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

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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.

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

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DEDICATION

This project is dedicated to my family, especially my dear mother Mrs. Josephine Odhiambo, for her continued support during my period of study and in preparation of this research project. Thank you for leading by example and for the encouragement and support.

I also dedicate this project my father, Mr. Alfred Odhiambo, for always nudging me to scale the heights of academics.

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ABREVIATIONS AND ACRONYMS

AGOA	–	African Growth and Opportunities Act
CBK	–	Central Bank of Kenya
DNs	–	Developing Nations
EPZ	–	Export Processing Zones
FDI	–	Foreign Direct Investment
FIS	–	Foreign Investment Survey
GDP	–	Gross Domestic Product
GNP	–	Gross National Product
GoK	–	Government of Kenya
IMF	–	International Monetary Fund
KAM	–	Kenya Association of Manufacturers
KenInvest	–	Kenya Investment Authority
KNBS	–	Kenya National Bureau of Statistics
UNCTAD	–	United Nations Conference on Trade and Development
UNCTAD	–	United Nations Conference on Trade and Development
UNDP	–	United Nations Development Programe
WIR	–	World Investment Report

ABSTRACT

There exists compelling evidence to prove that FDI has a notable and useful impact to spur the development of countries economically. FDI can be thought of as a medium for relaying physical assets and non-physical assets like the latest technological developments, and the best managerial skills and innovations. In theory, capital creation and advancements in technology drive economic growth, therefore, it is logically a good driver of development in receiving countries. Economists suggest that it is an essential component of development among developing nations. This exercise attempted to find out the effect that FDI had on manufacturing sector development in a country like Kenya. The independent variables were direct foreign investments, the rates of interest, the rates of inflation and exchange rates. Growth of the manufacturing sector was the response variant which the study tried to elaborate. This was estimated by contribution of manufacturing sector to GDP. The author gathered data for a decade (January 2009 to December 2018) on a quarterly timeline. The study used a cross-sectional research design and a multiple linear regression model that analyzed the relationship between the variables. Statistical packages version 21 was used to analyze the data. The results of the study produced R-square value of 0.614 which meant that 61.4 percent of the changes in growth of the manufacturing sector in Kenya could be shown by the selected independent variables while 38.6 percent in the variation was associated with other factors not covered in this research. The study showed that the independent variables had a strong relation with growth of the manufacturing industry (R=0.78.4). ANOVA findings showed that the F statistic was significant at 5% level with a p=0.000. This model was fit to show the growth of the manufacturing industry. The results also showed that only exchange rates were significant determinants of growth of the industry. The study suggested that measures were needed to improve and develop the manufacturing industry by controlling the prevailing levels of exchange rates.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Nations all around the globe compete in attracting Foreign Direct Investment (FDI), because of the implied positive effects FDI would have on the growth of their economies (Caves, 1996). Borensztein (1998) and Ikiara (2002) agree that FDI bridges the technological skills and capital problems of developing nations by introducing their expertise, resources, experience and promotional skills, connecting developing nations to international trade, and bringing automation-related spill overs to host country industries, as long as the right policies and business conditions exist in those countries. FDI is usually motivated by resource-seeking (Dunning, 1993); the magnitude and reasonable reliability of FDI implies it is a critical source of foreign capital for DNs (UNCTAD, 2019). Economists suggest that this is an essential component of the developing economies and development among developing nations. African nations continue to strive for increased FDI flow to their economies to facilitate their goals for improved economic outlook, technological advancement, and poverty alleviation and improved standards of living.

This study will be guided by theories that inform the impact that his model has on the economy i.e. location theory of international investment, the product life cycle theory, and the theory of internalization. The location theory of studies the physical location of industries. Every nation can adopt a deliberate approach in drawing in foreign investments e.g. by ensuring their physical locations offer greater competitive advantages, since FDI is drawn to countries with ample natural or created capital. The product life cycle theory explains how trade patterns change over time i.e. FDI is a response to the fear of a

diminishing market during the product maturity stage, necessitating firms to source cheaper inputs to counter market rivalry. Finally, internalization theory identifies the elimination of market rivalry, and country specific advantages in performance of an economic activity as key attractions of FDI (Hymer, 1976) i.e. FDI is attracted if it is cheaper for the foreign investor to exploit country-specific advantages, than it is for them to operate abroad. Multinational firms always plan their firm operations in a way that offers them specific advantages that can be easily exploited.

In Kenya, FDI inflow recovered from a declining trend from the years 2012 to 2015. In 2018, FDI inflows stood at $1.63 billion, a 27 per cent increase from the previous year. 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. Under the Investment Promotion Act (2004), KenInvest 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).

1.1.1 Foreign Direct Investments

This investment allows the investor to obtain long-term influence in enterprises located outside their home country. In Kenya, FDI refers to all capital held in non-Kenyan resources e.g. monies, credits, entitlements, benefits and property that is controlled by a foreigner, for the purpose manufacturing goods/ services for domestic consumption or for export (Investment Promotion Centre Act, Chapter 518). Moore and Lewis (1999) suggest that international business has always been informed by economic activity that included FDI, joint ventures and strategic alliances.

A foreign direct investor may be a corporation, a transnational institution, or a government. Both the foreign direct investor and host country are committed to availing their skills and expertise to the investment operation such as the knowledge of local/ international market and bureaucracy, financial capability, and technical expertise (Moosa, 2002). The long-term nature of the investor-investee relationship gives the foreign investor a huge stake in management (ten percent or more of voting shares), ensuring that both risks and rewards of the enterprise are shared by the parties involved (World Bank, 1996). Success is achieved by developing the industry of interest, and presence of local capital for foreigners to set up or support lucrative businesses in the host country, resulting in growth of various sectors of the economy of the host. FDI is also useful to local companies wishing to expand i.e. once FDI is initially obtained, incremental FDI inflows in the form of additional capital injections, reinvestment of business earnings, and extension of credits facilities, can also be sought by the investee (World Bank, 2002).

The KNBS publishes FDI inflows in their quarterly statistical releases. It is evaluated by employing natural logarithm in the proportion of FDI input to the measure of GDP or to a

specific sector i.e. Log (FDI). The natural log of a number refers to its log to the base of the math constant e, where e, is an irrational, transcendental number. For example, Log (1) is approximately equal to 2.718291828459.

1.1.2 Growth

Growth is considered a measure of performance in a company, industry/ sector or economy. Growth is also defined as the process of increasing in size (Mankiw, 2003). According to Knack (1995), economic growth refers to an increase in production and consumption of utilities, which can be measured by rising real GDP or real GNP.

