Factors Promoting Economic Growth in Egypt:

Evidence from ARDL Approach

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Abstract: This paper explores the relationship between some macroeconomic variables and economic growth. It aims to examine the effect of long-run relationship and the role of imports, exports, Gross Fixed Capital Formation (GFCF) and inflation on economic growth Egyptian using annual data covering the period 1970-2013.

The unit root test (ADF, PP) revealed that variables under consideration are integrated into I(0) and I(1), which lead to the application of ARDL approach. The empirical results utilize the ARDL co-integration analysis to establish the relationship in the long-run between the above independent variables and economic growth.

Exports prove to have a significant positive effect on economic growth rate, while Imports have a significant negative effect on economic growth rate. This result seems to agree with the economic theory, unlike the result about the role of GFCF on economic growth rate which disagrees with the economic theory, where a significant negative effect on economic growth rate.

The results of short-run dynamics analysis confirmed the existence equilibrium relationship in long-run. The Wald test results confirmed the existence of influence for independent variables of this model on the dependent variable in the short run. The study recommended a policy of exports promotion and more control to imports and inflation.

Key words: export; import; GFCF; inflation; economic growth; ARDL approach; ECM
JEL codes: F10, C32, O 11, O40

1. Introduction

One of the major issues that preoccupy the attention of policy makers in the active debate within the growing literature over the last decades is "how to boost economic growth of at national level?". This requires the relationship testing economic growth and relevant macroeconomic variables that affect the economic performance of a country? The answer to this question is quite controversial. To some, it is the export-promoting strategy, for others, the GFCF strategy is the main contributor to economic growth, and to still to others, it is the extent of trade openness of a country that matters for economic growth.

GDP growth is one of the most commonly known indicators of macroeconomic performance. If GDP growth

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rate is rising the economy is doing well, while If GDP growth rate is falling the economy is declining. There are many factors that affect the GDP growth rate, such as exports, imports, inflation and gross fixed capital formation (GFCF). Most economists regard growth in trade (exports and imports), the rise in GFCF and low inflation rates powerful factors in the promotion of economic growth.

Exports expansion contributes to economic growth thrower raising the percentage of GFCF and productivity. When there are incentives for investment growth and technology advancement, it is expected marginal productivity rising of exports sector compared to other sectors (Dritsakis et al., 2006).

Exports and imports have their own significance in the enhancement of the production and economic growth in the country. On the hand, the growth of exports leads to economic growth through the effect of foreign trade multiplier. On the other hand, foreign exchange earnings from exports allow the importation of capital goods which, in turn, leads to increasing the production capability of the economy. Prevalence of, the competition in export markets makes it possible to generate economies of scale and an acceleration of technical progress in production (Altaee et al., 2016).

GFCF is a key driver of economic development and economic growth. Economic theory identifies six macroeconomic roles to GFCF to which it impacts the economy, which is: (1) increasing production capacity, (2) increasing domestic expenditure, (3) lowering the production costs, (4) increasing labor productivity through the reduction of employment, (5) permitting production of new and high quality products, (6) bridging the technological gap with the advanced world which will increase the share of the country in the international trade (Altaee et al., 2016).

Established in the current literature a negative correlation between inflation and economic growth in Fishers (1993), De Gregorio (1993), Barro (1995, 1996), Brunno and Easterly (1995), Malla (1997), Faria and Carneiro (2001), Dewan and Husein (2001). While some literature found a positive relationship between inflation and economic growth (Chude & Chude, 2015).

These variables have been playing an important role in the economic performance of developing countries like Egypt. And therefore it is necessary for policy makers to understand the long and short-term impact of these variables on economy growth.

As the performance of the macroeconomic variables in Egypt economy is uncertain. It is critical for policymakers to guard the economy against economic shocks and diversify the sources of growth. Therefore this paper arouses the influence of these macroeconomic variables on economic growth in Egypt.

This study focuses on a dynamic relationship between exports, imports, inflation, GFCF and economic growth in a time-series framework from 1970 to 2013. Applying the ARDL approach in the analysis, this long time series will help to investigate the long-run and short-run dynamic relationship between the variables. This study aims to assess the impact of exports, imports inflation, GFCF on economic growth of Egypt for the period (1970-2013).

