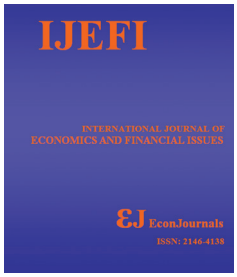

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The Impact of National Private Investment on Manufacturing in Egypt

Baher Mohamed Atlam[1], Ahmed Ashour Soltan[2], Noha Mohey Mohamed[3]*

[1]Department oF Economics, Faculty of Economics and Political Science, Cairo University, Egypt, [2]National Planning Institute, Egypt, [3]Department of Economics, Faculty of Economics and Political Science, Cairo University, Egypt.
*Email: nms.feps@gmail.com

ABSTRACT

This paper aims to present national private investment development phases and its contribution in manufacturing sector in Egypt. Moreover it devoted to examine the effect of national private investment on Egyptian manufacturing. Vector autoregressive analysis was adopted based on yearly data for the period (1990-2015). Time series stationarity are checked by augmented Dicky–Fuller test, and co- integration existence tested by Johansen co-integration test. The vector error correction model utilized to check the existence of long run relationship between the manufactured product as a dependent variable and the national private investment as explanatory variable. Finally this paper concluded that, however national private investment contribute high share to manufacturing sector, the empirical analysis results obtained negative impact of this type of investment on manufacturing sector in short and long run.

Keywords: National Private Investment, Manufactured Product, Vector Error Correction Model
JEL Classifications: E22, C22, L60, N67

1. INTRODUCTION

Investment is considered as an essential component in promoting transition process and sustained growth in the developing countries. It is a crucial element for output growth and employment generating. Investment classified into two types: First, public investment that concerns aggregate government-owned assets. Second, the private investment that includes national private investment and foreign direct investment. National private investment includes companies owned by national individuals in the country, but foreign direct investment includes multinational corporations and all companies owned by foreigners that participate in transfer of a vast set of assets, including financial capital and advanced technology.

However, most national private projects in Egypt work under small scale of production, but they represent around 79% of the total volume of the industrial projects in Egypt, and around 14% of total Egyptian employees working for these entities year 2013. Moreover; national private issued capital inflows into the manufacture sector by year 2014 accounted for 61.6% of the total national issued capital in the different sectors and value added by this sector represents 39% of gross domestic product (GDP). This evidence supports the importance of studying the influence of national private investment on manufacturing in Egypt, to identify the effectiveness of this type of investment on this important sector[1].

The study focuses on examining the impact of national private investment on the Egyptian manufacturing by analyzing the evolution of production, employment, and exports indicators using descriptive approach. Afterwards, the practical side of the study will be presented, by vector autoregressive (VAR) method and vector error correction model (VECM) approach over the period (1990-2015).

The rest of the study is classified as follows; the second section presents the literature review and empirical studies that addressed

1 The Central Agency for public Mobilization and statistics "CAMPAS".

the role of private investment and manufacturing in economic activity. Section three provides overview about investment and manufacturing in Egypt. Section four devoted to express the model specification and its result. Finally, the study deducts conclusion and implication remarks.

2. LITERATURE REVIEW

Economic literature addressed the factors that affect the economic growth. Economic theories and models considered investment as a whole and private investment as important determinants of economic growth. Moreover; the industrial sector presented in the literature as the main wheel of the economy.

Then the theoretical framework comes in two parts.

2.1. First, Presenting the Role of Private Investment in Economic Growth

2.1.1. Theories and models that explain the role of private investment in economic growth

Smith focused on increasing productivity by the division of labor and specialization, which resulted in greater productive efficiency. He considered that the profits gained in agriculture and industry contributes to increasing in savings, which leads to increased investment, and thereby increases growth (Tawiri, 2010. p. 760). Keynes (1936), was the first who called attention to the existence of investment function in the economy, observed that investment depends on marginal efficiency of capital relative to interest rate that reflect the opportunity cost of the invested funds. He pointed out that private investment was volatile since any rational assessment of the return on investment was bound to uncertainty and "animal spirits" of private investors. Mainly it would be the main driving force in investment decisions (Serven and Solimano, 1992. p. 97). After that Harrod and Domar growth models emerged (1939-1946). This model showed that rate of growth depends on saving and investing habits of households and firms (Solow, 1956. p. 65). However, Harrod and Domar models focused on the investment as important component of growth, But Solow model 1956 added technological possibilities and labor force as exogenous factors for growth (Solow, 1956. p. 67). According to this model, GDP growth depends on population increase, capital stock increase by investment, or technological level improvement. It also assumed that the relationship between per capita income and the rate of economic growth is negative, i.e., the possibility of achieving high growth rates will be low when there is an increase in the average per capita income, but it became evident that poor countries were not converging. Also a further problem for the Solow model, raised by Lucas (1990), is that it predicts the resource flows which are not observed. The basic model suggests that the returns to capital must be many times higher in the developing countries than in the developed countries. This would imply that most new investment would occur in the developing countries while this did not occur. These were the main reasons why economists have grown interested in endogenous growth (Ickes, 1996.p. 1 and Renelt, 1991. p. 7).

