



Does Financial Globalization Enhance Economic Growth in Egypt?

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Abstract

This paper aims to estimate the impact of financial globalization on economic growth in Egypt, in the long and short runs during the period (1980-1980). In order to estimate this relationship, the study used five different variables to express the level of financial globalization, which is the KAOPEN index as a de jure indicator for financial globalization, that is the officially announced restrictions and laws, the two indicators of foreign direct investment (inflows and outflows) and foreign indirect investment (assets and liabilities of financial portfolios) were also used as de facto indicators for financial globalization, that is, actual capital flows. The study also used the most important controlling variables affecting the relationship of financial globalization with economic growth, namely, the terms of trade exchange, trade openness, the level of human capital accumulation, government spending, and finally the level of financial development. The study relied on the estimation on the co-integration using the boundary test method, which is based on the use of Autoregressive Distributed Delays (ARDL) model which is the most appropriate in this case based on the results of the stationary variables. Before adopting the results, it was first ascertained that there is a co-integration relationship between the study variables, in addition to confirming that the estimated models are free from various measurement problems based on the results of diagnostic or confirmatory tests, and also the high explanatory power of the estimated models. The final results showed the fulfillment of the hypothesis of the study that financial globalization enhances economic growth in Egypt as we find a positive impact of de jure indicator of financial globalization on long-run economic growth. De facto indicators of financial globalization have confirmed the same result as we find a positive impact of foreign investment inflows on the long-run economic growth while the relationship between foreign investment outflows and economic growth takes the form of an inverted U-shaped as the inflection point is equal to 0.563 percent of GDP. For indirect foreign investments (foreign portfolios), we find a significant positive impact of foreign portfolio assets on long-run Egyptian economic growth although, these portfolios' liabilities had no impact on Egyptian economic growth despite their positive indication.

Key words: Financial Globalization; Financial liberalization; Economic growth

1. Introduction:

The World in the nineties decade has witnessed many rapid changes as the global economy turned into a small village rival parties by the technological revolution and information technology, and has resulted in this new concept, globalization, which have spread at all levels of production , financing, financial and administrative, on the other hand, it has multi types, as well as application areas, there is economic globalization which divided into productivity globalization and financial globalization (Husin and Abas , 2012). As there are no limits nowadays for the information, so there are no cultural, economic, and political confidentiality. These changes encourage the flow of capital specially to exploit the advantages and opportunities in the rising economic growth of the under developed countries. The globalization can be defined as the rapid growth on financial transaction that transmitted among countries such as increasing the foreign direct investment – FDI – and foundation of financial markets that attract short run capital among the countries (Alarag, 2012 ‘).

Most developing countries suffer from shortage of capital as capital is a scarce resource also it is represent the leader source for economic growth and development. Shortage of capital in developing countries because of insufficient of capital accumulation or shortage of domestic saving is insufficient to achieve higher rates of investment and economic growth so financial openness and capital liberalization is the port to supplement domestic saving and increase capital and investment for most developing countries to

achieve investment required to accelerate economic growth rate (Eichengreen2001, Arteta et al., 2001, and Edison et al., 2004).

This research aims to examine the impact of financial globalization on economic growth in Egypt through the period 1980 – 2019 and answer on the following questions: “Does the financial globalization have positive or negative effects on economic growth?” And the main hypothesis of this research is: “Financial openness has a significant effect on economic growth”.

2. Financial Globalization:

Dunning see that globalization strengths the relation between countries in a way that organize world economic system and increase financial flows. Others see that globalization is the control of capitalist economic system on international economic through intervention of international financial institutions (salman, 2005). This chapter focuses on economic globalization which classified into two types. First, productivity globalization which means that the firms produce their products in different countries (Multinational corporation) so trade has been spread (Mostafa, 2008); Second, Financial globalization which means inflow and outflow of capital over the countries(Kose, et al 2007). Financial globalization can be measures by financial liberalization, which Kaminsky and Schmukler (2003) defined this term as it involves the deregulation of three sectors; first, foreign capital account, second, domestic financial sector and third, stock market sector (Arestis and Caner 2004).

First; capital account liberalization can be determined by the regulations on offshore borrowing, exchange rate markets and capital outflows. Capital account sector can be fully liberalized if banks and institutions can borrow from abroad without any restrictions. There are any restrictions on capital outflows. Reserve requirements must be less than 10%. No special rates on current or capital accounts transactions.

