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The Role of Foreign Direct Investment in Promoting the Egyptian Exports with Reference to the Role of Kuwait Investment in the Egyptian Economy

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Abstract: The purpose of the paper is to illustrate the role of Foreign Direct Investment (FDI) in promoting the non-oil exports of Egypt with emphasis on the role played by the Arab investments in Egyptian economic activities. The paper uses econometrics analysis to shed light on Egypt's main exporting sectors and sub-sectors that benefitted most from FDI flows in boosting their exports. The paper is sought to measure the impact of non-oil FDI on non-oil Egyptian exports to know whether the increase of FDI is associated with an increase in exports or not. To answer this question, the paper employs the integrated time series analysis through the use of Vector Autoregressive (VAR), Vector Error Correction Model (VECM) and Panel data models for annual time series data for the period 1975-2015. Before doing so, the paper addressed the literature reviews, both theoretical and empirical reviews of the effects of FDI on host country's export performance and the causal links between Foreign direct investment and trade. There is a positive long-run equilibrium relationship between two variables; foreign direct investment flows to non-oil sectors and Egyptian non-oil exports. The econometric analysis showed that the process of correcting deviations (error equilibrium correction) in the short run which takes place in the movement of the two variables over time, is slow. And that means the impact of foreign direct investment flow to non-oil sectors on Egyptian non-oil exports is limited in the very short run; The impact takes some time which means that opportunities to stimulate non-oil exports by attracting more FDI are rather promising in the long-run. Therefore, there is a necessity for the economic policy to be planned to focus on trade and industry in long-run to attract more FDI to drive exports. The econometric analysis adopted by the paper also shows that changes in output, Foreign direct investment flows to non-oil sectors, private investment and exchange rate explain about 52% of non-oil export changes and the remaining 44% is

explained by other variables that are mostly qualitative variables not included in the model such as the efficiency of export's process management, technology levels, tariff and non-tariff restrictions imposed by some countries on their imports, quality standards and environmental requirements for some markets, the extent to which preferential agreements exist with some countries, etc. As for panel data analysis, Foreign direct investment flows to non-oil sectors has an influential role in stimulating manufacturing and tourism services exports but it does not affect exports of the agriculture sector, the ICT sector, while the agricultural exports, industrial exports, tourism boom, the thriving of ICT exports help attracting foreign direct investment to non-oil sectors. Furthermore, the panel data analysis found that FDI flows to manufacturing play an influential role in exports from some sub-industrial sectors-namely, textile sector, the pharmaceutical sector and the food sector, while it did not have a significant role in the exports of the chemical, engineering, mining, metallurgical industries, building materials and wood industries. Finally, the study recommends investment targeted promotion which is the use of various promotional resources to attract a particular type or category of FDI; it is export-oriented FDI rather than a focus on attracting FDI in general. The study also recommends Egypt to take advantage of the experiences of countries that have succeeded in promoting export-oriented foreign direct investment by equipping special export zones and turning them into industrial complexes and focusing through legislation on targeting certain investments to create industrial zones dedicated to a single activity in which Egypt enjoys competitive advantages such as the food industry and the wood furniture industry. In addition, Egypt is advised to formulate a national program to invest in high-value-added export sectors and to give preferential advantages to FDI flows to these sectors to encourage service exports, so as to transform these resources into exportable value added. The issuance of the new investment law (Law No. 72 of 2017) is a remarkable step towards this, however, the government must guarantee the proper implementation of this law and trying to make the business environment more attractive for foreign investors. Most of the previous studies conducted FDI flows to Egypt focused on measuring its overall impact on economic growth, or on variables such as productivity, employment, or its role in certain sectors, or its determinants. The value of this paper lies not only in its focus on measuring the impact of FDI flows to non-oil sectors on Egyptian non-oil exports but also in examining the impact of FDI flows to the major export sectors on exports of these sectors, as well as the impact of FDI inflows into the industrial sector on the exports of each of Egypt's sub-industrial sectors which contributes to guiding FDI policies in Egypt to achieve a positive impact on exports and then on Egypt's foreign trade. The paper is very important for scholars, institutes, universities, research centers, organizations and governments which concern to know and study the appropriate policies which are to be pursued to attract foreign direct investment and promote exports.

INTRODUCTION

Foreign direct investment in Egypt has been and continues to be a major focus of attention of economic policymakers since the early 1970s. As a result of the increase in the FDI flows to Egypt, especially since the nineties of the last century and under the successive economic reform programs pursued by Egypt, since, then, the study of the impacts of these investments on macroeconomic variables became necessary in light of the heated debate among economists regarding the feasibility of relying on FDI to support the competitiveness of the Egyptian economy and to stimulate export.

Since, attracting investment requires a distinct business environment, the Egyptian government has since the mid-1970s adopted a set of policies and incentive measures to encourage attracting FDI. Despite the consecutive legislations, since, 1974, that aimed at encouraging the attraction of FDI but theses legislations have not been sufficient to overcome the investment barriers. Recently, Egypt has taken courageous measures to encourage FDI inflows; in the begging of 2017, the parliament approved the issuance of a new investment law (Law No.72 of 2017) to avoid the drawbacks of previous legislative frameworks by adding items that would ease the allocation of land to investors, provide unprecedented incentives and tax exemptions to the investors and other items that considered by some economists as unjustified concessions in favor of investors.

The new investment law relies basically on identifying specific investment sectors that would be granted advantages, exemptions and guarantees without specifying the objectives of attracting foreign direct investment and whether to stimulate exports, creating job opportunities, transferring technology or meeting the needs of the local market. The unprecedented incentives in the new investment law has generated a debate over the benefits of FDI and whether it contributes in export which is one objective of the priority to the government during the current economic phase.

Given the lack of consensus on the benefit of FDI to the export in Egypt, this study examines the role of non-oil FDI in stimulating Egyptian non-oil exports. It aims at investigating the short run impact of non-oil FDI

on the non-oil exports and whether there is a long run equilibrium relationship between them or not. The study employs the cointegration time series analysis through the use of Vector Autoregressive (VAR), Vector Error Correction Model (VECM) and Panel Data analysis. The study relies on an annual time series data from 1975-2015.

The rest of the study is organized to reviews the theoretical and empirical studies that attempted to address the relationship between FDI and exports both on the country level and multi-country level. And briefly describes the theoretical base of the model used in the study and finally presents the main findings and conclusion of the study.

Study objectives

The main objectives of the study: The main objectives of the study are to measure the causal relationship between FDI flow to non-oil sectors and Egyptian non-oil exports. And to measure the impact of FDI flows to non-oil sectors on Egyptian non-oil exports, in addition to measure which of the export sectors are more affected by FDI flows.

Sub-objectives of the study: The study also is sought to highlight the determinants of Egyptian non-oil exports and the indirect impact of FDI flows to non-oil sectors on Egyptian non-oil exports through its impact on other variables such as growth, private investment and exchange rate.

In light of previous results, economic policies that attract FDI and how they can be channeled in a way that stimulates Egyptian exports will be discussed by using quantitative analysis to measure the relationship between foreign direct investment flow to non-oil sectors and Egyptian non-oil exports over the period under study (1975-2015), the study covers the period from the following year when Egypt moved from a state-run economy to a private sector-led economy-namely, 1975-2015; before Egypt began adopting a structural economic reform program in cooperation with the IMF in 2016.

The importance and contribution of the study: The state's keenness to attract foreign direct investment through policies and actions that may be associated with a significant cost on the national economy requires measuring the impact of FDI on various economic variables, particularly exports which is the subject of the study.

