account deficit is sometimes accompanied by increases of imports prices, which is directly reflected in domestic price levels. The reason for this is that the economy does not have sufficient flexibility in the short term to produce and use alternatives for goods imports, as well as to reduce the volume of imports and avoid its impact on domestic inflation.

In the light of the previous findings, the study recommends that the government concentrates on importing necessary capital goods that support the production process and provide alternative items for the imported goods. This process should be accompanied by industrial policies addressed to increase the level of industrial real value-added per head and to allow an increase of exports per head higher than the increase in imports per head. The increase of exports per head would help to diminish the current account deficit, even in the case of an increase of real value of imports per head.

For sustainable development, avoiding high trade deficits, there are two basic options: reduce imports of some products, making local products as good substitutes for foreign products, or increase exports of some products, what implies to increase industry. A mix of both options usually has a positive impact for sustainable development.

In addition, it is necessary to adopt economic plans to encourage exports by promoting and diversifying the basket of export products. Plans must also be set up to search for alternative markets for export commodities, so exports' situation won't be very sensitive to external factors. This will increase exports, reduce the current account deficit, and avoid inflationary pressures resulting from any increases in current account deficit.

References

Alkhatib, S. (2006) "Evidence on the Export- Led Growth Hypothesis: the Jordanian Case", *Dirasat Administrative Sciences*. Vol. 33-2, pp.1-9.

Central Bank of Iceland (2000) "Higher inflation and current account deficit call for restrictive economic policies, *Monetary Bulletin*, Vol. 1: pp. 3-11.

Charermza, W., Deadman, D. (1997) "*New Directions in Econometric Practice*", second edition, Edward Elgar, England.

Choudry, T. (1995) "Long-Run Money Demand Function in Argentina During 1935-1969: Evidence from Cointegration and Error Correction Model", *Applied Economic*, Vol. 27: pp. 661-667.

Chude, D., Chude N. (2015), "Impact of Inflation on Economic Growth in Nigeria", *International Journal of Business and Management Review*, Vol. 3-5, pp. 26-34.

Dikey, D., Fuller, W (1981) "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit root", *Econometrica*, Vol. 49-4: pp. 1057-1072.

Engle, R. and Granger, C. (1987) "Co-integration and Error Correction: Representation, Estimation and Testing", *Econometrica*, Vol. 55-2: pp. 251-276.

Granger, C. (1986) "Development in the Study of Cointegration Economic Variables", *Oxford Bulletin of Economics and Statistics*, Vol. 48-3: pp. 213-228.

Guisan, M.C. (2008). **"**Manufacturing And Economic Evelopment: ntersectoral Relationships In Europe, America, Africa And Asia-Pacific, 1999-2006", *Regional and Sectoral Economic Studies*, Vol. 8-2.[1]

Guisan, M.C. (2014). "World Development, 2000-2010: Production, Investment And Savings In 21 Areas Of America, Africa, Asia-Pacific, Europe And Eurasia", *Regional and Sectoral Economic Studies*, Vol. 14-2.[1]

Guisan, M.C., Aguayo, E., Exposito, P. (2014). "Econometric Model of Manufacturing, Investment And Development In 30 Countries Of Asia-Pacific", *Applied Econometrics and International Development*, Vol.14-2.[1]

Gujarati, D. (2010) "*Basic Econometrics*", 5th Edition, Magraw-Hill, Inc. New York.

Hunaiti, Y. (1996) "The Impact of Imported Inflation on Domestic Inflation and International Trade in Jordan", Unpublished Master Thesis, *Yarmouk University*, Jordan.

Lemgruber, A. (1977) "*Inflation in Brazil*", in: Lawrence B. Krause and Walter S. Salant (Eds.), *Worldwide Inflation: Theory and Recent Experience*, The Brookings Institution, Washington, D.C., pp. 395–442.