Although the classical and neo classical theories confirmed the importance of capital accumulation and savings (investment) as important components of economic growth, these theories do not seem to be interested in public and private investment. Infinite horizon model and overlapping generation model that developed by Ramsy 1928, Cass 1965 and Koopmans 1965 model (Romer, 1996. P. 39) and assumed a presence a large number of identical firms which owned by households.

This model initiated idea of studying the impact of private investment on economic growth (Romer, 1996. p. 39). Afterwards endogenous growth theory attributed process of economic growth in the long-term to the accumulation of knowledge. Moreover, it added new variables to the process of economic growth, such as the research and development and institutional work, and government performance, as factors important influence on investment and capital accumulation (Foss, 1996. p. 5-6). In addition, it argued that the free market leads to less than the optimal level of capital accumulation in human capital, research and development. Therefore, the government may improve the efficiency of resource allocation through investing in human capital, and encouraging private investment in high-tech industries (Tawiri, 2010. p. 761).

According to the above; we can conclude that economic theories emphasized the importance of investment as Essential factor in economic growth process, even investment in physical capital by increasing capital accumulation as attributed by neoclassical models, or in human capital as argued by endogenous growth models to achieve high growth rates.

2.2. Second: Models that Explain the Impact of Industry on Economic Growth

2.2.1. Presenting literature that explains the role of industry and manufacturing in economic growth

Technological change and innovations are essential sources of structural change. In Schumpeter's view, innovations lead to "creative destruction," a process whereby sectors and firms associated with old technologies decline and new sectors and firms emerge and grow (Kniivilä, 2007. p. 296 and Verspagen, 2000. p. 2-3). More productive and profitable sectors and firms displace less productive and less profitable ones, such as textiles and clothing stayed roughly two centuries and then have brought new industries such as iron and steel making, chemicals, motor vehicles, machine tools and electronics (Verspagen, 2000. p. 2-3). This evidence confirmed that technological change took place mainly in the manufacturing sector which led authors like Kaldor (1970) and Cornwall (1977) to assert that the expansion of this sector is a driving force for economic growth (Kniivilä, 2007. p. 296).

Nicholas Kaldor (1966. p. 67-68) was the leader of the structural theory of economic growth and of the view that manufacturing is the main engine of growth, and elaborated his view in form of a series of "laws" on economic development and growth: First law (called by the engine of growth equation) $Q = a_0 + Q_m$ where Q and Q_m represent the rates of growth of total output and manufacturing output, respectively. Second law: A kind of production function is added with Q_m is the growth rate of labor productivity in manufacturing sector and the rate of growth of employment in manufacturing, E_m the independent variable $Q_m = b_0 + b_1E_m$. The model was then completed with $E_m = c_0 + c_1E_m$ which denoted the dependence of labor supply in manufacturing

upon the growth of total labor supply E, which may include labor surplus in the other sectors (Cornwall, 1976. p. 307 and Jeon, 2006. p. 5). Kaldor tested these laws empirically by using data fortwelve OECD countries (Japan, Italy, West Germany, Austria, France, Denmark, Netherlands, Belgium, Norway, Canada, U.K. and United States) during the period of 1953-1954 to 1963-1964 and found a strong correlation between growth rate of GDP and manufacturing growth rate (Khan and Siddiqi, 2011. p. 1023). Kaldor's model was tested again on the same twelve countries for the time period of 1951-1970 by Cripps and Tarlingutilizing their method of eliminating cyclical influences, and they presented support for Kaldor's model (Cornwall, 1976. p. 309).

On the other side, Kaldor's model was criticized; because it excluded contribution of the stock of capital, which has an important influence on the growth of labor productivity. Moreover, this model assumed that total labor supply determine manufacturing output and later determine the total output i.e., it was not the rate of growth of demand of manufacturing output determine the growth rate of employment in manufacturing. This assumption was rejected by Cornwall 1976 and asserted the opposite of Kaldor's assumption.

Afterwards Rowthorn and Gomulka suggested that the rate of growth of manufactured output and productivity for any country is mainly dependant on the technological gap between industrial leader country and the studied country. Then Kaldor's model extended to include manufacturing investment as a share of value added in manufacturing (I), the rate of growth of export of manufacturing goods (Ex) and the rate of growth of population (P) as explanatory variables which entailed the engine of growth equation $Q_m = F (I, I/Y, E_x, P)$ where Y represented the per capita income (Cornwall, 1976. p. 310-312).

3. EMPIRICAL STUDIES

This part includes studies that examined the impact of investment and manufacturing sector (foreign direct investment, domestic investment and private investment) and manufacturing sector on economic growth.

