EFFECT OF FOREIGN DIRECT INVESTMENT INFLOWS ON GROWTH OF THE MANUFACTURING SECTOR IN KENYA

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D61/10422/2018

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION , SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER, 2020

DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed: Date: November 28, 2020

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This research project has been submitted for examination with my approval as the University Supervisor.

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ACKNOWLEDGEMENTS

To God, who made all this possible. All glory unto him.

I would like to thank Dr. Herick Ondigo, first and foremost, for agreeing to be my supervisor. I am grateful for his systematic guidance constructive criticism, open door policy and above all for his time and effort as he supervised me throughout the project process.

I would like to acknowledge some of my classmates who encouraged me to finish what we started together. Thank you all.

DEDICATION

This project paper is dedicated to family, who have always encouraged and supported me throughout my life. They have been, and still are, the pillar of strength in my life. I thank you.

To my friends, finishing this project would have been impossible if it were not for your constant impetus in concluding this project. Also, for your wonderful support and great input, you are much appreciated.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
EAC	East Africa Community
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
LDC	Less Developed Countries
MDG	Millenium Development Goals
OLI	Ownership, Location and Internalization
SPSS	Statistical Package for Social Sciences
UNCTAD	United Nations Conference on Trade and Development
VIF	Variance Inflation Factors
WIR	World Investment Report

ABSTRACT

The roled performed by FDI has been appreciated by many governments and they are coming up with means of attracting it. Foreign direct investment inflows movements into a country are said to have a positive and significant influence on economic progress of a country. Countries have to find new methods of attracting FDI stock because investors have different motivations all over. However, it is possible that FDI inflows influences overall growth but not necessary the growth of different sectors and therefore the need to investigate the relationship between FDI inflows and sectoral growth. This research attempted to find out the effect that FDI inflows have on manufacturing sector growth in Kenya. The independent variables were direct foreign investments, the rates of interest, public debt and balance of payments. Growth of the manufacturing sector was the response variable that this study aimed on explaining. The researcher gathered quarterly data of 10 years (January 2010 to December 2019). An explanatory research design was adopted whereas in analyzing their relationship amongst the variable multiple linear regression model was applied. Statistical packages version 23 was used to analyze the data. The findings of the study generated an R-square value of 0.595 that implies that 59.5 percent of that variation in the Kenyan manufacturing sector growth could be attributed to the independent variables selected in the study whereas 40.5 percent was attributed to factors not incorporated in the current study. The study showed that the independent variables had a strong association with growth of the manufacturing industry as shown by (R=0.771). ANOVA outcomes exhibited that the F statistic was significant at 5% level with a p=0.000. This implies that the model was appropriate in explaining the growth of the manufacturing industry. Further, the results showed that only public debt was a significant determinant of growth in the manufacturing sector. Although FDI inflows has a positive influence on growth of the manufacturing sector, the influence was not statistically significant. Interest rate and balance of payment exhibited negative but not statistically significant influence on growth of the manufacturing sector. The study recommends that measures are needed to control the prevailing levels of public debt as they significantly influence growth of the manufacturing sector.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Foreign Direct Investments (FDI) in addition to providing countries with the required resources for local investment also helps in the reaction of employment, helps in managerial expertise transference and technology all that lead to economic development (Mishkin & Eakins, 2009). The role performed by FDI has been appreciated by many governments and they have identified different means of attracting it (Adam & Tweneboah, 2009). Several Less Developed Countries (LDCs) especially in Africa, South America and part of Asia have given preference to the potential of FDI to spur economic growth and development of their economies. Evidence shows that FDI provides additional external resources to many countries which in turn promotes growth (World Bank, 2015).

The research was based on three theories that comprise of the product life cycle,internalization hypothesis and eclectic paradigm that endavours on expounding on the various FDI determinants of a particular country. Internationalization theory by Casson and Buckley (1976) asserts that licensing is key challenge as an entry strategy in the foreign markets since it fails to take advantages of all the available resources in the foreign country. Eclectic paradigm by Dunning (1993) disagreed that location-specific advantage is substantial in illuminating both the justification for as well as trend of FDI. Product life cycle theory expound on the various stages a new product passes through after which it proceeds to enter the international market (Charles, 2008).

Since the 1960s Kenya has had a very good history with foreign manufacturing firms. Kenya has continued to attract many investors from the globe who aims on investing in the larger East and Central Africa region. Inspite of this, there are some multinational

corporation that have been exiting the country under circumstances that are not clear which have had an adverse effect on the country FDI inflows. Sameer Africa left the market in September 2016, blaming the cheap and subsidized imports, in 2014, Eveready East Africa closed operations at the Nakuru manufacturing plant and opted for the importation of batteries from an affiliate in Egypt as a result of the increased competition faced from cheap illegal imports, a fortnight later, Cadbury quit the Kenyan market. Other companies that switched from Kenya for alternate markets are Procter and Gamble, Bridgestone, Unilever, Johnson and Johnson, Reckitt Benckiser and Colgate Palmolive (KAM, 2018). It is therefore imperative to investigate whether these happenings have had a significant influence on the growth of Kenya's manufacturing sector.

1.1.1 Foreign Direct Investment

As indicated by Hill (2005), FDI is an investment made in a corporation by an interested party from another nation for which the company is controlled by a foreign investor. A Longterm relationship is established by this transaction amongst the domesticinvestor and the host country (Olson, 2008). According to Ismaila and Imoughele (2010), FDI is a representation of a long-term commitment to the host country. The reason why it is preferable is that this type of investments holds no obligation to the host country. UNCTAD (2002) defines three forms of FDI: reinvested earnings, equity and capital consisting of intercompany loans. Employment opportunities are created by FDIs since when businesses set up in the host country, transfer of skills to the locals of the country is enabled through recruitment and training. Apart from new skills, the host country also benefits from technological advancements.

Kariguh (2014) mentioned that the crucial sources of FDI in many economies is capital flows since connects capital, managerial skills, technology, and human capital formation. It also enables the creation of an environment in which business competition thrives. Voorpijl (2011), however noted that consequences exist in increasing the inflow of FDI such as exploitation of the local communities by the multinationals more freely. Another issue arising from this is that private investment is promoted by international investors at the expense of public investments hence leaving little to the hosting companies in case the donors decide to leave.

Generally, FDI measurement is based on FDI stock which is conveyed as a percentage of a country's GDP. Normally the FDI results are reported at the year end and they consists of the FDI shares which comprise of equity investsment by residence and the credit to foreign countries and inward FDI shares that is equity investment by foreigner and inflow to the host countries. The main limitation of this technique is the lack of the needed technology and systems by the developing countries so as to enable efficient collection of the data FDI flows is also a measure of FDI along with foreign FDIs, but their unpredictable nature renders FDI a better measure, given that FDI stocks include economic changes, including the inflation and exchange rate adjustment (Nunnenkamp, 2002).

1.1.2 Growth

According to Naceur and Goaied (2001) growth is a strategy used by firms to improve their revenues through sale of products or income derived from providing services. Lee (2009) states that growth is the increase in profitability achieved through minimization of costs. Hence the growth of a firm can be described as an increase in sales, the expansion of a firm by way of merging or acquiring other firms, increase in profits,

development of products and services, diversification and increased number of a firm's employees. In financial terms, growth may be refered as to the increment in the revenue and sales of a business. Gudda (2003) stated that business growth is the improvement of a substantial measure of the success of an enterprise. This can be accomplished by either boosting the core business or revenue of a firm through increased product sales or service income, increasing the profitability of the business through cost minimization.

