IMPACT OF FOREIGN DIRECT INVESTMENT ON UGANDA’S MANUFACTURING SECTOR

By

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NOVEMBER, 2018
DECLARATION

I, SUSAN AINYO declare that this is my original work, and it has not been presented to any other institution of higher learning for the award of any academic qualification.

Signature..................................................

Date..........................................................

14th Nov 2017
This Research Paper entitled “Impact of Foreign Direct Investment on Uganda’s Manufacturing Sector” has been duly reviewed and approved by the undersigned.

Signature: .................................................. Date: 17/11/2018

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MAKERERE UNIVERSITY (COBAMS)
DEDICATION

This work is dedicated to my mother, may her Soul Rest in Peace.
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I am grateful to my family especially my father and brother for their support financially and emotionally during my studies. Am also grateful to my classmates and friends, Immaculate Ayebare, Davis Vuningoma, Francis Ahimbisibwe, Timothy Namboga, Jonah Atuha, Joan Katuhabe and Micheal Tumukunde who always encouraged me to study.

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<td>ERA</td>
<td>Electricity Regulatory Authority</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>OLS</td>
<td>Ordinary Least Squares</td>
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ABSTRACT

Acknowledging the importance of the manufacturing sector, the paper investigates the impact of Foreign Direct Investment (FDI) on Uganda’s manufacturing sector. The study used time series data of Uganda from 1990 to 2017, and the Ordinary Least Squares (OLS) technique, to advance the objective of the paper. Results reveal a significant and positive impact of FDI on Uganda’s manufacturing sector, which could be explained by the increase in productivity gains, technology transfers, introduction of new processes, managerial skills among others, as a result of the FDI. The study also finds a positive and significant impact of access to finance and exchange rate on Uganda’s manufacturing sector. This is mainly because finances are a key import in the manufacturing sector and hence should be made easier for the business community to access in order to facilitate more innovations and inventions especially in areas like agro processing to boost the manufacturing sector. Since the study finds a positive relationship between exchange rate (appreciation) and the growth of the manufacturing sector, policies aimed at currency appreciation like export promotion policies need to be implemented as a long term strategy to stimulate growth in the manufacturing sector. Lastly, the study found an insignificant impact of human capital, inflation and per unit cost of electricity on the manufacturing sector.
CHAPTER ONE

1.0 Introduction

Foreign Direct Investment’s (FDI) positive impact on the recipient economy both at the macro and microeconomic levels is recognized by most scholars. However, these effects vary depending on the sectors, the recipient country’s market size, economic and political stability. FDI is demanded in both developed and developing economies and can contribute to their development.

In developing countries, Foreign Direct Investment (FDI) is a significant source of private finance, accumulation of physical capital and complementing inadequate domestic savings (UNCTAD 2017). This is key, owing to the low private-sector capital and investment capacity in many developing countries (Word Bank 2017). Moreover, it could explain the numerous attempts by developing countries to attract FDI to their economies in the past two to three decades. This has been done through a range of policies including privatization, exchange rate liberalisation, tax holidays, and subsidies among others (Basemera, Mutenyo, Hisali, and Bbaale, 2012). The ultimate aim is to achieve economic growth, of which countries believe FDI is one of the drivers (Basemera, et al, 2012). Additionally, this notion is supported by traditional and endogenous growth models which underpin the importance of technology and efficiency improvements¹ as stimulants of economic growth.

One of the avenues through which FDI can contribute to economic growth is by stimulating the manufacturing sector and exports. This can be achieved through an upsurge in the exporting capacity of the recipient economy through productivity gains, transfer of technology, efficiencies, knowledge, managerial, marketing and technical skills. (Zhang

¹ Brought out by FDI
2001). Stimulating the manufacturing sector is important, since the sector has been recognized as essential for economic growth in low-income countries (UNIDO 2010, 2011b, and 2012a). The high rate of technical change in the manufacturing sector has the potential to create economies of scale, export competitiveness and diversification (Ocampo and Vos 2008).

In Uganda, which is the country of focus of the study, FDI inflows have been increasing over time, just like other developing countries. Moreover, Uganda’s strategy of attracting FDI can be traced to the Uganda Industrial Act of 1963, which prioritized the promotion of both foreign and local investors. This was aimed at promoting industrialization based on its backward and forward linkages, and the potential to create market for other sectors. However, the early efforts to attract FDI in Uganda were disrupted by the political turmoil from 1971 to 1986. This was characterized by a hostile investment climate, among which was the expulsion of Asians from Uganda.

To reverse the downward trend in FDI inflows, the new Government in 1986, unpacked a host of reforms. These included economic policy reforms such as foreign exchange and trade reforms, simplification of administrative procedures applicable to foreign investors, the signing and ratification of bilateral investment protection and promotion treaties and accession to various multilateral treaties facilitating FDI inflows.

Legally, an Investment code governing investment in Uganda was passed in 1991. This replaced earlier statues like the Foreign Investment Decree 1977 and the Foreign Investment (Protection) Act 1964. The 1991 code provided for the creation of the Uganda Investment Authority (UIA) to facilitate the procedures for foreign investment in the economy and promote investment in Uganda among other investment support and promotion roles.
In addition, privatization characterized the post-1985 period. Moreover, foreign investors wishing to participate in the privatization process and or invest in the country were accorded special incentives under the investment code. These included tax holidays up to 5 years, tax exemption on plant machinery, and repatriation of up to 100% of dividends. It should be noted that some of these incentives have since been eliminated or rationalized. It is therefore important to understand how these efforts have affected the country especially in terms of one of the key sectors which is manufacturing.