3.1. Studies that Examined the Impact of Investment on Economic Growth

Ek (2007) investigated the impact of investment on economic growth in China during the period 1994-2003. The analysis was based on studying the effect of foreign direct investment as a share of GDP on GDP for 30 different regions in China using regression method. The empirical results showed a positive effect of Foreign direct investment (FDI) as a fraction of GDP on the level of GDP.

Sangder (2009) examined the development of investment in Finland in relation to the ınvestment development path model and other small developed economies[2]. He analyzed statistical data (published in the World Investment Report, 2006) on foreign direct investment flows and stocks relative to GDP for small developed economies and Finland specifically. The evidence of this study found that foreign direct investment played a key role in the industrialization of the economy. Technological know-how and managerial skills spilled over into the economy and helped to develop domestic firms. Foreign-owned firms also played a part in developing Finnish infrastructure.

Miankhel et al. (2009) studied the dynamic relationship between export, foreign direct investment and GDP by using time series analysis and applying VAR approach for six emerging countries: Chile, India, Mexico, Malaysia, Pakistan and Thailand. All variables in the study were expressed in logs and defined in real values by deflating it to year 2000 prices using GDP deflators. This analysis covered the period from 1970 to 2005. The results found that in South Asia, there is an evidence that export led growth. In the long run, the study identified GDP growth as the common factor that drives growth in other variables such as exports in Pakistan and foreign direct investment in India. The Latin American countries (Mexico and Chile) showed that in the long run, exports affect the growth. In case of Malaysia the study observed bi-directional long run relationship among exports, foreign direct investment and GDP.

Kim (2011) examined the relationship between foreign direct investment and growth in Kenya over the period 2000-2009. Kim adopted a Causal study, focusing on how foreign direct investment causes changes in economic growth as well as how economic growth causes changes in FDI in Kenya. The result showed a strong and significant positive relationship between foreign direct investment and economic growth in Kenya. This positive relationship means that a direct proportionate relationship is found between foreign direct investment and economic growth.

Yasin (2013) analyzed the relationship between foreign direct investment and growth in Pakistan economy. Data in this study covered period from 1976 to 2010. Autoregressive distributed lag model applied to examine long run relationship between GDP (dependent variable) and foreign direct investment and exports (independent variables). The results of the study indicated that, no long run relationship is found between dependent and independent variables in Pakistan.

Despite that earlier studies used foreign direct investment to measure the impact of private investment on economic growth, the domestic source of investment (including natioanl private investment and public investment) may still influence economic growth. The following studies presented this point (chronologically ordered).

Ghura (1997) investigated empirically the factors that influence economic growth in Cameroon by using time series analysis during 1963-1996. The dependent variable was the output growth and the explanatory variables were ratio of real private investment to lagged real GDP, the ratio of real government investment to lagged real GDP and labor growth. The result of this study supported the endogenous growth model. It indicated that the aggregate production function exhibits increasing return to scale, the impact

2 The author defined small developed countries as which have a Human Development Index (HDI) higher than 0.9, a nominal GDP of less than $600 billion, a nominal GDP/capita higher than $15 000 per annum, a population between 2-20 million and where tertiary and quarterly sectors dominate are Small Developed Economies.

of increasing private investment on growth is large and significant. Also the study observed that the government investment have positive effect on growth and human capital development plays important role in output expansion.

Ghani and Uddin (2006) investigated the role of public investment and private investment in the process of economic growth in Pakistan's economy using the VAR approach. The study used a model which includes private investment and public consumption beside public investment. these variables obtained in real terms for the period (1973-2004). The results found that growth is largely driven by private investment and that no strong inference can be drawn from the effects of public investment and public consumption on economic growth.

Bukhari et al., (2007) attempted to analyze the interaction between public capital and economic growth in Korea Singapore, and Taiwan using dynamic panel data over the period (1971-2000). Analysis found that both public and private investment and public consumption have a long-term dynamic impact on economic growth in these countries.

Drezgić (2008) analyzed the effects of public investments on the economic growth of Republic of Croatia by using models of panel regression for the period 1997-2006. This study observedpositive and robust results in case of construction investments effects on growth. The study found high spillover effects due to small size of Croatian regions.

Tawiri (2010) studied the impact of domestic investment as a determinant of growth in the Libyan economy during the period (1962-2008) by using Time series analysis. Cobb–Douglas function was used to analyze the relationship between real per-capita GDP and its determinants as described in Cobb–Douglas function. This study adopted the ordinary least squares (OLS) method. The study showed the positive impact of domestic investment on per-capita GDP.

Osinubi and Amaghionyeodiwe (2010) analyzed the direction and significance of the effect of foreign private investment on economic growth in Nigeria over the period 1970-2005. They studied the effect of foreign private investment, domestic investment growth rate and, growth rate of net export on the growth rate of nominal GDP. The analysis based on regression method and time series analysis. The results showed that Foreign private ınvestment, domestic ınvestment growth and net export growth were positively related to economic growth in Nigeria.