Loderer (2009) states that there are various determiners of firm growth. The most common indicators of growth are assets, sales, employment, share of the market, profitability and physical produce. Sales is the most common indicator of the growth of a firm. The value of assets is dependent on the industry's capital strength. The share of the market due to the firm might be ambiguous because the variations might be irrelevant more so for small sized firms therefore comparing the market share for firms operating in different markets might not give a valued conclusion. It is also difficult to make a comparison of firms across different industries based on physical output due to the complexity of these differences and the nature of operations in the different sectors. Profit is the universal indicator of growth since it considers other elements other than the size of the firm.

There is no single measure of growth however, due to the changes that occur in financial statements for example the statement of financial position and the statement of comprehensive income, it is possible to determine the level of growth of a firm whether it is high or low. The most widely used macro measure of growth is per capita national income; an increment in per capita income serves as an indicator of an improvement in economic welfare. Physical resources are also major determinants of economic growth

because they highlight the concept of broad capital as seen by constant or increasing returns to scale (Lucas, 1993). It is common practice to measure growth in a sector of the economy in terms of increases in profits, increases in market share, improvements in value of the firm, contribution to GDP among others usually over a specified financial period (customarily one year) (UNCTAD, 2017).

1.1.3 Foreign Direct Investment and Growth

The primary construct surrounding the FDI liberalization policies of most developing nations and the efforts made by major donors to promote FDI for instance the World Bank and the IMF is the assumption that the inflow of FDI promotes the growth of the economy. Because FDI is composed of technology, capital stocks and know-how, it is expected that the impact that it would have on the economy will be profound (De Mello, 1997; Dunning, 1992). The theory of economics presupposes that FDI would lead to the creation of multiplier effects via horizontal and vertical spillover, it would lead to the transference of technology and know-how to firms in the domestic markets together with development of human capital. Empirical evidence points to the fact that the intensity with which horizontal (intra-industry) spillover effects have occurred is minimal however evidence has shown that vertical integration (inter-industry) is in existence and has shown its importance in sectors such as manufacturing and agriculture (Liesbeth et al., 2008).

FDI has several beneficial effects that might be evidenced through a positive effects of the economy. This translates into economic growth. Several other benefits include transference of superior technology to the market which assist developing countries, increased knowhow and the development of capital markets indirectly. The research studies done in this area show that the rationale behind the increased long term

relationship is inclusive of the underlying assumption which suggests that due to FDI inflows there is creation of spillover effects to the local stock market which hence inspires regulators to institute regulations that are friendly to the market in their respective nations which will promote business activities (Rogoff, 2005).

Empirical studies such as Amondi (2016), Khun (2018) and Dinh and Nguyen (2019) have revealed contradictory evidence on positive productivity externalities in the host country brought about by foreign multinationals. A proposal has been made to find a mechanism that will place emphasis on the role the local financial markets play in creating an environment that is conducive for FDI in order to support growth through backward linkages, providing clarification to this empirical ambiguity. In small economies, the production of final goods and services has been carried out by local and foreign firms which are continuously in competition to capture the best skilled and unskilled labor, as well as intermediate products. For a firm in the intermediate and goods sector to be operational, entrepreneurs must have the capability to produce various intermediate goods, a process requiring a lot of capital investment. As the local financial markets get more developed, the simpler it is for entrepreneurs with financial constraints to commence their business operations (Alfaro, Laura & Chanda, 2010).

1.1.4 Manufacturing Sector in Kenya

Despite Kenya's manufacturing industries being small, they have been ranked as the most advanced in East Africa. A significant growth has occurred in Kenya's manufacturing sector since the late 1990s to the present. Kenya's manufacturing industries are wide and diverse, and the most common ones include: Small-scale consumer goods (furniture, plastic, textiles, batteries, cigarettes, soap, flour and clothing), horticulture, agricultural products, aluminum, oil refining, steel, lead,

commercial ship repair and cement industries. The manufacturing sector's contribution to economic growth and competitiveness in Kenya cannot be underestimated. The manufacturing sector has been ranked as the third leading contributor to Gross Domestic Product (GDP) in Kenya (KAM, 2018).

The expectations of Kenya's manufacturing sector as stated in Vision 2030 development plan, is to have a vigorous, diversified and aggressive manufacturing sector that can support the socio-economic development agenda of the country. This can only be attained through employment creation, attraction of Foreign Direct Investment (FDI), wealth generation and providing the necessary motive towards the achievement of Millennium Development Goals (MDGs). The manufacturing sector's contribution to the GDP for the country has stagnated at around 10% and set to rise at a rate of 10% per year as per the Medium-Term Plan of Kenya Vision 2030 (KAM, 2018).

Several multinational manufacturing firms are operational in Kenya and they include Nestlé Foods, Coca-Cola, British American Tobacco, General Motors East Africa, Unilever Kenya among others. FDI is manifested in our daily lives in the goods and services we consume. Not only does FDI provide goods and services, it also creates employment opportunities, and technical knowledge since employees are trained to maintain the standards of the multinational's investment across the entire world. These multinationals are a major foreign exchange earner to the country. In total, Kenya has more than 45 multinationals in the manufacturing sector with Britain, USA, Germany, Netherlands, Switzerland, and China being the key sources of FDI (UNCTAD, 2017).

1.2 Research Problem

Apart from offering nations with critical resources for local investment, FDI in addition leads to job creation, aids transferring management expertise and technology that ultimately leads to economic development (Mishkin & Eakins, 2009). The role perfromaed by FDI has been appreciated by many governments and they have identified different means of attracting it (Adam & Tweneboah, 2009). FDI inflows movements into a country are said to have a positive and significant influence and economic progress of a country. Countries have to find new methods of attracting FDI stock because investors have different motivations all over. However, it is possible that FDI inflows influences overall growth but not necessary the growth of different sectors and therefore the need of investigating the connection amongst FDI inflows and sectoral growth.

FDI inflow to Kenya rose by 27 percent, to stand at $1.63 billion in the year 2018. The FDI inflows went to varied economic sectors i.e. manufacturing, chemicals, hospitality, etc. Increased FDI inflows to Kenya can be attributed to the fact that Kenya has in recent times made efforts to encourage both private and foreign investment in the country. In 2019, Kenya jumped to position 61 from 136 in 2015, scoring 70.3 out of 100 points compared to 55 points in the latter year. Kenya has also been promoting its EPZs as lucrative areas for processing-oriented foreign capital. In addition, Under the Investment Promotion Act (2004), Ken Invest will issue any non-citizen who invests a minimum of $100,000 in an activity that is both lawful and benefits Kenya, with an investment certificate. Such favorable policy conditions for establishment of FDI continue to make Kenya a favored FDI destination in East Africa; investment in processing and tertiary industries can be reasonably expected to continue to be focused

in a few countries in Africa, more so the developing processing regions in East Africa (WIR, 2019).

International studies in this area have entirely focused on how FDI influences economic growth and other indicators. Dinh, Vo and Nguyen (2019) study FDI effect on growth, both in shorrun and in the longrun within developing nations. The study results show that FDI in the long term helps to stimulate the growth of the economy however it effects are negative in the short run for the countries in the study. Khun (2018) sought to determine how FDI impacts the growth of Cambodia's economy using a time series data from 2006 to 2016. The result revealed a positive effect of FDI on Cambodia's growth. Gunby, Jin and Reed (2017) study the role of FDI in the economic growth of China. Their main finding is that FDI has a small effect on the economic growth of China than the normal expectation that would result from a naïve aggregation of existing estimates.