1.1 Problem Statement

Uganda’s development agenda as stipulated in the Vision 2040 is to transform the country from a peasant to a modern and prosperous country. To achieve this, stimulation of the manufacturing sector and exports is one of the key pillars earmarked for the journey that would enable the development of export-led and internationally competitive economy. This requires huge investment in technology, efficiencies, knowledge, managerial, marketing and technical skills. It is therefore not surprising that Uganda has implemented deliberate policies over time to attract Foreign Direct Investment aimed at stimulating the manufacturing sector. Policies including tax holidays, and tax exemptions have contributed to the increase in FDI inflows to Uganda. The inflows increased by 129.24%\(^2\) from 1994 (US $ 88.2 million) to 2003 (US $ 202.19 million). From 2004 to 2013, the FDI inflows increased by 271% from US $ 295.2 million to US $ 1,096 million respectively. However, the growth in FDI inflows hasn’t been matched by a growth in the manufacturing sector and exports. The contribution of the manufacturing sector to GDP in Uganda has averaged about 8%\(^3\) from 1994 to 2015. This is below the average 13% contribution

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\(^2\) Authors computation based on statistics from World Development Indicators

\(^3\) Based on the statistics from World Development Indicators
of the manufacturing sector to GDP of Sub-Saharan Africa (Dinh and Clarke 2012). In 2013, manufactured exports contributed only

25.7% to Uganda’s merchandise exports. This implies that Uganda is still dependent on primary exports. The underlying question therefore is; Why hasn’t the surge in FDI inflows in Uganda, stimulated the manufacturing sector and exports? This is therefore the basis of the study which aims at unpacking the impact of the FDI on Uganda’s manufactured exports.

1.2 Objective Of The Study

The study set out to examine the impact of FDI on Uganda’s manufacturing sector.

1.3 Approach To Achieve Research Objectives

The study used time series data of Uganda from 1990 to 2017 with the main variables of interest being FDI as share of GDP, the independent variable and the manufactured value added as the dependent variable. Other control variables were used. The study used a standard Ordinary Least Squares (OLS) estimation technique, to estimate the impact of FDI on the manufactured sector. Data was obtained from the World Bank, World Development Indicators, International Monetary Fund and Uganda Electricity Regulatory Authority database.

1.4 Significance Of The Study

The study is significant since, the several studies emphasizing the importance of FDI on the Ugandan economy, focused on the impact at the aggregate level of the economy. There is a gap at disaggregated level in terms of the impact of FDI on the manufacturing sector in Uganda. Additionally, identifying the relationship between FDI and manufacturing sector can be used for long term planning by policy makers. The manufacturing sector has the export potential

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4 Authors computation based on statistics from World Development Indicators
which can improve export performance and diversification of developing countries like Uganda.

Manufacturing has the potential to increase the value of a country’s resources, since expanding manufacturing production recognized as essential for economic growth in low-income countries like Uganda. Moreover, manufacturing has been a primary factor in many emerging Asian and Latin American countries, which have experienced rapid growth in productivity and employment creation, as well as technological upgrading.

Manufacturing has considerable potential to develop deeper, more dynamic, and stronger forward and backward linkages not only within the sector itself (upstream and downstream activities), but also with other sectors

1.5 Description Of The Manufacturing Sector In Uganda

The manufacturing industrial sector in Uganda consists of the production of processed foods, beverages, non-metallic minerals, wood and wood products, chemical products, leather, footwear, textiles, and wearing apparels. Although growing, the sector remains relatively small and is dominated by subsidiaries of multi-national corporations. This is largely attributed to the privatization era in the mid-1990s and heavy investment by foreign companies in sectors such as textiles, steel mills, tannery, bottling and brewing, and cement factories (Obwona et al, 2014). Consequently, the most important sectors are the processing of agricultural products (such as coffee), the manufacturing of light consumer goods, and the production of beverages, electricity, and cement. The following activities are included under these sectors: processing of meat, fish and dairy products; coffee processing; grain milling; tea processing; bakery and manufacturing of other food products; manufacturing of beverages and tobacco; manufacturing of textiles and leather products; sawmilling, printing and publishing; chemicals and chemical products;
manufacturing of plastics; manufacturing of metal products; manufacturing of furniture; and other manufacturing according to the national industrial policy (Obwona et al, 2014).

Manufacturing (both formal and informal) is one of the sub-sectors of Uganda’s industrial sector. Other sub-sectors are construction, mining and quarrying, electricity generation, and water services. While the focus here is on manufacturing, it is worth briefly highlighting the performance of other industrial sub-sectors. Construction has dominated Uganda's industrial output, contributing between 10% and 16% to GDP since 2000, followed by manufacturing, averaging 7% (Obwona et al, 2014).

The GDP at current prices (in Billions Uganda shillings) by the different subsectors under industry is as shown below in figure 1.

**Figure 1: GDP for industry at current prices in Billions of shillings**

![GDP for Industry at Current Prices](image)

*Source: UBOS statistical Abstracts (2012-2016)*
The manufacturing sector is further sub divided into formal and informal. According to the UBOS business register 2007, any firm employing above 5 people is formal and the number of employees implicitly categorizes businesses into small, medium and large. The distribution of firms by size considers the number of employees, the level of outputs or capital investment in order to categorize firms as small, medium, and large. The proportion of firms employing between 50 to 99 persons and 100 or more is extremely small, each represented by 18, 12 3 per cent respectively. This suggests that Uganda has a very small proportion of large-scale manufacturing firms (Obwona et al 2014).

This suggests that Uganda has a very small proportion of manufacturing firms. This is reflected in the low contribution of the manufacturing sector to GDP.

The contribution of the manufacturing sector and its subsectors to Uganda’s GDP from 2000 to 2011 averaging at 5% and 2% respectively as shown below in the figure 2 below.

**Figure 2: Manufacturing sector contribution to GDP at current prices**

![Graph showing the contribution of manufacturing sector to GDP from 2000 to 2015](image)

*Source: World Bank/World Development Indicators.*
From the figure 2 above we see a growing trend of contribution of the manufacturing sector to Uganda’s GDP though there was a slight decline between 2007 and 2010. The declining trend in the manufacturing sector performance could be attributed to increased import competition following the signing of the EAC treaty, as well as excess capacity at plant level, owing to infrastructural constraints according to the government report under WTO trade policy review (2013). However, from 2011, there is increased contribution with significant increases realised in the period 2012 to 2015 as shown by the positive growth trend.

The manufacturing sector in Uganda is dominated by Small- and Medium-scale Enterprises (SMEs), which account for over 90% of the establishments in the country's manufacturing sector⁵ (Republic of Uganda 2010a; 2010b).

