FACTORS AFFECTING ECONOMIC GROWTH IN EGYPT POST REVOLUTION

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Abstract- With a growing population of more than 87 million, Egypt represents one of the largest markets in the MENA region. This contributes to the attractiveness of the Egyptian investment climate. In fact, capital investment in Egypt have always been a key contributor to the economy's long- term growth; especially private sector investment. In fact, the Egyptian economy is increasingly becoming more reliant on private sector investment, which represents 62% of total implemented investment in Fiscal Year 2013/2014 compared to 49%in Fiscal Year 2002/2003. Additionally, Egypt has always been a very attractive Middle-eastern destination for Foreign Direct Investment (FDI). According OECD 2014, Egypt is one of the top five African countries in terms of attracting FDI and the largest recipient in the sub-region. Since exchange rate is a main catalyst in investment climate and a major force influencing foreign direct investment, it should be also considered when examining factors affecting economic growth. The objective of this research is to find out the impact of private sector investment, foreign direct investment and exchange rate on economic growth in Egypt from 1999 to 2015.

Keywords- Economic growth, Egypt, Private sector investment, foreign direct investment

I. INTRODUCTION

Since the beginning of the new millennium, the Egyptian government is taking steady steps toward a wide range of economic reforms, in order to open a pathway for higher contribution from the private sector in economic activities. Between 2004 and 2010, the improving economic situation led to an annual growth rate of more than 5% (culminating in 7% in 2005-2008) and approximately USD 50 billion in foreign direct investments. This has been translated into figures and numbers (SECD, 2012). However, Egypt has been experiencing a period of political transition since early 2011. As with all periods of transition, the resulting instability has had a major negative impact on the economy. This has been compounded by the tepid recovery from the global economic crisis that has been seen in many parts of the world as both foreign tourists and investors curtail their spending (OECD, 2014). Finally, it is important to state that Egypt's second revolution in mid-2013 has opened a new path in the country's troubled political transition and resumed efforts for economic recovery after nearly three years of economic failure.

Egypt's macroeconomic indicators tell the tale: real GDP growth decreased sharply from 5.1% in fiscal year 2009-10 to 1.8% in 2010-11, many foreign investors halted on-going investment and some left the country, leading to a net USD 164 million outflow of FDI in the first quarter of 2011 (January-March). As a consequence unemployment rates have increased since fiscal year 2010-11, reaching 12.7% in 2012, and the highest rate in more than a decade. Indeed, private sector investment has increased by almost three folds between Fiscal Year 2002/2003 and Fiscal Year 2013/2014 reaching EGP 265 billion (see Figure 1). This is translated to an average annual growth rate of almost 26%. Additionally, the private sector employs 70% of Egypt's labor force.