Locally, existing studies have mainly concentrated on the influence of FDI on growth without considering the sectoral growth which is the focus of the current study while others have focused on determinants of FDI. Gitau (2019) sought to establish the macro economic factors influencing FDI inflows in East Africa Community (EAC). The study outcomes exhibit that interest rate, exchange rate and economic growth are statistically significant factors affecting FDI inflows while balance of payments does not substantially determine FDI inflows in EAC member countries Khadenje (2015) and Kimotho (2015) centered on the influence of FDI on economic growth in Kenya but their studies did not take into account manufacturing sector growth which is the gap the current study seeks to leverage on.

Although there are empirical studies done in both the local and international scene on FDI, there exists contextual and conceptual gaps. Contextually, most of the local studies have focused on the influence of FDI inflows on economic growth of the country as a whole without dealing with sectoral growth. The sectoral growth is important as the FDI may be having significant influence in some sectors and not all. Conceptually, most studies have centered on determinants of FDI inflows in a bid to attract more FDI. This study sought to bridge these gaps by investigating the effect that FDI inflows has had on growth of the manufacturing sector in Kenya by answering the research question; what is the effect of FDI inflows on growth of the manufacturing sector in Kenya?

1.3 Research Objective

To determine how FDI inflows impacts the growth of the manufacturing sector in Kenya.

1.4 Value of the Study

The study results will be used as a reference point by academicians, researchers and students that wish to conduct studies in this or related areas. More so, scholars and researchers will benefit as this study will help them identify other areas of future studies through listing associated topics which needs further studies and gaps that need to be bridged.

To government and organizations such as the Kenya Association of Manufacturers, in the formulation and implementation of policies and regulations that governs operations in the manufacturing sector. Good policies in terms of FDI inflows and other variables that will be found to have an influence on growth of the manufacturing sector which shall contribute significantly to not only advancing financial development but also to the development of the whole economy.

The study's findings will also be beneficial to investors in the manufacturing sector as they will get a deeper understanding on the role played by foreign direct investments on growth and take the necessary actions to enhance their sustainability. Furthermore, the research shall make contributions to theory in terms of FDI inflows and growth.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section contains a review of the theories forming the study's foundation. Additionally, previous studies by researchers in this area and those related to it will be discussed. Other determinants of economic indicators will be given in the sections of this chapter and a conceptual framework exhibiting how the study variables interact and a summary of the literature will conclude the chapter.

2.2 Theoretical Framework

Theoretical framework provides a foundation for understanding the theoretically expected relationship among the study variables and in this case FDI inflows and growth. The theories selected for this research were internalization theory, eclectic paradigm theory and the product life cycle theory.

2.2.1 Internalization Theory

Casson and Buckley (1976) are the proponents of this theory. Additional contributions to the theory were made by Hennart (1982) and Casson (1983). The theory gives an explanation for the growth of multinational entities together with their motives. It explains that these entities structure their internal activities so that they can gain advantages that would improve their competitive edge. Hymer (1976) mentioned that, the occurrence of FDI will only take place when the specific advantages related to a firm are exploited in a manner that will guarantee that the advantages will outweigh the cost of putting up similar investments abroad. His statement implied that in order for FDI to take place, there should be an existence of imperfect markets and it is a matter of strategy as opposed to a capital market financial decision.

Casson and Buckley (1976) make an argument that FDI is lucrative upon the fulfilment of three requirements are made that is Ownership, Location and Internalization (OLI). The entity must have an edge in ownership terms in comparison to the ownership in the domestic entity. Such an advantage may be a specific organizational edge or technological advancement. The relevance of this theory to the current study is that it appreciates that in the host countries there are other factors that detrmies if there will be FDI inflows or not. The aim of the study was investigating whether FDI inflows have an influence on growth of the manufacturing sector.

2.2.2 Eclectic Paradigm Theory

Dunning (1993) was the proponent of this theory that is a combination of three distinct but related theories. The related theories include Ownership, Location and Internalization (OLI) that are utilized to provide a description of how the factors therein cause variations in FDI. Advantages related to ownership are those provided by intangible assets. A consideration of this fact is that the assets have to be exclusively possessed by the entity and additionally be assignable to other entities at prices that would lower the costs to the company or would increase the rate of returns to the company. In his propositions, Dunning (2005) mentions that holding other elements constant, an entity with greater competitive advantages, compared to its competitors, has a greater opportunity to raise its overall production expounding its global presence.

Dunning (2005) mentions that a corporation has higher chances of obtaining superior profits if, it produces in foreign countries contrary to extending its ownership rights to other nations. This theory hence supports the establishment of production markets by an entity by exploiting its competitive edge and selecting suitable locations. By so doing, not only are the entities engaging in FDI though in addition gaining much more

in comparison to competitors. The study will examine whether the level of FDI inflows in a country has an influence on growth of the manufacturing sector.

2.2.3 Product Life Cycle Theory

Vernon (1966), mentioned that this is a four-phased cycle and the phases include innovation, growth, maturity and decline. A firm has to have a revenue generating a notion about a good or service. The notion then enters a growing stage right through to maturity. From there it starts to decline, and this is brought about by competition faced from the external market as well as the lack of innovative prospects by the business. Organization engaged in FDI bring production equipment to foreign countries so that they can be in close proximity to their target market and ensure that they are able to capture and sustain a good market share (Dunning, 1993).

Vernon's FDI evaluation is strictly based on a good. A summation of the process indicates that the invention of a good occurs first in its domestic market. The home nation in which foreigners reside is advantageous in terms of technology and innovative capacity. From Production the innovator then starts at the local market and is at a subsequent stage in the product lifecycle sold to international markets that do not have the innovative capacity nor the technology to produce the similar products. As a result of this, the product undergoes a standardization process and hence reaches its maturity. It is at this developmental stage that labor is a crucial element in the production process. As a result, there arises a need for the product innovators to acquire value from local resources and citizens of the foreign nation, hence FDI is a crucial phase in the development of a product (Chen, 1983). The relevance of this theory to the study is that it appeciates a firm's lifecycle stage as the key FDI inflow determinant.

2.3 Determinants of Growth

The factors that determine growth can either be internal or external to the firms and determine the output level. Internal factors differ from one firm to another and determine growth differently. Such factors occur due to the decisions made by management in consultation with the board. External elements of growth are; FDI, rates of interest, volatility of the rates of exchange, inflation, economic growth, money supply and others. Internally, these factors are governance, size of firm, financial leverage, liquidity, efficiency of management, capital, market power and etcetera (Athanasoglou et al., 2005).

2.3.1 Foreign Direct Investments

The theory of Economics states that FDI creates growth multiplier effects via both the horizontal and vertical spillover effects; that includes technology and know-how transference to local firms, human capital formation, etc. Empirical studies cast doubts on the magnitude of horizontal spillover effects but gives a conviction on the existence and how crucial vertical effects, in both the manufacturing and the agricultural sector are (Liesbeth et al., 2008).

Consensus from literature shows that FDI spurs growth through the increase in productivity and gains from efficiency by firms. The empirical evidence however varied but in developed countries, it supports the notion that domestic firms' productivity has a positive relation to the existence of foreign firms (Globeram, 1979). Results from developing nations are varied with some showing positive spillovers (Blomstrom, 1986) and others showing little or no evidence of positive spillovers in the short term from foreign firms. Reasons given for the varied results are that the projected forward and backward links may not be existent (Aitken et al., 1997).