Second; domestic financial sector fully liberalization can be determined by lack of controls on credit and interest rate on borrowing and lending. Foreign currencies deposits are allowed.

Third; stock market fully liberalization can be determined by allowing for foreigners to hold domestic equity without any restrictions. Allowing for outflow of capital and profit within two years of the initial investment.

A country can be fully financial liberalization if there is fully liberalization in at least two sectors and partially liberalization in third sector. In another word, financial globalization is the integration of domestic financial system with global financial institutions and markets as this integration requires liberalization of capital market and domestic financial sector which characterized by cross-border capital flows or movements (Schmukler, 2004).

3. Financial globalization and economic growth

There are some channels for financial globalization –direct channels and indirect channels- that raise growth in developing countries (Prasad et al, 2003) as financial inflows between countries increase opportunities for investment and economic growth.

▪ **First: Direct channels:**

1. **Increasing domestic saving:** Financial openness leads to increasing the flow of FDI which increase investment in developing countries which provide higher productivity and higher return on capital and so on increase saving as vicious circle illustrates this relationship between investment, productivity, income and saving. The financial liberalization theory depend on the assumption that saving has a positive relation with real rate of interest rate on deposits and growth rate which is captured in investment rate and productivity level as higher interest rate discourage consumption and encourage saving, vice-versa. Another assumption that the theory depend on is that investment has a negative relation with loan interest rate and positive relation with growth rate (Arestis and Caner, 2004). It allows for increased investment in capital-poor countries while they provide a higher return on capital than is available in capital-rich countries. This channel illustrates the liberalization of domestic financial sector but the following channels illustrate the liberalization of stock market and capital account.
2. **Financial integration between countries:** Financial integration of a poor country with countries that have surplus capital increases the opportunities of capital inflows which raise investment rate and higher economic growth (Prasad et al, 2003).
3. **Reduction in the cost of capital:** Financial liberalization improves the allocation of risk (Henry 2000, and Stulz1999) as risk diversification between domestic and foreign investors will reduce the cost of capital and

encourage investment in higher return projects to enhance economic growth.

- 4. Technological and managerial transfer:** FDI inflow may generate transfer of foreign and new technology and managerial control which enhance productivity and so on increase GDP and economic growth.
- 5. Encouragement of domestic financial sector development:** Increasing financial inflow either capital or technology and management will increase competition between foreign sector and domestic sector which motivate domestic sector to improve the quality of financial services and increase efficiency.

▪ **Second: Indirect channels:**

- 1. Promotion of specialization:** Financial globalization encourages investors to diversify their investment to decrease risk –risk sharing-. Risk sharing would indirectly encourage specialization to raise output and growth rate; this logic is explained by Brainard and Cooper (1968), Kemp and Liviatan (1973), Ruffin (1974), and Imbs and Wacziarg (2002).
- 2. Inducement for better policies:** Financial liberalization would make some changes in policies of government as government would change tax policies to attract foreign investment which enhance economic growth.
- 3. Enhancement of capital inflows by signaling better policies:** If a country undertake to impose a future friendly policies toward foreign investment by removal some restrictions on inflow and outflow of capital, this lead to an increase in capital flows as some countries including Egypt have received significant capital inflow after removing restrictions on capital.

4. Literature review:

Historical evidences experienced by countries and previous literatures have a debate on the effect of financial liberalization on economic growth as showing the both positive and negative effect of financial liberalization (Chaisrisawatsuk, W., and Chaisrisawatsuk, S. 2004) which depending on several factors such as the nature and structure of economic, maximum capacity of productivity in domestic economy, infrastructures in domestic country, income structure and efficiency and effectiveness of economic policies in developing countries, different financial liberalization indicators that used in the previous literatures, econometrics techniques used in these literatures and the different variables used (Wei, 2015) as

Quinn & Toyoda. (2008) found that the effects of capital account openness are not dependent on presence of other variables (income, investment, population growth, trade openness, revolution coups and oil prices) as the relationship between openness and growth is linear and capital account liberalization has a positive effect on economic growth in both developed and emerging market nations. **Klein & Olivei (1999)** found that open capital accounts had a significant and economically effect on economic growth in developed and developing countries. Countries with open capital account enjoyed with greater enhance in economic growth than countries with capital account restrictions. **Bekaert et al. (2005)** found that equity market liberalization had a significant effect on economic growth. As the equity market liberalization leads to a 1 % increase in annual real per capita gross domestic product growth, this increase is significant.