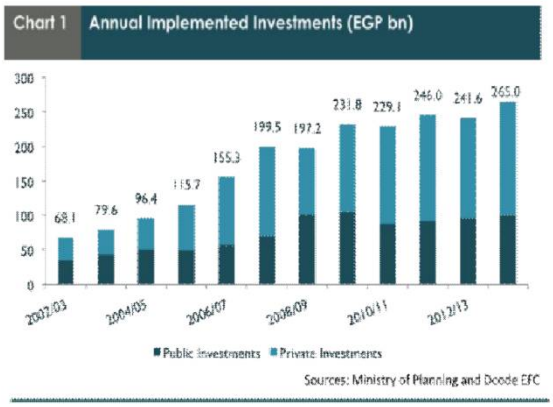


Figure 1: Annual implemented Investment

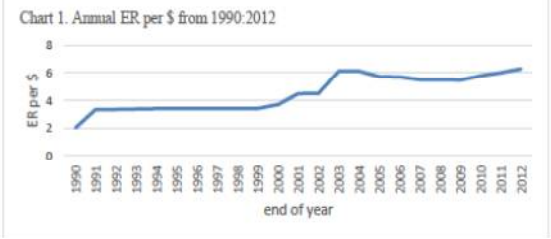
Egypt is a middle- income country with an important emerging market. Between 2004 and 2010, the improving economic situation led to an annual growth rate of more than 5% (culminating in 7% in 2005-2008) and approximately USD 50 billion in foreign direct investments. However, the Egyptian economy is still relatively small (only the fourth economy in the Arab World after Saudi Arabia, the United Arab Emirates and Algeria). Since the revolution of 1952, the public sector intervenes in all economic activities, and privatization initiatives have proven to be difficult. This has led to delays in the country's industrial development and an insufficient competitiveness of Egyptian products. Nevertheless, the country remains an important economic hub connecting the African, European and Asian continents, and its economy is well diversified (SECD, 2012). Additionally, Egypt has always been a destination for foreign direct investment (FDI) (See Table 1).

Starting from the sixties till 1990, Egypt had put a fixed but adjustable currency policy in practice. The Egyptian authority had kept the value of the Egyptian Pound fixed to the USD. In February 1991 as a part of the economic reform program, the Egyptian authority changed its policy from the adoption of a fixed but adjustable rate regime to a managed floating exchange rate. Over the period from January 2001 to December 2002, the exchange of the Egyptian Pound was devalued three times. The first time was when the Central Bank of Egypt adopted the new exchange rate regime. The second time was on September 2001, as a result of the 9/11 terrorist act against the USA and its implications on the Egyptian economy. The Central Bank of Egypt devalued the Egyptian Pound to 4.14 LE per 1$. The third time was in January 2002. As the effects of the 9/11 attack continued, the losses in the tourism sector in Egypt continued, the Central Bank of Egypt forced to devalue the Egyptian Pound one more time and it set the exchange rate at 4.5 LE per 1$. The Central Bank of Egypt kept this rate till its announcement of adopting floating exchange rate regime in January 2003.In 25th of January 2011, what is called the 25th of January revolution erupted. As a result, Egypt has been in political and social instability. There have been great impacts of this event on the Egyptian economy. It might be expected that the exchange rate of the Egyptian Pound would depreciate substantially. However, the exchange rate of the Egyptian Pound against the USD was fairly stable, only depreciating from 5.8 LE per 1$ in January 2011 to be 6.1 LE per 1$ in November 2012 (see Figure 2). Two main things explain this behavior. First, the huge amount of the decline that happened in reserves during this period. Second, there is strong evidence that the Central Bank of Egypt had been intervening extensively to keep the exchange rate of the Egyptian Pound stable against the USD (Massoud and Willet, 2014)

Table 1: FDI in Egypt

Foreign Direct Investment	2012	2013	2014
FDI Inward Flow *(million USD)*	6,031	4,192	4,783
FDI Stock *(million USD)*	78,643	83,114	87,882
FDI Stock *(in % of GDP)*	30.0	30.6	30.7

Source: OECD, 2014



Source: OECD, 2014
Figure 2: Annual Exchange Rate in Egypt

This research aims to explore the impact of private sector investment, foreign direct investment (FDI) and interest rate on economic growth in Egypt during the period from Fiscal Year 1999/ 2000 to Fiscal Year 2013-2014.

II. LITERATURE REVIEW

Despite short-term downturns and setbacks, the long-term trend in economic output over the last 200 years has been increasing. It has led to rising levels of employment and income, and remains a key factor in generating the necessary level of investment, both public and private, in technology and infrastructure to facilitate the shift to a low carbon and resource efficient growth path. Economic growth has also provided developing countries the opportunity to improve the quality of life of their citizens, and to rise to meet the environmental challenges they face. Investment, aid and demand for imports from advanced economies all have an important role in supporting economic growth and development across the world (Everet et al, 2010).