2.3.2 Balance of Payments

The balance of payment can be defined as trade balance between two nations. It is a reflection of all the payments and receipts for dividends, products and interests between the two nations. A country has a negative balance of payment in the current account when its imports are greater than what it is exporting. This is also referred to as a deficit and it shows that a nation needs more foreign currency than it acquires from the products that it's exporting. The balance of trade and earnings on foreign investment of a country are reflected by its current account which involves transactions such as its imports, exports and debt, among others. More expenditure of its currency by a country on imports than on exports causes a deficit in the current account. Soaring current account deficits are often an antecedent to difficulties in balance of payments (Higgins & Klitgaard, 1998).

Theoretically, economies consuming more than they are generating through running large deficits, are unable to have enough funds for investing in the economy and thus foreign investors shy away from such a country. However, an increase in exports relative to imports may imply increase income for the locals which can end up attracting foreign direct investments (Higgins & Klitgaard, 1998).

2.3.3 Interest Rates

Investments made in developing countries are mainly done by the government and the crucial factor affecting them is the real rate of interest. Financial growth may be impacted upon by rates of interest which in turn lower the growth rate. A high rate of interest in the financial market discourages many people from taking up loans for investments and other development activities will be stalled (Quinn & Toyoda, 2008).

However, no logical conclusion has been derived from studies on the association between interest rate, finance development and growth in most developing nations (Obstfeld, 2009; Kose et al., 2009; Quinn & Toyoda, 2008). These diverse findings have mainly been attributed to differences in the type of interest rate measure, country coverage, the sample period, and methodologies employed.

2.3.4 Public Debt

Reference to economic theory points out that when a country has a government debt it a good for the growth of the economy which in effect affects the various sectors that make up the economy. Though this benefit of government debt extend only to specific limit above which lead to negative effects on the economy. Krugman (1988) in the theory of debt overhang articulately explained the way in which accumulating high public debts results to low FDI inflows which makes the country economic growth to be low.

Krugman (1988) states that debt overhang is a condition of a counting having a very huge debt. As indicated in his theory when a country has a huge public debt it discourages foreign investors since they will be subjected to higher taxes that will be used in financing the public debt. Conversly, the theory suggest that when thr public debt is reduced it will lead to increment of FDI that will hence reduce the risk of having debt default.

2.4 Empirical Review

Although there are many local and international empirical studies on foreign direct investments in an economy, most of the studies have concentrated on the influence of FDI inflows on the economic growth or other determinants of FDI inflows without focusing on how FDI inflows influence sectoral growth. The studies that address this

relationship have been carried out in varying contexts and their results cannot be generalized in the local context.

2.4.1 Global Studies

Dinh et al. (2019) investigate and provide more relevant quantitative evidence on how FDI impacts the growth of the economy not only in the short run but also in the long run for developing nations during the period 2000-2014 focusing on the lower middle income group. To confirm the findings, different econometric models were applied and included fully modified ordinary least square, vector error correction model, panel-based unit root test and Johansen cointegration test. From the results of the study, FDI was found to be substantial in stimulating the economy in the long term but showed a negative effect in the short term for the nations studied. Other macroeconomic elements were also crucial in giving an explanation for the growth of the economy in the countries studied. The supply of money showed a positive effect on the economic growth in the short term whereas the total credit attributable to the private sector had a negative impact. Additionally, the growth of the economy in the long run is attributed to the supply of money, human capital, total local investment, and local credit for the private sector.

Khun (2018) conducted a study to investigate how FDI impacts the growth of the economy of Cambodia using a time series data from 2006 to 2016. A mix of correlation matrices and multiple regression analysis models were used for the analysis of the collected data. Findings showed that FDI positively impacted the growth of the economy of Cambodia. The recommendations from the study implored the government to institute reforms in the local market in a bid to attract more FDI in the country.

Gunby et al. (2017) explored the role FDI plays in China's economy. The meta-analysis was applied to the corresponding empirical literature to seek answers. Their primary finding was that FDI's impact on the growth of the Chinese economy was less significant than the expectation resulting because of guileless combination of the existing estimations. Prejudice of publications and excessive estimations founded on studies that are less preferred and sample features that have only inflated the observations made. Upon accounting for the effects, Once accounted for these effects are accounted for, the forecasted effect of FDI on the economic growth of china is condensed to a statistical insignificance. This shows that the likely causes of the Chinese "economic miracles" lie in other areas.

Alvarado et al. (2017) examine how FDI impacts the economic growth of 19 nations in the Latin American region. Using panel data econometrics, strong empirical evidence suggesting a statistical insignificance of FDI on the economic growth of the countries in an aggregate form was found. The results found varied depending on the incorporation of the different development levels achieved by the nations studied. FDI was found to positively and significantly have an influence on products in high-income countries, while in upper-middle-income countries it was found to be non-constant and insignificant. Finally, among the lower-middle-income countries it was found to be negative and statistically substantial. The conclusion of the study was that FDI was not adequate to improve the growth of the economy of Latin America countries, except for the high-income countries in the region.

Pegkas (2015) found a positive and substantial effect of FDI on economic growth in accordance with the theory of economics. The result was that FDI has a crucial role in the economic growth of the Eurozone. FDI has been stated to be a crucial factor in the

economic growth of Malaysia and drives management knowledge, technology and capital investment. The study on the association amongst FDI and economic growth in Malaysia from 1970 through to 2005 using time series data showed a substantial relation amongst FDI inflows and economic growth.

2.4.2 Local Studies

Gitau (2019) sought to determine how macro-economic variables influence FDI inflows in EAC member countries. A five-year period (2014-2018) was chosen for the study and the quarterly data was from a secondary source. A descriptive design was suitable for the study and analysis was made using the multiple linear regression model. The results showed that individually, interest rate, exchange rate and economic growth are statistically significant factors affecting FDI inflows while balance of payments does not substantially determine FDI inflows in EAC member countries.

Kaibere (2018) sought to determine the influence of FDI on residential real estate prices in Kenya. In addition to foreign direct investment, the study used interest rates, inflation and GDP growth rates as control variables for the study. A descriptive research design was appropriate with the study period of ten years (2008-2017) and data analyzed using SPSS. FDI, GDP and inflation were established to be negatively related to housing prices while interest rate was established to have a positive impact on housing prices. Foreign direct investment was also the only variable that was established to have a significant impact on housing prices.

Amondi (2016) sought to evaluate the impact of FDI on Kenya's real estate sector performance. The descriptive research design was applied in which secondary data was gathered and anylzed with the aid of SPSS. The conclusion was that FDI, rates of interest and inflation affect the real estate performance in Kenya with FDI having the

highest effect, seconded by inflation and ultimately interest rates. In addition to this, FDI was found to be positively associated to the performance of the real estate sector whereas inflation and interest rates showed a negative effect on the performance of this sector. Furthermore, it was found that FDI, inflation and interest rates were not statistically significant individually.

Khadenje (2015) used secondary data to evaluate the impact of FDI on the growth of the Kenyan economy for the period 1995-2015, using multiple regression analysis and correlation. The research concluded that, FDI and economic growth in Kenya show a strong positive correlation. The relationship amongst FDI and the other variables e.g. interest rates and foreign exchange rates also showed a direct proportional relationship. Khadenje's study differs from this study in that it did not consider the effect of FDI on the manufacturing sector growth in Kenya.