MacKinnon, J. (1991) "*Critical Values for Cointegration Tests*," Chapter 13 in Long-Run Economic Relationships: Readings in Cointegration, ed. R. Engle and C. Granger. Oxford, Oxford University Press.

Rawahneh, H. (2011) "Inflation Dynamics in Jordan, An Empirical Study: 2000-2010",

Unpublished MA Thesis, *Al al-Bayt University*, Jordan.

Sandri, S., Alshyab, N., Ghazo, A. "Trade In Goods And Services And Its Effect On Economic Growth –The Case Of Jordan", *Applied Econometrics and International Development*, Vol. 16-2.[1]

Sayed, I. (1989) "The Correlation between the Current Account Deficit of the Balance of Payments and Inflation in the Egyptian Economy during the period (1975-1985)", unpublished Master Thesis, *Ain Shams University*, Egypt.

Schmidt-Hebbel, K. (2010) "Macroeconomic Regimes, Policies, and Outcomes in the World", *Estudios de Economia*, 37(2):161-187.

Zaki, R. (1980) "The Problem of Inflation in Egypt: Causes and Consequences with Proposals to Combat Price Rises", *Egyptian Book Organization*, Cairo.

[1] Available at http://www.usc.es/econo met/eaat.htm

Appendix 1: Data for the variables of the study

Year	Money Supply (M2) (m. JD)	Government Expenditure (m. JD)	Exchange rate (JD/1$)	Current Account/GDP (%)	GDP (m. JD)	Current Account (m. JD)	Inflation Rate (%)	CPI (2002 =100)
1990	3122.6	1032.6	0.66	-14.6	2760.9	-402.5	16.1	68.4
1991	3717.5	1264.8	0.67	-16.4	2958	-484.4	8.3	74
1992	4193	1291.2	0.69	-16.3	3610.5	587.7-	3.9	76.9
1993	4481.8	1336.6	0.7	-11.5	3884.2	446.4-	3.3	79.4
1994	4841.5	1492.7	0.7	-6.4	4357.4	279.2-	3.6	82.3
1995	5159.8	1604.8	0.71	-3.8	4714.7	179.8-	2.2	84.2
1996	5175.3	1706.6	0.71	-3.2	4911.3	157.4-	6.6	89.7
1997	5576.6	1884.2	0.71	0.4	5137.4	20.8	3	92.4
1998	6026.3	2028.7	0.71	0.3	5609.9	15.5	3.1	95.3
1999	6747.6	1956.3	0.71	5	5778.1	287.1	0.6	95.8
2000	7434.7	1970.1	0.71	0.3	5998.6	19.5	0.6	96.4
2001	7866.1	2123.5	0.71	-0.3	6363.7	17.7-	1.8	98.2
2002	8419.1	2221.7	0.71	5.2	6794	355.7	1.9	100
2003	9465.7	2442.3	0.71	11.8	7228.8	849.8	2.3	102.3
2004	10571.4	2931	0.71	0.3	8090.7	27.7	2.6	105
2005	12364	3104.3	0.71	-18	8925.4	1610.6-	3.5	108.7
2006	14109.7	3860.4	0.71	-11.5	10675.4	1223.8-	6.3	115.5
2007	15606.9	4540	0.71	-16.8	12131.4	2038-	4.7	120.9
2008	18304.3	5431.9	0.71	-9.3	15593.4	1457.2-	13.9	137.8
2009	20013.3	6030.5	0.71	-5.2	16912.2	882.9-	-0.7	136.8
2010	22306.7	5708	0.71	-7.1	18762	1336.3-	5.1	143.8
2011	24118.9	6796.6	0.71	-10.2	20476.6	2098.8-	4.4	150.1
2012	24945.1	6878.2	0.71	-15.2	21965.5	3345.3-	4.6	157
2013	27363.4	7077.1	0.71	-10.3	23851.6	2448-	5.6	165.8
2014	29240.4	7851.1	0.71	-6.8	25437.1	-1717.5	2.9	170.7

Source: Central Bank of Jordan.