Most of the previous studies conducted on Egypt on FDI focused on measuring its overall impact on economic growth or on variables such as productivity, employment or its role in certain sectors, or its determinants. The importance of this study lies not only in its focus on measuring the impact of FDI flows to non-oil sectors on Egyptian non-oil exports but also in examining the impact of FDI flows to the major export sectors on exports of these sectors as well as the impact of FDI inflows into the industrial sector on the exports of each of Egypt's sub-industrial sectors which contributes to guiding FDI policies in Egypt to achieve a positive impact on exports and then on Egypt's Foreign trade. The study's contribution is as follows:

- Measuring the relationship between FDI and Egyptian exports through the analysis of time series
- Linking this relationship to economic literature and empirical studies and highlighting the issue of FDI in relation to exports by re-introducing it from another angle
- Evaluating or interpreting the contribution-or non-contribution-of FDI to Egyptian exports and the extent of this contribution
- Using econometric models to prove or deny the relationship of Foreign investment to Egyptian exports

Questions and hypothesis of the study: In light of the importance and research questions mentioned, the following hypothesis which the researcher aims to prove or deny can be formulated:

- There is a causal relationship between FDI flows to non-oil sectors and exports of these sectors
- The impact of FDI flows to non-oil sectors varies depending on the sectoral distribution of Egyptian exports and its contribution to these sectors
- Output variables, effective real exchange rate, domestic private investment, relative export prices as well as Foreign direct investment positively affect exports of Egypt

Literature review: In the academic field, a lot of efforts have been devoted to examining the relationship between FDI and exports. We can summaries the major theories and models that attempted to explain such a relationship as follows:

Theoretical reviews

Flying geese theory: It is a model that is closer to theory and has been developed on the basis of real observations from Asian economies, where Japan is the leading and most competitive economy while other economies fly around and try to compete. The most important element of this model is the cost of labor component where FDI flow from high-cost of labor countries to lower-cost of labor countries (as in the case of Japan). This model recognizes that countries are gradually shifting from labor-intensive industries to capital intensive industries and then to precision industries. The model ascribes the positive

impact of FDI on exports to factor endowment where cheap labor or cheap resources make exports more competitive in the host country. Moreover, Foreign direct investment brings technology, administrative and technical skills to the host country through the spillover effects.

Product life cycle theory: Introduced by Vernon[1], the theory suggests that there are four stages of the product throughout its life cycle: innovation, growth, maturity and decline. At the innovation stage, the multinational corporation provides innovative new products for the domestic consumption with the acquisition of a monopoly export advantage that enables it to export surplus to serve the international markets as well. Then, the demand in other markets is increasing on the industrial products similar to those of the corporation. With the development and expansion of the production, technology begins to spread, creating incentives for the corporation to invest abroad to exploit low manufacturing costs, achieve scale economics and to prevent the loss of export markets to the local producers in these markets. In the maturity phase, manufacturers begin to standardize production for this product while other corporations start replicating the product. Finally, the competition escalates forcing all producers including the multinational corporation, to reduce the cost so that the declining phase begins as multinational corporations are motivated to move their investments to a cheaper third country. Thus, investments are transferred from one country to another in order to maintain export markets.

New trade theory: The theory is based on the transition from the study of the reasons of trade between different countries according to the traditional theories of international trade to study the reasons of trade between similar countries. The new trade theory recognizes that some of the new reasons for the growth of intra-state trade are the dominance of increasing returns to scale where the cost of production decreases as the size of the corporation expands by opening branches abroad. The theory suggests that the distribution of production stages across a group of countries (vertical FDI) is likely to cause the effect of trade creation. Assuming constant transaction cost, the choice of the locations of each production stage depends on the relative prices of the factors of production and the abundance of resources, thus, FDI cause the trade in a form of exports of finished goods from the branches of the multinational corporation to the home country and other neighboring countries[2].

New growth theory: According to this theory, FDI encourages technology and the use of new inputs in the production function that promote growth which is reflected in increasing exports of the host country. FDI also leads to an increase in the knowledge base through training of workers and acquisition of new skills[3]. FDI has an impact on exports by directing domestic capital to export activities through the transfer of technology, thereby creating new products for export, facilitating access to international markets through large networks linking multinational corporations to each other, providing training for local employment as well as transferring modern management techniques that stimulate export[4]. On the other hand, FDI may lead to crowding out or reduce savings and domestic investment, transfer of low-level or inappropriate technology to the host country to cover domestic market rather than export[5].

The eclectic paradigm: It was presented by Dunning and is considered an important theory that includes several elements in explaining the role of foreign investment in promoting exports. The theory is a combination of three different sub- theories he defined in three letters, OLI (Ownership, Location and Internalization) and can be considered as an expanded model of the well-known monopoly advantage theory.

The theory focuses on the ownership advantages and these ownership advantages refer to intangible assets which are at least owned by the investing corporation and can be transferred through the activity of multinational enterprises at low costs resulting in higher income or lower costs. But internationally-active corporations operating in different markets incur some additional costs, so if they want to enter a foreign market, the corporation must have specific advantages that outweigh operating costs in these markets. An internationally active corporation has a monopoly advantage that it uses in overseas markets, resulting in higher marginal income (or lower marginal costs) than those available to local competitors[6-8]. In addition, to the previous main theories, there were new visions of FDI as follows:

The dynamic capability perspective: The term dynamic capabilities refers to "a corporation's ability to deploy, distribute, use and rebuild its own resources (or the knowledge it possesses) in order to achieve sustainable competitive advantage". This success depends not only on whether multinational Corporations have a distinct knowledge but also on "how to distribute and use this knowledge in an effective way".

For example, the unprecedented development of voice-recognition systems technology, created by IBM, did not generate much revenue until these systems were deployed and adopted by markets such as Malaysia, Hong Kong, Taiwan, China and Korea through IBM subsidiaries in these markets[9].

These dynamic capacities require two components: the ability to extract economic returns from existing resources (which means exploiting the available possibilities) and the ability to develop new capacities (capacity-building) through learning. In other words, dynamic capabilities shift the resources of internationally active corporations from merely income generating static-based resources to sophisticated and sustainable resources (ibid).

The evolutionary perspective: This model distinguishes between two types of knowledge: objective knowledge that can be learned and knowledge experiential which is acquired only through personal experience. A critical assumption of the model is that market knowledge, including corporate awareness of market opportunities and problems is gained through experience in doing business in these markets. Experience-based knowledge can lead to more investment opportunities in these markets and is a driving force in the process of localizing foreign investments. The model also assumes that this knowledge is an essential factor of reducing uncertainty in these markets, so, it is assumed that internationally active corporations will allocate more resources and gradually increase their investments as they gain experience from engaging in these markets. This experience is largely market-specific and may not be applied in other countries[10].

The integration-responsiveness perspective: This paradigm is known as the Global Integration and Local Responsiveness Paradigm model, or I-R, the model indicates that participants in global industries are developing a competitive position in two dimensions and these two dimensions are fundamental realities that together face internationally competitive businesses. The first dimension is global integration which refers to the coordination of activities across countries in an effort to build operational networks and maximize the benefits of the competitive advantages of the countries attracting FDI. The second dimension is the local response which relates to responding to specific needs of the FDI-host country[11].

Empirical reviews: Some empirical studies on the relationship between FDI and exports have reached different results from one country to another or from one group of countries to another but most have addressed the positive impact of FDI on exports through capital accumulation, technology transfer and know-how; particularly in the open economies[12, 13] while other studies have shown that this effect may be minimal or even negative, most likely because of the impact of crowding out competition for domestic investments and because of the tendency of multinational corporations to settle their investments in the most developed and more productive countries rather than in those most in need[14].