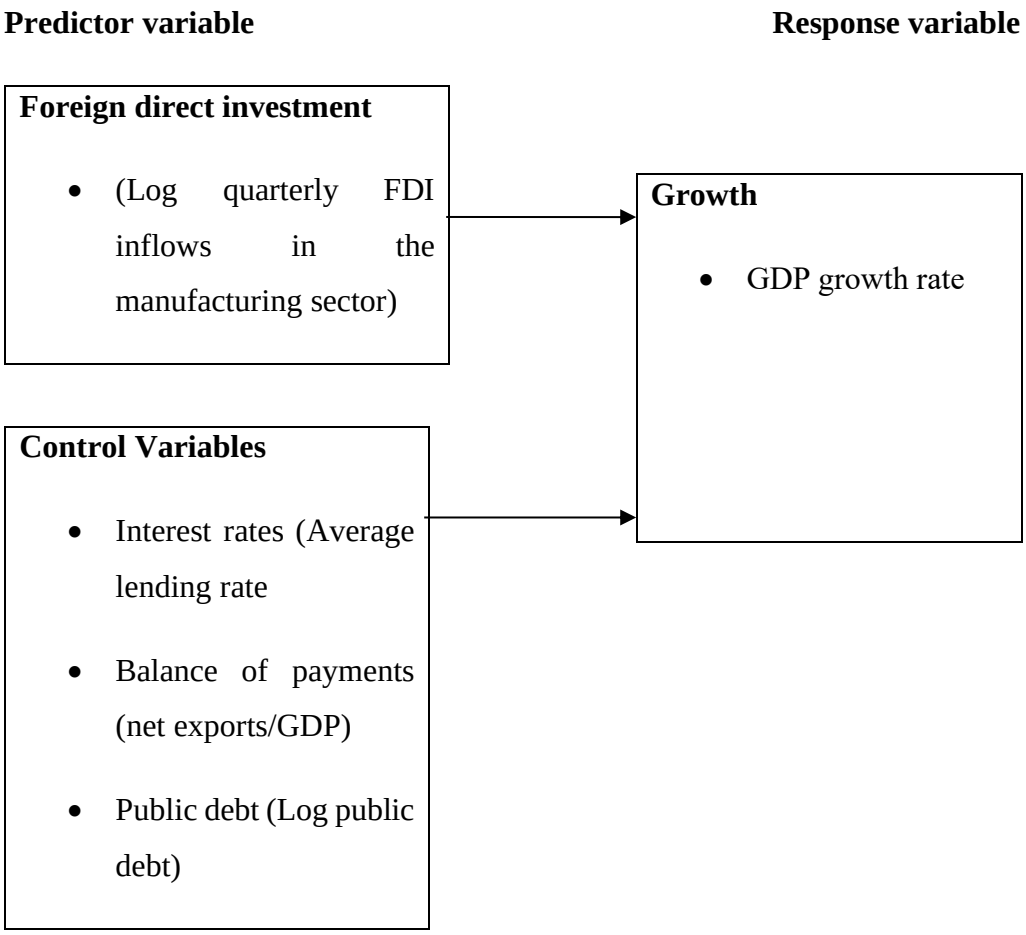
Kimotho (2015) embraced a descriptive survey in studying the effect of FDI on economic growth in Kenya between the years 2005 and 2014. The study had three findings, firstly, that capital injections like FDI enable nations to accumulate capital faster, that is, it allows them to import more than they export, thereby enabling more investments than savings, and improving labor productivity and wages. Secondly, FDI has the capacity to create employment for some educated folk in the rural and urban informal sectors. Thirdly, FDI is able to transfer technology and expertise, therefore spurring the productivity of local firms. The study concludes that FDI and economic growth have a positive correlation.

2.5 Conceptual Framework

The expected association between the study variables is best explained using a conceptual model. The conceptual model developed below shows how FDI inflows and

growth of the manufacturing sector in Kenya are related. The independent variable is FDI inflows given by the natural log of the FDI inflows into the manufacturing sector on a quarterly basis. The control variables are interest rates given by quarterly average bank lending rate, balance of payment given by natural logarithm of exports minus imports and public debt given by the natural logarithm of the total value of public debt on a quarterly basis. The dependent variable that the research seeks to explain is growth of the manufacturing sector as characterized by the manufacturing sector sectoral GDP growth rate as on a quarterly basis.

Figure 2.1: The Conceptual Model



Source: Researcher (2020)

2.6 Summary of the Literature Review

This section looked on to the theories and the empirical studies that this study was founded on. The theoretical framework was formed of three theories which consisted of; eclectic paradigm, internalization and product life cycle. In addition,factors which are thought to determine economic growth were reviewed. Under the empirical review, studies on area of study or associated areas were reviewed. This study was motivated by the lack of consensus in there various studies revied on FDI inflows and growth.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section of the study consists of the structure of the research, population, the data

collection procedures, test of assumptions under diagnostic tests and methodologies used in analyzing the collected data.

3.2 Research Design

The researcher embraced an explanatory research design to assess the effect of FDI inflows on growth of the manufacturing sector in Kenya. Explanatory design will be used since the researcher seeks to determine the state of affairs as they are (Khan, 2008). The appropriateness of this design lies in the fact that the researcher is accustomed to the phenomenon being investigated but seeks to know more with respect to the nature of associations amongst the study variables. Additionally, an explanatory research aims seeks to represent accurately the variables under consideration which helps to respond to the research query (Cooper & Schindler, 2008).

3.3 Data Collection

Secondary sources were the main source of data for this study. The secondary data for the study was retrieved from KNBS publications and the CBK website. The quantitative data collected included average bank lending rate and quarterly public debt which were collected from CBK website. Data on FDI inflows to the manufacturing sector, GDP in the sector, total GDP, imports and exports were collected from KNBS on a quarterly basis. The secondary data was obtained for 10 years from 2010 to 2019 for every quarter.

3.4 Diagnostic Tests

To determine the viability of the study model, the researcher carried out several diagnostic tests, which included normality test, stationarity test, test for multicollinearity, test for homogeneity of variances and the autocorrelation test. Normality tests the presumption that the residual of the response variable has a normal

distribution around the mean. The test for normality was done by the Shapiro-wilk test or Kolmogorov-Smirnov test. In the case where one of the variables is not normally distributed it was transformed and standardized using the logarithmic transformation method. Stationarity test was used to assess whether statistical properties for instance mean, variance and autocorrelation structure vary with time. Stationarity was obtained using augmented Dickey Fuller test. In case, the data fails the assumption of stationarity, the study used robust standard errors in the model (Khan, 2008).

Autocorrelation measures how similar a certain time series is in comparison to a lagged value of the same time series in between successive intervals of time. This was measured by the Durbin-Watson statistic and incase the assumption is violated the study employed robust standard errors in the model. Multicollinearity occurs when an exact or near exact relation that is linear is observed between two or several predictor variables. Variance Inflation Factors (VIF) and the levels of tolerance were used. Any multicollinear variable was dropped from the study and a new measure selected and substituted with the variable which exhibits co-linearity. Heteroskedasticity tests if the variance of the errors from a regression is reliant on the independent variables. The study assessed for heteroskedasticity using the Levene test and incase, the data failed the assumption of homogeneity of variances the study used robust standard errors in the model (Burns & Burns, 2008).