3.2. Studies that Examined the Impact of Manufacturing on Economic Growth

Libanio and Moro (2003) analyzed the relation between manufacturing output growth and economic performance from a Kaldorian perspective by estimating Kaldor's first and second growth laws for a sample of seven Latin American economies during the period 1985-2001. He explained the relation between industrial growth and GDP growth by the effects of manufacturing on productivity levels in the whole economy. The results of this study confirmed that, the "manufacturing is the engine of growth" hypothesis, and suggest the existence of significant increasing returns in the manufacturing sector in the largest Latin American economies and the possibility of cumulative growth cycles in the region, based on the expansion of industrial activities.

Jeon (2006) tested the validity of the Kaldorian approach (the hypotheses of the manufacturing sector as the engine of economic growth) to growth and development in China during its reform period of 1979-2004 by using time-series and regional panel data. He found that allthe empirical test results were supportive of the validity of the hypothesis in China during thereform period of 1979-2004. Moreover the study asserted that the secondary industry has played a key role in overall growth of GDP of the Chinese economy, which considered afundamental message of the Kaldorian economic development thinking.

Khan and Siddiqi (2011) studied empirically the validity of the Kaldorian approach to growth and development in Pakistan by using a time series data over the period of 1964-2008. OLS regression analysis is being employed to testify the relationship between growth of manufacturing sector and economic growth. They found that the growth of GDP is much closely associated with the growth of manufacturing sector comparing to the agricultural or service sector. Moreover manufacturing sector exhibited more forward and backward linkages compared to services and agriculture sectors, which ultimately have a positive impact on economic development of Pakistan. They attributed the half of growth of GDP in Pakistan to the growth of manufacturing output.

The previous literature review and empirical studies asserted the hypotheses of industry as an economic growth engine, and the empirical studies confirmed that. Accordingly; it is strongly recommended that this study should attempt to investigate the impact of local private investment on manufacturing in Egypt during the period (1990-2015).

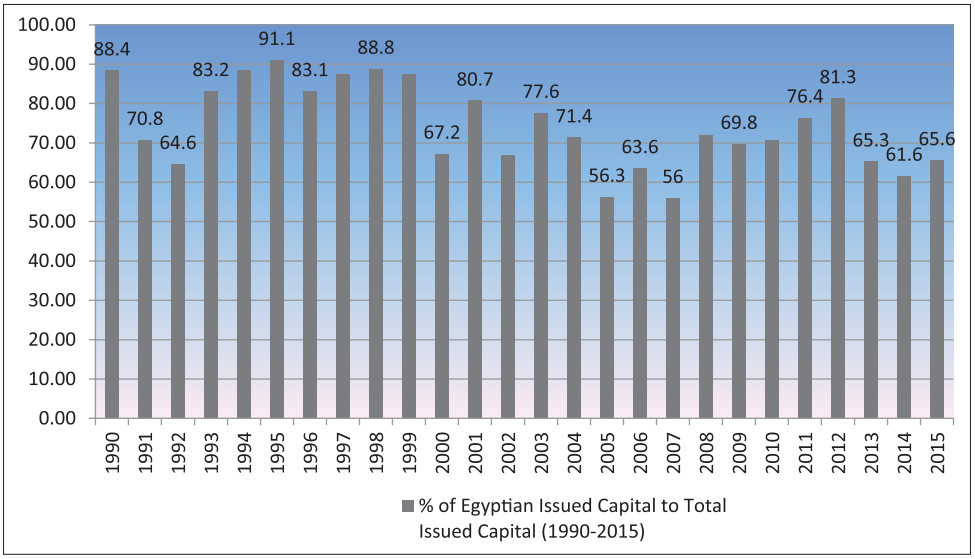
4. PRIVATE INVESTMENT AND MANUFACTURING OVERVIEW IN EGYPT

Private ınvestment plays a key role in the economic activity and progress of any country. Developed and developing countries like Egypt depend on investment to create more employment opportunities, increase exports, and solve poverty problems.

According to the ministry of planning; the estimated total investment contribution share to GDP is 14.4% during years 2012/2013. In the same period; total private investment contribution share was 62.4% of total investment. This percentage decreased slightly in 2013/2014 to 58% due to enlarging public investment in major public projects such as Suez Canal project.