The importance of FDI and its impact on economic variables, particularly exports have received much attention in the empirical literature. Numerous studies have explained the relationship between FDI and exports. Some of these studies showed that FDI played a role in export promotion, while other studies showed that there was no significant impact of FDI on the exports of the host country. The empirical literature suggests that the relationship between FDI and export depends on multiple considerations including investor motivation, the nature of the host economy, the structure of the host country's exports, comparative advantages and competitiveness of the host country's economy, policies and legislation that favor investment in export sectors through numerous incentives. The empirical studies on the relationship between FDI and export can be divided into two categories, country level studies which examine the relationship in one country and the multi country level studies that dealt with several countries.

On the country level, Alguacil and Orts[15] studied the impact of FDI on export in Spain using quarterly time series data from 1970-1992. The study used VAR and Granger causality models and found a positive long run relationship between the two variables.

Using Granger causality and OLS with annual data, Pfaffermayr[16] applied his study on Austria and found an integrated relationship from FDI to exports. He carried out another study in Austria in 1996 using panel data from 1980-1994 for different sectors and employed fixed effect panel data model using Generalized Method of Moment (GMM) and found a stable integrated relationship from both sides.

Kiran[17] dealt with the relationship between FDI and trade in Turkey using quarterly data during the period 1992-2008. He applied the Granger causality and VAR model and found no causal relationship between FDI and trade in Turkey.

On the other hand, Awokuse *et al*.[18] compiled detailed data on the manufacturing sectors in China using the panel fixed effect estimation method and they concluded that FDI flows to China had significant positive impacts on exports but the impact varied from sector to sector.

In contrast, Sharma[19] studied the demand function for Indian exports using annual data from 1970-1998. The results showed that the demand for Indian exports increases when export prices are lower than world prices. The appreciation of the local currency (rupees) adversely affects Indian exports. The export supply was directly linked to domestic relative prices. In addition, the study revealed that higher domestic demand reduces export supply. Moreover, It was clear from the data that FDI had

no significant impact on export performance, although, FDI parameters were positive. The study concluded that FDI flows to India were a market-seeking rather than export-oriented investment[20].

In a study on FDI and export growth in Saudi Arabia, Alkhathlan[21] used the co-integration method to test the role of FDI in promoting Exports of Saudi Arabia by two estimates: the first is to estimate the Saudi export supply function using four variables: Saudi exports as a dependent variable, Foreign direct investment, export prices and GDP as explanatory variables. The results showed that Saudi exports had a stable and long-term relationship with FDI and that FDI flows to Saudi economy have already contributed to the increase in Saudi exports: the second is the use of the error correction model which showed that changes in Saudi exports are accompanied to changes in foreign direct investment in the short term. The study concluded that the foreign direct investment to the Kingdom flowed not only to be directed to the domestic market but also to exploit the competitive advantages of the Kingdom-a country with the availability of two major production factors-namely, capital represented in oil revenues and trained workers from several different countries[21].

Arshad[22] examined the long-run relationship between FDI, trade (exports and imports) and economic growth in Pakistan. A combined frame of vector autoregressive and co-integration analysis was used to study the relationship during the period 1965-2005. The results showed two long-run relationships between GDP, imports, exports and Foreign direct investment. Exports and foreign direct investment do not cause each other in the short run. But the mutual impact is in the long term[22].

On the multi country level, Brainard[23] studied the impact of FDI on exports in 29 countries in different industrial sectors using panel data from 1977-1994 and a two stages OLS. Results of the study suggest the existence of strong two ways relationship between FDI and exports. Similar study was carried out by Clausing[9] on 29 countries using panel data for different sectors from 1977-1994 and using gravity model and fixed effect panel regression. The study found an integrated relationship from FDI to export. Harding and Javorcik[13] examined the role of FDI in improving export performance in 105 developing countries. Data were collected at the level of each country and at the product level during the period 1984-2000. The study used VAR and fixed effects panel method and concluded that FDI inflows had contributed to the improvement of exports of developing countries. In another study, Ahmadi and Ghanbarzadeh[24] used country data for the MENA region for the period 1970-2008, using the VAR Model, Granger causality and fixed effects panel model, they reached a bi-directional causal relationship between FDI, GDP and export.

Kutan and Vuksic[25] used country data for 12 Eastern and Central European countries for the period 1996-2004, using the generalized least squares method. The results show that FDI has increased the production capacity of domestic supply and hence exports. However, the direct effects of FDI on exports have only been observed in newly enrolled countries to the European Union.

In a study on how to determine the effects of FDI on export quality, Hallak and Schott[14] applied an econometric model and found that isolating the effects of FDI on the unit value of the exported product is difficult task due to endogeneity problems. The presence of foreign investors may lead to a higher unit value of the exported product but it is possible that the characteristics of the sector or FDI-host country are responsible for the high value of the exported product unit which is an attraction element for FDI. In this regard, Harding and Javorcik[13] provided evidence of the effectiveness of investment promotion efforts. They used World Bank's census of investment promotion agencies covering 169 agencies around the world. Data on sectors that had been prioritized to attract FDI were compiled to test whether they had attracted more FDI during the same period (Hallak, op. cit).

Overview on the Arab investments flows to Egypt: During the study period, the cumulative inflows of Arab FDI to Egypt were about L.E 137 billion. Egypt experienced significant inflows of Arab Capital, especially from Gulf countries. Table 1 presents Egypt's absorption of Arab capital and its distribution in Egyptian economy.

Table 1 shows that as of the end of 2015, the stock of Arab investments in the non-oil sectors in Egypt was L.E 137 billion. The major investors were the Arab Gulf countries where the United Arab Emirates came at the top of this group with contribution amounted to about L.E 34.2 billion, Saudi Arabia comes in second place where its investments amounted to about L.E 32 billion, Kuwait ranked in third place with investments of L.E 16.5 billion, Libya came in fourth place with investments L.E 13.4 billion, followed by Qatar in fifth place with investments of about L.E 11 billion. Bahrain ranked sixth with investments of about L.E 6.9 billion while Lebanon and Syria ranked seventh and eighth with investments of about L.E 6.5 billion, 5.9 L.E billion each. There have also been tangible contributions from Iraq, Jordan and Palestine; their contributions amounted to L.E 2.7 billion, L.E 2.2 billion and L.E 2.5 billion, respectively. Yemen's contributions amounted to about L.E 1.8 billion. Interestingly, there were limited contributions to one Gulf

Table 1: Cumulative Sum of Arab investments in non-oil sectors in Egypt from 1975-2015 (L.E million)