Economic Growth is one of the main objectives of economic policy and economic decisionmaking. Economic growth is an increase in real GDP. It means an increase in the value of goods and services produced in an economy. The rate of economic growth measures the annual percentage increase in real GDP. There are several factors affecting economic growth, but it is helpful to split them up into demand side factors and supply side factors. In fact, demand side factors influence growth of aggregate demand (AD). These demand side factors are consumption, investment, government spending or exports. Any factors of these can lead to higher AD and thus higher economic growth. The process of economic growth is a highly complex phenomenon and is influenced by numerous and varied factors such as political, social and cultural factors. As such economic analysis can provide only a partial explanation of this process.

A wide range of studies have investigated the factors underlying economic growth. Using differing conceptual and methodological viewpoints, these studies have placed emphasis on a different set of explanatory parameters and offered various insights to the sources of economic growth (Lensink and Morrissey, 2006). In general, investment is the most fundamental determinant of economic growth (Artelariset al., 2007) identified in the literature. The importance attached to investment has led to an enormous amount of empirical studies examining the relationship between investment and economic growth (Artelariset al., 2007). In Egypt, most sectors are dominated by private investment, which is healthy sign for any economy. Additionally, private investments are becoming more significant than before in sectors like transport and communication, education and healthcare.

Foreign direct investment (FDI) has been a big source of external funding in developing and developed countries. The impact of FDI on economic growth has been extensively discussed in economic research. There have been both positive and negative analyses of FDI on economic growth. Most economists and policymakers believe that FDI stimulates development in investment in technology, increases the capital stock, and increases employment. However, it might have negative impact on domestic investment and eliminates competition in the local markets (Upreti, 2015).

Among economic variables, the variable which is most closely and directly related to the external sector of the economy and more than any other variable can provide economic growth is the macroeconomic variable of real exchange rate because fluctuation of real exchange rate can cause high fluctuation in foreign trade and balance of payments. Today, due to deep changes in exchange system, the exchange rate shows off as a key factor in economic policy making more than ever (Jafari, 1999). On the other hand, one of the effective factors in choosing the appropriate exchange system in developing countries is the relationship between real exchange rate and economic growth. Choosing ineffective exchange system and inappropriate exchange policies in many countries has had negative effects on their economic growth. Fluctuations of real exchange rate in a flexible exchange system make ample changes in investment and international trade, thereby on economic growth. Many countries, to avoid exchange rate fluctuations, fix the value of their currency against the most important currencies. However, it is observed that some other countries refuse to fix the exchange rate and accept the floating exchange rate systems, to accept exchange rate fluctuations (Basirat et al, 2014).

III. RESULTS AND DISCUSSION

3.1. Research Variables

After introducing the prevailing economic conditions in Egypt and presenting literature review concerned with variables used in research, the following hypotheses have been concluded.

H1: Increase in private sector investment positively relate to Gross Domestic Product (GDP)

H2: Increase in foreign direct investment (FDI) positively relates to Gross Domestic Product (GDP)

H3: Exchange rate positively relate to Gross Domestic Product (GDP)

This research has one dependent variable and three independent variables these are as follows:

Dependent variable: Growth in real GDP presented from FY 1999/2000 to FY2013/2014

Independent Variables:

1. Total Private Sector investment from eight economic main sectors (Agriculture, Crude oil & Mining, Construction and building, transport and communication, tourism, financial services, health services and education) from FY 1999/2000 to FY2013/2014
2. Total Foreign Direct Investment (FDI) from FY 1999/2000 to FY2013/2014
3. Exchange rate (Egyptian Pound versus US Dollar) from FY 1999/2000 to FY2013/2014

3.2. Research Analysis Tools

Secondary data has been collected from statistics issued by Egyptian Ministry of Planning and Egyptian Ministry of Finance. The hypotheses are analyzed using multiple regression analysis. Multiple regression analysis is a statistical tool that allows examining how multiple independent variables are related to a dependent variable. Once you have identified how these multiple variables relate to the dependent variable, information can be taken about all of the independent variables and use it to make much more powerful and accurate predictions about why things are the way they are. Moreover,Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables

Several analytical techniques using the SPSS will be used to assess the relationships among the variables under investigation such collinearity diagnostics, correlation, ANOVA and regression. Correlation analysis tests if there is a relationship between the variables. The coefficient indicates if this relationship exists significantly and whether it is positive or negative. The analysis of variance (ANOVA) analyses the differences between variables. Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables

3.3 Research Analysis and Findings

After analyzing data several results were found. From results presented in Table 2 and 3, it is clear that:

R: It is interpreted just like any regular correlation coefficient except it indicates the strength of the combined relationships between all the independent variables and the dependent variable. In this research, R is 0.774 showing a strong relationship.