McLean & Shrestha (2002) found that financial liberalization has a positive effect on economic growth and other result is that foreign direct investment and portfolio inflows had a positive effect on economic growth but bank inflows had a negative one. **Abiad, et al. (2004)** found that liberalization does improve efficiency of allocation of capital as liberalization's effect on the quality not the quantity of investment. **Borensztein, et al. (1998)** found that FDI has a positive overall effect on economic growth as this effect depends on the availability of human capital in developing countries as the effect of FDI in developing countries with very low level of human capital is negative, and also FDI is more productive than domestic investment and also has an indirect effect on growth.

Chaisrisawatsuk, W., & Chaisrisawatsuk, S. (2004) conclude that financial liberalization has both positive and negative effects on growth depending on the conditions in each country as the results of this paper are that first, there is positive relationship between volatility of exchange rate and financial depth in all four countries as more volatility of exchange rate leads to more capital flows. Second, negative relationship between exchange rate volatility and saving in Indonesia, Singapore and Thailand but this relation is positive in Malaysia. As greater financial liberalization and appropriate volatility in exchange rate are the important components to achieve a stable economic growth rate.

Faria, et al. (2009) found that the result from index of financial liberalization model using impulse-response function show that there is no statistically significant between shocks among variables but country risk shocks

has a positive response on exchange rate while the result from index of financial integration model shows that financial integration has negative effect on GDP and economic stability (it leads to raise the rate of inflation and exchange rate). **Assefa (2012)** found that the Fixed Effect Models (FEM) results indicate a significant positive relationship between stock market capitalization and economic growth, and also significant but weak relationship between financial and trade openness and economic growth while the System Generalized Method of Moments (SGMM) results indicate a significant positive relationship between financial openness measure GEQY and economic growth, but negative and not strong relationship between real stock returns and trade (XM open indicator) and financial (GEQY indicator) openness so African countries open these equity markets to international capital and investors and encourage foreign direct investment (FDI).

Hammana & Ben Meazo (2013) found that there is a significant and negative relation between FL and economic growth in Algeria as inflow of FDI has a negative effect on economic growth because of the rentier nature of Algerian economic as most of FDI invested in hydrocarbons sector. So Algeria must diversify FDI in more sectors and improve industrial sector and specialize in producing products which has a comparative advantage.

5. The Model:

To achieve the study's goal, which is to measure the long-term impact of financial globalization/financial openness on economic growth in Egypt, this applied study depends on annual time-series data for Egypt during the period

from (1980-2019) with a total of 40 annual observations, which were obtained from Many different international organizations such as the World Bank, the global BIN table database, United Nations Conference on Trade and Development (UNCTAD) and others, and this sample was selected based on the availability of data.

Now on the basis of the previous literature and the hypotheses of the study, the study will depend on the following general model in the linear form to clarify the relationship between financial globalization and economic growth, as shown in the following equation:

$$GDP_C \text{ growth}_t = \beta_0 + \beta_1 FG_t + \beta_2 \text{Terms of Trade}_t + \beta_3 \text{Openness}_t + \beta_4 \text{Human Capital}_t + \beta_5 \text{Gov. Exp.}_t + \beta_6 \text{Domestic credit}_t + \epsilon_t$$

As t represent the time period used from (1980-2019), β_0 represent the constant while ($GDP_C \text{ growth}_t$) represent the economic growth (dependent variable) and FG_t represent the financial globalization (independent variable) and $\beta_2, \beta_3, \beta_4, \beta_5$ and β_6 represent the co-efficients of determinant variables of economic growth (control variables) and ϵ_t represent the random error term.

6. Data and Methodology:

The study relied on four international databases to obtain the necessary data to express the variables of the study model, the following table 1 presents a brief description of the variables used in the standard analysis, their symbols and data sources while table 2 illustrate the brief descriptive statistics of the variables of the study.