The hypotheses to be tested in as follow are being tested: The three macroeconomic variables exports, imports, GFCF contribute positively to economic growth, while inflation contributes negatively to economic growth.

The rest of the paper consists of a review of the literature, methodology and the empirical finding. Finally, Conclusions and policy implications remarks are given.

2. Literature Review

Altaee et al. (2016) provided an empirical analysis of the relationship between economic growth and its determinants with special focus on gross fixed capital formation, export, import, and financial development for the Kingdom of Saudi Arabia, The findings suggested a positive relationship between fixed capital formation, export, on one hand and economic growth on the other hand, both in the short-run and the long run. By contrast, the financial development variable produced a negative effect on economic growth in the short-run. But it turned out to be positive in the long-run. Finally, the imported variable showed a negative contribution to growth in the long-run as well as in the short-run. The results are consistent with the theoretical and empirical predictions.

The macroeconomic determinants of economic growth in Nigeria have been examined by Ismaila & Imoughele (2015), and measured by real gross domestic product (RGDP). The results showed that gross fixed capital formation, foreign direct investment, and total government expenditure are the main determinants of Nigeria economic output under a stable inflationary rate. The authors recommended for the government to consciously develop the appropriate business environment through the provision of necessary infrastructure, In order to lower the cost of doing business in Nigeria. This included the need for the government to retain tight monetary and fiscal policies in order to fight inflation in the Nigerian economy, given that inflation proved to have a negative influence on investment and Nigeria economic growth. Finally, they recommended stringent policy to minimise the incidence of the strike in Nigeria labour sector in order to enhance their performance to the nation economy.

A study by Ghimire & Hejkrlik (2014) aimed to assess empirically the relationship between export and economic growth in Georgia post-soviet countries. Using Granger causality and cointegration test for the hypothesis of economic growth led by export. The result shows that there is bidirectional Granger causality between total export and GDP and in the short run. So, in order to implement appropriate growth and development strategies, the causal pattern between export and growth must be determined.

Assaf (2014) investigated the relationship between some macroeconomic variables (export, inflation, foreign direct investment) and economic growth of Jordan. The results revealed that export and inflation have a positive impact on growth. While there is no statistically significant impact of foreign direct investment in economic growth represented by (GDP).

Javed et al. (2014) aimed to show the effect and volatility of international incidences, macroeconomic variables on economic growth in Pakistan. The results suggested that the IMF and FDI and GDP are negatively related whereas capital formation, exports, market capitalization global financial crisis, 9/11, and Iraq war having significantly positive relation to GDP.

The main purpose of Afshar's study (2013) has been to discuss the effects of some key macroeconomic variables on financial development and economic growth. He agrees that the financial system can play an important role in economic development and financial institutions and that markets can foster economic growth through several channels.

A Study by Antwi et al. (2013) aimed to ascertain the major macroeconomic factors that would drive Ghana's real per capita GDP growth determine which direction these factors influence economic policy formulation and implementation. The study found cointegration relationship between real GDP per capita (economic growth) and its macroeconomic factors. It recommended that the government should be able to generate more revenue domestically than relying on foreign aid.

The main objective of Havi et al. (2013) is to examine the major macroeconomic determinants of economic growth in Ghana within 1970-2011 applying Johansen method of cointegration. The study found that physical capital and foreign aid had a positive effect on growth in real gross domestic product per capita. The result show that: In the long run, physical capital, labour force, foreign direct investment, foreign aid, consumer price index, government expenditure and military rule prove to the significant determinants of growth in real gross domestic product per capita in Ghana. Also, in the short run, foreign direct investment and government expenditure prove to the significant determinants of growth in real gross domestic product per capita. The study recommended policies to increase physical capital and foreign aid. Educational institutions should link up with the corporate organizations to train productive labour force. It argued that military rule had a negative impact on growth in real GDP per capita, therefore, the Government must put in place strategies to protect and sustain democratic rule in Ghana.

Ullah & Rauf (2013) analyzed the impacts of macroeconomic variables on economic growth in case of some selected Asian countries. This study found on the basis of the sample of countries that economic growth is positively affected by foreign direct investment and saving rate while exports in the sample period have negative impacts on economic growth and labor force and tax rate have no impacts on economic growth.