R Square: This statistic measures the percentage of variation in the dependent variable (Real GDP) which is explained by the independent variables (Private Sector Investment, FDI and Exchange Rate). The value of R2 is always between 0 and 1. The weaker the relationship between the two variables, the closer is the value of R2 to 0. The stronger the relationship between the two variables, the closer is the value of

R2 to 1. I this research, R Square value is 0.553 implying that there is a relatively strong relationship between the dependent and independent variables.

The F ratio (in the Analysis of Variance Table) is 47.834and significant at p = .000. This provides evidence of existence of a linear relationship between the dependent variable (real GDP) and the three independent variables (private sector investment, FDI and exchange rate)

Table 2: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.744[a]	.553	.541	348253.9487782	.314

Table 3: ANOVA

Model		df	Mean Square	F	Sig.
1	Regression	3	5801295032097.597	47.834	.000[b]
	Residual	116	121280812839.587		
	Total	119			

Moreover, the two values F ratio and t-ratio indicate respectively show there is a linear relationship between the dependent and independent variables taken together, and whether any given independent variable has an influence on the dependent variable over and above that of the other independent variables.

Results presented in Table 4 and 5, tests multi-collinearity. Collinearity occurs when two independent variables in a multiple regression have a non-zero correlation. Multi- collinearity occurs when more than two independent variables are inter-correlated. That's why this research selected multi-collinearity.

Table4: Coefficient Correlation

Model	t	Sig.	Collinearity Statistics	
			Tolerance	VIF
(Constant)	-7.184	.000		
Private Sector Investment	2.130	.035	.961	1.040
Net FDI	1.419	.159	.953	1.049
Exchange Rate	10.884	.000	.959	1.043

Tolerance indicates how much information multi-collinearity has cost the analysis. Thus tolerance in this research ranges from0.953 to 0.961 indicate that parameter estimates, confidence intervals and significance tests for a predictor are using 95% of the available information.

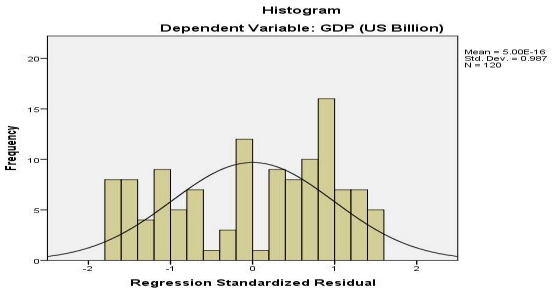
The VIF statistic of a predictor in the model is merely the reciprocal of its tolerance (i.e., VIF = 1/tolerance). So if tolerance is 0.95 then the VIF is 1/0.95 = 1.5. VIF stands for variance inflation factor. This number indicates how much larger the error variance for the unique effect of a predictor (relative to a situation where there is no multi-collinearity). If any of the VIF values exceeds 5 or 10, it implies that the associated regression coefficients are poorly estimated because of multi-collinearity.

Table5: Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Private Sector Investment	FDI	Exchange Rate
1	1	3.071	1.000	.00	.04	.03	.00
	2	.611	2.243	.00	.96	.03	.00
	3	.306	3.166	.01	.00	.94	.01
	4	.012	15.976	.98	.01	.00	.99

The eigenvalues is also used to measure the presence of multi-collinearity. If multi-collinearity is present in the predictor variables, one or more of the eigenvalues will be small (near to zero).