Growth is important for a country/economy because it shows the extent to which she has progressed from one point in time to the next, given a designated measurement criteria. Knack (1995) posits that an economy is divided into sectors i.e. big groupings of activity based on the position they occupy in the production chain, work done, or proprietorship. Economic sectors are broadly divided into three i.e. primary or extractive sector which deal with raw materials, secondary/ processing or manufacturing sector which are engaged in processing inputs into finished or semi-finished products, and, tertiary or service sector which deals with provision of services.

Measures of economic growth include GDP, GNP, per capita national income, changes in supply of natural resources, rate at which capital is created, population make-up, automation, scientific or technological knowledge and skills, efficiency of processes, organizational set-up, increase in demand for products, increase in wages across a population, increase in the number and diversity of a population, improvement in purchasing behavior, improvement in lifestyle and in social interactions and religious beliefs and goals. The most widely used measure is per capita national income; an increase

in income serves as the 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 etc. usually over a specified financial period (customarily one year) (UNDP, 2010).

1.1.3 Foreign Direct Investments and Growth

Its inflows and growth can be seen as complimentary i.e. while FDI inflows can promote economic, and by extension sectoral growth for a host country, a nation with a high growth rate can attract increased FDI as it is assumed to possess a better investment environment. Studies have shown that FDI flow to different sectors results in varied effects on the country's economic growth, and that lumping different forms of FDI together distorts the real growth effect of FDI and produces varied outcomes (Taylor & Francis, 2009).

The possible good or bad impacts of FDI on the economy can depend on the nature of the sector of investment, Hirschman (1958). Appropriate policies are useful in reallocating resources to specific sectors, and in directing inflow of FDI to those specific sectors. For example, spillover effect of FDI occurs more in the processing industry than in primary or services industries; most empirical reports on the spillover effect are based on FDI in processing sectors (Chuang & Hsu, 2004). There is therefore no predetermined reason to assume that a country's different sector-level FDIs have similar impacts on the hosts' economic growth, the effects of this model may differ depending upon certain attritubes in each industry and their connections to the overall economic outlook- these connections vary across extractive, processing and tertiary sectors (WIR, 2001). There are various

factors that are particular to a sector that can affect the influence of FDI on sectoral growth e.g. the motivation of the foreign investor to provide funding. Certain conditions may also be necessary in a sector for it to affect the economy differently, for example, the effect of FDI in the extractive industry is not always good (Hirschman, 1958), therefore majority of FDI in primary sectors is received in form of big projects with large one-off funding to a country (World Bank, 2005).

1.1.4 Manufacturing Industry of Kenya

Processing industries have shown dismal performance in the last decade, resulting in a notable fall in its contribution to national GDP and raising concerns to a possibility of a deindustrialization phase. Historically, the sector's contribution to the economy stabilized at around 10% of GDP; it was about 8.4% and 9.2% in the years 2017 and 2016 respectively. The manufacturing sector has however been seeing a resurgence of interest as one of the pillars espoused in President Kenyatta's big four agenda (KAM, 2018).

In the period 2008-2012, the GoK, through Sessional Paper No. 9 (KNBS, 2012) titled 'The National Industrialization Policy Framework for Kenya 2012-2030' presented a medium term plan focused on industrial transformation process for Kenya. The policies therein aimed at ensuring the manufacturing industry achieves and maintains annual sector growth rates of 15%, and to set Kenya apart as the preferred destination for industrial investments in Africa. The policy is intended at ensuring the best strategy is followed in pursuit of sector growth and development, through the formation of a conducive policy environment that encourages the private sector to chart the path to industrial development and develop a favorable economic environment with the capacity to attract both local and foreign investments (Vision 2030).

According to the FIS (2018) by KNBS, CBK and KenInvest, incoming FDI to the manufacturing industry rose by 21.8% to KSh 22,870.40 million in the year 2017, compared to an inflow of Ksh 18,783.49 million in the year 2016, which was a decline of 25.2 per cent from Ksh 25,121.33 million in the year 2015.

1.2 Research Problem

There exists compelling evidence to prove this model has a notable and useful effect on the development of economies in receiving countries. FDI can be thought of as a medium for relaying physical assets and non-physical assets like the latest technological developments, and the best managerial skills and innovations. In theory, capital creation and advancements in technology drive economic growth, therefore, FDI is logically an important driver of the receiving countries' development. The useful effect of FDI on growth is due to FDIs' ability to transfer resources linked to productivity enhancement (Wang, 2009). The magnitude and reasonable reliability of FDI implies it is a critical source of foreign capital for DNs (UNCTAD, 2019). Economists suggest that this model is an essential component of growing economies and development among developing nations

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), KenInvest 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 empirical research has focused on the effect that this model has on developing economies. Alfaro et al. (2010), carried out extensive analysis by employing a cross-sectional regression for 47 developing nations between the years 1981-1999, and established that this model has an ambivalent impact on development i.e. FDI in the extractive industry seems to have a counteractive effect on growth, in manufacturing a useful one, while in the service sector its unclear. The authors used descriptive survey to establish the impact of this model on GDP development in five countries with the conclusion that FDI encourages development. Tang et al. (2012) studied improvements on theory of FDI to recipient countries and carried out empirical research on the effects of FDI. They noticed that this model contributes continuously crucial aspect in economic improvement, while Hanafy (2015), studying FDI inflow to different economic sectors in Egypt found a positive impact of FDI in the processing sector, no notable impact of FDI in the tertiary sector and a counterproductive effect of FDI in the agricultural sector.

Locally, Njeru (2013) established that stable and positive increase in FDI in Kenya from the year 1982 to 2012 had a beneficial impact on the development of the countries' economy. Abala (2014) in his work of the impact of this model on the development of the country's economy found that a decline phase of this model inflows into the country was a

result of there being little or no further market for new MNCs to enter and achieve worthwhile returns. Ngeny and Mutuku (2014) also did research to assess the effect of the model in Kenya and affirm that this model has a large useful impact on the economy of the country especially through horticulture and tourism industries in Kenya. Khadenje (2015) used secondary data to evaluate effect this model in developing economies between the years 1995-2015. She concluded that there was a strong positive correlation. Kimotho (2015) in his descriptive study to find the correlation growth between the years 2005 and 2014 found that there was a correlational link between FDI and development. There have been no studies that have touched on the effect of FDI on developing the this industry specifically; this study aims to address this research gap thus posing the question, impact of FDI in growing the manufacturing sector in this country?

1.3 Research Objective

To determine the effect of foreign direct investment inflows on growth in the manufacturing sector in Kenya

1.4 The Value of the Study

Findings from the research will establish effect of FDI developing the manufacturing sector in the country. This will be important to the GoK as it will be able to re-evaluate foreign relations in order to spur increased FDI inflow to the manufacturing sector. Increased FDI channelled towards manufacturing would encourage growth of industries thereby propelling the sector towards achievement of sustainable GDP contributions of 15% as espoused in the presidents big four agenda.