Table 1: Study variables description

Variable	Description	Source
<i>GDP_C growth</i>	Real GDP per capita growth (annual %)	(WBI)
<i>KAOPEN</i>	An index measuring a country's degree of capital account openness	(CII)
<i>FDI, net inflows</i>	Foreign direct investment, net inflows (% of GDP)	(WBI)
<i>FDI, net outflows</i>	Foreign direct investment, net outflows (% of GDP)	(WBI)
<i>Portfolio Assets</i>	Portfolio equity assets (stock) (% of GDP)	(UNCTAD)
<i>Portfolio liabilities</i>	Portfolio equity liabilities (stock) (% of GDP)	(UNCTAD)
<i>Terms of Trade</i>	The ratio of the export unit value index to the import unit value index	(WBI)
<i>Trade Openness</i>	Trade (Imports + Exports) (% of GDP)	(WBI)
<i>Human Capital</i>	Human capital index, based on years of schooling and returns to education	(Penn)
<i>Gov. Exp.</i>	General government final consumption expenditure (% of GDP)	(WBI)
<i>Domestic credit</i>	Domestic credit to private sector (% of GDP)	(WBI)

Note: - (WBI); The World Bank's global development database.

- (CII); The Chinn-Ito Index (2020).

- (Penn); Penn World Table, version 10.0.

- (UNCTAD); United Nations Conference on Trade and Development.

Table 2: Descriptive statistics of the study variables

	<i>Unit</i>	<i>Obs.</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Dependent Variable:						
<i>GDP_C growth</i>	<i>(% growth)</i>	40	2.7426	1.957	-1.1464	7.3654
Independent Variable:						
<i>KAOPEN</i>	<i>(-1.86 : 2.44)</i>	40	-0.1214	1.714	-1.9203	2.3336
<i>FDI, net inflows</i>	<i>(% of GDP)</i>	40	2.4164	2.041	-0.2045	9.3486
<i>FDI, net outflows</i>	<i>(% of GDP)</i>	40	0.1301	0.208	0.0074	1.1794
<i>Portfolio Assets</i>	<i>(% of GDP)</i>	21	0.5106	0.287	0	1.0024
<i>Portfolio liabilities</i>	<i>(% of GDP)</i>	21	1.4154	0.976	0.0045	2.9864
Control Variables:						
<i>Terms of Trade</i>		40	112.03	31.56	53.506	187.26
<i>Trade Openness</i>	<i>(% of GDP)</i>	40	49.984	11.18	30.247	74.459
<i>Human Capital</i>		40	1.9816	0.415	1.2798	2.6768
<i>Gov. Exp.</i>	<i>(% of GDP)</i>	40	12.132	2.091	7.6602	17.339
<i>Domestic credit</i>	<i>(% of GDP)</i>	40	34.049	11.38	13.936	54.931

the study used five different variables to express the level of financial globalization, which is the KAOPEN index as a de jure indicator for financial globalization, ie the officially announced restrictions and laws, the two indicators of foreign direct investment (inflows and outflows) and foreign indirect investment (assets and liabilities of financial portfolios) were also used as a de facto indicator for financial globalization, that is, actual capital flows. The study also used the most important controlling variables affecting the relationship of financial globalization with economic growth, namely, the terms of trade exchange, trade openness, the level of human capital accumulation, government spending, and finally the level of financial development.

After confirming that the variables are stationary at the level and the first difference together, as the variables are a mixture of I(0) and I(1), the methodology of this research depend on Autoregressive Distributed Lag Period (ARDL) technique through estimation of the UECM model using the Ordinary Least Squares (OLS) method as follows

$$\begin{aligned} \Delta GDP_C growth_t = & \alpha_i + \varphi_i GDP_C growth_{t-1} + \delta_i^* FG_t + \theta_i^* Trade\ terms_t + \gamma_i^* Openness_t \\ & + \vartheta_i^* Human\ capital_t + \pi_i^* Gov.\ Exp._t + \lambda_i^* Domestic\ credit_t + \sum_{j=1}^m \beta_j^{**} GDP_C\ growth_{t-j} \\ & + \sum_{j=0}^m \delta_j^{**} FG_{t-1} + \sum_{j=0}^m \theta_j^{**} Trade\ terms_{t-1} + \sum_{j=0}^m \gamma_j^{**} Openness_{t-1} \\ & + \sum_{j=0}^m \vartheta_j^{**} Human\ capital_{t-1} + \sum_{j=0}^m \pi_j^{**} Gov.\ Exp._{t-1} + \sum_{j=0}^m \lambda_j^{**} Domestic\ credit_{t-1} + \mu_t \end{aligned}$$