Sector	ICT	Construction	Finance	Services	Agriculture	Tourism	Manufacturing	Total
Countries								
UAE	11918.12	6828.83	7274.13	3063.06	751.47	1547.68	2780.41	34163.7
Saudi Arabia	422.49	7940.25	2482.35	2791.45	2853.44	4790.71	10658.17	31938.86
Kuwait	121.1	4060.83	3648.03	1387.76	582.9	2601.03	4132.05	16533.7
Libya	26.75	334.56	832.39	517.8	11024.95	203.84	476.53	13416.82
Qatar	7.36	1141.56	7497.83	309.02	42.28	1217.52	711.48	10927.05
Bahrain	11.43	226.9	4002.99	72.62	590.42	117.43	1857.06	6878.85
Lebanon	69.88	252.9	3707.1	471.11	112.91	173.91	1733.27	6521.08
Syria	54.85	510.24	33.63	886.55	96.49	293.02	3976.7	5851.48
Iraq	19.06	424.06	307.88	673.94	693.91	7.6	608.78	2735.23
Palestine	31.98	179.15	35.06	151.72	293.96	102.87	1675.95	2470.69
Jordan	34.5	193.03	97.97	341.1	228.3	179.04	1103.77	2177.71
Yemen	22.07	257.41	54.1	84.51	141.52	324.54	874.61	1758.76
Oman	0.14	60.76	21.01	83.91	20.59	44.57	181.89	412.87
Sudan	9.87	35.37	17.59	52.11	41.51	16.73	163.86	337.04
Algeria	0.31	4.89	0	7.17	1.54	19.93	249.87	283.71
Morocco	2.97	22.36	0.38	18.17	9.55	7.8	217.22	278.45
Tunisia	10.93	14.93	0.71	61.29	43.07	40.45	45.16	216.54
Somalia	0.18	0.2	0	0.3	3.95	0	0.03	4.66
Mauritania	0	3.25	0.01	0	0.1	0	0.01	3.37
Djibouti	0.08	0	0.07	0.07	0	0	0	0.22
Total	12764.07	22491.48	30013.23	10973.66	17532.86	11688.67	31446.82	136910.79

General Authority for Investment and Free Zones

Table 2: Kuwaiti FDI flows to Egypt by economic activity as of end of 2015

Sector	Total flows (L.E millions)	Implemented (L.E millions)	Value at establishment	No. of projects
ICT	121.1	-2.57	123.67	59
Construction	4060.83	2473.37	1587.46	264
Finance	3648.03	2700.72	947.31	60
Services	1387.76	712.39	675.37	326
Agriculture	582.9	260.94	321.96	115
Tourism	2601.03	924.96	1676.07	114
Manufacturing	4132.05	2930.89	1201.16	196

General Authority for Investment and Free Zones-Egypt

state: Sultanate of Oman, approximately L.E 412 million and Arab Maghreb countries; Algeria, Morocco and Tunisia, 284 L.E million, L.E 279 million, L.E 217 million, respectively.

With regard to the sectoral distribution of Arab FDI flows to Egypt, these investments were focused on the industrial and finance sectors (23 and 22% of total Arab investments, respectively), construction by approximately 16.4% and agriculture accounted for approximately 13%. Arab contributions in the information and communications technology and tourism sectors were relatively limited (9.3, 8.5%, respectively). Nevertheless, there have been significant investments in the tourism sector of Saudi Arabia amounting to about L.E 4.8 billion. Saudi Arabia, despite occupying second place after the UAE was the most invested Arab country in the industrial sector with investments of more than L.E 10.7 billion, while UAE investments were concentrated in the information and communications technology sector (about L.E 12 billion) representing more than 90% of Arab investments in this sector, probably due to their notable investments in Etisalat Egypt.

Syria's relatively high investments in the industrial sector have been noted, amounting to about L.E 4 billion, roughly equal to Kuwait's investments in this sector.

Despite the Arab countries occupying the first place in terms of the investing countries group in Egypt, these investments which amount to L.E 137 billion are still relatively low compared to Arab investments abroad. That raises question marks about the lack of efforts to create an attractive investment climate for these investments.

Kuwait's contribution to the FDI flows to Egypt amounted to L.E 16.5 billion and ranked in third place after Saudi Arabia and the United Arab Emirates. Quarter of Kuwait's investments to Egypt flowed to the industrial sector by about L.E 5 billion, followed by the construction sector by about 24.5%. Kuwait was also interested in investing in the finance and tourism sectors in Egypt, 22 and 15% respectively with limited interest in the agriculture sector 3.5% as shown in Table 2.

The Kuwait Investment Authority and the Kuwait Development Fund are prominent investors in Egypt. On the other hand, Kuwait is considered as one of the most important Arab markets for Egypt's exports.

MATERIALS AND METHODS

The methodology and model

Methodology and model approach: It is well known in the time series analysis that using non-stationary series in

Table 3: Variables summery statistics

Variables	Symbols	Units	Mean	Maximum	Minimum	SD
Non-oil exports	Lexports	$ Billion	5.8	21.09	1.05	6.8
Non-oil FDI	LFDI	$ Billion	1.4	7.17	0.11	1.58
Domestic investment	LD_Inv	$ Billion	17.37	47.54	3.79	13.03
Egypt GDP	LGDP	$ Billion	121.88	247.72	32.96	63.83
Real effective exchange rate	Lreer	index	149.47	281.7	84.21	50.75

Prepared by the researcher

the regression analysis would lead to a spurious regression. According to Nelson and Plosser, most of the economic data often have either stochastic trend known as unit root or deterministic trend which make the conventional regression methods not applicable. In order to obtain consistent regression results in that case, time series variables must be stationary; the stationarity of time series data may be obtained through transforming data using differencing in order to remove the trend. The order of transforming a non-stationary time series to a stationary time series is called the "order of integration" where the stationarity means integration of order zero.

Although, differencing is a useful technique to obtain consistent time series estimation, however, in fact, it does not properly estimate the long run relationship between the variables which is an important to determine the equilibrium between macroeconomic variables. Engle and Granger suggested that if there exist a linear combination between two non-stationary variables that is integrated of order zero, it is possible to obtain consistent OLS estimates using the level data and thus preserving the long run properties of the relationship. The stationary linear combination in fact implies that the two variables are trending together.

Data of this study are time series annual data representing the period from 1975-2015, so, the number of observations is 41. In order to maintain the consistency of data source, the study relied on data from Ministry of Trade and Industry, General Authority of Investment and Free Zones. In the VAR, VECM Models, we use exports as a dependent variable while non-oil FDI, domestic investment, Egypt GDP growth and real effective exchange rate as explanatory variables (all variables are transformed to the log form). As for panel data analysis, we use data on main exporting sectors and sub-industry sectors from Central Agency for Public Mobilization and Statistics. The sample interval ranges from January 1975 to December 2015.

The selection of variables was mainly based on the empirical reviews discussed in section 5.2. Table 3 shows the descriptive summery statistics for the level values of these variables. Table 3 shows statistics in level data, while we will use the log form in the analysis using the symbols for each variable as in column (2) in Table 3.

To test the hypothesis of this study, we employ a co-integration time series analysis through the use of VAR vector auto regression and error correction model VECM. The theoretical basis of the model is based on the reduced export function formula used in several empirical studies by Goldstein and Khan[26], Rose[27], Athukorala and Suphachalasai[28], Jongwanich[29] and Rahmaddi and Ichihashi[30].

The idea of the model is that real exports are determined by several factors; effective real exchange rate, global income as an indicator of global export demand and the productive capacity of the economy; represented in GDP, FDI, domestic investment and average export relative price: i.e., the unit price in foreign markets compared to its price in the domestic market to reflect the profitability preferences of the domestic producer between domestic market and export markets. In the absence of time series data on the average export relative price, a proxy of the real effective exchange rate was used, an index reflects the prices of goods and services in Egypt in relation to the prices of goods and services in the OECD countries which represent Egypt's main trading partners.

Given that real global income is being treated as an influential factor in export demand and that Egypt's productive capacity is an influential factor on Egyptian export supply and since the small economy hypothesis (e.g., Egypt's economy) states that the world market is able to absorb any export offered by Egypt, Egyptian exports should be more influenced by the supply side, i.e. Egypt's ability to supply exports and not the demand side (ibid., 2012). In other words, the global income factor is expected to be insignificant in this case and such a hypothesis allows us to estimate some of the other determinants affecting exports, including FDI or domestic investment. FDI is expected to affect exports on the supply side through direct and indirect spillover effects[31].