The study is also beneficial to policy makers as it will impress upon them the need to harmonize and present policies relating to FDI and the manufacturing sector in Kenya

coherently. This is important because despite the structural reforms undertaken so far, a close analysis of the manufacturing sector shows that supply responses to the policies have been poor. Specifically, the manufacturing sector has failed to achieve significant export volumes contrary to expectations (Asanuma et al., 2008).

The study will also be important to scholars and academics as it will add to the body of knowledge on the effect of this model in developing countries in the country. Numerous studies carried out on this research objective, but none have touched on growth of this sector specifically; this work intends on building on the existing body of knowledge.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two will evaluate existing literature on theories that discuss FDI and growth. It also looks at reviewing and analyzing present studies on FDI flow and growth. Finally the chapter's summary is presented.

2.2 The Theoretical Review

This study was guided by location theory of international investment, the product life cycle theory and the internalization theory.

2.2.1 Locational Theory of International Investments

This theory was first developed by Heinrich (1826). It focuses on the geographic location of an economic activity i.e. it comprises "supply oriented location theory" ,"demand oriented location theory" where one proposes that output will occur when variables of producing costs (plus transport) are minimal, according to Dunning (1973), while the latter states that companies will set up businesses relative to their target markets and competitors. Every nation can therefore engage in deliberate actions to draw in FDI by enhancing their location advantages. FDI are constantly looking for countries with ample natural or created resources. The behavior of the FDI as regards its motivation is also important i.e. if FDI is looking for resources, markets, improved efficiency or is expanding as part of its strategy.

From 1990, global production began to be described through particular components related to the location theories (Dunning, 2000). New determinants of environmental advantages are due to worldly dynamics i.e. transaction costs due to the distance between the nations,

automation and modernization standards, the need to conclude cross border partnerships etc. (Dunning, 2000). In this case, the location advantages are the result of created resources, including intellectual capital, the innovative systems, institutional and communication networks. Dunning asserts that location advantages are continuously changing (Dunning, 2003).

Kenya has been receiving increased attention from international investors following reported economic growth rates of six percent in the last six years. Kenya is a regional hub on the continent, therefore continues to attract investors the world over to invest in her economy. Between the years 1954 and 2013, Kenya enacted policies, institutions and laws to promote industry. A snapshot of such policies include the establishment of the export processing zones, export promotion centers as well as dismantling of export licensing and price control in the 1990's, while in the 2000's policies included membership in AGOA, establishment of KenInvest, Vision 2030, and most recently, the big four agenda in the Jubilee manifesto. All these and more actions by the GoK are aimed at making Kenya a favored FDI destination, more so in investments in the manufacturing industries in the country.

2.2.2 Product Life Cycle Theory

Raymond Vernon developed this theory in 1966. He suggests four phases in production i.e. the introduction, growth phase, maturity phase and gradual decline. The theory explains how trade patterns change over time. This theory begins by comparing advantages of factor availability (Vasyechko, 2012). Here, FDI is taken to be a response to the fear of a diminishing market during the product maturity stage, necessitating firms to source cheaper inputs to counter market rivalry.

In the first stage, FDI creates new modernized goods to meet local market demand, and exports excess abroad. This stage reflects the foreign investor's advantage of technology on international competitors as they are able to manufacture the necessary goods. The second stage is characterized by the foreign investor moving production to the developing country, which helps the foreign investor cut on export costs, increase profits and also ship some of the goods back to their home country. At the third stage, the developing country's competitors export similar goods to the foreign investor's home country. This marks clear competition between the FDI recipient nation and the foreign investor's home country, thus labelled the maturity stage because the developing country's competitors have 'developed' enough to export to the foreign investor's country. The last stage is characterized by the developing country's markets remaining viable target markets for other foreign investors due to the stabilized economy. The foreign investor's home country market is seen to decrease. Kenya has been facing stiff competition from her neighbors in attracting FDI i.e. the WIR (2018) ranked Kenya fourth after Ethiopia, Uganda and Tanzania.

2.2.3 Internalization Theory

Coase introduced this theory in 1937and developed by Hymer in 1976. Hymer (1976) found that FDI was determined by removing competition, and the upper hand which some countries have in a specific economic engagement. According to Hymer (1976) FDI will occur if gains of using country-specific benefits exceed comparative costs in operating in a foreign investor's home country. Buckley and Carson (1976), and Hennart (1982) also further developed this theory i.e. they describe the rise of multinational firms, and their incentives for achieving FDI status. Buckley and Carson, show that multinational firms

plan their firm processes to develop specific advantages, which they can then exploit. Dunning (1993) considered this theory important and used it in the eclectic theory.

Kenya is considered the most industrialized country in East Africa. This should imply that it is highly competitive i.e. should be able to attract more FDI to her economy, compared to her neighbors. Kenya also boasts of good infrastructure, and business savviness among her population, which places it in an advantageous position to attract FDI; notwithstanding all this, the WIR (2019) reports that Kenya is trailing her neighbors in FDI.

2.3 Determinants of Development in the Manufacturing Industry

As a result of continued urbanization, this sector continues to be crucial to the Kenyan economy, as observed in its contribution to GDP. Processing industries, concentrated in the main urban centers i.e. Nairobi, Mombasa, and Kisumu, include food-processors e.g. grain millers, beer producers, and sugarcane crushers. There is also processing activity in fabrication of goods, processing of crude petroleum in Changamwe, as well as a jua kali sector that manufactures small-scale household goods, car parts, and farming tools (WIR, 2018). Various factors contribute to developing this sector in Kenya. These factors include;

2.3.1 Foreign Direct Investments

FDI is regarded as catalyst that spurs growth in productivity, capacity utilization, resource accumulation and technological advancement, which results in development of productive capacity, skills and enhancement of local labor, technological advancement and integration with others. Spillover effect of this model is likely to occur in processing activities than in other activities and most empirical reports on the spillover effect are based on FDI in manufacturing industries (Chuang & Hsu, 2004).

Through the big four agenda in the Jubilee manifesto, the GoK plans to revive the one time economic giant, the manufacturing sector. Towards this end, policies, partnerships and laws have been established, some deliberately aimed at attracting an increased flow of FDI to the manufacturing sector so as to revive it. KAM suggests that competitiveness must be urgently addressed because comparing Kenya to global benchmarks reveals that cost levels are at least 10 per cent higher in Kenya; this cost imbalance must be addressed because foreign investments will normally flow into countries that have the lowest cost of production.

2.3.2 Exchange Rates

International trade by countries results in exchange of their currencies i.e. foreign exchange. Increase in exchange rate fluctuation results in decreased cross border trade because of risks and high costs of doing business associated with changes in the exchange rate; variable exchange rates do not encourage trade, and at the same time, they reduce the incentive to produce and process goods.