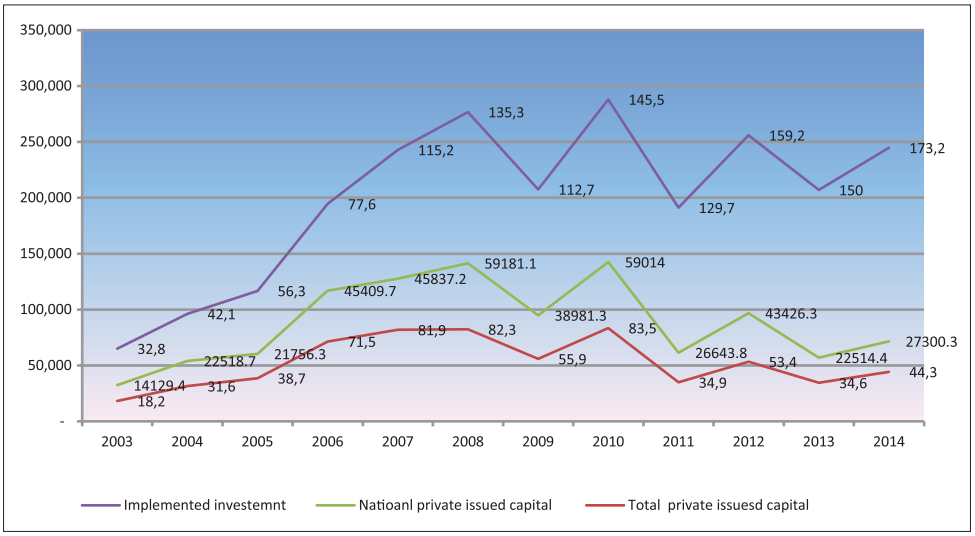
However; private investment is essential for keeping countries on solid steps towards progress and prosperity, but during political and economic instability countries were unable to attract foreign direct investment. This situation accelerated the importance of national private investment intervention in order to compensate the missing chance of foreign direct investment.

Figure 1: Percent of egyptian ıssued capital to total ıssues capital (1990-2015)



General authority of investment and free zones

Figure 2: National issued capital, total private issued capital, Implemented investment (L.E-Million)



General authority of investment and free zones. Ministry of planning

As depicted in Figure 1, national private investment contributed with more than 55% of total private issued capital, and it reached 76.4% and 81.3% during years 2011 and 2012 respectively. This increasing rate of national issued capital was mainly due to political instability and unattractive investment climate during 25th January 2011 revolution. Afterwards national issued capital declined to 66% in 2015 of the total private issued capital, as Arabic investment issued capital increased.

The trend of time series in Figure 2 depicts a positive correlation between total implemented investment, private issued capital, and national issued capital. The three measures move together overtime. Figure 1 depicts that years 2008, 2010, and 2012 marked by moving up, but in 2005, 2009 and 2011 the downturn coincided for the three measures. This indicates that national private investment is a key engine in Egyptian economy and can be presented by national issued capital.

Meanwhile, Egyptian economy includes seven activities; manufacturing, service, construction, tourism, banking service, agriculture, and communication and information technology.

As depicted in Figure 3, manufacture sector attracts the highest percentage of national private investment. It obtained around 31% of national private issued capital between 1985 and 2015.

Moreover, manufacture sector represent 15%[3] of GDP and 49%[4] of total exports id manufactured commodities in 2011/2012. This indicates the importance of manufacture sector as a main source of foreign currency.

In addition; it is obvious in Figure 4 the high contribution of national private issued capital to the manufacturing sector. Mainly

3 Ministry of planning (2016).

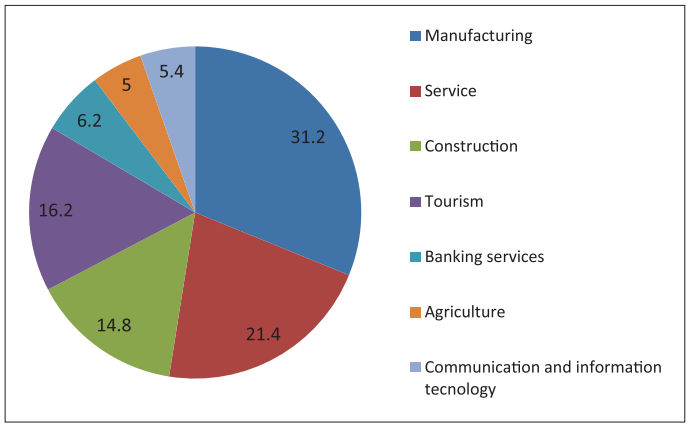
4 Central Bank of Egypt (2016) " This percentage includes non petroleum commodities, total and semi manufactured commodities".

it contributes by 50.6% at least of the total issued capital that injected in manufacturing sector. Moreover in 2011 this percentage increased to 87.1% due to the drop of foreign and Arab issued capital during this period of time.

5. MODEL SPECIFICATION, DATA AND METHODOLOGY

Methodology supported by Nicolas Khaldor model which extended by Corwall 1976. This model assumed that manufactured product affected by investment, manufactured exports, number of workers and GDP per capita. According to this assumption; the study attempts to assess the impact of these variables on manufacturing in Egypt. The empirical analysis focuses on the impact of national private investment on manufactured product. Due to data availability constrains, national private investment represented by national private issued capital, and manufacturing represented by manufactured product. The manufactured product function is expressed as follows:

Figure 3: National issued capital % (1985-2015)



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$$Q_m = f(I, EX_m, NW_m, 1/GDP\ pc) \quad (1)$$

Qm "Manufactured product" = Log total manufactured product.
NI "National private investment" = Log national private issued capital.
NW "Number of workers" = Log number of workers in the manufactured sector.
EX_m = Log total manufactured exports.
1/GDP pc "GDP per capita" = Log inverse GDP per capita.