The expansion of manufacturing activities in Uganda continues to be hampered by several obstacles. These include the factors that drive supply like weak institutional support in relation to rules and laws of customs; limited access to affordable credit, particularly the absence of financial infrastructure to support micro, small, and medium enterprises (MSMEs); inadequate entrepreneurship and managerial skills; costly, unreliable, and inadequate physical infrastructure, particularly quality transport, energy, and communication infrastructure. In addition, the lack of serviced industrial parks across the country; unreliable supply of inputs; low level of technology, lack of indigenous capability for technology and innovations mastery, all have an adverse impact productivity in manufacturing. There is also a dearth in technical/technological skills, reflected in a shortage of scientists, engineers, and mid-level

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⁵ This excludes enterprises in the informal sector, which is widespread and is believed to account for a large proportion of manufacturing output and employment.
technicians specially trained for adoption, adaptation, and diffusion of innovative technologies in the country (UBOS statistical abstract 2016).

The World Bank report on doing business (2016), measures whether the regulatory environment is more conducive to the starting and operation of a local firm. The ease of doing business ranking only shows how much the regulatory environment has changed relative to that in other economies, and Uganda is ranked 115 out of 190 countries. Nevertheless, in the year 2015/16, Uganda was among the countries that implemented reforms that made it easier to do business. This was demonstrated in the change of the doing business ranking from the average ranking of 120.44 to 115.

According to the Uganda Bureau of Statistics reports (UBOS), the distribution of firms by region shows that Kampala has the highest proportion of firms in all manufacturing subsectors except for coffee processing, grain milling, and tea processing. While the eastern region has the highest proportion of grain milling firm, the western region specializes in tea processing. Finally, the central region has the most coffee processing firms while the northern region is not specialized in any particular sector. The Kampala region dominates the chemical and chemical products manufacturing sub-sector. With regards to employment, the highest number of people in Uganda’s manufacturing sector are employed by coffee processing, chemical and chemical products.

The manufacturing firm’s legal ownership according to the report of UBOS (2007) shows that the majority consists of sole proprietors (55 percent) followed by private limited companies (29 percent), partnerships (11 percent), and others (5 percent). This demonstrated the relatively small proportion of private limited companies; therefore they face a challenge of being unable to raise capital through the capital market since most are not listed. Capital for investment has been identified as one of the limiting factors to industrial growth and expansion. This is evident
since the dominance of the sub-sector by sole proprietors implies that equity financing is the major source of capital. Furthermore, this also explains why the structure of Uganda’s manufacturing sector that is dominated by SMEs that fall under the informal category of the manufacturing sector.

The above explained structure of Uganda’s manufacturing sector is reflected in the slow and declining growth trend in the percentage of manufactured products to merchandise exports and the declining growth trend of the value added in manufactured export. The contribution of manufacturing exports to GDP as shown in figure 3 below showing performance of manufactured products in the period 2000-2015.

**Figure 3: The Performance of Uganda’s manufactured exports, 2000-2015**

![Graph showing the performance of Uganda's manufactured exports, 2000-2015](source: world development indicators)
The annual growth of the value added of Uganda’s manufactured products over the period 2000 to 2015 has been erratic, with declining growth between 2011 and 2013 to below 5 percent and then an increase from 2013 to above 10 percent. The contribution of the manufactured products as percentage of GDP shows slow growth that is relatively constant over time at around 10 percent. The share of manufactured exports as a percentage of merchandise export has increased from around 3 percent in 2000 to 34 percent in 2012, however, since then it has declined to around 25 percent in 2015.

1.6 Thesis Outline

The paper is structured as follows: the next section provides a review of existing literature on the impact of FDI on manufactured exports, theoretical and empirical framework of the study. Section three provides the methodology including the model and the data while section four presents results and discussions. Section 5 concludes the study.
CHAPTER TWO

2.0 Literature Review

The first part of this chapter highlights the theoretical literature in relation to the impact of FDI on the manufacturing sector. The second part focuses on empirical studies conducted in relation to the present study.

2.1 Theoretical Framework

FDIs have been incorporated in equilibrium trade models, for example in Markusen and Venables (1998) to show that FDI is complementary to trade, specifically, that it influences exports including manufactured exports. Kutan and Vuksic (2007) model, postulate a positive relationship between FDI and manufactured exports.

Moreover, the endogenous growth models argue that technical progression in terms of results from production of ideas is key for growth. (Romer, 1986, 1990, 1993; Lucas, 1988; Grossman and Helpman, 1991) In essence, the authors argue that, accumulation of human capital, through Research, Development and innovation, contributes to the creation of new technological knowledge. This knowledge creation, brought by FDI, allows the economy to maintain a good level of long-term growth, under conditions related to knowledge externalization. Thus, FDI can positively contribute to the economic growth of the host country by improving research and development which in return improves the manufacturing capacity and exports.

Similarly, the macroeconomic approach as identified by Kiyoshi Kojima asserts that the industries seeking for foreign direct investment identified by macroeconomic approach are trade-oriented and complement each other rather than hinder international trade. In essence, these promote the exports of the host countries.
The classical and Neo-Classical models also anchor economic growth on the stock of productive resources including capital and labour. Ricardo’s theory for example postulates that an increase in capital and labour would result in growth in output. In the Harrod-Domar model of growth, the change in capital stock (investment) determines the growth in output.

Economists like Steve Chan and Michael P. Todaro therefore argue that FDI contribute to the capital stock, technology and other capital goods which positively influence manufactured exports.

In addition to the above, there are other theories that explain FDI from a point of view of the Multi-National Companies (MNC). These include the following.

The location theory is key in explaining movement of FDI and exports. It’s argued that if extended across national boundaries, it could explain why MNCs emerge (Parry, 1980). Location theory is of two kind; “supply oriented location theory" explains that production takes place where the factor costs for production are the lowest (Dunning, 1973). Conversely, "demand oriented location theory” asserts that the location of a firm is governed by the location of its market and competitors (Dunning, 1973). Bringing the two theory together four main locational factors; raw materials, cheap labor, protected and untapped markets, and transportation costs are believed to give rise to the emergence of MNCs (Buckley, 1985).

The capital flow theory. The theory suggests that capital (financial) moves between countries in relation to differing interest rates in different countries (Hymer, 1979). It is also pointed out that interest rates would vary depending on the factor endowment ratios of labor and capital and risk premium (Hymer, 1979:2). By the same logic, it is believed that MNCs occur in countries where the return on investment is higher (Parry, 1980). MNCs are not only the transfer of capital but also, technology, management and organizational skills and these were transferred within the
firm retaining control over their use (Dunning, 1979). This can then translate into increased productivity and exports.