The link between rates of exchange and booming trade is based on underlying long-term policy dependability rather than the short-term causes (Klein & Shambaugh, 2006); any correlation between the fluctuations and cross border activities could be as a result of reverse causality, whereby flows assist to stabilize the rates variations which will decrease exchange rate fluctuations (Broda & Romalis, 2010) and increasing flow of FDI towards growth of economic sectors.

2.3.3 Interest Rates

The central bank issues lending rate adjusted for inflation; it is assessed by the GDP deflator. Rates of lending in different countries vary depending on terms and conditions set by each country's central bank. This makes them difficult to compare (World Bank, 2019).

The rate of interest in a country significantly impacts investment. High interest rates result in a higher saving culture among the investors in an economy so as to reap the high returns that come with high interest rates, while low rates of interest result in greater borrowing by investors. Active borrowing and lending in an economy and by extension on a global level, encourages economic growth generally, and results in economic development among countries.

2.3.4 Inflation Rates

This is defined as a periodic percentage change in the cost incurred by citizens of a country to buy products or services that are adjustable at specific intervals e.g. annually (World Bank, 2019).

Inflation exists when the cost of products or services rises and the economic situation in a country appears to be unpredictable. The consumer price index (CPI) measures this; increasing CPI is sign of inflation. The CPI is used as an indicator for salaries, casual pay, negotiated prices, retirement funds, etc. so as to change them in tandem with the changes in inflation in a country. The GDP which is a critical economic growth indicator is also normally inflation adjusted; the manufacturing sector is an important contributor to a country's GDP.

2.3.5 Taxes and Levies

According to KAM, there are currently too many levies including Import Declaration Fees and Railway Development Levy that have decreased Kenya's competitiveness by 2% and 1.5% respectively. Such levies ought to be removed for manufacturers bringing in inputs and raised on already processed goods coming in, in order to promote local manufacturing. Countries like China, India and Vietnam have successfully done this, thus opened up their countries to greater FDI inflow. Host countries with economic policies like tax incentives for the foreign countries attract more FDI.

Barro and Sala-i-Martin (1995) say that economic policies will influence the level of taxation in a country and also the economic growth of the country, because they set out a framework within which growth takes place and how much an investor must incur in terms of tax remittances. A stable political country, good legal institutions, and sound policies, will result in stabilized economies where the tax burden is not too high, thus allowing investors to have more 'cash-in-hand' for reinvestment.

2.3.6 Local Investments

Bond et al (1997) suggest that introducing funds into an economy encourages increased production, skills enhancement, infrastructure development and employment, all factors that constitute to economic growth as well as growth of downstream sub-sectors of the economy. Industrial experts in Kenya say that for manufacturing to realize the targeted GDP contribution goal of 15% in the next five years, there needs to be investment in strategic long-term systems. Such investments cannot wholly be foreign sourced, local entrepreneurs are expected to contribute the much needed skills and capital.

The endogenous growth theory suggests that many benefits are by monetary investment, more so in infrastructure e.g. development of roads, social amenities and communication networks, the results of which is enhanced productivity. The Solow type growth theory emphasizes the importance of capital accumulation through investment. The more capital is introduced into an economy, the more development takes place, which in turn results in economic growth due to economic development.

2.3.7 Counterfeit Goods

Illicit, un-customed, under-invoiced and counterfeit goods continue to enter through Kenya's porous borders. There are many counterfeit goods coming in through the port of Mombasa and the Eldoret International Airport, yet the government is not taking any punitive action to address it. Such goods eat into the market share of local companies producing legitimate products. The enforcement of proper tariffs at the borders is also wanting and needs to be addressed urgently KAM (2019).

There are also reported cases of fraudulent imports at the Busia border, whereby unscrupulous local businessmen collaborate with likeminded exporters from abroad and bring in illegitimate consumer products. A good example is the import of sugar from Uganda, which has continued to contribute towards the dismal performance of local sugar processors, including closure of some sugar milling factories in western Kenya.

2.3.8 Research and Development

Romer (1986, 1990) and Lucas (1968), through the endogenous growth theories, suggest that the advent of new knowledge and innovation will produce long-lasting economic growth. This will in turn lead to growth in diverse fields and development of the economy as a whole. Most technological improvements are the result of deliberate actions e.g. R&D

carried out in research institutions. Accumulation of knowledge stimulates growth, which in turn stimulates capital accumulation (Romer 1990). Therefore, technological change results from technological innovations generated by R&D and productivity-improving developments.

Innovation and R&D influences economic growth positively through the increase of productivity in various economic sectors, including manufacturing. Improved technology results in production of new, improved and superior products and processes. Most developing countries (Kenya included), continue to seek FDI so as to benefit from spillover technological effects, which they can employ to develop their local industries.

2.4 Empirical Review

Alfaro et al. (2010) carried out an empirical analysis using cross-section regression for 47 low-income countries from all over the world between 1981 and 1999. The empirical analysis aimed to find out if FDI promotes economic growth. It was established that it has an ambivalent effect on growth i.e. FDI in the extractive industry seems to have a counteractive effect on growth, in manufacturing a useful one, while in the service sector it's unclear.

Agrawal and Khan (2011) used descriptive survey in research of impact of FDI on GDP increases in some Asian countries between 1990 and 2009, and established "FDI promotes economic growth; additionally, they provide an estimate that one dollar of FDI adds about seven dollars to the GDP of each of the five countries". Rabiei and Masoudi (2012) assessed this relationship in several countries. Finding show that it has a positive effect on the growth of all the countries studied.

Tang et al. (2012) studied developments on the theory of FDI to recipient countries and carried out empirical research on the effect that FDI had in China between the years 1988-2003. They recognized the role of this model in development, and globalization has introduced challenges to the existing FDI theories. They employed analytical models to review previous studies and empirical evidence in Asia, and discovered the effect of this model on development of countries.

Hanafy (2015), studying FDI inflow to different economic sectors in Egypt from 1992-2008 found its positive effect in the processing industry, no notable impact of FDI in the tertiary sector and a counterproductive effect of FDI in the agricultural sector. He concluded that a notable growth generating impact lacked in this sector and the economy as a whole.

Njeru (2013) conducted research to establish the effect of this model on the growth of the economy in the country. He established that the consistent positive increase in FDI to Kenya from 1982 to 2012 resulted in a good development.

Abala (2014) carried out an analysis to find the empirical link between FDI and the growth of the economy from 1970-2010. His findings were that the flow of FDI in Kenya in search of market and this requires a rapidly growing real GDP. The study also determined that the decline phase of FDI inflows into Kenya were as a result of there being little or no further market for new MNCs to enter and achieve worthwhile returns on investment as a result of the fast growing economy and major local competition.