Then the basic model is defined as follows:

$$Qm_t = \beta_0 + \beta_1 NI + \beta_2 EX_t + \beta_3 NW_t + \beta_4 1/GDP\ pc_t + \xi \quad (2)$$

The analysis focuses on parameter β_1 that represents coefficient of the impact of national private investment on manufactured product. If $\beta_1 < 0$, negative effect will be expected for national private investment.

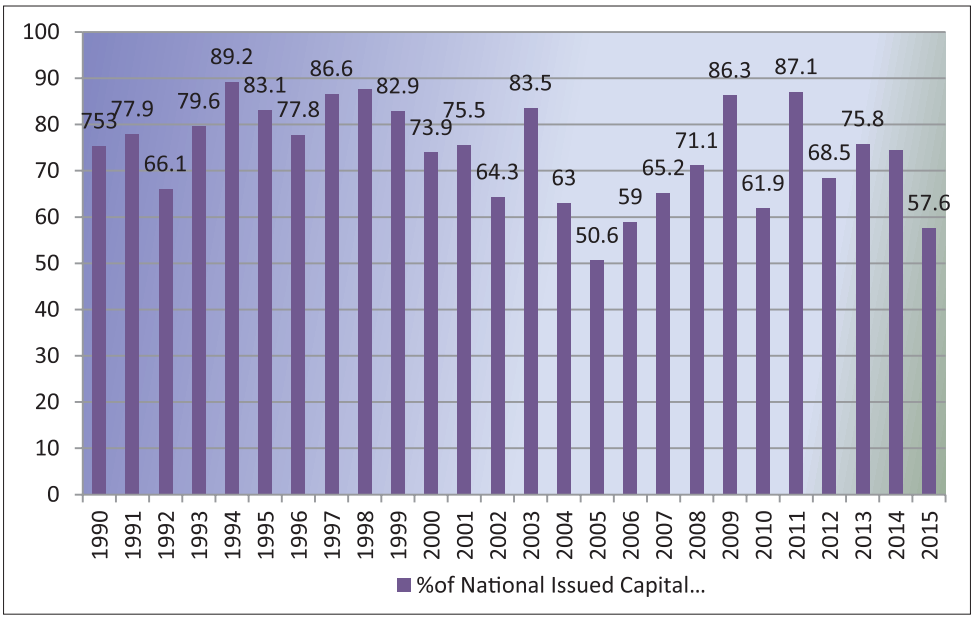
The study uses annual data between 1990 and 2015. Also it was taken from several sources; Ministry of planning, Central bank of Egypt, The Central Agency for public Mobilization and statistics "CAMPAS," and ındustrial development authority.

6. ESTIMATION AND ANALYSIS RESULTS

6.1. Unit Root Test

Regression results often suffer a spurious regression problem due to non stationary time series. This problem can be relaxed by testing the stationarty of time series by applying augmented Dicky–Fuller (ADF) test which estimated by the following regression equation:

Figure 4: Percent of national ıssued capital share to the manufacturing sector (1990-2015)



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$$\Delta Y_t = \beta_1 + \beta_{2t} + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} Y_{t-1} + \mu t \quad (3)$$

Regarding test results, Table 1 depicts that all variables are non stationary at level. Subsequently ADF test applied again on series and the result shows that manufactured product and national private investment are stationary at first difference. On other side number of workers, GDP pc, and manufactured exports time series are stationary at second difference.

Since the dependent variable Q_m order is less than the order of more than two independent variables, then we can proceed with performing Johansen maximum likelihood co integration test.

6.2. Co Integration Test

The study use Johansen maximum likelihood approach to test for long run relationship existence. First we determine the optimal lag length by applying unrestricted vector auto regression "VAR" in levels.

As Table 2 shows above using Schwartz criterion, lag length is specified to be 1. Also Table 3 presents Johansen co integration test results based on the maximum eigen value. These results are found based on the null hypothesis of the number of co integration equation (r) against the alternative hypothesis (r+1). The null hypothesis can be rejected if the teat statistic greater than critical value at 5% significant level.

Maximum eigen value statistics values in Table 3 indicate one co integration equation at 5% significant level. This reflects the existence of long run relationship between manufactured product and the explanatory variables.