3.5 Data Analysis

Following data collection from the various sources, the data was arranged in way that aided achieving the research objectives. To enable the data analysis, the researcher used a software namely the SPSS version 23. Inferential as well as descriptive statistics were conducted. For descriptive statistics, the measure of central tendency, dispersion and

skewness were computed for all the variables individually and on overall. For inferential statistics, the researcher ran both correlation and regression analysis. Correlation determined the extent of the relation between the variables in the study and regression established the cause and effect amongst the variables. A multivariate regression analysis was applied in determining the association between the response variable (growth) and predictor variables: FDI inflows, interest rates, balance of payments and public debt.

3.5.1 Analytical Model

To determine the relative significance of every explanatory variable with respect to growth of the manufacturing sector in Kenya, a multivariate regression model was applied.

The study employed the following multivariate regression model;

$$Y = ß_0 + ß_1X_1 + ß_2X_2 + ß_3X_3 + ß_4X_4 + ε$$

Where:

Y was growth of the manufacturing sector as measured by growth rate in sector GDP on a quarterly basis.

$ß_0$ was the regression constant (parameter of the function)

$ß_1$, $ß_2$, $ß_3$ and $ß_4$ are the coefficients of independent variables

X_1 was FDI inflows given by natural logarithm of FDI inflows into the manufacturing sector on a quarterly basis

X_2 was interest rates given by the average bank lending rate on a quarterly basis

X_3 was balance of payments given by the ratio of net exports to GDP on a quarterly basis

X_4 was public debt given by the natural log of public debt on a quarterly basis

ε was the error term

3.5.2 Tests of Significance

Parametric tests were done by the researcher in determining the statistical significance of the individual variables as well as the overall model. The F-test was adopted in determining how significant the overall model was and it was done by using the ANOVA. A t-test was undertaken to measure the statistical significance of individual parameters.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

In this chapter, both the finding and results of the study are presented. The objective was to establish the impact of FDI flows on growth of manufacturing industry in Kenya.

The sections covered include descriptive statistics, diagnostic tests, correlation analysis, regression and discussion of findings.

4.2 Descriptive Analysis

In descriptive statistics, the minimum, maximum, mean as well as the standard deviation values of each of the study variables is shown. In the current study, the below table exhibit the statistic that were applied. SPSS software was applied in undertaking the analysis of the variables and produced the outcomes shown in Table 4.1 below.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Growth	40	.0520	.1228	.101725	.0177192
FDI inflows	40	9.1666	10.9681	10.093205	.4649439
Interest rates	40	5.8333	18.0000	9.693665	2.8334484
Balance of payments	40	-0.5435	.00004	-.05543	.221
Public debt	40	13.9455	15.6131	14.787008	.5212206
Valid N (listwise)	40				

Source: Research Findings (2020)

4.3 Diagnostic Tests

Diagnostic tests were undertaken before the regression model was run. In this case, the tests conducted were Multicollinearity test, normality test, autocorrelation and Heteroscedasticity tests.

4.3.1 Multicollinearity Test

Multicollinearity can be defined as statistical condition where there is high correlation amongst independent variables when conducting a multiple regression model. This situation is unwanted. A group of variables are said to be perfectly multicollinear where the variables have a 100% linear relationship.

Table 4.2: Multicollinearity Test

	Collinearity Statistics

Variable	Tolerance	VIF
FDI Inflows	0.376	2.660
Interest rates	0.360	2.778
Balance of payments	0.392	2.551
Public debt	0.372	2.688

Source: Research Findings (2020)

In this study, VIF was applied in testing for multicollinearity whereby VIF value below 10 indicated nonexistence of multicollinearity. There must be no strong relationship amongst independent variables for multiple regression to be appropriate. As indicated by Table 4.2 above, the VIF values of the independent variables were below 10 which implied nonexistence of multicollinearity and therefore multiple regression models was appropriated for use.

4.3.2 Normality Test

To test for normality, the researcher used the Shapiro-Wilk test and Kolmogorov-Smirnov tests. The null and alternative hypotheses are as shown below.

H0: the secondary data was not normal.

H1: the secondary data is normal

A p-value exceeding 0.05, would lead to rejection of the null hypothesis and vice versa. Table 4.3 below summarizes the outcomes.

Table 4.3: Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Growth	Statistic	Df	Sig.	Statistic	Df	Sig.
FDI inflows	.180	40	.264	.894	40	.790
Interest rates	.176	40	.264	.892	40	.784
Balance of payments	.178	40	.264	.893	40	.787
Public debt	.181	40	.264	.896	40	.792

a. Lilliefors Significance Correction

Source: Research Findings (2020)

The data revealed a p- value exceeding 0.05 hence the researcher used only the alternative hypothesis and concluded that the data consumed in the research was evenly distributed. This data was used in conducting parametric tests and statistical analyses that included regression analysis, ANOVA and correlation analysis.

4.3.3 Autocorrelation Test

Correlation of error terms in varying time periods were checked by undertaking a serial correlation test. The Durbin Watson test for serial correlation was used to assess for autocorrelation in the linear panel which is a major challenge in panel analysis of data, and it has to be accounted so as to get right model specifications. Below are the results.

Table 4.4: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.771[a]	.595	.549	.0119054	1.540

a. Predictors: (Constant), Public debt, Balance of payments, Interest rates, FDI inflows
b. Dependent Variable: Growth

Source: Research Findings (2020)

The null hypothesis is that there is no first order serial /auto correlation. The Durbin Watson statistic of 1.540 is between 1.5 and 2.5 implying nonexistence of serial correlation.

4.3.4 Heteroskedasticity Test

The researcher checked for heteroskedasticity by use of Likelihood Ratio (LR) as exhibited in Table 4.5. This test used the alternative hypothesis that the error was homoscedastic. A chi-square value of 36.52 was produced by the likelihood-ratio test with a 0.0000 p-value. The chi-square esteem was significant at 1 percent level which implies that the data was homoskedastic.

Table 4.5: Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of Growth
chi2(1) = 36.52
Prob > chi2 = 0.0000

Source: Research Findings (2020)

4.4 Correlation Analysis

Pearson correlation was used in analyzing associations between growth of manufacturing sector and the variables for this research (foreign direct investments, public debt, balance of payments and interest rates). Findings show, existence of an insignificant and weak positive correlation (r = .240, p = .136) between FDI and manufacturing sector growth. Public debt has a negative and significant relation with growth of manufacturing sector as proved by (r = -.761, p = .000). Although interest rate and balance of payments were found to have a negative correlation with manufacturing sector growth, the correlation was insignificant as exhibited by the p value of 0.843 and 0.725 correspondingly that are more than the significance level of 0.05.