As $GDP_C growth$ represent dependent variable, δ_j^{**} , θ_j^{**} , γ_j^{**} , ϑ_j^{**} , π_j^{**} , λ_j^{**} , refer to short-run parameters (error correction) while φ_i , δ_i^* , θ_i^* , γ_i^* , ϑ_i^* , π_i^* , λ_i^* refer to long-run parameters, α represent the intercept, Δ refers to the first difference of variables, m refers to lags periods for first difference variables and μ refers to the random error term. The assumptions of the model as follows:

Null Hypothesis: There is no co-integration between the variables

Alternative Hypothesis: There is a co-integration between the variables

Comparison of the calculated F-statistic value with within critical bounds suggested by Pesaran, et al. (2001) Since the F-test has a non-standard distribution, there are two critical values for test statistic; Lower Critical

Bounds (LCB) values that assume variables are integrated of degree I(0), and Upper Critical Bounds (UCB) values that assume variables are integrated of degree I(1). If the calculated F-statistic value is greater than the tabular upper bound ($F^T > F^U$), then the null hypothesis is rejected and the alternative hypothesis is accepted; that is, there is a co-integration relationship between the variables. On the contrary, if the calculated F-statistic value is less than the tabular minimum value, then the null hypothesis is accepted, which indicates that there is no co-integration between the variables, but if the calculated F-statistic value falls between the upper and lower bound value, In this case, the result is inconclusive, meaning the inability to make a decision to determine whether there is a co-integration between the variables or not.

After verifying the existence of a co-integration relationship, this requires estimating the long-run relationship between variables as shown in the following equation:

$$y_t = \theta + \sum_{i=1}^p \sigma_i y_{t-i} + \sum_{i=0}^q k_i x_{t-i} + \epsilon_t$$

In addition to estimating the error correction model by using the residuals estimated with one delay (lag) period ϵ_{t-1} which are obtained from the long-run relationship in the previous equation, so the short-run relationship and the error correction take the following formula:

$$\Delta y_t = \mu + \sum_{i=1}^r \pi_i \Delta y_{t-i} + \sum_{i=0}^s \omega_i \Delta x_{t-i} + \gamma \epsilon_{t-1} + v_t$$

The error correction model (ECM) has two importance, the first is that it estimates the short-run coefficients, while the second is the error correction term (ECT) which is represented by the coefficient γ in the previous equation, and it measures the speed of adjusting the imbalance from the short run towards the long-run equilibrium which requires that it must be significance and negative in order to provide evidence of the stability of the long term relationship (that is, the error correction mechanism is present in the model).

7. Results:

The results at the bottom of Table 3 showed that the value of the F-Bounds test computed for the six regressions exceeds the corresponding tabular upper bound (UCB), and then the null hypothesis is rejected and the alternative hypothesis is accepted, indicating the existence of a long-run equilibrium relationship between financial globalization with its various variables and the real per capita output growth in Egypt, that is, there is a joint integration relationship at the level of significance of 1%. As a result we can complete the analysis to get the estimations of the long and short run parameters. The long-run results in Table 3 showed many interesting results, which can be explained as follows:

For regression (1), which represents the simple study model without controlling the financial globalization variable, we find that all the model variables represent major determinants of economic growth in Egypt, and their impact is consistent with the economic theory and the reality of the Egyptian economy as we find a positive long-run effect of trade openness, the stock of

human capital, the role of government, and financial development on economic growth in Egypt. We also note that the most stimulating determinants of economic growth is the level of human capital with a factor of (4.82), followed by the role of the government at a factor of (0.69), then trade openness with a factor of (0.23), and finally financial development with a factor of (0.06). On the other hand, the effect of the terms of trade was negative on the Egyptian economic growth with an effect coefficient (-0.06).

Table (5-7): Financial globalization and Economic growth: Long-run relationship in Egypt

Dependent Variable: GDP_C growth

Method: ARDL

Model selection method: Schwarz criterion (SIC)

Variables	Reg (1)	Reg (2)	Reg (3)	Reg (4)	Reg (5)	Reg (6)
<i>Long-run coefficients:</i>						
<i>KAOPEN</i>		0.4408 [2.328]**				
<i>FDI, net inflows</i>			1.3510 [3.409]**			
<i>FDI, net outflows</i>				19.029 [3.229]***		
<i>FDI, net outflows²</i>				-16.899 [-3.137]***		
<i>Portfolio Assets</i>					6.4856 [2.073]*	
<i>Portfolio liabilities</i>						0.7007 [0.729]
<i>Terms of Trade</i>	-0.0556 [-7.577]***	-0.0674 [-10.10]***	-0.2650 [-3.463]**	-0.0749 [-5.456]***	-0.1443 [-2.345]**	-0.0957 [-2.446]**