Also the long run relation can be estimated by the following equation:

Table 1: Unit root test results

Series	Augmented Dicky–Fuller test results		
	Level	First difference	Second difference
Q_m	1.437 (2)	−6.659 (1)	-
NI	−0.812 (1)	−3.685 (0)	-
NW	−0.971 (1)	−3.342 (0)	−5.773 (0)
GDP pc	−1.471 (1)	−3.342 (0)	6.420 (0)
EX_m	0.209 (1)	1.622 (0)	−4.426 (0)
Critical values at 5% significant level*	−3.622	−3.622	−3.622

All values between brackets represent lag length using Schwartz info criteria. *The hypothesis of non stationary, series in level is rejected at 5% significant level using Mackinnon (1991) critical values. ADF gives t-statistics that includes intercept and trend

$$Q_m = 430.81 - 260.66\,IN + 20.93\,NW + 4.99\,1/GDP\,pc + 0.027\,EX$$
$$(0.55)\quad (-0.55)\quad (-0.62)\quad (-2.72)\quad (-0.33) \quad (4)$$

The previous equation resulted at 5% significance level. Also values in parentheses represent t-statistics which show most of coefficients are insignificant. Moreover, the equation depicts negative long run relationship between national private investment and manufactured product which not compatible with theory. This case might be attributed to the nature of national private investment in Egypt. It characterized by small scale production, in addition to the heavily dependency on labor intensive style of production. These facts diminish externalities thus scale down production.

6.3.VECM

After long run relationship has been approved, VECM approach can be performed, that finds error correction term (Ec_{t-1}). This term is lagged residual statistically negative and significant at 5% significant level. Regarding VECM approach we assumed using intercept and no trend as Table 4 depicts results.

Table 4 shows that 92% of disequilibrium between manufactured product as dependent variable and other independent variables adjusted in the following period.

In addition, the estimated results of VECM presented in the following equation:

$$\Delta Qm = 0.65 - 9644.24\Delta\,NI + 672.65\Delta\,NW - 3.89\Delta\,1/GDP\,pc - 0.45\Delta\,EX_m - 0.92\,Ec_{t-1}$$

t-statistics (1.48) (2.44) (2.41) (−0.63) (2.12) 2.96 (5)

However; the explanatory variable Δ1/GDP pc is insignificant, the rest of all variables are significant. This indicates the significant effect of national private investment, number of workers, and manufactured exports on manufactured product in the short run.

7. CONCLUSION AND POLICY IMPLICATIONS

This study presented the stages of development of national private investment and its contribution to the manufacturing sector during 1990-2015. Also it investigated the impact of national private investment on manufactured product in Egypt using VECM test and examines the long run relationship by performing co integration test.

Table 2: Lag order selection criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	170.8645	NA	6.84E-13	−13.82204	−13.57661	−13.75693
1	337.6969	50.2487*	5.31E-18	−25.64141	−24.16884*	−25.25074
2	367.995	32.8229	4.68e-18*	−26.08291*	−23.38321	−25.36668*

*İndicates lag order selected by the criterion. LR: Sequential modified LR test statistic (each test at 5% level). FPE: Final prediction error, AIC: Akaike information criterion, SC: Schwarz information criterion, HQ: Hannan-Quinn information criterion

Table 3: Johansen cointegration test results

Hypothesized Number of CE (s)	Eigen value	Max-eigen Statistic	0.05 Critical value
None*	0.841999	44.28369	34.80587
At most 1	0.69522	28.51597	28.58808
At most 2*	0.61607	22.97507	22.29962
At most 3*	0.538928	18.58081	15.8921
At most 4*	0.357822	10.62934	9.164546

Max-eigen value test indicates 1 co integrating eqn (s) at the 0.05 level, *Denotes rejection of the hypothesis at the 0.05 level, **MacKinnon-Haug-Michelis (1999) P values

Table 4: Vector error correction results

Variables	Coefficient standard error	t-statistics
Δ NI	−9644.24	2.439
Δ NW	672.65	2.4082
Δ 1/GDP pc	−3.89	−0.6252
Δ EX_m	−0.454	2.123
Ec_{t-1}	−0.92	2.96
R^2	0.42	
F statistic	2.015	
DW	1.83	

The study found a correlation between total implemented investment, private issued capital and national private issued capital, and the three indicators move together overtime. Thus national private issued capital used as indicator of national private investment due to data availability constraint.

The results reflect that the national private investment represents important component to sustain growth especially during economic and political instability. The data pointed to the high contribution of national issued capital to the total issued capital which was more than 55%, in addition to the great percentage in severe period of time. Moreover the manufacturing sector in Egypt attracts the highest percentage of national private issued capital which obtained around 31% of total national private issued capital. In addition to the high contribution of national private issued capital respect to the total private issued capital in manufacturing sector which boomed to 87.06% in 2011. This implies the crucial role of national private investment in Egyptian manufacturing sector.

However, national private investment represents a high share in the manufacturing sector, the finding of the empirical analysis shows that there is statistical significant negative impact of national private investment on manufactured product in Egypt in both short and long run. This result is an outcome of problems that national private investment suffers. Mainly this type of investment characterized by small scale of production and the heavily use of labor intensive style of production. Also according to VECM results the manufactured exports is statistically significant affect the manufactured product by providing the manufacture sector with foreign currency to import the needed raw material and equipment.