The eclectic theory as developed by John Dunning applies to ownership advantage, location advantage and internalization conditions. The theory is anchored on the fact that firms operating in a foreign country market incur costs of being in a foreign market including; lack of knowledge with regards to aspects such as domestic rules, institutional frameworks, people’s values, legal framework and many other cost factors. Therefore, for a foreign firm to operate in another country, it needs to have information for all the costs mentioned. Moreover, ownership advantage is a firm specific advantage that gives power to firms over their competitors (Dunning, 1993). This includes advantage in technology, in management techniques, easy access to finance, economies of scale and capacity to coordinate activities (Dunning, 1993). MNCs to fully reap the benefit of firm specific advantages; they should opt for the location advantage of the host country. The advantages will include availability of abundant raw materials, well developed infrastructures, low level of bureaucracies, skilled human resource, and lower level of wages, macroeconomic stability and prevalence of peace. Therefore, these factors determine the productivity of the FDI in as far as fostering the manufacturing growth is concerned.

2.2 Previous Studies

Various empirical studies reveal a positive relationship between FDI inflows and the manufacturing sector. In most cases, the studies present an indirect effect in terms of capital accumulation, technology transfer among others.

Hood and Young (1979) assessed the impact of the FDI in form of Multi-National Companies on manufactured exports of Least Developed countries (LDC). They argued that the impact of inward FDI and exports and the MNCs’ exporting ability in the developed countries is stronger
than in the LDCs. They further point out that the extent of influence of inward FDI on the host country's export performance is highly influenced by the host countries’ government policies but not on FDI alone.

In addition, Lin (1995) examines the impact of FDI between Taiwan and each of the four ASEAN countries (Indonesia, Malaysia, the Philippines and Thailand) from 1981 to 1992. He observed that, cumulative FDI from Taiwan to those ASEAN countries increased their exports back to Taiwan. Similarly, Leichenko and Erickson (1997) assessed the causal relationship between inward FDI inflows and manufactured export performance based on the US states level during the period of 1980 to 1991. The result revealed that inward FDI has a positive impact on future state manufacturing exports performance.

Wang (2009) contributes to the debate by analyzing the (FDI) and economic growth, with a focus on the manufacturing sector. He analyses the heterogeneous effects of different sectorlevel FDI inflows on host country's economic growth. The study used data from 12 Asian economies over the period of 1987 to 1997. The study reveals strong evidence, that FDI in manufacturing sector has a significant and positive effect on economic growth in the host economies. The bottom line is that FDI impacts the manufacturing sector positively, and it’s through the manufacturing sector, that economic growth is achieved.

Gu et al., (2008) assessed the contribution of FDI on China’s export performance based on disaggregated sectors over the period 1995 to 2005. He found out that FDI inflows had significant and positive effects on Chinese manufactured exports. Similarly, Sultan (2013) employed the Granger causality and used the Vector Error Correction Model to assess the impact of FDI inflows on Indian exports from 1980 to 2010. The study found a positive relationship between FDI and exports. However, this study analysed all exports and not only manufactured exports. Various other studies found a positive relationship between FDI and
exports. These include studies by Chow (1987), Alguacil (2002), and Wilmore (1992) among others.

Zhang (2007) examined the impact of FDI on China’s total exports from 1978 to 2004. He used a model that captures and isolates the basics of the FDI-export link. He treated FDI as an additional factor, in which the country’s export performance was determined by the factor endowments and scale economies. He found a positive impact of FDI on China’s export performance. He argued that the export promoting effects of FDI are greater than the domestic capital. However, he noted that FDI accelerated China’s exports owing to her bargaining power with multinationals and the policies. He argues that FDI doesn’t automatically translate into increased exports, without the complimentary policies.

Castejon and Woerz (2006) argue that the impact of FDI on the manufacturing exports is dependent on the stage of development of industries, and industrial pattern. This was based on the analysis of 35 OECD countries from 1987 to 2002. They stress that the role of FDI is stronger in catching up economies, especially as a driver of manufactured exports.

Similarly, Akulava (2011) used the Belarusian industrial aggregated panel data over the 2002-2009 period to assess the impact of FDI. The study reveals a very diverse FDI impact at the industrial level. The obtained results showed that the foreign capital distribution across sectors of the economy determines the FDI impact on economic performance. The results revealed a positive impact of FDI on a country’s manufacturing sector and exports.

Ekanayake et al. (2003) examined the relationship between output level, inward-FDI and exports across the developed and developing countries (Brazil, Canada, Chile, Mexico and the US) from 1960 to 2001 by using the Granger causality test. The findings are not consistent across these countries. Importantly, a two-way causal relationship between inward FDI and
exports is found in the U.S., and the existence of a one-way causal relationship which flows from exports to FDI is found in Brazil and Mexico.

Metwally (2004) tests the relationship between FDI, exports and economic growth in Egypt, Jordan and Oman, from 1981 to 2000 by using a simultaneous equation model. The findings revealed that the export of goods and services is strongly influenced by the inward FDI in these three countries. Similarly, Baliamoune-Lutz (2004) examined the causal relationship between FDI, exports and economic growth in Morocco from 1973 to 1999 by using the Granger causality test. The result shows that there is a two-way causal relationship between FDI and exports at a national level.

Anowor et al., (2013) found that FDI had a statistically significant impact on the manufacturing exports in Nigeria. They employed an econometric model using time series data from 1970 to 2011. They also found other variables like domestic investment, trade openness and exchange rate to have a significant impact on exports in Nigeria. The findings of Anowor et al., (2013) are in line with Caves (1996), who highlights a positive impact of FDI on exports. Caves (1996) attributes the positive impact of FDI to productivity gains, technology transfers, introduction of new processes, managerial skills among others. He used the country-specific time series vector auto regression model to draw up the conclusion, based on South Africa. Findlay (1978) contributes to the debate with the argument that FDI increases the rate of technical progress in the host country.

Balasurbramyan et al (1996) asserted that FDI is very important for economic growth in export promotion rather than import substitution countries. They anchored their findings on the cross-country panel data estimation using the Ordinary Least Square method. This is in line with the findings of Djankovic and Hoekman (2000), who stress the impact of FDI on manufacturing sector through development of the domestic firms. Their assertions were based on a country-
specific time series analysis of impact of FDI on exports in Czech Republic using the Ordinary Least Square method. Similarly, Borensetain et al (1998), argues that technological transfer through FDI has a more significant contribution to economic growth and exports than domestic investments. He based his findings on a case of Malaysia using a two-stage Least Squares regression time-series analysis.