A study by Hussin & Saidin (2012) examined the impact of foreign direct investment (FDI), openness and gross fixed capital formation on economic growth which indicates using gross domestic product (GDP) over the period 1981-2008 in ASEAN-4 countries. The result showed that all variables are correlated with each other and also have the positive relationship to GDP, and all variables may lead economic growth boost when they are increasing whereas FDI becomes the most efficient variable in order to assist economic growth and followed by openness and gross fixed capital formation. The study recommended that the governments in the ASEAN-4 countries have to design and implement policies that can improve saving rates so that gross fixed capital formation will be enlarged.

Betyak (2012) investigated the impact of several macroeconomic variables on economic growth of five selected European countries considered to be "crisis countries" within the European Union: Portugal, Ireland, Italy, Greece and Spain. Results suggest that domestic investment and saving rates are positively associated with GDP growth rate for each country in the sample. The effects of inflation rate are found to be positively related to GDP growth for the countries in the sample except Greece. Also, trade openness is found to be positively related to GDP growth for the countries in the sample except Ireland and Greece, contrary to theoretical expectation. Finally, the study found that there was no marked improvement in the macroeconomic performance as there was no marked improvement in the macroeconomic performance in the post-Euro period relative to pre-Euro period.

Ray (2011) tried to analysis the relationship between export and economic growth in India. The paper was based on testing the hypotheses of causality and cointegration between GDP and export in India. Cointegration test confirmed that economic growth and exports are co-integrated, indicating the existence of long-run equilibrium in the relationship between the two, as confirmed by the Johansen Cointegration test results. The Granger causality test finally confirmed the presence of bi-directional causality which runs from economic growth to export and vice-versa. The error correction estimates gave evidence that in the short run, export and GDP are also mutually causal. The study recommends Policies of export promotion in order to enhance economic growth.

Klasra (2011) investigates the relationship between foreign direct investment, trade openness and economic growth in Pakistan and Turkey using bounds test. The results indicate that in the short run there is a bidirectional causal relationship between trade openness and exports for Pakistan and FDI and exports relationship for Turkey.

The long run relationship results support the growth-driven exports hypothesis for Turkey and openness-growth nexus in Pakistan.

3. Methodology

The objective of this paper is to investigate the role of imports, exports, GFCF and inflation in promoting economic growth in Egypt using 44 annual observation for the period, 1970-2013. Growth rate, imports, exports, GFCF and inflation are the key variables.

The GDP economic growth rate (GDPR) is used as the proxy for economic growth in Egypt. All necessary data for the sample period are obtained from official Statistics on the Egyptian economy, published by World Bank. To avoid the problems of heteroscedasticity all the variables are taken in their natural logarithms. Using the time period, 1970 to 2013 for Egypt, this study aims to examine the long-run relationship and the role of imports, exports, GFCF and inflation in promoting economic growth.

Many Methods of Econometric have been suggested in the literature for investigating long-run equilibrium (cointegration) among variables. However this study uses the autoregressive distributed lag (ARDL) modelling approach, as originally proposed by Pesaran & Shin (1998). The main advantage of ARDL modelling lies in its flexibility when the variables are of the different order of integration. The ARDL model used in this study is expressed as:

$$GDPR_t = f(EXP_t, IMP_t, GFCF_t, INF_t, U_t)$$

The ARDL model has some advantages over other cointegration approaches such as Engle-Granger (1987), Johansen-Juselius (1990):

(1) ARDL model is fit for small or finite samples consisting of 30 to 80 observations.

(2) It employment apart from the variables is being stationary of I(0) or I(1), there is still a prerequisite that none of the explanatory variables is off I(2) or higher order.

(3) The ARDL Model applies general-to-specific modeling framework by taking a sufficient number of lags to capture the data generating process. It estimates (p+1)k number of regressions in order to obtain an optimal lag length for each variable, where p is the maximum lag to be used, and k is the number of variables in the equation. The model is selected on the basis of different criteria like SBC, AIC, RBC and HQC.

(4) The ARDL method can distinguish between dependent and explanatory variables and eradicate the problems that may arise due to the presence of autocorrelation and endogeneity (Afzal et al., 2013).