The model proceeds further to study the relationship of FDI to the exports of the main export sectors; agriculture, manufacturing, tourism and information and communications technology through Panel Data analysis. Then, the model study the relationship of FDI to exports of industrial sub-sectors: chemical exports, engineering exports, mineral exports, mining exports, textile exports, wood exports, exports of building materials, especially cement, pharmaceutical exports, food industry exports .In doing so, we identify FDI alongside other export determinants, so, the study data are an annual time series

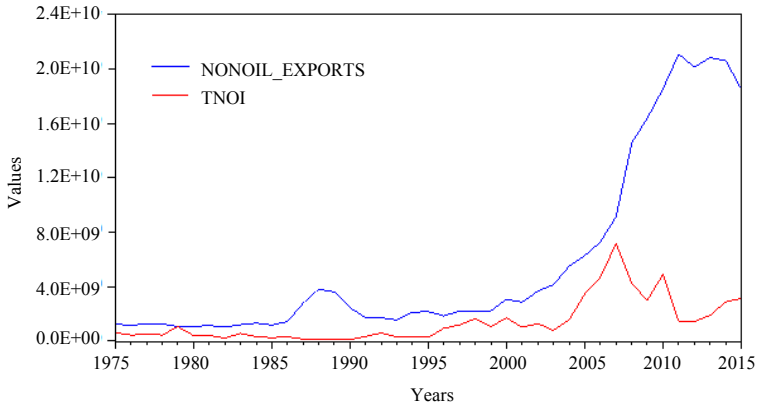

Fig. 1: The relationship between Egypt's non-oil exports and total non-oil FDI flows during the period (1975-2015) in real terms; Prepared by the researcher via. Eviews Software

for the period from 1975-2015 in real terms, covering the following variables related to the export supply side:

- Non-oil exports in US dollars and in real prices (NONOIL_EXPORTS)
- FDI flows to non-oil sectors (Total Non-oil Exports FDI) at constant prices, it represents the investments of multinational corporations and individual activities or non-resident institutions in Egypt which have the acquisition and control over the project and make profits behind it
- Egypt's GDP in constant prices and in US dollars (GDP)
- Real Effective Exchange Rate (REER): an indicator that reflects both the local currency exchange rate against foreign currencies as well as the difference in average commodity prices between Egypt and trading partners. The increase in the value of this indicator reflects the appreciation of the Egyptian pound against the currency basket of trading partners and vice versa
- Domestic private sector investment (DPIM) in US dollar and at constant prices: Public investment has been excluded since most of it is spent on infrastructure and utilities as opposed to domestic private investment which tends to develop the productive capacities of projects, whether produced by the domestic market or export markets[32]

It will be tested if the data is appropriate for the use of the VAR Model or VECM: these models have several advantages, the most important of which are:

- These models can be used in the case of integrated time series data of different orders, such as the properties of data of Egypt
- They contain a single equation
- They are easy to apply and interpret
- Lag length can be used for different variables in the model
- They can measure the short-term impact as well as the equilibrium long-term relationship[33]
- They provide better results in the case of relatively short time series (<60 observations)

Figure 1 and 2 show the plotting of time series of study variables during the specified period 1975-2015. The steps of the model are as follows:

- Test the stationarity of the time series of the variables used in the model to determine order of integration using Augmented Dickey Fuller Test
- Determine the lag structure of the variables to lose as few degrees of freedom as possible so as to reach a Parsimonious model
- Selecting the optimal lag length by different criteria such as LR sequential modified LR test statistic, Schwarz information criterion, HQ hannan-quinn information criterion, Akaike information criterion, FPE final prediction error
- According to Table 4, after the comparison of lag length criteria, it can be found that the optimal lag order for the VAR model is one .the lag length 1 was selected by three criteria LR, SC and HQ
- Variables cointegration using Johansen test. As shown in Table 5, there was a single co-integrated vector or a long-term equilibrium relationship between the study variables. The table also shows the unrestricted cointegration rank test (Trace) among Egyptian non-oil exports, the real GDP growth rate, real effective exchange rate and domestic private sector investment as endogenous variables whereas FDI in non-oil sectors as an exogenous variable. The table demonstrated a single Cointegration Vector between variables at a significance level 5%

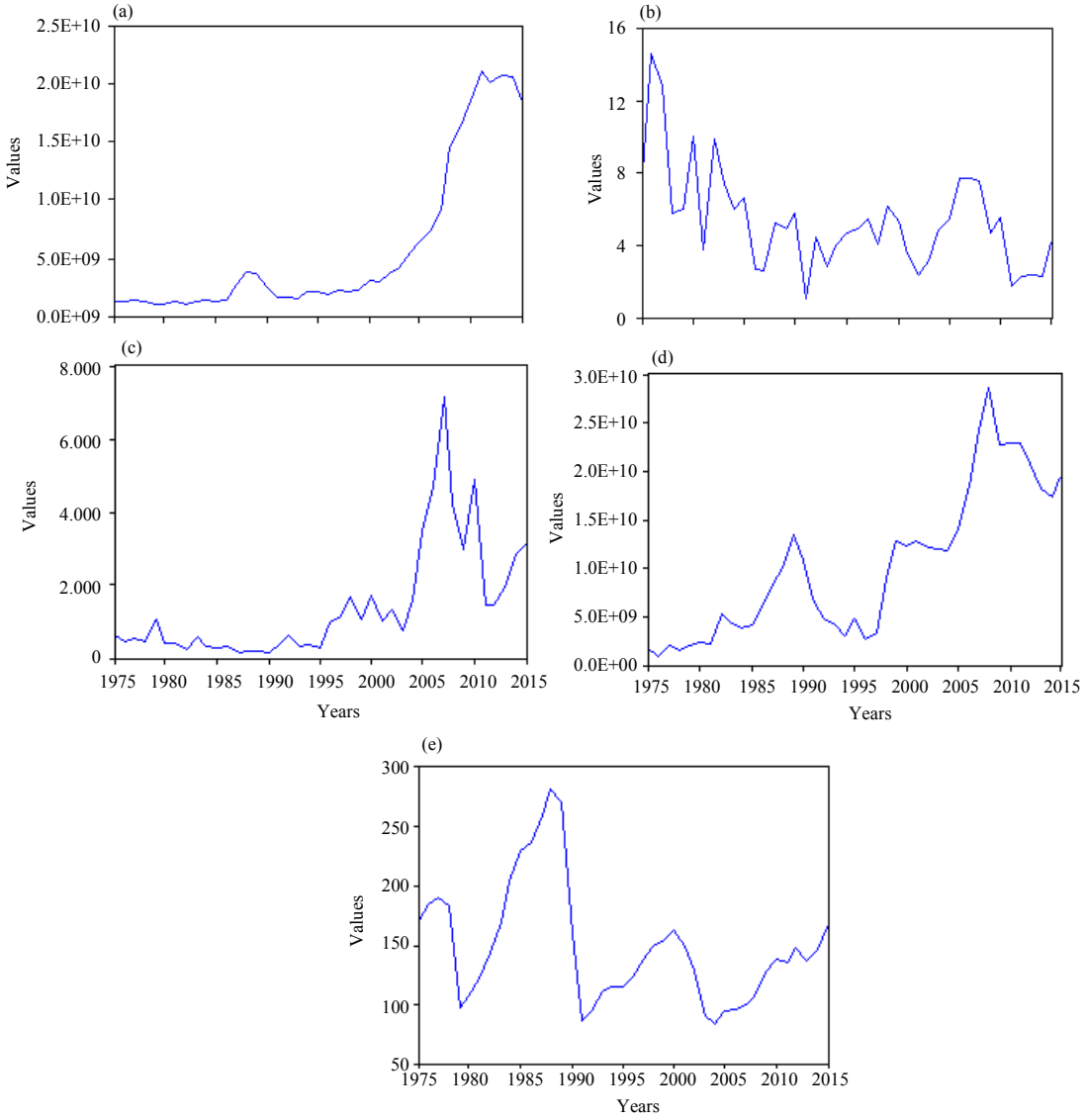

Fig. 2(a-e): The plotting of time series, (a) Nonoil_export, (b) GDP_Growth, (c) FDI, (d) DPIM and (e) REEP; Prepared by the researcher via Eviews Software