Finally; national private investment affects manufactured product negatively, however; the chance is available to change the direction. This chance requires enlarging production scale, and adopting recent production technology. On other side these requirements need financial and knowledge capabilities which are poor in case of the Egyptian national private investment. Therefore it is important that the government provides national private investors with the related information about investment chances, and available technology in each field of production. In addition to presenting legislations and institutional facilities to encourage the merger and partnership between different national private investment to enhance the production scale and achieve the mass production benefits.

REFERENCES

Bukhari, S., Adnan, A.L., Saddaqat, M. (2007), Public ınvestment and economic growth in the three little dragons: Evidence from heterogeneous dynamic panel data. International Journal of Business and Information, 2(1), 57-79.

Cornwall, J. (1976), Diffusion, convergence and Kaldor's laws. Economic Journal, 86(342), 307-314.

Drezgić, S. (2008), The Effects on Public Sector Investments on Economic Growth of Croatia, Young Economists Seminar to14th Dubrovnik Economic Conference.

Ek, A. (2007), The Impact of FDI on Economic Growth: The Case of China. Jonkoping: International Business School.

Foss, N. (1996), The New Growth Theory: Some Intellectual Growth Accounting, Department of Industrial Economics and Strategy, Copenhagen Business School.

Ghani, E., Uddin, M. (2006), The ımpact of public ınvestment on economic growth in Pakistan. The Pakistan Development Review, 45(1), 87-98.

Ghura, D. (1997), Private İnvestment and Endogenous Growth: Evidence from Cameroon, WP/97/165. Washington, DC: International Monetary Fund.

Ickes, B.W. (1996), Endogenous Growth Models, Department of Economics. Park, PA: Penn State University. p16802.

Jeon, Y. (2006), Manufacturing, Increasing Returns and Economic Development in China, 1979-2004: A Kaldorian Approach, Department Economics Working Paper Series, Department of Economics, University of Utah, No. 2006-08.

Khan, K., Siddiqi, M.W. (2011), Impact of manufacturing ındustry on economic growth in case of Pakistan: A kaldorian approach. Institute of Interdisciplinary Business Research, 3(1), 1021-1037.

Kim, A.M. (2011), The Impact of Foreign Direct Investment (FDIs) on Economic Growth and Development in Kenya. Kenya University of Nairobi.

Kniivilä, M. (2007), Industrial development and economic growth: Implications for poverty reduction and income inequality. Helsinki, Finland: Pellervo Economic Research Institute. Available: http://www.un.org/esa/sustdev/publications/industrial_development/3_1.pdf.

Libanio, G., Moro, S. (2003), Manufacturing Industry and Economic Growth in Latin America: A Kaldorian Approach. Brazil: Federal University of Minas Gerais. Available from: http://www.anpec.org.br/encontro2009/inscricao.on/arquivos/00098e6915698ae97aca03d8e866339ae4e.pdf. [Last accessed on 2014 Mar 02].

Mackinnon, J.G. (1996), Numerical Distribution Functions for Unit Root and Cointegration Tests. Journal of Applied Econometrics, 11, 601-618.

Miankhel, A.K., Thangavelu, S., Kalirajan, K., (2009), Foreign Direct Investment, Exports, and Economic Growth in Selected Emerging Countries: Multivariate VAR Analysis. Japan: Crawford School of Economics and Government, Australian National University.

Osinubi, T.S., Amaghionyeodiwe, L. (2010), Foreign private ınvestment

and economic growth ın Nigeria. Review of Economic and Business, 3(1), 105-127.
Renelt, D. (1991), Economic Growth, A Review of the Theoretical and Empirical Literature, Country Economics Department WPS678. Washington, DC: World Bank.
Romer, D. (1996), Advanced Macroeconomics. United States of America: The McGraw- Hill Companies.
Sangder, M. (2009), The Investment Development Path and Small Developed Economies: The Case of Finland, Norwegian School of Economics and Business Administration.
Serven, L., Solimano, A. (1992), Private ınvestment and macroeconomic adjustment: Asurvy. Word Bank Research Observer, 7(1), 95-114.
Solow, R.M. (1956), A contribution to the theory of economic growth. Quarterly Journal of Economics, 70(1), 65-94.
Tawiri, N. (2010), Domestic Investment as Drive of Economic Growth in Libya, International Conference on Applied Economics. p759-769.
Verspagen, B. (2000), Growth and Structural Change: Trends, Patterns and Policy Options, Paper Prepared for the Conference on Wachstums – Und Innovationspolitik in Deutschland und Europa. Probleme, Reformoptionen und StrategienzuBeginn Des 21, Jahrhunderts", Potsdam, 14 April 2000, First Draft, April 2000.
Yasin, K. (2013), The ımpact of foreign direct investment on Pakistan economic growth, interdisciplinary. Journal of Cotemporary Research in Business, 4(11), 287-296.