Ngeny and Mutuku (2014) also researched the effect of FDI in Kenya and found that notable trends in sectoral composition of FDI are in horticulture, garments and tourism

industries. They carried out an analysis of variance, as well as a test of hypothesis and assessed the data collected for the work. His conclusion was that FDI in the horticulture and tourism industries had been in response to favorable weather conditions, while in the garment industry, it had been in response to America granting Kenya preferential access to her market under AGOA i.e. the inception of AGOA in the year 2000 saw clothing sales from Kenya to America increase approximately 6.1 times to $270 million in the year 2006. The final verdict was that FDI was largely beneficial to the Kenyan economy more so through the horticulture and tourism industries in Kenya.

Khadenje (2015) used secondary information to evaluate the effect that this model in the developing economy Kenya between 1995-2015, by employing multiple regression analysis tools and correlation. The research showed that, FDI and economic development in Kenya have a strong positive correlation. The relationship between this and other variabless 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 this in developing the manufacturing sector in the country.

Kimotho (2015) adopted a descriptive survey to study the effect that this had growing the economy in Kenya years 2005 and 2014. He had three findings, firstly, that capital injections like FDI enable nations to accumulate capital faster i.e. it allows them to bring in more export, thereby enabling them invest more than save, and boosting labor productivity and wages. Secondly, FDI has the capacity to create employment for some educated folk in the rural and urban informal sectors (Jacobs, 2001). Thirdly, FDI is able to transfer technology and expertise, therefore spurring the productivity of local firms

(Jacobs, 2001). His study concludes that there exists a correlation between FDI and economic growth.

2.5 Conceptual Framework

This is a representation showing research variables and relationships that occur among them, Oso & Onen (2009). In this research, we study the effect of this model on growing the economic sector in Kenya. The independent variable for this research is FDI inflow, the dependent variable is an improved manufacturing sector industry, and there are control variables i.e., rates of interest and the rate of inflation. This can be represented diagrammatically as below;

Figure 2.1: The Conceptual Model
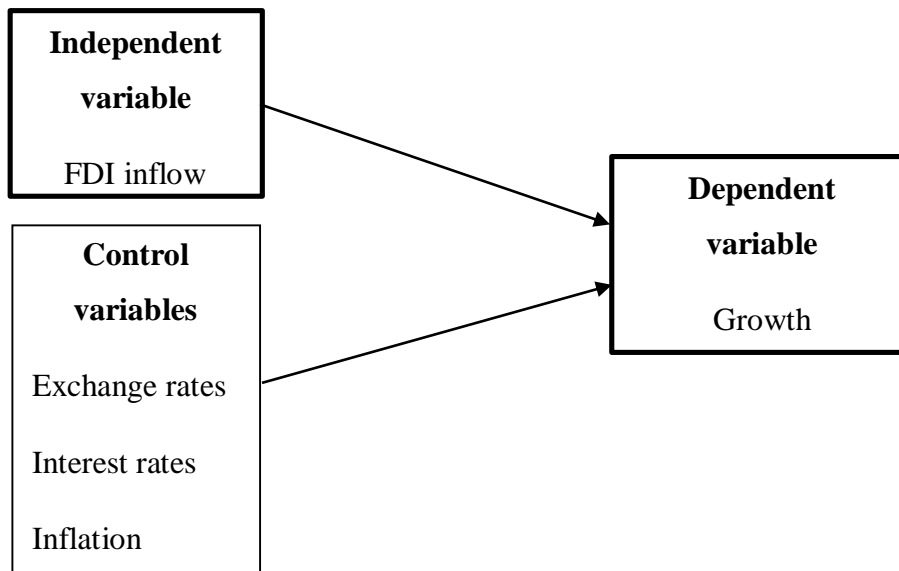
Source: Researcher (2019)

2.6 Summary of Literature Review

Location theory of international investment suggests that FDI flows are constantly looking for countries with ample natural or created resources e.g. good infrastructure, a conducive business environment, educated and skilled employees etc. Every nation can therefore

make deliberate attempts at drawing in more FDI by designing and enhancing their country advantages e.g. between the years 1954 and 2013, Kenya enacted policies, institutions and laws to promote industry e.g. establishment of the export processing zones and price control in the 1990's, while in the 2000's Kenya joined membership of AGOA. In the product life cycle theory, FDI are seen as a response to the fear of a diminishing market as the product enters its maturity phase, thereby necessitating the search for cheaper inputs to counter market competition. Here we see that Kenya has been facing stiff competition from her neighbors in attracting FDI. In the internalization theory, Hymer (1976) showed that FDI will occur if the gains of having country-specific gains which negate the comparative costs of operations. Kenya is considered the most industrialized country in East Africa thus making it highly competitive i.e. the country should be able to attract increased FDI to her economy.

The literature review has established that there is a research gap i.e. the empirical studies discussed have dwelt on the impact of FDI in growing the country, while only one has not factored the effect of FDI on horticulture and tourism industries in Kenya. The researcher intends to find out how FDI impacts growth in the manufacturing industry in this country.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Jankowicz (1991) states that the choice of research methodology differs according to the type of the subject on research, sources of data used, aim of collecting the information, the extent of control exerted in collecting the data, and the presumptions made in examining them.

The research methodology for this study is guided by the intent of the study i.e. addressing the study objective. It presents the research design followed by the methods of data collection, diagnostic tests used and finally data analysis undertaken.

3.2 Research Design

This is the strategy where the study is usually undertaken. It is made up of the schematic plan for collecting, measuring and analyzing data with the aim of yielding maximum information in the most efficient way (Kothari, 2004; Oso & Onen, 2009).

The researcher used descriptive survey to analyze the effect of this model on growing this industry in Kenya. Best, Khan (2007), describe descriptive survey as a process of disciplined enquiry via data gathering and analysis, in an empirical study. This research design was suitable because it allowed description of the variables under study as well as identify correlation i.e. mark the correlations among the variables in the research. Surveys are commonly employed to gather large amounts of data from which mean, median and modes can be calculated, and predictions can be drawn.

3.3 Data Collection

The work relied heavily on different sources if data. This was sourced from UNCTAD WIR for work between 2009 and 2018, for each quarter of the years while manufacturing sector data was obtained from the KNBS for a similar period. Data on inflation was also obtained from KNBS while information on the rate of interest and exchange rates was sourced from the government, for a quarterly basis for the same period.

3.4 Diagnostic Tests

Various diagnostic tests were carried out to find about the links between the existing variables of study.