Table 4.6: Correlation Analysis

		Growth	FDI inflows	Interest rates	Balance of payments	Public debt
Growth	Pearson Correlation	1				
	Sig. (2-tailed)					
FDI inflows	Pearson Correlation	.240	1			
	Sig. (2-tailed)	.136				
Interest rates	Pearson Correlation	-.032	-.072	1		
	Sig. (2-tailed)	.843	.659			
Balance of payments	Pearson Correlation	-.057	-.265	.077	1	
	Sig. (2-tailed)	.725	.098	.635		
Public debt	Pearson Correlation	-.761**	-.181	.028	.009	1
	Sig. (2-tailed)	.000	.265	.863	.956	

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=40

Source: Research Findings (2020)

4.5 Regression Analysis

Regression analysis of growth of manufacturing sector was run against the independent variables; foreign direct investments, rates of interest, balance of payments and public debt. It was carried out at 5% level. Table 4.7 below shows the outcome.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.771[a]	.595	.549	.0119054	1.540

a. Predictors: (Constant), Public debt, Balance of payments, Interest rates, FDI inflows
b. Dependent Variable: Growth

Source: Research Findings (2020)

R squared shows changes in the response variable that can be explained by the independent variables. According to table 4.8, R square was 0.595 and it suggests that 59.5 percent in growth of the manufacturing sector is explained by changes in foreign direct investments, rates of interest, balance of payments and public debt. Other

variables not taken into account in this study explain 40.5% of variations in growth of the manufacturing sector in Kenya. Further, the finding discovered a strong relationship between predictor variables and growth of manufacturing firms as indicated by correlation coefficient (R) equivalent to 0.771.

Table 4.8: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.007	4	.002	12.847	.000[b]
	Residual	.005	35	.000		
	Total	.012	39			

a. Dependent Variable: Growth

b. Predictors: (Constant), Public debt, Balance of payments, Interest rates, FDI inflows

Source: Research Findings (2020)

From Anova, the p-value produced is 0.000 which is less than p=0.05. This shows that the model significantly explained the influence of foreign direct investments, public debt, balance of payments and interest rates on the growth of the manufacturing industry in Kenya.

The model coefficients were used to show the significance of individual variables. This was done using the p-values and the t statistic. This analysis is important as it helped the researcher understand which of the four selected independent variables (foreign direct investments, public debt, balance of payments and interest rates) significantly influences growth of the manufacturing sector in Kenya. The significance of the associate was indicated by the value of p shown in the column sig. As a rule of thumb, if the p value is below 0.05 at a confidence level of 95% then the measure is statistically significant. Table 4.9 below indicates the outcomes.

Table 4.9: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.510	.064		8.011	.000
	FDI inflows	.004	.004	.099	.867	.392
	Interest rates	-.000	.001	-.064	-.590	.559
	Balance of payments	-.003	.009	-.043	-.382	.705
	Public debt	-.025	.004	-.745	-6.797	.000

a. Dependent Variable: Growth

Source: Research Findings (2020)

From Table 4.9, it can be concluded that of the four selected predictor variables, only public debt had a significant determiner of manufacturing sector growth in Kenya as shown by a p value that was less than 0.05. The other independent variables (foreign direct investments, interest rates and balance of payments) were insignificant determinants of growth of the manufacturing sector in Kenya, shown by low t values and p > than 0.05.

The below regression equation was formulated:

$Y = 0.510 - 0.025X_1$

Where,

Y = Growth of the manufacturing sector

X_1= Public debt

The constant = 0.510 indicates that if the chosen independent variables (foreign direct investments, rates of interest, balance of payments and public debt) were rated zero, the growth of the manufacturing sector would be 0.510. A unit increase in public debt would translate in reduction in growth of the manufacturing sector by 0.025. The other selected determinants were found to be statistically insignificant.

4.6 Discussion of Research Findings

The objective of the current research was to find out influence of the predictor variables on manufacturing industry growth in Kenya. The independent variables were foreign direct investments, public debt, balance of payments and interest rates. The dependent variable was Growth of the manufacturing sector which the study aimed to investigate. It was measured by quarterly contribution of the manufacturing sector to GDP. Relations between independent and dependent variables were assessed using correlation and regression analysis

The Pearson model showed a weak and insignificant relationship amongst FDI inflows and growth of the manufacturing sector. The outcomes additionally showed that interest rates and balance of payments had a negative but insignificant correlation with the growth of manufacturing industry. Public debt was found to have a strong, negative and statistically significant correlation with manufacturing sector growth in Kenya.

The model summary revealed that the selected independent variables justifies 59.5% of changes in growth of the manufacturing sector in Kenya. The explanatory power of the selected predictor variables was discovered to be suitable at 95% confidence level since the F-value was 12.847 and the p value was 0.000 that is below the significance level at 5%. This implies that the overall model applied for this study was a suitable prediction model for explaining growth of manufacturing industry in Kenya.

This research is in contrast with Khadenje (2015) who used secondary data to evaluate to assess impact on economic growth, using multiple regression tools. The research concluded that, FDI and economic growth in Kenya show a strong relation. The relationship between the two also showed a direct proportional relationship. Khadenje's study differs from this study in that it did not consider the effect of FDI on the growth

of the manufacturing sector in Kenya.

This study was at tandem with Amondi (2016) who sought to assess the influence of FDI on real estate sector performance in Kenya. The descriptive research design was applied in which secondary data was applied and with the aid of SPSS it was analyzed. The conclusion was that FDI, rates of interest and inflation affect the real estate performance in Kenya with FDI with the highest effect, seconded by inflation and finally interest rates. In addition to this, FDI was found to be positively associated to the performance of the real estate sector whereas inflation and interest rates showed a negative effect on the performance of this sector. Furthermore, it was found that individually, interest rates, FDI and inflation were not statistically significant.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The main goal of the study was determining how FDI inflows influence growth of the manufacturing industry in Kenya. This chapter shows the results from the prior chapter, it gives a conclusion and details the limitations faced in undertaking the study. Moreover, it recommends policies that policy makers can use. Additionally, the chapter gives recommendations for future researchers.

5.2 Summary

The study assessed how FDI contributed to the development of the manufacturing industry in Kenya. Foreign direct investments, public debt, balance of payments and interest rates formed the independent variables. The study used cross-section design to analyze and collect data. Data was acquired from several sources which comprised of CBK, KNBS and UNCTAD WIR after which it was analyzed with the aid of SPSS software version 23. Data of over 10 year period was utilized.

The findings exhibited a positive and insignificant association amongst FDI inflows and growth of the manufacturing sector in Kenya. Further, the correlation results showed that interest rates and balance of payments have a weak, negative and statistically insignificant correlation with growth in the manufacturing industry. Public debt however exhibited a strong positive and statistically significant correlation with growth of the manufacturing sector in Kenya.

The R-square was 0.595, which implies that 59.5% of variation in growth of the manufacturing industry in Kenya could be attributed to the predictor variables selected whereas 40.5% of variations in of the manufacturing sector growth is attributed to

factors not incorporated in the study. The study showed that independent variables had a strong relationship with manufacturing sector growth (R=0.771). ANOVA highlight that F statistic is significant at 5% level with a p=0.000. This suggest that the model was suitable in explaining the influence of the selected independent variables on the growth of manufacturing sector in Kenya.

From the regression findings it was discovered that if all the predictor variables chosen (foreign direct investments, rates of interest, balance of payments and public debt)were rated 0, growth would be 0.510. Increasing a unit in public debt would translate in a reduction in growth of manufacturing sector by 0.025. The other selected determinants (foreign direct investments, rates of interest and balance of payments) were found to be statistically insignificant.

5.3 Conclusion

The findings of this study show that the growth in manufacturing industry in the country in Kenya is negatively influenced by public debt. It concludes that greater public debt translates to a reduction in the manufacturing sector growth to a large extent. It revealed existence of an insignificant positive influence of FDI on the manufacturing sector growth in Kenya. This means that the higher the FDI inflows, the higher the growth rate of the manufacturing sector but not to a significant extent. The study further concludes that although rates of interest and balance of payments have a negative effect on the sector growth, the effect is not statistically significant.