Table 4: Optimal lag selection for the study variables

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1887.51	NA	2.47e+43	111.2651	111.4446	111.3263
1	-1740.12	251.4260*	1.09e+40	103.5364	104.4342*	103.8426*
2	-1723.71	24.12576	1.12e+40	103.5125	105.1287	104.0637
3	-1704.32	23.95996	1.02e+40*	103.3127	105.6472	104.1089
4	-1686.71	17.60725	1.17e+40	103.2182	106.2709	104.2593
5	-1668.32	14.06626	1.57e+40	103.0774	106.8484	104.3634
6	-1652.39	8.430891	3.55e+40	103.0818	107.5711	104.6127
7	-1624.15	8.305210	9.19e+40	102.3619*	107.5695	104.1378

*Significant values; Prepared by the researcher via Eviews Software

The bottom line then is that the unrestricted cointegration rank test trace has shown that there is a cointegration relationship among the model variables, as confirmed by the max-eigen value test. This enables us to use the error correction model to estimate the nature of these relationships, so

Table 5: Unrestricted cointegration rank test (trace) for the study variables

Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 critical value	Prob.**
Unrestricted Cointegration Rank Test (Trace)				
None*	0.570523	61.80597	47.85613	0.0015
At most 1	0.286682	28.84369	29.79707	0.0641
At most 2*	0.213906	15.66838	15.49471	0.0471
At most 3*	0.148771	6.281898	3.841466	0.0122

Trace test indicates 1 cointegrating Eq.(s) at the 0.05 level; *denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haug-Michelis (1999) p-values

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen statistic	0.05 critical value	Prob.**
Unrestricted cointegration rank test (Maximum eigenvalue)				
None*	0.570523	32.96227	27.58434	0.0092
At most 1	0.286682	13.17532	21.13162	0.4363
At most 2	0.213906	9.386478	14.26460	0.2554
At most 3*	0.148771	6.281898	3.841466	0.0122

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haug-Michelis (1999) p-values

NONOIL_EXPORT	GDP_GROWTH	REER	DPIM
Normalized cointegrating coefficients (standard error in parentheses)			
1.000000	-2.22E+09	28357357	-2.067554
	(4.7E+08)	(2.5E+07)	(0.24940)
Adjustment coefficients (standard error in parentheses)			
D(NONOIL_EXPORT)	-0.053968		
	(0.02491)		
D(GDP_GROWTH)	1.88E-10		
	(5.4E-11)		
D(REER)	1.31E-09		
	(6.7E-10)		
D(DPIM)	0.142554		
	(0.04739)		

Prepared by the researcher via Eviews Software; Sample (adjusted): 1977 2015; Included observations: 39 after adjustments; Trend assumption: Linear deterministic trend; Series: NONOIL_EXPORT GDP_GROWTH REER DPIM; Exogenous series: FDI; Lags interval (in first differences): 1 to 1

that, the following mathematical formula of error correction model equations has been adopted as follows:

$$\Delta_{NONOIL\_EXPORT} = \alpha_0 + \sum_{i=1}^{n} \beta_i \Delta_{NONOIL\_EXPORT_{t-i}} + \sum_{i=0}^{n} \delta_i \Delta_{GDP\_Growth_{t-i}} +$$

$$\sum_{i=0}^{n} \gamma_i \Delta_{FDI_{t-i}} + \sum_{i=0}^{n} \lambda_i \Delta_{DPIM_{t-i}} + \sum_{i=0}^{n} \eta_i \Delta_{PEER_{t-i}} + \varphi Z_{t-1} + \mu_t$$

Where:

Nonoil_export = The non-oil exports in US dollars and in real prices
GDP_Growth = The real growth rate of Egypt's GDP
FDI = The FDI flows to non-oil sectors at constant prices
DPIM = The domestic private sector investment in US dollar at constant prices
REER = The real effective exchange rate
Z_{t-1} = Error correction term
φ = The error correction parameter

It must be with negative sign to reflect the backward movement in the direction of the equilibrium state while the positive signal reflects the direction away from the equilibrium state. φ Ranges from 0 to -1; the zero value indicates that there is no adjustment towards equilibrium after one period of time while the value 1 indicates a full adjustment towards equilibrium. Thus, the parameter reflects the speed of adjustment because it measures the speed at which the dependent variable (Egyptian non-oil exports) returns to equilibrium after changes in the explanatory variables, namely, lagged exports, GDP growth rate, FDI, domestic private sector investment and effective real exchange rate.

α_0 denotes to constant. Parameters β_i, δ_i, γ_i, λ_i, η_i are the short-run parameters of the model whereas represents the error term which is supposed to be normally distributed with zero mean ($\mu = 0$) and constant variance $\sigma 2$ which is known as white noise innovations.

RESULTS AND DISCUSSION

VECM estimation and analysis: Cointegration analysis demonstrates that non-oil export, GDP growth rate, FDI, domestic private investments, real effective exchange rate do have long-run equilibrium relationships. As the cointegration equation shows in Table 6, there is a long-run relationship among the variables. Table 7 and 8 show the error correction term C (1) (φ) which is significant and with negative sign equal to -0.05 reflecting the long-run relationship with slow speed of adjustment toward equilibrium.

However, in the short term, the five variables are in disequilibrium. The short-term imbalance and dynamic structure can be expressed as VECM where there is no

Table 6: The results of error correction model-long-run relationship

Cointegrating Eq:	Coint Eq. 1
NONOIL_EXPORT(-1)	1.000000
GDP_GROWTH(-1)	-2.22E+09
	(4.7E+08)
	[-4.75035]
REER(-1)	28357357
	(2.5E+07)
	[1.11477]
DPIM(-1)	-2.067554
	(0.24940)
	[-8.29006]
C	2.33E+10

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Table 7: The results of error correction model-short-run relationship