Average investment is boosted through manufacturing sector output growth from FDI. This conclusion was made by De Gregorio (2003) following a time series analysis of Chile’s exports using Ordinary Least Square method. In addition, Fernandes (2011) argues that positive effects of FDI on manufacturing firms are evident through increasing the Total Factor Productivity. The conclusion was based on firm fixed effects instrumental variables regressions of FDI on manufacturing firms in Chile. However, other empirics including Obwoma C (2004) argue that the FDI spillover depend on country’s capacity to absorb foreign technological transfer to domestic firms.

On the other hand, Sharma (2000) and Nguyen et al, (2012) disagreed and argued that FDI has no impact on export growth. Additional arguments put forward by Huang (2003) and Rudolph (2006) indicates that giving significance to FDI inflows alone can’t lead to any benefits for the domestic manufactures. Instead they claim that FDI give contradictory results through the reduction of the domestic manufactures. This is also echoed by Blomstrom et al. (1999) who postulate that FDI has an impact on the economy of a country and manufacturing sector if a host country is above a certain threshold. They claim that it’s those countries that reached a certain level of development and income that are in position to absorb and diffuse new technologies. They based their arguments on a cross country panel estimation using the Autoregressive distributed lag model. Ogiogio (2005) also found a negative effect of FDI on firm productivities based on a time series analysis of Uganda’s exports.
Similarly, Jun and Singh (1996) argue that manufactured exports of a country attract FDI, not the other way round. They based their assertions on the analysis of the determinants of FDI for 31 developing countries from 1970 to 1993, using a pooled cross country and time series model. They also carried out a Granger causality test to examine the causal relationship between FDI and exports for the sampled countries. Their results contradict the assertions that FDI leads to increased manufactured exports. On the contrary, they suggest that the direction of causality is predominantly from exports to FDI, especially for high FDI recipient countries. They further indicate that export orientation (especially manufacturing exports) is ranked as the strongest explanatory variable for attracting FDI.

Khan and Leng (1997) examined the interactions among inward-FDI, exports and economic growth for Singapore, Taiwan and South Korea, at the aggregate level from 1965 to 1995 using the Granger causality test. They claimed that there is no evidence to support the causal relationship between FDI and exports in Taiwan and South Korea. Moreover, a one-way causal relationship which flows from exports to inward FDI is found in Singapore.

2.3 Conclusion

A considerable number of studies have been conducted on the impact of FDI on manufactured exports. The debate has generated interesting results with majority of studies concluding that FDI affects the manufacturing sector positively. However, a few studies as discussed above assert that FDI has a negative impact on the manufacturing sector, while others don’t find a significant impact. Some literature suggests that the impact hinges a set of conditions.
CHAPTER THREE

3.0 Research Methodology

This chapter describes the methodology in terms of estimation strategy, model specification, description and definition of the variables, sources of data and analysis.

3.1 Estimation Strategy

The study employs a standard Ordinary Least Squares (OLS) estimation technique using time series data of Uganda from 1990 to 2017. The main variables of interest being FDI as the independent variable and the Manufacturing Value Added as the dependent variable. The approach is supported by earlier works of Kutan and Vuksic (2007), Anowor et al., (2013), Balasurbramyan et al (1996) among others, who use OLS methodology to assess the impact of FDI on manufactured sector.

The model to be estimated

\[ MFV_t = f (FDI_t, HC_t, DC_t, EXR_t, Inft, TO_t, EL_t) \]

Where:

- \( MFV_t \) = Manufacturing Value Added
- \( FDI_t \) = Foreign Direct Investment inward flows/GDP
- \( DC_t \) = Access to domestic credit/GDP
- \( HC_t \) = Human Capital
- \( EXR_t \) = Exchange Rate
- \( Inft \) = Inflation rate
- \( EL_t \) = Electricity cost per unit
The model is specified as;

\[ MFV_t = \beta_0 + \beta_1 \frac{FDI_t}{GDP} + \beta_2 \frac{DC_t}{GDP} + \beta_3 HC_t + \beta_4 EXR_t + \beta_5 Inft + \beta_6 EL_t + u_t \]

Logged values are used for all variables except inflation and the equation is hence written as:

\[ \text{Log}MFV_t = \beta_0 + \beta_1 \text{Log}FDI_t/GDP + \beta_2 \text{Log}DC_t/GDP + \beta_3 \text{Log}HC_t + \beta_4 \text{Log}EXR_t + \beta_5 \text{Inft} + \beta_6 \text{Log}EL_t + ut \]

3.2 Variables

The Manufacturing Value Added is the dependent variable. As defined by the World Bank, Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. This captures the growth in the manufacturing sector of a country. Data in current U.S. dollars was obtained from the World Bank, World Development Indicators.

The Independent variables, which are the potential drivers of the manufacturing sector, as captured by Manufacturing Value Added, are summarized in table 1 below. Their expected effect and data source is shown as well.
Table 1: Independent Variables, their measurement, expected effect and data source

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Measurement</th>
<th>Expected Effect</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Direct Investment</td>
<td>Foreign Direct Investment net inflows (% of GDP)</td>
<td>Positive</td>
<td>World Bank, World Development Indicators</td>
</tr>
<tr>
<td>Human capital</td>
<td>Human Capital Index</td>
<td>Positive</td>
<td>United Nations Development Program database</td>
</tr>
<tr>
<td>Access to finance</td>
<td>Domestic credit to private sector (% of GDP)</td>
<td>Positive</td>
<td>World Bank, World Development Indicators</td>
</tr>
<tr>
<td>Inflation</td>
<td>Inflation rate</td>
<td>Negative</td>
<td>World Bank, World Development Indicators</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>Real Effective Exchange Rate based on Consumer Price Index</td>
<td>Negative/P</td>
<td>IMF, International Financial Statistics</td>
</tr>
<tr>
<td>Electricity cost per unit</td>
<td>Electricity cost per unit</td>
<td>Negative</td>
<td>Uganda’s Electricity Regulatory Authority database</td>
</tr>
</tbody>
</table>

FDI as suggested by earlier studies is one of the potential drivers of the manufacturing sector. See for example: Zhang (2007), Hood and Young (1979), Wang (2009), Anowor et al., (2013), and Gu et al., (2008). The expectation is that FDI inflows have a positive impact on manufacturing sector and exports. The data on the FDI inflows (% of GDP) was obtained from the World Bank, World Development Indicators.