After analyzing data, the following graph was concluded: (See Figure 3)



CONCLUSION

In this research an effort was made in order to examine the relationship among the real GDP, private sector investment, foreign direct investment and exchange rate, , using annual data over the period 1999-2014 Analytical results showed that there is a positive significant correlation between the dependent variable (GDP) and there independent variables (Investment, FDI and exchange rate. The hypotheses were proved to be significant and showed a significant positive relationship between the variables using presented in values of R and R Squared. Additionally, the two values F ratio and t-ratio indicate respectively show there is a linear relationship between the dependent and independent variables taken together. The results showed that a high percentage of the variation in GDP and the three independent variables. Tolerance in this research ranges from0.953 to 0.961 indicating that the predictorsare using 95% of the available information. Lastly, the VIF value ranges from 1.04 to 1.049, this implies that associated regression coefficients are strongly estimated.

As a result of this, Egypt's government will need to show measurable economic progress and, in parallel, a clear strategy on how to improve the allocation of resources, as the economic successes of the past have benefitted only a small portion of society and left poverty widespread throughout the whole country.

The key question is whether the new and emerging political forces in the country will move in the direction of market reforms. With rising unemployment, a rapidly expanding population of mainly young people, and persistent high level of poverty, one of the major current and future social challenges for the Egyptian government will remain the creation of sufficient and dignified jobs. Finally, exchange rate policy should follow a lightly managed float. There are times when it is appropriate for the central bank to intervene in the foreign exchange market to smooth exchange rate fluctuations and help maintain an orderly foreign exchange market. However, continued high levels of intervention can lead to overvalued exchange rates that result in destabilizing rather than stabilizing the market. Indeed, exchange rate stability is one of the main drivers that encourage private sector investment and FDI.

If Egypt can achieve political stability, strengthen its private sector, re-attract foreign direct investments and overcome problems such as the large public debt andhigh unemployment, its economy may regain its economic growth path. However, many challenges lie ahead. For instance, persistent political and security uncertainties could further diminish confidence, depress growth, lower bank deposits, trigger further capital outflows, and ultimately increase pressure on the Egyptian Pound and international reserves. Risks to the fiscal outlook also persist, as social spending mayneed to rise in light of high unemployment, and banks may be unable or unwilling to finance the large fiscal deficit. Finally, it will be important to address the large discrepancies between the social classes of the Egyptian society in order to avoid new massive demonstrations and social conflicts.

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REFERENCES

[1]. Artelaris P., Arvanitidis P. and Petrakos G. (2007) “Theoretical and methodological study on dynamic growth regions and factors explaining their growth performance” Paper presented at the 2nd Workshop of DYNREG in Athens, 9-10 March

[2]. Basirat,M., Nasirpour, A. and Jorjorzadeh, A. (2014) The effect of exchange rate fluctuations on economic growth considering the level of development of financial markets in selected developing countries, Asian Economic and Financial Review, 2014, 4(4): 517-528

[3]. Everett,T., Ishwaran, M., Paolo Ansaloni, G., Rubin, A. (2010) Economic Growth and the Environment, Defra Evidence and Analysis Series, Paper 2.

[4]. Jafari, M., 1999. The effect of real exchange rate on the economic growth; case study of the economy of Iran during the period 1959-1996. Master Thesis, Faculty of Humanities and Social Sciences Mazandaran University

[5]. Lensink W. and Morrissey O. (2006), “'Foreign Direct Investment: Flows, Volatility and the Impact on Growth”, Review of International Economics, 14, 3, 478-493

[6]. Massoud, A. and Willet, T. (2014) Egypt’s Exchange Rate Regime Policy after the Float, International Journal of Social Science Studies 2(4),1-16

[7]. OECD (2014) Business Climate Review of Egypt, Investment Policies and Public-Private Partnerships, Private Sector Development, Project Insights. www.oecd.org

[8]. Swiss Economic Cooperation and Development (2012), Egypt Country Strategy 2013-2016, State Secretariat for Economic Affairs SECO, Switzerland.

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