<i>Trade Openness</i>	0.2286 [11.67]***	0.2147 [8.826]***	0.7145 [3.351]**	0.1825 [3.933]***	0.2206 [2.437]**	0.2654 [3.209]***
<i>Human Capital</i>	4.8188 [8.979]***	6.0241 [8.018]***	16.863 [3.537]**	5.9777 [5.350]***	-25.799 [-1.763]	0.2414 [0.072]
<i>Gov. Exp</i>	0.6867 [10.79]***	1.0279 [13.28]***	1.3874 [10.54]***	1.2696 [5.965]***	3.2969 [1.229]	1.9567 [1.062]
<i>Domestic credit</i>	0.0617 [6.418]***	0.0583 [2.181]**	-0.2556 [-2.281]*	0.0459 [2.101]*	-0.4728 [-1.752]	-0.0970 [-0.656]
<i>Constant</i>	-23.088 [-11.18]***	-26.950 [-7.865]***	-40.246 [-4.052]***	-25.419 [-5.888]***	9.6276 [0.564]	-18.899 [-1.373]
<i>Adjusted R²</i>	%95.8	%93.9	%99	%78.6	%83.1	%77.9
<i>DW – stat.</i>	2.5100	2.3216	2.6716	2.4647	3.1484	2.9380
<i>Fisher test (F-stat.)</i>	(31.745)***	(24.061)***	(116.78)***	6.3043***	(10.855)***	(8.0824)***
<i>Selected Model: ARDL</i>	(4, 4, 4, 0, 4, 4)	(3, 2, 2, 2, 3, 3, 2)	(4, 4, 4, 2, 4, 4, 2)	(1, 3, 2, 3, 3, 2, 3, 1)	(1, 0, 1, 0, 1, 1, 0)	(1, 0, 1, 1, 0, 1, 0)
<i>F-Bounds test</i>	22.883***	25.279***	138.83***	9.5431***	7.1331***	4.8803***
<i>Breusch –Pagan -Godfrey</i>	0.3628 (0.979)	1.9831 (0.108)	0.9955 (0.568)	1.0139 (0.516)	0.5526 (0.818)	1.5711 (0.244)
<i>Breusch-Godfrey LM test.</i>	1.2275 (0.349)	0.5275 (0.606)	5.5139 (0.099)	2.1154 (0.177)	5.6139 (0.030)	2.9559 (0.109)
<i>Jarque-Bera</i>	1.0325 (0.597)	0.6799 (0.712)	1.9737 (0.373)	0.5891 (0.749)	0.2946 (0.863)	1.0956 (0.578)
<i>Ramsey RESET Test</i>	2.7894 (0.133)	0.1352 (0.720)	0.0759 (0.797)	4.2857 (0.065)	1.8226 (0.210)	0.0759 (0.789)
<i>Autocorrelation</i>	No	No	No	No	Yes	No
<i>Partial Correlation</i>	No	No	No	No	No	No
<i>CUSUM</i>	stability	stability	stability	stability	stability	stability
<i>CUSUM of Squares</i>	stability	stability	stability	stability	stability	stability

Note: - ***, **, * indicate significance at 1%, 5% and 10% respectively.

This negative effect indicates that improving the terms of trade in Egypt can negatively effect on economic growth through lower exports unless foreign demand for exports is inelastic as Egyptian exports are inelastic in terms of prices in the global market, and therefore any improvement in the terms of

trade would lead to a decline in exports which would subsequently hamper the economic growth of Egypt. Thus, the increasing openness of the Egyptian economy to the outside world, with the high level of skill of citizens, the high role of the government in the economy, and the level of lending to the private sector encourage stimulating economic growth in Egypt.

Moving to regression (2) in which the de jure indicator of financial globalization (KAOPEM) is controlled; we note that there is a positive impact of de jure indicator of financial globalization on economic growth in Egypt in the long run. The regression coefficient indicates that a decrease in the level of legal restrictions on international capital movements by one degree will lead to an increase in Egyptian economic growth by 0.44% on average. De facto indicators of financial globalization have confirmed the same result as in regression (3), in which the variable foreign direct investment inflows (FDI inflow) was controlled as a de facto proxy for financial globalization; we find a positive impact of investment inflows to Egypt on long-run economic growth at the 5% level as according to the regression coefficient, an increase in foreign investment inflows to Egypt by 1% of GDP leads to an increase in the economic growth rate by 1.4% on average. This result is also consistent with empirical studies that examined the relationship between foreign direct investment and economic growth.