This study additionally concluded that the variables chosen for study; foreign direct investments, interest rates, balance of payments and rates of exchange affect growth of manufacturing industry as they explain 59.5% of variations in growth. For this reason, that 59.5% of the variation in the growth of manufacturing sector is explained by the

predictor variables it also suggests that other variables not incorporated in the study explain the other 40.5% of the changes in the growth of the industry. It is enough to arrive to the conclusion that the variables highlighted significantly influence the growth as indicated by a p value of less than 0.05 in anova summary.

This study was at tandem with Amondi (2016) who sought to assess the influence of FDI on real estate sector performance in Kenya. The descriptive research design was applied in which secondary data was applied and with the aid of SPSS it was analyzed. The conclusion was that FDI, rates of interest and inflation affect the real estate performance in Kenya with FDI with the highest effect, seconded by inflation and finally interest rates. In addition to this, FDI was found to be positively associated to the performance of the real estate sector whereas inflation and interest rates showed a negative effect on the performance of this sector. Furthermore, it was found that individually, interest rates, FDI and inflation were not statistically significant.

5.4 Recommendations for Policy and Practice

The study findings showed a negative and significant influence of public debt on growth of the manufacturing industry in the country. It suggests measures to be in implemented in ensuring that factors which influence the prevailing levels of public debt are well take care of to ensure that the manufacturing sector and the economy in general is not adversely affected by the prevailing level of public debt. If the country can be able to manage the prevailing level of public debt, this would lead to a rise in the manufacturing industry and this will ultimately translate to growth of the entire economy.

The findings discovered that FDI inflows had a positive but not significant influence on growth of manufacturing sector in Kenya. This implies that if FDI inflows were to increase, the manufacturing sector would growth, but the extent of growth might not be

statistically significant. The study recommends decision makers to come with measures aimed at boosting inflows in the country as this will translate in growth in manufacturing sector and perhaps other sectors in the economy.

The study found that balance of payments and interest rates have a negative effect on Kenya's manufacturing sector growth. The study recommends the need to increase exports as this will boost the balance of payments and thereby reduce the negative influence of current account deficit. The study recommends the need to control interest rates as they affect growth of the manufacturing industry.

5.5 Limitations of the Study

The period selected in this study was 10 years that is from 2014-2019. There is no proof that alike outcome will remain the same in a longer period. More so, the findings might not even hold for the period beyond 2019. An extended period will lead to the results being reliable since it will include cases of major economic changes like recessions and booms.

The quality of data was the greatest limitation of this study. This is because it cannot be determined accurately that the secondary data represent the situation as it is in the ground. It is has only been assumed that the data is accurate. This is usually a general problem when dealing with secondary data. The research used secondary data, which was in the public domain had already been obtained, unlike the first-hand information associated with primary data. The study additionally did not exhaust the entire factors affecting corporate taxes of listed firms greatly because of availability of data limitation.

In achieving the analysis of the data, the study used a multiple linear regression model. Because of the restrictions involved when using the model like erroneous and deceptive

outcomes that lead to the value of the variable changing, it was therefore not possible the findings of the study to be generalized with accuracy. More so the result could be different if more data was added in the regression. Hence the model was another limitation.

5.6 Suggestions for Further Research

This work aimed to assess influence of FDI inflows on growth of manufacturing industry in the country; it relied on data from secondary sources. A research study that focuses on first-hand primary data or a combination of both primary and secondary is recommended to capture some qualitative aspects that might have been missed in this study.

The study did not exhaust all the independent variables affecting the growth of the manufacturing industry. The study recommends the need for more study and research in this area, and for more variables to be incorporated in the study and analysis. Factors like the supply of money, inflation, exchange rates, level of poverty and other variables. Showing the effect of each of these variables on manufacturing sectors growth will be an enabler to policy makers to identify what tools to use in managing growth of the sector.

The study focused on the last 10 years, due to limitations of data availability. More studies should use a wider variety of data to confirm more information on the same. It was also limited as it focused on only the manufacturing sector. Further studies should be done in other sectors as well. Finally, the research utilized a multiple regression model, future researchers should utilize other models to confirm or disapprove the findings.

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APPENDICES

Appendix I: Research Data

Year	Quarter	Growth	FDI inflows	Interest rates	Balance of payments	Public debt
2010	1	0.1121	10.2212	6.9167	4.31E-05	13.9455
	2	0.1071	9.8473	6.7500	-1.93E-02	14.0003
	3	0.1191	9.5845	6.0000	-2.24E-02	14.0503
	4	0.1228	10.4275	6.0000	-2.82E-02	14.0843
2011	1	0.1114	10.4853	5.8333	-2.69E-02	14.1327
	2	0.1136	10.1260	6.0833	-3.82E-02	14.1750
	3	0.1188	9.9153	6.5000	-4.50E-02	14.2507
	4	0.1224	10.7717	15.1667	-3.75E-02	14.2479
2012	1	0.1063	10.4585	18.0000	-3.06E-02	14.2431
	2	0.1072	10.0528	18.0000	-3.11E-02	14.2939
	3	0.1126	9.7669	15.3333	-4.62E-02	14.3339
	4	0.1174	10.6296	11.6667	-3.20E-02	14.3880
2013	1	0.1097	10.2788	9.5000	-3.11E-02	14.3989
	2	0.1072	9.8486	8.8333	-2.67E-02	14.4545
	3	0.1114	9.5917	8.5000	-4.14E-02	14.5112
	4	0.1140	10.4235	8.5000	-4.25E-02	14.5505
2014	1	0.1094	9.9646	8.5000	-2.65E-02	14.5825
	2	0.1083	9.5697	8.5000	-1.79E-03	14.6232
	3	0.1071	9.2934	8.5000	-5.92E-02	14.6780
	4	0.1053	10.1591	8.5000	-5.74E-02	14.6930
2015	1	0.1065	9.7419	8.5000	-5.20E-01	14.7740
	2	0.1057	9.3826	9.0000	-5.44E-01	14.8404
	3	0.1056	9.1666	11.5000	-1.53E-01	14.8875
	4	0.1037	10.0082	11.5000	-4.57E-01	14.9339
2016	1	0.1028	9.9442	11.5000	-3.46E-01	14.9933
	2	0.1045	9.5301	10.8333	-2.95E-01	15.0610
	3	0.1044	9.2454	10.5000	-3.11E-01	15.1083
	4	0.0987	10.0966	10.5000	-3.31E-01	15.1415
2017	1	0.0993	10.5858	10.0000	-3.99E-01	15.1923
	2	0.1001	10.1798	10.0000	-4.28E-01	15.2653
	3	0.1001	9.8936	10.0000	-4.70E-01	15.3090
	4	0.0938	10.7393	10.0000	-4.69E-01	15.3341
2018	1	0.0968	10.8132	9.5000	-4.10E-01	15.3848
	2	0.0985	10.3971	9.0000	-4.03E-01	15.4274
	3	0.0984	10.1089	9.0000	-3.92E-01	15.4490
	4	0.0919	10.9681	9.0000	-3.79E-01	15.4728

Year	Quarter	Growth	FDI inflows	Interest rates	Balance of payments	Public debt
2019	1	0.0550	10.2108	9.0000	-3.16E-01	15.4992
	2	0.0530	10.7802	9.0000	-3.07E-01	15.5501
	3	0.0520	10.6065	9.0000	-3.14E-01	15.6059
	4	0.0550	9.9133	8.8300	-3.53E-01	15.6131