ARDL model includes a sufficient number of period lags can even get the best group from data of general model:

$$GDPR_t = C + \beta_1 EXP_t + \beta_2 IMP_t + \beta_3 GFCF_t + \beta_4 INF_t \qquad (1)$$

Where GDPR =gross domestic product rate, EXP =total of exports, IMP=total of imports, GFCF =gross fixed capital formation and INF= inflation rate

To test the extent a co-integration relationship among the variables of the model, we follow the methodology of Pesaran et al. (2001). To test the equilibrium relationship among the variables under unrestricted error correction model (UECM) and known Bounds Testing Approach .The model takes the following formula:

$$\Delta \ln GDPR_t = C + \alpha t + \beta_1 \ln EXP_{t-i} + \beta_2 \ln IMP_{t-i} + \beta_3 \ln GFCF_{t-i} + \beta_4 \ln INF_{t-i} + \Sigma \gamma_{1i} \Delta \ln EX_{t-in-1i=1} + \Sigma \gamma_2 \Delta \ln IM_{t-in-1i=}$$
$$_{1} + \Sigma \gamma_3 \Delta \ln GFCF_{t-in-1i=1} + \Sigma \gamma_4 \Delta \ln INF_{t-in-1i=1} + \varepsilon_t \qquad (2)$$

Where the parameter is the dependent variable (GDPR) lag for a period of one to the left of the equation. β

represents a long-run relationship parameters. While the differences reflect the first parameters (γ) parameters in the short run while the (α) refers to the function boycotted and ε to random error.

ARDL methodology characterized than other cointegration methodologies such Engel-Granger method, Durbin-Watson method (Test CRDW) and Johansen (Johansen Cointegration Test) as follows (Hassan, Schumann 2013.186: 185(in Arabic)):

(1) Separation of the effects of the short-run for long-run and be done by identifying the co-integration relationship of the independent variables of the variable in the short run and long run.

(2) Determine the size of the effects which are caused by all of the independent variables on the dependent variable, as well as to estimate the parameters of independent variables in the short and long run.

(3) The resulting estimators are not biased and that they contribute to the prevention of occurrence of autocorrelation

According to Pesaran and Pesaran (1997), the ARDL approach involves two steps for estimating the long-run relationship. The first step is to examine the existence of long-run relationship among all variables in the equations underestimation. And for that we calculate F-statistic through (Wald test) where the null hypothesis that there is no co-integration relationship between the variables model) the absence of long-run equilibrium relationship:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

While the alternative hypothesis that there was co-integration relationship among the variables model:

$$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$$

After finding a long-run relationship in the first step, we run the second step of the analysis, which is to estimate the coefficients of the long-run relationship and determine their values, followed by the estimation of the short-run elasticity of the variables with the error correction representation of the ARDL model (Tzougas, 2013).

4. Empirical Results

4.1 Unit Root Test

Before applying ARDL, the order of integration is examined using Augmented Dickey-Fuller (ADF) and Phillips Perrons (PP) unit root tests are, used to determination of unit root. ADF test checks serial correlation by adding lagged values of explanatory variables, as in Table 1.

The results of ADF and PP show that GDPR and INF are stationary at the level I (0) with constant. Each of EX, IM, and GFCF are stationary at the level I (1) with constant. The results are presented in Table 1.

4.2 Bounds F-test for Cointegration

Results of the bounds test procedure for co-integration analysis between GDPR and independent variables model are presented in the Table 2.

The empirical results in a Table 2 refer to a long run relationship between GDPR and rest variables of the model, because F-statistic for the Bounds Test is 6.33, it clearly exceeds even the 1% critical value for the upper bound. So, we reject the hypothesis of "No Long-Run Relationship", or agree on the hypothesis there are Long-Run Relationship.

4.3 Estimated Long Run Coefficients

After establishing a cointegration relationship between the series, Autoregressive Distribution Lag (ARDL) model can be established to determine long run and short run relationships.

According to the standard AIC was chosen following lagged values (3, 1, 5, 0, 3) as shown in Figure 1.