Also in regression (4) in which the variable foreign direct investment outflows (FDI outflow) was controlled as a de facto proxy for financial globalization; we notice from the regression that the relationship takes the form of an inverted U as at low levels of foreign investment outflows, the effect is

positive on economic growth, but at high levels of foreign investment outflows, the effect turns to negative. The inflection point is equal to 0.563 percent, which means that FDI outflows from Egypt that are less than the 0.56% of the total output will positively affect economic growth, while if the level of foreign investments outflows rises above this limit, it will negatively effect on economic growth as this result is consistent with the economic logic. It is natural in any country that there is a percentage of foreign investments that exit due to the change in the economic conditions that control investment, and this does not effect on economic growth, because it does not stem from structural problems specific to the economy itself. Despite the negative impact of outflows of foreign investments on Egyptian economic growth, the rise in capital outflows or inflows reflects the high level of financial globalization and the low level of financial restrictions imposed.

The situation did not differ when moving to regression (5), in which the index of foreign portfolio assets was controlled as a de facto proxy for financial globalization which showed a significant positive impact of indirect foreign investments (foreign portfolios) on Egyptian economic growth in the long run. The regression coefficient indicates that an increase of 1% of GDP in foreign portfolio assets will lead to an increase in economic growth in Egypt in the long run by 6.49% in average. On the other hand, regression (6) in which the index of foreign portfolio commitments was controlled, as a de facto proxy for financial globalization showed that there was no impact of these commitments on the Egyptian economic growth, despite their positive indication. Therefore, based on the results of the regressions from (2) to (6), a decision can be taken

to accept the main hypothesis of the study that there is a positive impact of financial globalization on economic growth in Egypt in the long run.

For the control variables in the regressions (2), (3), (4), (5), (6), it is shown that they are significantly in agreement with the results of regression (1). Finally for key regression statistics; It shows the high value of the adjusted coefficient of determination \bar{R}^2 , where the model explains between 77.9% - 99% of the changes that occur in the growth of real per capita GDP growth in Egypt, and the Fisher test (F-Stat) indicates a rejection of the null hypothesis and the acceptance of the alternative hypothesis in the presence of statistical significance of the model used as a whole at the level of significance of %1.

Also the error correction coefficient ECM (-1) was significance and negative which indicates that the error correction mechanism is present in the model, that is, there is stability in the relationship in the long run. We also find that the short-run conclusions did not differ from the long-run results, although the effect of the short-run was greater; we find a positive impact of financial globalization on economic growth in Egypt in the short run, in addition to the positive impact of trade openness, human capital, government spending, and financial development. On the other hand there was a negative impact of terms of trade, and economic growth in the previous year.

8. Results:

The current study aimed to estimate the impact of financial globalization on economic growth in Egypt, in the long and short terms during the period (1980-1980). In order to estimate this relationship, The study relied on the co-

integration using the boundary test method, which is based on the use of Autoregressive Distributed Delays (ARDL).

The final results showed the fulfillment of the hypothesis of the study that financial globalization enhances economic growth in Egypt. We find a positive impact of de jure indicator of financial globalization on long-run economic growth as financial globalization can raise Egypt's growth rate through a number of channels. Some of these determinants directly affect economic growth (increasing domestic savings, reducing the cost of capital, transfer of technology from developed countries to Egypt, and development of domestic financial sectors) and other determinants include indirect channels, which in some cases can be more important than direct ones (increased production specialization due to better risk management, improvements in both macroeconomic policies and institutions caused by competitive pressures or the "discipline effect" caused by globalization).

De facto indicators of financial globalization have confirmed the same result as for foreign direct investment flows; We find a positive impact of FDI inflows on the long-run Egyptian economic growth while the relationship between FDI outflows and economic growth takes the form of an inverted U-shaped, that is, at low levels of foreign investment outflows, the impact is positive on economic growth, but at high levels of foreign investment outflows the effect turns negative. The inflection point is equal to 0.563 percent of GDP.