Exchange Rate. Measures a country’s price competitiveness relative to its trading partners. It is included in the study to show the relative competitiveness of the economy (in this case the value of the Uganda shilling per US $). The inclusion of the exchange rate in the model is justified by the works of Sharma (2001), Mallick (2012) among others. The expectation is that depreciation of the exchange rate (Decrease in real effective exchange rate) can impact positively or
negatively on manufactured exports. The data on the Real Effective Exchange Rate based on Consumer Price Index, was obtained from the International Monetary Fund (IMF), International Financial Statistics.

Inflation. A macroeconomic variable that shows the economic stability of a given country. A low inflation rate shows that a country is economically stable, whereas a high inflation rate indicates economic instability with a poor monetary policy. The expectation is that inflation has a negative impact on manufactured capacity since it limits outputs, savings and quality of investments. This notion was supported by the works of Fisher (1991) and Smith (1994). The data on inflation was obtained from the World Bank, World Development Indicators.

Access to finance as a variable was proxied by Domestic credit to private sector (% of GDP). This includes financial resources provided to the private sector by financial corporations, like loans, purchases of non-equity securities, and trade credits and other accounts receivable that establish a claim for repayment. The financial corporations include monetary authorities and deposit money banks, as well as other financial corporations like finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies. Improved access to finance would be reflected in increased domestic credit to private sector as a percentage of credit. This was expected to have a positive impact on the manufacturing sector. The data on Domestic credit to private sector (% of GDP) was obtained from the World Bank, World Development Indicators.

Human capital is expected to positively affect the manufacturing sector. Human capital is estimated by the human capital index. The Index includes key dimensions like expected years of schooling, mean years of schooling and the education index. Data on the Human Capital Index was obtained from the United Nations Development Program database.
The cost of electricity per unit was expected to negatively affect the manufacturing sector. Literature including Dinh and Clarke (2012) has highlighted the cost of electricity as being key to the manufacturing growth. The data on the cost of electricity per unit, which was specifically measured in US Dollar per KWH, was obtained from the Uganda’s Electricity Regulatory Authority database. The data used was based on the average electricity cost per unit of the large and medium industries.

3.3 Data Analysis

To investigate the relationship between the dependent variable with each independent variable and then the significance of the coefficients, multiple regression analysis is employed using ordinary Least Square (OLS) technique. The analysis in the whole study is done using STATA v. 14
CHAPTER FOUR

4.0 Analysis and Discussion of Results

This section presents and discusses results of the analysis. The section begins by providing and discussing the descriptive statistics of the main variables that have been used in the model. This is followed by diagnostic tests on the relevance and applicability of the estimation techniques used in the analysis. Subsequent to this is the presentation of the main results of the model analysis.

4.1 Descriptive Statistics

The descriptive statistics provide a snapshot of the characteristics of the variables that have been used in the empirical analysis. This information is contained in Table 2 below which emphasises that 28 observations were made for all variables.

Table 2: Summary statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>mean</th>
<th>Std Dev.</th>
<th>min</th>
<th>max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufactured value added</td>
<td>28</td>
<td>992,251</td>
<td>818,158</td>
<td>166,329</td>
<td>2.437e+06</td>
</tr>
<tr>
<td>FDI share of GDP</td>
<td>28</td>
<td>3.107292</td>
<td>1.668</td>
<td>-.1373014</td>
<td>6.479821</td>
</tr>
<tr>
<td>Inflation</td>
<td>28</td>
<td>11.47</td>
<td>13.00</td>
<td>-3.170</td>
<td>45.07</td>
</tr>
<tr>
<td>exchange rate</td>
<td>28</td>
<td>119.7</td>
<td>30.64</td>
<td>93.74</td>
<td>239.6</td>
</tr>
<tr>
<td>human capital</td>
<td>28</td>
<td>3.060</td>
<td>1.214</td>
<td>1.150</td>
<td>4.630</td>
</tr>
<tr>
<td>Domestic Credit</td>
<td>28</td>
<td>9.167</td>
<td>4.355</td>
<td>3.530</td>
<td>15.80</td>
</tr>
<tr>
<td>Electricity cost per unit</td>
<td>28</td>
<td>.0035442</td>
<td>.0011933</td>
<td>.0011267</td>
<td>.0056431</td>
</tr>
</tbody>
</table>

4.1.1 Time Series Trends Of The Variables

Times series data often exhibits increasing or decreasing trends, with fluctuations. The trend analysis is important to determine the behavior of the variables over time. The manufacturing value added which indicates a growth in the manufacturing sector has increased over time, albeit
fluctuations. A significant increase is observed from 2000 to 2010. The fluctuations reveal non-Stationarity of the data. The trend analysis is depicted in figure 4 in the Annex.

The trend analysis for the FDI as a share of GDP also reveals non-Stationarity of data owing to fluctuations over time. There was a surge in FDI inflows as share of GDP from 1990 to 2000, which was followed by subsequent fluctuations. The trend analysis of the FDI inflows as a share of GDP is depicted in figure 5 in the Annex. All the other variables including inflation, human capital, domestic credit, real effective exchange rate and cost of electricity per unit, reveal similar trends of fluctuation as highlighted in the annex.

4.1.2 Correlation Analysis

A pair wise correlation was done to analyse the relationship between the variables. Results reveal a positive relationship between log of manufactured value added and log of FDI as a share of GDP, at the 5% level of significance. In addition, a positive relationship between log of manufactured value added and Log human capital as well as log of electricity is revealed. The analysis reveals a negative relationship between the log of manufactured value added and the log of exchange rate and inflation. Details are provided in table 3 below.
Table 3: Correlation table of the variables

<table>
<thead>
<tr>
<th></th>
<th>Log manufacturing value added</th>
<th>log FDI share of GDP</th>
<th>Log exchange rate</th>
<th>Log human capital</th>
<th>log electricity</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log manufacturing value added</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>log FDI share of GDP</td>
<td>0.5723*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log exchange rate</td>
<td>-0.5938*</td>
<td>-0.5791*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log human capital</td>
<td>0.9194*</td>
<td>0.6218*</td>
<td>-0.7664*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log electricity</td>
<td>0.8173*</td>
<td>0.5967*</td>
<td>-0.9122*</td>
<td>0.9042*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.3985*</td>
<td>-0.565*</td>
<td>0.4379*</td>
<td>-0.4624*</td>
<td>-0.4277*</td>
<td>1</td>
</tr>
</tbody>
</table>

*Significance at 5%

4.2 Diagnostic Tests

The Breusch-Pagan-Godfrey Test for Heteroscedasticity: Under the null hypothesis of homoscedasticity, P-values of 0.0006 were obtained thus null hypothesis was not rejected. The model therefore is homoscedastic.