Error correction:	D (NONOIL_EXPORT)	D (GDP_GROWTH)	D (REER)	D (DPIM)
Coint. Eq. 1	-0.053968	1.88E-10	1.31E-09	0.142554
	(0.02491)	(5.4E-11)	(6.7E-10)	(0.04739)
	[-2.16615]	[3.49237]	[1.96117]	[3.00780]
D(NONOIL_EXPORT(-1))	0.036622	4.66E-10	1.05E-08	-0.281941
	(0.20352)	(4.4E-10)	(5.5E-09)	(0.38716)
	[0.17994]	[1.05996]	[1.93234]	[-0.72823]
D(GDP_GROWTH(-1))	-55624883	-0.20962	2.971256	69865395
	(6.5E+07)	(0.13943)	(1.73026)	(1.2E+08)
	[-0.86115]	[-1.50340]	[1.71724]	[0.56858]
D(REER(-1))	4289109.	-0.019129	0.282811	19966710
	(6150595)	(0.01328)	(0.16475)	(1.2E+07)
	[0.69735]	[-1.44082]	[1.71657]	[1.70650]
D(DPIM(-1))	0.024735	2.57E-10	-7.24E-10	0.424548
	(0.07490)	(1.6E-10)	(2.0E-09)	(0.14248)
	[0.33023]	[1.58930]	[-0.36067]	[2.97961]
C	2.73E+08	-1.976843	-11.94068	-1.15E+09
	(2.8E+08)	(0.60808)	(7.54592)	(5.4E+08)
	[0.97085]	[-3.25097]	[-1.58240]	[-2.14585]
FDI	0.095167	9.20E-10	4.94E-09	1.119167
	(0.13446)	(2.9E-10)	(3.6E-09)	(0.25578)
	[0.70778]	[3.16969]	[1.37103]	[4.37546]
R^2	0.528849	0.427649	0.315171	0.519555
Adj. R^2	0.421758	0.320334	0.186765	0.429471

Prepared by the researcher via. Eviews Software

Table 8: Values and significance of VECM estimated parameters of the short-run and long-run relationships

Variables	Coefficient	SE	t-Statistic	Prob.
C(1)	-0.053968	0.024914	-2.166145	0.0379
C(2)	0.036622	0.203522	0.1799410	0.8583
C(3)	-55624883	64593992	-0.861146	0.3956
C(4)	4289109.	6150595.	0.6973490	0.4906
C(5)	0.024735	0.074900	0.3302330	0.7434
C(6)	2.73E+08	2.82E+08	0.9708510	0.3389
C(7)	0.095167	0.134459	0.7077760	0.4842

R^2 = 0.528849; Mean dependent var = 4.45E+08; Adjusted R^2 = 0.421758; SD dependent var = 1.22E+09; Prepared by the researcher via. Eviews Software

correlation among the variables in the short term as Table 6 and 7 show the insignificance of the variables parameters in in the short term.

Model specification and diagnostic tests: To describe the statistical reliability of the model, four tests were conducted, namely, residuals serial correlation test, the heteroscedastisity test and the normal distribution of the residuals and then for residual normality of the study variables.

Residual serial correlation test: The results of the test showed that the test statistics reached 1.4 and the probability value 0.240 which is greater than all levels of significance 1, 5 and 10%. So, there is no need to reject the null hypothesis that no serial correlation in the residual series.

Residual heteroscedasticiy test: The probability value of the test was 0.0953 which is >5% level of significance which indicates the absence of variation of error or

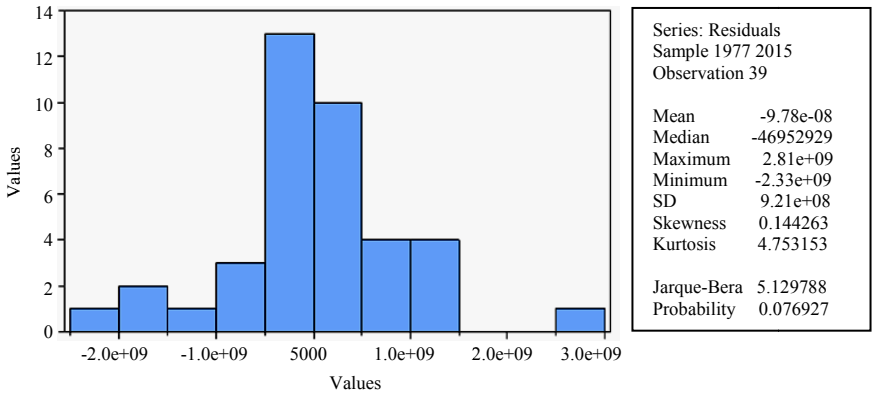

Fig. 3: Residual normal distribution; Prepared by the researcher via. Eviews Software

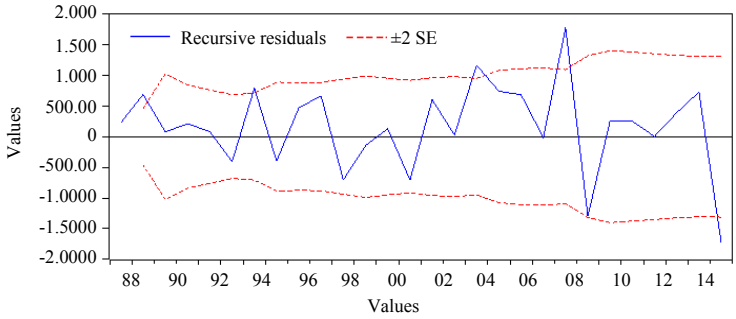

Fig. 4: Model stability test; Prepared by the researcher via, Eviews Software

Table 9: Model diagnostic tests

Test	Null hypothesis	Test statistic	p-values
Breusch-Godfrey serial correlation LM test	No serial correlation	1.40	0.240
Breusch-Pagan-Godfrey test of heteroskedasticity	No heteroskedasticity	23.55	0.0953
Jarque-Bera normality test	Normal	0.078	0.70
Ramsey RESET test	No misspecification	0.01	0.99

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heteroscedasticity. That can be explained that the random error variable follows a zero mean behavior, constant variance and independent and identically distributed.

Residual normal distribution test (model variables): The results of the normal distribution test of the residual showed that the probability value of Jarque-Bera test amounted to 0.0789 which is greater than the significance level of 5% which calls to accept the null hypothesis that the residuals are normally-distributed (Fig. 3 and Table 9).

Model stability test: Figure 4 shows the model's stability test by testing recursive residuals; it is a complementary procedure to the previous testing of the residuals which shows that the model is fairly stable where the curve of the recursive residualslies between the confidence interval represented by the dotted lines.

Panel data analysis (main sectors): The validity and reliability of the model specification and diagnostic tests enables us to move forward to the next step. As the model revealed that there is a long-run relationship between the FDI and non-oil exports, we move to panel data analysis to study which sectors are most affected by FDI flows through two phases: Key export sectors and manufacturing sub-sectors

Table 10 shows that there is a causal relationship between FDI flows to non-oil sectors and non-oil exports in two main sectors: Manufacturing and Tourism. However, there was a one-way causal relationship unidirectional Granger causality from exports of two main sectors: agricultural exports and exports of information and communications technology services to FDI flows.

When examining panel data series in order to ensure the stationarity of time series for the selected variables, we used unit root tests of the previously referred panel data series data. It was found that the panel data series for

Table 10: Key export sectors

Cross sector causality test			
Variables	Independent variable		
Sector	Dependent variable	FDI	EXP
Agriculture	FDI	-	3.32 (0.0481)**
	EXP	0.79 (0.4605)	-
Manufacturing	FDI	-	4.47 (0.0188)**
	EXP	5.74 (0.0071)***	-
Tourism	FDI	-	5.30 (0.0099)***
	EXP	3.95 (0.0285)**	-
Information and communication technology	FDI	-	4.51 (0.0183)**
	EXP	0.66 (0.5198)	-

The values shown are F statistical values. The value in parentheses is the probability value P-value associated with the Wald test, the symbols ** and *** indicate a significance level of 5, 1%, respectively; Prepared by the researcher via. Eviews Software

Table 11: Results of panel data unit root tests

	FDI		i-Exp		D(i-Exp)	
Method	Statistic	Prob.**	Statistic	Prob.**	Statistic	Prob.**
Null: Unit root (assumes common unit root process)						
Levin, Lin and Chu t*	-5.73915	0.0000	1.72874	0.9581	-10.3575	0.0000
Null: Unit root (assumes individual unit root process)						
ADF-Fisher Chi-square	59.6795	0.0000	6.75008	0.9921	131.376	0.0000
PP-Fisher Chi-square	126.262	0.0000	4.00289	0.9998	258.598	0.0000
Im, Pesaran and Shin W-stat			3.11898	0.9991		

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Table 12: The relationship between FDI in industrial-subsectors and exports of subsidiary industries

	Fixed effect				Random effect			
Variables	Coefficient	SE	t-Statistic	Prob.	Coefficient	SE	t-Statistic	Prob.
C	498725.2	81915.83	6.088264	0	501243.6	297080	1.687233	0.0924
FDI	1976.85	750.2509	2.634919	0.0088	1926.993	746.308	2.582033	0.0102

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FDI in the industrial sub-sectors were stationary at level while the panel data series for sub-industrial exports were stationary at first difference; That is, the two series are integrated of different orders which does not enable us to conduct cointegration tests and thus the likely of a long-run equilibrium relationship between the two series was ruled out.