3.4.1 Normality Test

These are support graphical evaluation of normality (Elliott & Woodward, 2007). Normality tests compare the results in a subject under study to a standardized distribution of results having similar results; the null hypothesis states "the sample distribution is normal." If the test is significant, the distribution is non-normal. Samples usually pass normality tests; but for big samples, notable outcomes would be obtained even if there is a small change from normality, even though a small change won't have an impact on the outcomes of a parametric test (Oztuna et al. 2007). The Shapiro-Wilk test is built on the correlations between information and the regular outcomes; the Shapiro-Wilk test is considered by pundits to be the best option for investigating the normality of data (Thode, 2002).

3.4.2 Multicollinearity Test

To ensure the data collected is free from bias and one variable data is not related to another variable data, the study conducted a multicollinearity test. It occurs where the linear

correlation among independent variables is close to precise or precise. The variance inflation factor (VIF) will be applied to test Multicollinearity. When the values of VIF are between 1 and 10, then there is no Multicollinearity, when the VIF is less than 1 or greater than 10, there is presence of Multicollinearity. When the test fails the researcher should standardize the continuous variables by choosing a standardization method on the regression dialog box e.g. one may choose a variable centering approach (Burns & Burns, 2008).

3.4.3 Heteroskedasticity

Heteroskedasticity is considered to be a presumption of Classical Linear Regression Model (CLRM) which necessitates examination and accounting for in data, where it occurs. The Classical Linear Regression Model adopts that error homoscedastic, i.e. it is constant. In case the error variance isn't constant, then the data has heteroskedasticity. If a regression model is run without considering heteroskedasticity, impartial parameter approximations will be realized, but with false standard errors. The heteroskedasticity test assessed if the error terms are correlated across observation in the time series data. From a regression model, the error terms must have a constant variance called homoskedastic. Therefore, to ensure that the residuals meet these criteria, the Breusch-Pagan test was employed for heteroskedasticity whereby the alternative hypothesis for this test is that residuals are homoskedastic (Gujarati, 2004).

3.4.4 Autocorrelation

It refers to measurement of sameness between specific time and value of the same time series over consecutive periodic periods. It was examined by the Durbin-Watson test. This test provides results ranging from of 0 to 4 where a test statistic of 2 implies no

autocorrelation, less than 2, implies there is positive autocorrelation, and more than 2, implies there is negative autocorrelation (Khan, 2008).

3.5 Data Analysis

Mugenda and Mugenda (2003) describe this as procedure undertaken to make information or data collected for a study orderly, structured and meaningful. In this research, data was assessed using multiple analysis methods. The descriptive and inferential analysis was applied to determine relationships between variables in thr research.

Descriptive analysis involves using methods like mode, mean and dispersion e.g. range, quartile deviation, standard deviation and variance. Inferential analysis involves forming judgements about connections and the contrasts discovered in research outcomes (Oso & Onen, 2009). Analysis was applied to assess impact of FDI on the growth of the manufacturing industry in the country. The work used the linear regression model;

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

In which;

Y is the growth of the manufacturing sector assessed by contribution to GDP from the year 2009 to 2018 on a quarterly basis.

α constant variable

β is the regression coefficient

X_1 is FDI as measured on a quarterly basis by UNCTAD (WIR)

X_2 is the exchange rates between USD/Ksh on a quarterly basis as measured by the CBK

X_3 is the rates of interest of lending rate on a quarterly basis

X_4 is inflation as measured by KNBS on a quarterly basis

ε   the error term

3.5.2 Tests of Significance

Tests of significance are used to refuse an alternative hypothesis in a study. The researcher employed the F-test, which was obtained from the Analysis of variance (ANOVA), to test how the model works. The t-test, R and R^2 was employed to test the susceptibleness of the dependent variable i.e. growth (contribution to GDP) to changes in the independent variable i.e. FDI inflows.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, FINDINGS

4.1 Introduction

The information that was gathered was meant for establishing impact of FDI on growth of manufacturing industry in Kenya. Using statistical frameworks, the findings were tabulated formats as highlighted in the following pages.

4.2 Descriptive Analysis

Descriptive statistics shows the mean, maximum and minimum values of variables which are used with their standard deviations for this work. The table below shows the descriptive statistics for the variables applied in the study. Analysis of the variables under study was obtained using SPSS software within ten years (2009 to 2018) basis, every three months.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Growth	40	.092	.123	.10823	.008166
FDI	40	9.2	11.0	10.078	.4610
Interest rate	40	5.833	18.000	9.58540	2.884208
Exchange rate	40	4.319	4.640	4.50365	.105118
Inflation rate	40	4.033	16.833	8.07400	3.606442
Valid N (listwise)	40				

Source: Research Findings (2019)

4.3 Diagnostic Tests

Diagnostic tests were carried out 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 a statistical situation where two or more predictor variables in a multiple regression model are highly correlated. It's undesirable situation where the correlations among the independent variables are strong. A set of variables is said to be perfectly multicollinear in case there is one or more exact linear relationship among some of the variables.

Table 4.2: Multicollinearity Test

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Foreign direct investment	0.376	2.659
Interest rates	0.360	2.778
Inflation rate	0.392	2.551
Exchange rate	0.376	2.659

Source: Research Findings (2019)

VIF value was used where values less than 10 for VIF means that there is no Multicollinearity. For multiple regressions to be applicable there should not be strong relationship among variables. From the findings, all the variables VIF values are <10 as indicated in Table 4.2 indicating that there is no statistically significant Multicollinearity among the independent variables.

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 greater than 0.05, would lead the researcher to reject the null hypothesis and vice versa. The test results are summarized in table 4.3.

Table 4.3: Normality Test

Growth	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
FDI	.165	40	.300	.880	40	.784
Interest rate	.149	40	.300	.857	40	.853
Exchange rate	.156	40	.300	.906	40	.822
Inflation rate	.172	40	.300	.869	40	.723

 a. Lilliefors Significance Correction

Source: Research Findings (2019)

The data revealed a p- value more than 0.05 hence the researcher used only the alternative hypothesis and concluded that the data used in the research was evenly distributed. This data was used to conduct parametric tests and statistical analyses such as Pearson's correlation, regression analysis and analysis of variance.

4.3.3 Autocorrelation Test

Correlation of error terms in varying time periods were checked by conducting 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: Breusch-pagan Serial Correlation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.784[a]	.614	.570	.005353	1.848

a. Predictors: (Constant), Inflation rate, FDI, Exchange rate, Interest rate
b. Dependent Variable: Growth

Source: Research Findings (2019)

The null hypothesis is that there is no first order serial /auto correlation. The Durbin Watson statistic of 1.848 is between 1.5 and 2.5 implying that serial correlation doesn't exist.