In theory, countries tend to gain from FDI inflows through various forms of trade expansions, such as new factories/machines, mergers and acquisitions, joint ventures, etc as through these trade expansions, countries open to FDI

gain valuable skills and experience, advance technologies, help local labor markets, and benefit local consumers by providing high-quality products due to intense competition. It is also natural in any country that there is a percentage of foreign investments that come out due to the change in the economic conditions that govern investment, and this does not affect the process of economic growth, because it does not stem from structural problems related to the economy. However, the rise in these outflows reflects the occurrence of structural problems in the real economy that make this country an expulsion of investments, which of course will negatively effect on the accumulation of physical capital stock and thus economic growth as capital is a crucial factor, especially for developing countries, in the process of economic development. If a large outflow of capital occurs, the economy will not only suffer from reduction on domestic capital accumulation, but also to some extent impede the outflow of capital. Despite the negative impact of foreign investments outflows on Egyptian economic growth, the rise in these outflows or inflows reflects the high level of financial globalization and the low level of financial restrictions imposed.

As for indirect foreign investments (foreign portfolios), we find a significant positive impact of foreign portfolio assets on long-term Egyptian economic growth although, these portfolios' liabilities had no impact on Egyptian economic growth despite their positive indication. The error correction mechanism was also in the model, that is, there is stability in the relationship in the long run and also, the short-run conclusions did not differ from the long-run results, although the short-run effect was greater.

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الملخص

تهدف هذه الدراسة إلى تقدير أثر العولمة المالية على النمو الاقتصادي في مصر على المدى الطويل والقصير خلال الفترة (1980-1980). لتقدير هذه العلاقة ، استخدمت الدراسة خمسة متغيرات مختلفة للتعبير عن مستوى العولمة المالية ، وهو مؤشر KAOPEN كمؤشر قانوني للعولمة المالية ، أي القيود والقوانين المعلنة رسميًا ، واستخدمت مؤشر الاستثمار الأجنبي المباشر. كما تم استخدام الاستثمار (التدفقات الداخلة والخارجة) والاستثمار الأجنبي غير المباشر (أصول والتزامات المحافظ المالية) كمؤشرات فعلية للعولمة المالية ، أي تدفقات رأس المال الفعلية. كما استخدمت الدراسة أهم المتغيرات الضابطة المؤثرة في علاقة العولمة المالية بالنمو الاقتصادي وهي شروط التبادل التجاري ، والانفتاح التجاري ، ومستوى تراكم رأس المال البشري ، والإنفاق الحكومي ، وأخيرًا مستوى التنمية المالية. اعتمدت الدراسة في التقدير على التكامل المشترك باستخدام طريقة اختبار الحدود ، والتي تعتمد على استخدام نموذج الانحدار الذاتي لفترات الإبطاء الموزعة (ARDL) وهو الأنسب في هذه الحالة بناءً على نتائج المتغيرات الثابتة. قبل اعتماد النتائج ، تم التأكد أولاً من وجود علاقة تكامل مشترك بين متغيرات الدراسة ، بالإضافة إلى التأكد من خلو النماذج المقدرية من مشاكل القياس المختلفة بناءً على نتائج الاختبارات التشخيصية أو التأكيدية ، وكذلك ارتفاع القوة التفسيرية للنماذج المقدرية. أظهرت النتائج النهائية استيفاء فرضية الدراسة القائلة بأن العولمة المالية تعزز النمو الاقتصادي في مصر حيث وجدنا أثراً إيجابياً مؤثر العولمة المالية (KAOPEN) على النمو الاقتصادي على المدى الطويل. كما أكدت المؤشرات الواقعية للعولمة المالية نفس النتيجة حيث وجدنا تأثيراً إيجابياً لتدفقات الاستثمار الأجنبي على النمو الاقتصادي على المدى الطويل بينما تأخذ العلاقة بين تدفقات الاستثمار الأجنبي الخارج والنمو الاقتصادي شكل حرف U معكوس باعتباره انعكاساً حيث أن نقطة الانقلاب تساوي 0.563% من الناتج المحلي الإجمالي. بالنسبة للاستثمارات الأجنبية غير المباشرة (المحافظ الأجنبية) ، نجد تأثيراً إيجابياً كبيراً لأصول المحفظة الأجنبية على النمو الاقتصادي المصري على المدى الطويل ، على الرغم من أن التزامات هذه المحافظ لم يكن لها أي تأثير على النمو الاقتصادي المصري على الرغم من المؤشرات الإيجابية.

الكلمات الدالة: العولمة المالية؛ التحرير المالي؛ النمو الاقتصادي.