Serial correlation was tested using the Durbin Watson tables to resolve the test. DW lies between 0 and 4. Generally a statistic around 2 indicates no serial correlation. A value of 1.3924 was obtained which is closer to 2. This indicates no serial correlation in the model.

The Ramsey test was carried out under the null of no omitted variables. Based on the P-values of 0.0077, the null hypothesis was not rejected.
### Table 4: Summary of diagnostic tests

<table>
<thead>
<tr>
<th>Test</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breusch-Pagan for Heteroscedasticity</td>
<td>0.0006</td>
</tr>
<tr>
<td>Durbin-Watson d-statistic for serial correlation</td>
<td>1.392435</td>
</tr>
<tr>
<td>Ramsey Reset</td>
<td>0.0077</td>
</tr>
</tbody>
</table>

#### 4.3 Estimation And Discussion Of Results

The estimation results are presented in table 4 below. Based on the F statistics of 0.000, the null hypothesis that all of the model coefficients are equal to 0 was rejected. This indicates the overall significance of the model and that it’s a good predictor. The R-squared for the model is 0.953, indicating that 95.3 percent of the variation in manufactured value added can be explained by the independent variables. The observations as presented in table 4 are less by 1 since, the minimum value of FDI as share of GDP was negative thus the log of the value was dropped by STATA in running the regression.
Table 5: The Impact of FDI on Uganda’s manufacturing sector

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>t values</th>
<th>P values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log fdi share gdp</td>
<td>0.101*</td>
<td>1.97</td>
<td>0.050</td>
</tr>
<tr>
<td></td>
<td>(0.0563)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log human capital</td>
<td>0.963</td>
<td>0.81</td>
<td>0.425</td>
</tr>
<tr>
<td></td>
<td>(1.182)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log domestic credit</td>
<td>2.072***</td>
<td>3.99</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.519)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inflation</td>
<td>0.00866</td>
<td>1.72</td>
<td>0.102</td>
</tr>
<tr>
<td></td>
<td>(0.00505)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log exchange rate</td>
<td>2.016***</td>
<td>3.03</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td>(0.664)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log electricity</td>
<td>-0.458</td>
<td>-0.75</td>
<td>0.460</td>
</tr>
<tr>
<td></td>
<td>(0.608)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.0985</td>
<td>0.02</td>
<td>0.985</td>
</tr>
<tr>
<td></td>
<td>(5.063)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared F</td>
<td>0.953</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent variable is the Log Manufacturing value added

As expected, FDI has a positive and significant influence on Uganda’s manufacturing sector, since results reveal it’s statistically significant at a 10 percent level. The results reveal that a one percent increase in FDI inflows as a share of GDP leads to 10 percent increase in the manufactured value added. The positive influence could be explained by the increase in
productivity gains, technology transfers, introduction of new processes, managerial skills among others, as a result of the FDI. This is key to a Low Developing country like Uganda, which has gaps in terms of capital accumulation for investments in manufacturing, limited technology among others. These findings are consistent with previous studies including Zhang (2007), Hood and Young (1979), Wang (2009), Anowor et al., (2013), and Gu et al., (2008). Zhang (2007) in his studies actually emphasized that FDI inflows have more impact on manufactured exports than domestic capital.

Access to finance which is proxied by the domestic credit as a percentage of GDP also has a positive and significant impact on Uganda’s manufacturing sector. The variable is significant at the level of 1 percent. Therefore, a one percent increase in domestic credit leads to a 2 percent increase in the manufacturing sector. This is mainly because capital is a key input in the manufacturing sector needed to facilitate investments, production inputs like labor, machinery, research, training for skills development and value addition which have a significant impact in increasing productivity in the manufacturing sector, leading to growth in the sector. This is also consistent with various literature including Dinh and Hinh T (2012) who emphasize that access to finance is very significant in stimulating the manufacturing sector of countries. They argue that manufacturing firms in Low Developed Countries are less productive mainly due to limited access to finance. Therefore improving access to finance for the manufacturing sector is key in promoting their growth.

Similarly, the effect of the exchange rate on the manufacturing sector cannot be over looked. Results reveal a positive significant impact of the real effective exchange rate on Uganda’s manufacturing sector, at the level of 1 percent. A one percent increase in the exchange rate (which signifies appreciation of the exchange rate) leads to a 2 percent increase in the manufacturing value added. This could be explained by the fact that the imports become cheaper, including the much required manufacturing capital and intermediate goods. However,
this implies that the exports of the country become more expensive which might not be favourable to the manufacturing exports of the country. The findings are consistent with literature by Ehinomen and Tomilade (2012), who argue that an appreciation is good for the manufacturing sector since intermediate commodities become cheaper. However they emphasize that at the same time, government should put a total ban on commodities that can be produced domestically. On the other hand studies by Habibus and Hossain (2003) emphasize that an appreciation is negative for the manufacturing sector since exports become more expensive and hence less competitive on the world market, which can negatively affect growth in the manufacturing sector.

The electricity cost per unit was expected to have a significant and negative impact on the manufacturing sector. However, the results show that the cost per unit of electricity is insignificant but negative in explaining variations in the manufacturing sector. This could be because manufacturing firms in Uganda usually push the cost to the final consumer. The findings are consistent with a study done by Renata et al (2013) who concluded that an increase of energy prices has not had significant malign impact on industrial sector development and export. However other studies done by Dinh and Clarke (2012), urge that the cost of electricity can be a challenge to growth in the manufacturing sector in terms of high production costs. Jason (2018) argues that manufacturers benefit from the rising cost of electricity if they can push the cost to the final consumer hence boosting their revenues. However, the rise in electricity service price has had a negative effect on many other industries, particularly those that rely on electricity inputs, experience high import competition and produce homogeneous products.