4.3.3 Heteroskedasticity Test

It checked for heteroskedasticity by use of Likelihood Ratio (LR) as indicated in the Table. This test used the alternative hypothesis that the error was homoscedastic. A chi-square value of 36.48 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)   =   36.48
Prob > chi2 =   0.0000

Source: Research Findings (2019)

4.4 Correlation Analysis

Pearson correlation was used to analyze associations between growth of manufacturing sector and the variables for this research (foreign direct investments, interest rates, inflation rate and exchange rates). Findings show, there was a weak positive and statistically

insignificant correlation (r = .054, p = .739) between foreign direct investment and manufacturing growth. Inflation and exchange rates have a negative and significant relation with growth of manufacturing sector as evidenced by (r = -.347, p = .028) and (r = -.770, p = .000) respectively. Although interest rate was found to have a negative correlation with manufacturing growth, the relationship was not significant as shown by a p value of 0.201 which is higher than significance level of 0.05.

Table 4.6: Correlation Analysis

		Growth	FDI	Interest rate	Exchange rate	Inflation rate
Growth	Pearson Correlation	1				
	Sig. (2-tailed)					
FDI	Pearson Correlation	.054	1			
	Sig. (2-tailed)	.739				
Interest rate	Pearson Correlation	-.201	-.088	1		
	Sig. (2-tailed)	.213	.589			
Exchange rate	Pearson Correlation	-.770**	-.021	.250	1	
	Sig. (2-tailed)	.000	.897	.119		
Inflation rate	Pearson Correlation	-.347*	-.176	.556**	.361*	1
	Sig. (2-tailed)	.028	.278	.000	.022	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						
c. Listwise N=40						

Source: Research Findings (2019)

4.5 Regression Analysis

Growth of manufacturing sector was regressed against four other variables; foreign direct investments, rates of interest, inflation rate and exchange rates. It was carried out at 5% level. The model summary statistics are as seen in table 4.7 below.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.784[a]	.614	.570	.005353	1.848
a. Predictors: (Constant), Inflation rate, FDI, Exchange rate, Interest rate					
b. Dependent Variable: Growth					

Source: Research Findings (2019)

R squared shows the deviations in the variables due to changes in variables. Seen in table 4.8 here, R square showed 0.614 which implies that 61.4 percent in growth of the manufacturing sector is caused by differences in foreign direct investments, rates of interest, inflation rate and exchange rates. The other variables show for 38.6 percent of the variations in manufacturing growth in Kenya. The findings also revealed a strong relationship between variables and growth of manufacturing firms as shown by correlation coefficient (R) equal to 0.784. A statistic of 1.848 indicated that the predictor variables were not correlated since the value was more than 1.5.

Table 4.8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.002	4	.000	13.944	.000[b]
1	Residual	.001	35	.000		
	Total	.003	39			
a. Dependent Variable: Growth						
b. Predictors: (Constant), Inflation rate, FDI, Exchange rate, Interest rate						

Source: Research Findings (2019)

The value is 0.000, less than p=0.05. This shows the model significantly showed how foreign direct investments, inflation rate with exchange rates affected growth of the manufacturing industry in Kenya.

Coefficients of determination reflected the direction of the relationship between foreign direct investments, inflation rate, exchange rates and growth of manufacturing sector in Kenya. The p-value under sig. column was an indicator of the significance of the relationship. At 95% confidence level, a p-value of less than 0.05 was i as a measure of statistical significance. The results are as indicated in table 4.9

Table 4.9: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.358	.050		7.096	.000
	FDI	.002	.002	.091	.856	.398
	Interest rate	-.000	.000	-.137	-.884	.382
	Exchange rate	-.052	.011	-.666	-4.800	.000
	Inflation rate	-.000	.000	-.199	-1.222	.230
a. Dependent Variable: Growth						

Source: Research Findings (2019)

These findings show that only exchange rates were found to be significant determinants of manufacturing sector growth in Kenya shown by values that are less than 0.05. The other independent variables (foreign direct investments, interest rates and inflation) were insignificant determinants of growth of the manufacturing sector in Kenya, shown by low t values and p > than 0.05.

The following regression was estimated:

$Y = 0.358 - 0.052X_1$

Where,

Y = Growth of the manufacturing sector

X_1 = Exchange rate

The constant = 0.358 shows that if selected independent variables (foreign direct investments, rates of interest, inflation rate and exchange rates) were rated zero, the growth would be 0.358. A unit increase in exchange rate would result in a decrease in growth of manufacturing sector by 0.052. The other selected determinants were found to be statistically insignificant.

4.6 Discussion of Research Findings

The purpose of current work was to find out influence of the predictor variables on manufacturing industry in Kenya. The independent variables were foreign direct investments, interest rates, inflation rate and exchange rates. Development of this sector was the dependent variable, which the study sought to explain. It was measured by quarterly contribution of the manufacturing sector to GDP. Relations between independent and dependent variables were assessed.

The Pearson model showed weak insignificant relation between independent and dependent. It showed that inflation and exchange rates had a bad correlation with the development of manufacturing industry. Although interest rate was found to have a negative correlation with manufacturing growth, the relationship was not probable.

The model summary revealed that the independent and dependent variable as depicted by are not, and account for 38.6% of changes in growth of the manufacturing sector in Kenya. It found to be fit at 95% confidence level since the F-value is 13.944. This implies that the overall model applied for this study was significant, in that it is 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 is partly in agreement with Kimotho (2015) who adopted a descriptive survey to study the effect of this model in developing the economy 2005 and 2014. He had three findings, firstly, that capital injections like FDI enable nations to accumulate capital faster i.e. it allows them bring in more inflows than outflows. Secondly, it has the capacity to create employment for educated but jobless folk Thirdly, it can able to use technology, therefore improve production of local firms. Kimotho's study finally shows the relation of the two firms.

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 previous chapter, conclusion, and limitations encountered during the study. Moreover, it recommends policies that policy makers can use. Additionally, the chapter gives recommendations for future researchers.

5.2 Summary of Findings

The study assessed how foreign direct investment contributed to the development of the manufacturing industry in Kenya. The independent variables for the study were foreign direct investments, economic growth, interest rates, inflation rate and exchange rates. The study used cross-section design to analyze and collect data. Secondary data was obtained from the CBK, KNBS and UNCTAD WIR and was analyzed using SPSS software version 21. The study used data for over a 10 year period.

The results showed a positive and insignificant relation among the variables in the data. It showed that inflation and rates of exchange have a negative correlation with growth in the manufacturing industry. Although interest rate was found to have a negative correlation with manufacturing growth, the relationship was not significant.

The co-efficient of R-square was 0.614, showing 61.4 % in differences in growth of the manufacturing industry in Kenya can be shown by the chosen variables while 38.6 percent

in differences in growth is associated with other factors not covered in this research. The study showed that independent variables had a strong correlation with growth of the manufacturing sector (R=0.784). ANOVA highlight that F statistic is significant at 5% level with a p=0.000. This model was fit to explain the relationship between the selected variables.