Table 11 shows the results of unit root tests for the panel data series; Table 11 shows that the FDI panel data series is stationary at level due to the rejection of the null hypothesis of a unit root hypothesis at all significance levels since the p-value is equal to 0.0000 in the LLC and Fisher statistics. On the other hand, the table shows that the sub industrial exports (i-Exp) are not stationary at level since we accept the null hypothesis that there is a unit root in the series (p = 0.9581). However, the table shows that the same series has been transformed to stationary after taking the first differences (i-Exp) where we then rejected the unit root null hypothesis at all level of significance.

Thus, we excluded the possibility of a long-run cointegrated relationship between the panel data of the two series. And to determine the extent to which there is a short-run relationship between the two series, fixed effects and random effects models were chosen to test the nature of the relationship. The results revealed the significance of FDI flows to industrial sub-sectors and its influential effects on sub-industrial exports, indicating a short-run significant relationship between the two variables. Table 12 shows that the probability value of the FDI variable in the industrial sub-sectors in the fixed effects model and random effects model was 0.0088 and 0.0102, respectively.

Panel data analysis (manufacturing sub-sectors): We proceeded to study the effects of FDI flows to industrial sub-sectors and the exports of these sub-sectors as shown in Table 12.

Therefore, we concluded to conduct a short-term causality tests among industrial sub-sectors from one side and FDI flows to these sub-sectors from other side. The idea of causality briefly means that I can predict the changes in the dependent variable (exports) based on the behavior of the independent variable (FDI). A shown in Table 13, the FDI flows to industrial sub-sectors Granger cause the exports of these sectors in three manufacturing sub-sectors-namely, textile, food and the pharmaceutical (medical) sub-sector, since, we cannot accept the null

Table 13: Short-run causality tests between FDI and sub-industrial sectors

Null hypothesis	Obs	F-Statistic	Prob.
TEXTILES_EXPORTS does not Granger Cause FDI_IN_TEXTILES	38	0.53560	0.6613
FDI_IN_TEXTILES does not Granger Cause TEXTILES_EXPORTS		4.27576	0.0123
CHEMICAL_EXPORTS does not Granger Cause FDI_IN_CHEMICALS	38	1.34742	0.277
FDI_IN_CHEMICALS does not Granger Cause CHEMICAL_EXPORTS		1.54753	0.2219
FDI_IN_ENGINEERING does not Granger Cause ENGINEERING_EXPORTS	38	0.64317	0.5931
ENGINEERING_EXPORTS does not Granger Cause FDI_IN_ENGINEERING		0.18885	0.9032
MEDICAL_EXPORTS does not Granger Cause FDI_IN_MEDICAL	38	2.05284	0.1269
FDI_IN_MEDICAL does not Granger Cause MEDICAL_EXPORTS		2.37793	0.0888
MINERAL_EXPORTS does not Granger Cause FDI_IN_MINERAL	38	3.78993	0.02
FDI_IN_MINERAL does not Granger Cause MINERAL_EXPORTS		0.47951	0.6989
METAL_EXPORTS does not Granger Cause FDI_IN_METALS	38	0.62946	0.6015
FDI_IN_METALS does not Granger Cause METAL_EXPORTS		0.92743	0.43 91
WOOD_EXPORTS does not Granger Cause FDI_IN_WOOD	38	135.526	7.00E-18
FDI_IN_WOOD does not Granger Cause WOOD_EXPORTS		0.76115	0.5245
FDI_IN_Building_MATERIAL does not Granger Cause Building MATERIAL_EXPORTS	38	1.21184	0.3218
RAW_MATERIAL_EXPORTS does not Granger Cause FDI_IN_Building_MATERIAL		0.66606	0.5793
FDI_IN_FOOD does not Granger Cause FOOD_EXPORTS	29	33.5163	0.002
FOOD_EXPORTS does not Granger Cause FDI_IN_FOOD		6.27359	0.0451

Prepared by the researcher via. Eviews Software

hypothesis that the FDI in these sub-sectors does not Granger cause its exports (at 5% significance level in the case of textile and food and 10% significance level in the case of medical exports).

CONCLUSION

The study revealed that there is a positive long-run equilibrium relationship between two variables; foreign direct investment flows to non-oil sectors and Egyptian non-oil exports. The process of correcting deviations (error equilibrium correction) in the short run which takes place in the movement of the two variables over time, is slow. And that means the impact of foreign direct investment flow to non-oil sectors on Egyptian non-oil exports is limited in the very short run; The impact takes some time which means that opportunities to stimulate non-oil exports by attracting more FDI are rather promising in the long-run. Therefore, there is a necessity for the economic policy to be planned to focus on trade and industry in long-run to attract more FDI to drive exports. The econometric analysis results also show that changes in output, Foreign direct investment flows to non-oil sectors, private investment and exchange rate explain about 52% of non-oil export changes and the remaining 44% is explained by other variables that are mostly qualitative variables not included in the model, such as the efficiency of export's process management, technology levels, tariff and non-tariff restrictions imposed by some countries on their imports, quality standards and environmental requirements for some markets, the extent to which preferential agreements exist with some countries, etc.

As for panel data analysis, Foreign direct investment flows to non-oil sectors has an influential role in stimulating manufacturing and tourism services exports but it does not affect exports of the agriculture sector, the ICT sector while the agricultural exports, industrial exports, tourism boom, the thriving of ICT exports help attracting Foreign direct investment to non-oil sectors. Furthermore, the panel data analysis found that FDI flows to manufacturing play an influential role in exports from some sub-industrial sectors-namely, textile sector, the pharmaceutical sector and the food sector while it did not have a significant role in the exports of the chemical, engineering, mining, metallurgical industries, building materials and wood industries.

Finally, the study recommends investment targeted promotion which is the use of various promotional resources to attract a particular type or category of FDI; it is export-oriented FDI rather than a focus on attracting FDI in general.

The study also recommends Egypt to take advantage of the experiences of countries that have succeeded in promoting export-oriented foreign direct investment by equipping special export zones and turning them into industrial complexes and focusing through legislation on targeting certain investments to create industrial zones dedicated to a single activity in which Egypt enjoys competitive advantages such as the food industry and the wood furniture industry. In addition, Egypt is advised to formulate a national program to invest in high-value-added export sectors and to give preferential advantages to FDI flows to these sectors to encourage service exports so as to transform these resources into exportable value added. The issuance of the new investment law (Law No. 72 of 2017) is a remarkable step towards this; however, the government must guarantee the proper implementation of this law and trying to make the business environment more attractive for foreign investors.

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