Inflation was expected to have a significant and negative impact on the manufacturing sector. However, results revealed that inflation is insignificant in explaining variations in growth in the manufacturing sector. This is consistent with a study done by Modebe and Ezeaku (2016) which
revealed that inflation had a negative and non-significant effect on manufacturing sector growth. However Bans-Akutey et al (2016) in their study found that there is negative significant link between inflation and manufacturing sector productivity in the long run.

Results also reveal an insignificant positive impact of human capital on the manufacturing value added. However, the insignificant impact of human capital on the manufacturing sector wasn’t expected. It was expected that the skill set obtained from the humancapital development, significantly impacts positively on the manufacturing sector. Never the less, the insignificance could be explained by the fact that the human capital development programs are not manufacturing sector oriented. This implies that the human capital skills acquired are employed in different sectors. This is consistent with research done by Amin & Aaditya (2008) who found that greater availability of skilled workers had a positive and significant impact on output in the service sectors. They do not find any such effect for the manufacturing sectors mainly due to the differential effect on services and manufacturing which arises because service sectors are more skill intensive.
CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATION

5.1 General Summary And Conclusion

This paper investigated the impact of FDI on Uganda’s manufacturing sector. The study used time series data of Uganda from 1990 to 2017, with the main variables of interest being FDI inflows as the independent variable and the manufactured value added as the dependent variable. Other control variables used include access to finance, exchange rate, inflation, human capital and per unit cost of electricity. The study used a standard Ordinary Least Squares (OLS) estimation technique, to estimate the impact of FDI on the manufactured sector.

The study finds that FDI has significant and positive impact on Uganda’s manufacturing sector. The positive influence could be explained by the increase in productivity gains, technology transfers, introduction of new processes, managerial skills and capital to facilitate training and innovation among others from FDI. This is key to a Low Developing country like Uganda, which has gaps in terms of capital accumulation for investments in manufacturing, limited technology among others. Foreign Direct Investments also support growth in manufactured exports which boosts growth in the manufacturing sector.

The study also finds a strong positive and significant impact of access to finance on Uganda’s manufacturing sector. The strong positive impact could mainly be because capital is a key input in the manufacturing sector needed to facilitate investments, production inputs like labor, machinery, research, training for skills development and value addition which have a significant impact in increasing productivity in the manufacturing sector.
Additionally, the findings also revealed a strong positive impact of exchange rate (appreciation) on the manufacturing sector. This could be explained by the fact that exchange rate appreciation leads to cheaper imports including the inputs to the manufacturing sector like heavy machinery and technology since people will have more dollars to afford them, directly supporting growth in the manufacturing sector. However it also means exports become more expensive and less competitive which can negatively affect manufacturing.

The insignificant impact of human capital on Uganda’s manufacturing sector could be explained by Uganda’s human development programs that are not tailored to Uganda’s manufacturing sector needs. This is also explained by inadequate skilled labor in the Country to support manufacturing through inventions and innovations.

Finally, the insignificant impact of unit cost of electricity and inflation on the manufacturing sector could be explained by the fact that the cost of electricity challenge and inflation pointed in some literature, can be offset by other significant factors like FDI and the access to finance. However increase in per unit cost of electricity is known to have a negative impact manufacturing since it increases on the cost of production hence reducing on profit margins of manufacturers which discourages investments in the Country. Literature including Dinh and Clarke (2012) has highlighted the cost of electricity as being key to the manufacturing growth.

Therefore, since the study reveals a positive and significant relationship of FDI, access to credit and exchange rate appreciation on the manufacturing sector. Therefore emphasis in ensuring growth in FDI, ease of access to credit and strengthening of the Shilling against other currencies through growth in exports could promote growth in manufacturing sector as one of the pathways to achieving the vision 2040.
5.2 Policy Implications And Recommendations

The implication of the study is that, Uganda can continue implementing policies aimed at attracting FDI, with an objective of fostering the growth of the manufacturing sector. However, complementary mechanisms can be put into place to ensure that the FDI inflows translate into manufacturing sector. The complementary mechanisms could include;

- Tagging incentives provided for FDI inflows to the manufacturing sector.

- Availing information on various potential investments in the manufacturing sector to foreign direct investors, to ensure that most of the foreign direct investments are directed towards manufacturing.

- Ensuring macroeconomic stability in order to attract more Foreign Direct Investments in the Country.

Similarly, domestic access to finance should be prioritized since it has a strong impact on the manufacturing sector in terms of capital accumulation necessary for the growth of the manufacturing sector. Therefore, deliberate efforts to promote the financial corporations including monetary authorities and deposit money banks, as well as other financial corporations like finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies are recommended. In addition, Policies that encourage financial inclusion can also be implemented order to increase access to finance.

The study finds a positive relationship between exchange rate appreciation and the growth of the manufacturing sector. Therefore, long term deliberate efforts geared towards boosting Uganda’s currency like export promotion policies can be implemented as a means of stimulating the manufacturing sector. Value addition in exports is also recommended to promote to increase the value of exports, hence boosting growth in the manufacturing sector.
5.3 Areas Of Further Research

There is need for a comprehensive cost-benefit analysis of FDI inflows to Uganda. This is informed by the fact that various incentives have been rolled out over time. However, as revealed in the current study, the FDI inflows have a significant positive impact on Uganda’s manufacturing sector. It would be interesting and worthwhile to extend the analysis to other sectors like Agriculture and Services sector, while looking at the cost-benefit analysis.
REFERENCES


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ANNEXES

Trend of manufacturing value added in Uganda from 1980 to 2017

Source: World Development Indicators

Time series trend of FDI as share of GDP in Uganda from 1980 to 2017
Source: World Development Indicators

Time series trend of inflation in Uganda from 1980 to 2017

Source: World Development Indicators

Time series trend of Uganda’s human capital from 1980 to 2017
Source: World Development Indicators

Trend of Access to domestic credit in Uganda from 1980 to 2017

Source: World Development Indicators
Trend of Uganda’s Real Effective Exchange Rate from 1980 to 2017

Source: International Monetary Fund

Trend of Uganda’s Electricity cost per unit
Source: Uganda Electricity Regulatory Authority