Table 1   Unit Root Test

Philips-Perron					Augmented Dickey-Fuller					Test in	variable
Critical values			t-Statistic	Prob.	Critical values			t-Statistic	Prob.		
10 %	5 %	1 %			10%	5%	1%				
-2.60	-2.93	-3.59	-3.86	0.0054	-2.60	-2.93	-3.59	-3.82	0.0054	Level	LnGDPR
-2.60	-2.93	-3.59	-1.47	0.0048	-2.6	-2.93	-3.6	-1.66	0.44	Level	Ln EX
-2.60	-2.93	-3.59	-4.3	0.53	-2.6	-2.93	-3.59	-4.37	0.0012	1st difference	
-2.60	-2.93	-3.59	-2.06	0.0013	-2.67	-0.087	-2.67	-1.86	0.34	Level	Ln IM
-2.60	-2.93	-3.59	-5.08	0.26	-2.60	-2.93	-3.59	-5.13	0.0001	1st difference	
-2.60	-2.93	-3.59	-2.79	0.0001	-2.60	-2.93	-3.6	-2.67	0.087	Level	Ln GFCF
-2.60	-2.93	-3.59	-4.19	0.067	-2.6	-2.93	-3.59	-4.21	0.0018	1st difference	
-2.60	-2.93	-3.59	-4.15	0.0019	-2.67	0.087	-2.67	-4.18	0.002	Level	LnINF

Source: Calculated by a researcher from the outputs eviews9.

Table 2   Bounds Test for Cointegration Relationship

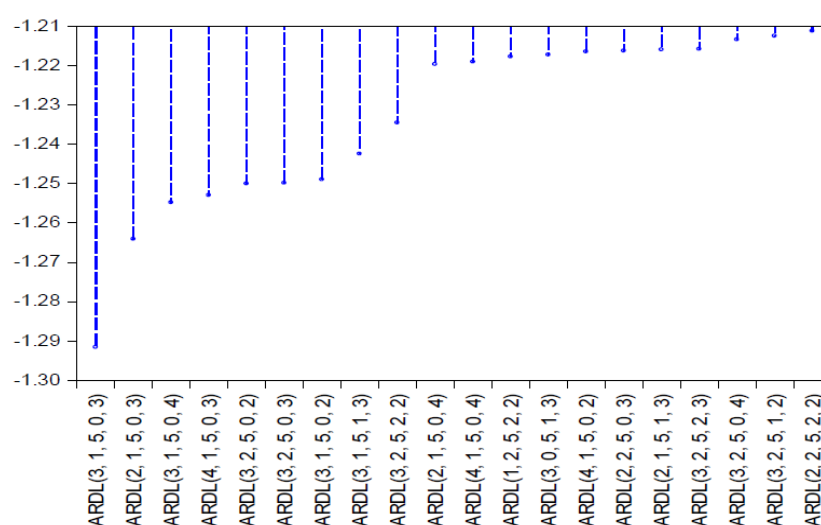| ARDL Bounds Test		
Sample: 1975 2013		
Included observations: 39		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	6.331801	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Source: output reviews 9.

Figure 1   Akaike Information Criteria (Top 20 Models)

4.4 Long-run Estimates of ADRL Process

The empirical results in a Table 3 refer to that relationship between GDPR and exports is positive and statistically significant, this result agrees with economic theory. The Coefficient of exports equal 1.656 is meaning a 1.7% increase in exports will lead to about 1% increase in GDP.

In contrast to the economic theory, there appears to be a negative relationship between GDPR and GFCF but it is not statistically significant. This result agrees with (Sallam, 2014), which pointed to the existence of a Causal relationship between GDP and GFCF, from GDP to GFCF.

On the other hand, there is a negative relationship that's statistically significant between GDPR and both imports and inflation. This result agrees with economic theory. The coefficient of imports and inflation equal 1.44, 0.27 respectively. So 1% increase in imports will lead to about 1.66% decrease in GDP, 1% increase in inflation rate will lead to about 0.2% reduce in GDP.

The coefficient of determination (R2) is 0.84. The result shows that about 84% of the variation in GDPR is caused by variations in the explanatory variables. The Durbin-Watson statistics is 2.52 which shows the absence of serial correlation.