The regression results show that all dependent variables (foreign direct investments, rates of interest, inflation rate and exchange rates were rated at 0, growth would be 0.358. Increasing a unit in exchange rate would show in a decrease in growth of manufacturing sector by 0.052. The other selected determinants were found to be statistically insignificant.

5.3 Conclusion

This work shows the growth in manufacturing industry in the country in Kenya is negatively influenced by exchange rates. It concludes that greater exchange rates lead to a decline in growth in the manufacturing sector to a great extent. It showed that FDI had a good effect on growth of the manufacturing sector in Kenya though not statistically significant. This implies that the higher the FGDI, the higher the increase on prevailing growth rate of the manufacturing sector but not to a great extent. It further concludes that although rates of interest and inflation rates have an effect on the sector altogether growth, the effect is no great.

This study concludes that the variables chosen for study; foreign direct investments, , inflation rate and rates of exchange affect growth of manufacturing industry as they cost 61.4 percent of the differences in growth. The fact that the independent variables explain 61.4 % of changes in growth of the manufacturing sector imply that the variables not

included in the model explain only 38.6% of changes in growth of the industry. It is enough to conclude that the variables highlighted significantly affect the growth as shown summary.

Kimotho (2015) adopted descriptive survey to assess the effect of FDI on the development of the economy. He had three findings, firstly, that capital injections like FDI enable nations to accumulate capital faster i.e. it allows them to accumulate more, to invest more, thereby boosting productivity and wages. Secondly, it has capacity of creating employment for some educated folk. Thirdly, it is able to transfer technology and expertise, therefore spurring the productivity of local firms (Jacobs, 2001). Kimotho's study shows the correlation between these two variables.

5.4 Recommendations

It showed the negative and significant effect of exchange rates on manufacturing industry in the country. It suggests measures to be in place to ensure that factors which influence the prevailing levels of exchange rates are well addressed to ensure that the manufacturing sector and the economy in general is not adversely affected by the prevailing level of exchange rates. If the country can be able to manage the prevailing level of exchange rates, this would lead to a rise in the manufacturing industry and this will ultimately translate to the economy.

It showed that FDI had a positive but not significant influence on growth of manufacturing sector in Kenya. It 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 rate of inflation and interests have a negative effect on Kenya's manufacturing sector growth. It recommends them to be keen on inflation and interest rates as they affect growth of the manufacturing industry. If measures are taken to reduce the prevailing levels of inflation rate and interest rates, this would translate to growth in the manufacturing sector.

5.5 Limitations of the Study

The period selected in this study was 10 years that is from 2009-2018. There is no proof that similar results will remain the same for a longer time period. Additionally, it cannot be assessed if same findings will be beyond 2018. More time would prove more reliable since it will include cases of major economic changes like recessions and booms.

The most significant limitation for this study was the quality of the data. It cannot be concluded with accuracy from this study that the findings are a true representation of the situation at hand. An assumption has been made that the data used in the study is accurate. Additionally, a lot of inconsistency in the measurement of the data was experienced due to the prevailing conditions. The study utilized secondary data contrast to primary information. It took into consideration a few of the determinants of growth in the manufacturing sector and not all factors because of the limit imposed by data availability.

To complete the analysis of the data, multiple linear regression model was used. Because of the limitations involved when using the model like erroneous and misleading results resulting from a change in variable value, it would be impossible for the researcher to generalize the findings with accuracy. In case of an addition of data to the regression model, the model may not perform as per the previous.

5.6 Suggestions for Further Research

This work aimed to assess influence of FDI on growth of manufacturing industry in the country; it relied on data from secondary sources. A research study that focuses on first-hand collection of information is recommended for a more comprehensive 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, level of poverty and other variables. Showing the effect of each of these variables on sectors growth will enable policy makers to identify what tools to use.

The study focused on the last decade, because of more recent data. More studies should use a wider variety of data to confirm more information on the same. It was also limited as it focused on one area. Further studies should be done in others sectors as well. Finally, other models should be used to show the associations between the variables.

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APPENDICES

Appendix I: Research Data

Year	Quarter	Ln FDI inflows	Interest rate	Ln Exchange rate	Inflation rate	Growth
2009	1	10.480	8.417	4.377	16.833	0.116
	2	10.060	8.083	4.362	15.920	0.118
	3	9.744	7.750	4.334	13.393	0.121
	4	10.577	7.250	4.319	10.300	0.123
2010	1	10.221	6.917	4.337	7.850	0.112
	2	9.847	6.750	4.369	5.867	0.107
	3	9.584	6.000	4.394	4.707	0.119
	4	10.427	6.000	4.389	4.033	0.123
2011	1	10.485	5.833	4.410	4.157	0.111
	2	10.126	6.083	4.456	6.013	0.114
	3	9.915	6.500	4.533	9.020	0.119
	4	10.772	15.167	4.542	12.777	0.122
2012	1	10.458	18.000	4.432	15.827	0.106
	2	10.053	18.000	4.432	16.290	0.107
	3	9.767	15.333	4.434	14.297	0.113
	4	10.630	11.667	4.449	10.697	0.117
2013	1	10.279	9.500	4.463	7.257	0.110
	2	9.849	8.833	4.438	5.043	0.107
	3	9.592	8.500	4.469	4.563	0.111
	4	10.423	8.500	4.453	5.387	0.114

Year	Quarter	Ln FDI inflows	Interest rate	Ln Exchange rate	Inflation rate	Growth
2014	1	9.965	8.500	4.458	6.203	0.109
	2	9.570	8.500	4.469	6.827	0.108
	3	9.293	8.500	4.480	7.237	0.107
	4	10.159	8.500	4.498	6.977	0.105
2015	1	9.742	8.500	4.517	6.667	0.106
	2	9.383	9.000	4.563	6.657	0.106
	3	9.167	11.500	4.634	6.390	0.106
	4	10.008	11.500	4.629	6.437	0.104
2016	1	9.944	11.500	4.624	6.840	0.103
	2	9.530	10.833	4.615	6.590	0.104
	3	9.245	10.500	4.618	6.470	0.104
	4	10.097	10.500	4.622	6.403	0.099
2017	1	10.586	10.000	4.639	6.483	0.099
	2	10.180	10.000	4.638	7.723	0.100
	3	9.894	10.000	4.640	8.323	0.100
	4	10.739	10.000	4.638	8.153	0.094
2018	1	10.813	9.500	4.623	7.360	0.097
	2	10.397	9.000	4.613	5.683	0.098
	3	10.109	9.000	4.612	4.703	0.098
	4	10.968	9.000	4.624	4.603	0.092