4.5 Short-run Dynamics of ADRL Process

The value of the coefficient of error correction model (ECM) (-0.83 and at the significant level 5%) confirms the existence of a long-run equilibrium relationship. The Table 4 illustrates the results of an error correction model estimates. Alternatively, it refers that 83 percent of the disequilibrium in independent variables from the previous period's shock will converge back to the long-run equilibrium after approximately 0.83 years.

The results obtained from the ARDL-ECM show the short-run dynamic coefficients associated with the long-run relationships are presented in Table 5. The optimal lag length for the selected error correction representation of the ARDL (3, 1, 5, 0, 3) model is determined by the Akaike Information Criterion (AIC).

R^2 is the coefficient of determination and defines the proportion of total variations in dependent variable. In the above ECM model the given value of R^2 is 0.78 explaining 78% goodness of fit that is the model properly explains the GDP R. As well as, value of adjusted $R^2 = 0.57$ explains 57% goodness of fit.

4.6 Wald Test

Wald test is used here to test there if is the joint effect of independent variables, on the dependent variable. As shown in Table 5 Wald Test results indicates refused null hypothesis H_0: $\beta_8 = \beta_9 = \cdots.........= \beta_{20} = 0$ and accept the alternative hypothesis (H_1: $\beta_8 \neq \beta_9.........\neq \beta_{20} \neq 0$), there is influence for independent variables (EX, IM, GFCF, INF) of this model on the dependent variable (GDPR) in short run.

Table 3   Long Run Coefficients Based on ARDL (3, 1, 5, 0, 3)

Dependent Variable: *Ln*GDPR				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
*Ln*EX	1.656445	0.552711	2.996946	0.0066
*Ln*GFCF	-0.404559	0.419204	-0.965063	0.3450
*Ln*IM	-1.436927	0.834217	-1.722486	0.0990
*Ln*INF	-0.271803	0.095677	-2.840835	0.0095
C	2.826060	0.671371	4.209385	0.0004

Source: output reviews

Table 4   Error Correction Representation for the Selected ARDL (3, 1, 5, 0, 3) Model

variable	coefficient	T-statistic	Prob
ΔLnGDPR(-1)	-0.083736	-0.466820	0.6457
ΔLnGDPR(-2)	0.071767	0.462602	0.6486
ΔLnGDPR(-3)	0.072539	0.498640	0.6235
ΔLnEX(-1)	-1.043812	-0.805970	0.4297
ΔLnEX(-2)	0.061772	0.058290	0.9541
ΔLnEX(-3)	-0.207920	-0.195450	0.8470
ΔLnGFCF(-1)	1.134390	1.130469	0.2717
ΔLnGFCF(-2)	1.805407	1.695658	0.1055
ΔLnGFCF(-3)	-0.229016	-0.218085	0.8296
ΔLnIM(-1)	1.573094	0.862571	0.3986
ΔLn IM(-2)	0.282281	0.202551	0.8415
ΔLn IM(-3)	0.021398	0.017639	0.9861
ΔLnINF(-1)	0.025393	0.157158	0.8767
ΔLn INF(-2)	-0.112366	-0.735776	0.4704
ΔLn INF(-3)	0.026834	0.225868	0.8236
constsnt	-0.224961	-1.896618	0.0724
ECM(-1)	-0.837292	-3.610042	0.0017
R-squared	0.778216	Adjusted R-squared	0.567522

Source: output reviews 9

Table 5   Wald Test Results

Wald Test:			
Equation: Untitled			
Test Statistic	Value	df	Probability
F-statistic	1.760855	(13, 20)	0.1237
Chi-square	22.89111	13	0.0430
Null Hypothesis: $\beta(8) = \beta(9) = \beta(10) = \beta(11) = \beta(12) = \beta(13) = \beta(14) = \beta(15) = \beta(16) = \beta(17) = \beta(18) = \beta(19) = \beta(20) = 0$			
Null Hypothesis Summary:			
Normalized Restriction (= 0)	Value	Std. Err.	
C(8)	-1.043812	1.295100	
C(9)	0.061772	1.059726	
C(10)	-0.207920	1.063804	
C(11)	1.134390	1.003469	
C(12)	1.805407	1.064723	
C(13)	-0.229016	1.050121	
C(14)	1.573094	1.823727	
C(15)	0.282281	1.393626	
C(16)	0.021398	1.213063	
C(17)	0.025393	0.161579	
C(18)	-0.112366	0.152717	
C(19)	0.026834	0.118805	
C(20)	-0.224961	0.118611	
Restrictions are linear in coefficients.			

Source: output reviews 9.

4.7 Stability Test

Now we do stability test to analyses the stability of the long-run coefficients together with the short-run dynamics, the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUM) are applied.

The stability of the estimated coefficients of the error correction model, and a graphical representation of CUSUM and CUSUMQ statistics, are shown in Figures 2 and 3. According to Bahmani-Oskooee (in Tzougas, 2013) the null hypothesis (i.e., that the regression equation is correctly specified) cannot be rejected if the plot of these statistics remains within the critical bound on the 5% significance level. As it is clear from Figures 2 and 3, the plots of both the CUSUM and the CUSUMQ are within the boundaries and hence these statistics confirm the stability of model.
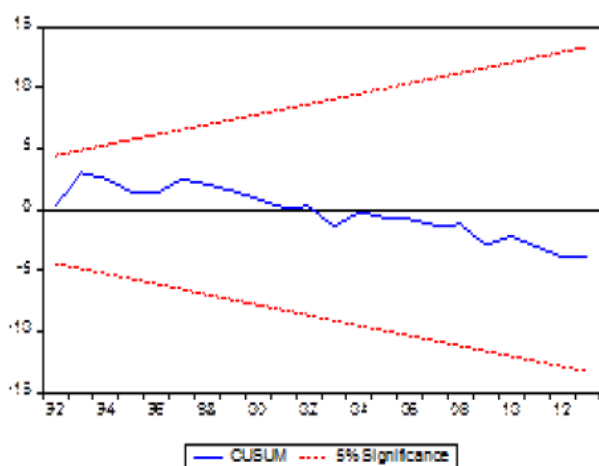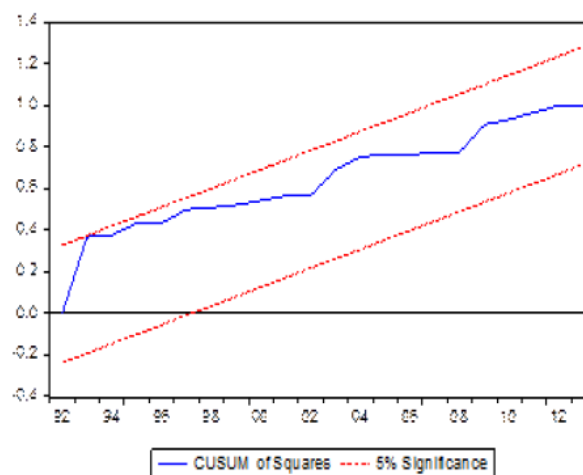

Figure 2   CUSUM Statistics

Figure 3   CUSUMQ Statistics

5. Conclusion and Recommendations

The main idea that preoccupies of policy makers is the kind of the factors that affect the economic performance of a country?. The answer to this question remains uncertain. To some, it is the export-promoting strategy, others GFCF strategy as the main contributor to economic growth, and to others, it is the extent of trade openness of a country that matters for economic growth.

This study contributes to the literature on the role of some macroeconomic variables on economic growth in Egypt. Through examining the dynamic relationship between exports, imports, inflation, GFCF and economic growth in Egypt using annual data covering the period 1970-2013, applying autoregressive distributed lag (ARDL) and error correction model (ECM). This study achieved its objectives from the research finding, the study concluded that there is a long-run relationship between exports, imports, inflation and economic growth in Egypt.

Before starting at the ARDL test, the unit root test (ADF and PP) was carried out to check for stationary and non-stationary level of the variables, the results of unit root test show that GDPR and INF are stationary at level I(0) and other variables are stationary at level I(1) with constant. The results of ARDL and Error Correction models (ECM) proved the existence of relationship long run between GDPR and Independent variables except GFCF. The optimal lag length for the selected error correction representation of the ARDL (3, 1, 5, 0, 3) model is determined by the Akaike Information Criterion (AIC).

According to previous findings, the study recommends, increasing exports through increased production and to encourage and increase export incentives, on the other hand, the reduction of the increase in inflation rates as

well as the development of policies to reduce imports of luxury goods.

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