

Impact of Exchange Rates on Foreign Direct Investment in Tanzania

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ABSTRACT

This study examines the impact of the exchange rate on Foreign Direct Investment (FDI) in Tanzania. The secondary time series data was obtained from World Bank, World Development Indicators (WDI) and from the Central Bank of Tanzania for the period 1995 – 2017. Using correlation and regression analyses, the findings reveal that there is strong positive relationship between real exchange rates and FDI inflows in Tanzania. Moreover, the findings reveal that the depreciation of Tanzanian Shillings attracts FDI to the country. In addition, inflation, capital formation, GDP and the interest rate are significant determinants of FDI in Tanzania.

Keywords: Real Exchange Rate, Foreign Direct Investment, Economy of Tanzania.

ÖZ

Döviz kurlarının ülkelerdeki makroekonomik değişkenler üzerinde birçok etkisi var. Bu araştırmanın amacı, reel döviz kurlarının Tanzanya'daki Doğrudan Yabancı Yatırımlar (DYY) üzerindeki etkilerini incelemektir. Bu çalışma ikincil zaman serileri verilerine dayanmaktadır. Bu amaçla 1995 - 2017 döneminde 23 yıllık döviz kurları ve DYY verileri kullanılmıştır. Veriler Dünya Bankası, Dünya Kalkınma Göstergeleri (DYY) ve Tanzanya Merkez Bankası'ndan alınmıştır. Çalışmada döviz kurları ile DYY arasındaki ilişkiyi incelemek için korelasyon ve regresyon analizi kullanılmıştır. Bulgular, gerçek döviz kurları ile Tanzanya'daki doğrudan yabancı yatırım girişleri arasında güçlü bir pozitif ilişki olduğunu ortaya koymaktadır. Dahası, bulgular Tanzanya Şilillerinin değer kaybının ülkeye doğrudan yabancı yatırım çektiğini ortaya koymaktadır. Ayrıca, enflasyon, sermaye oluşumu ve faiz oranı, Tanzanya'daki doğrudan yabancı yatırımın önemli belirleyicileridir.

Anahtar Kelimeler: Gerçek Döviz Kuru, Doğrudan Yabancı Yatırım (DYY), Tanzanya Ekonomisi.

DEDICATION

This research project is dedicated to my beloved wife, Asha Nassib Ali, my family, and my grandmothers Mtumwa Idd Mwaadini and Fatma Bakari Juma. They have supported me morally and materially from the lowest level of my education up to this date. Their contributions have enabled me to attain high education and they have helped me to make the way I am today. Thanks also go to my sponsor the Ministry of Finance and Planning Zanzibar.

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LIST OF ABBREVIATIONS

BOT	Bank of Tanzania
EAC	East Africa Community
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
NBS	National Bureau of Statistic – Tanzania
OECD	Organization for Economic Co-operation and Development
PPP	Purchasing Power Parity
RER	Real Exchange Rate
TIC	Tanzania investment Centre
TOT	Term of Trade
TRA	Tanzania Revenue Authority
UK	United Kingdom
US	United States
ZIPA	Zanzibar Investment Promotion Authority

Chapter 1

INTRODUCTION

1.1 Background

International investment is becoming increasingly important for the economic development of numerous countries (World Bank, 2018). FDI has made an important contribution to the long-term growth of Tanzania's economy. FDI plays a significant role in the economic growth of developing countries. FDI not only plays an important role in the capital formation of developing countries but it also enables the transfer of technology and innovative skills from developed to developing countries. Currently, the attraction of foreign investments toward production is one of the main concerns of several countries (BOT, 2018). However, foreign investors are motivated to invest in a country if there is the prospect of making long-term profits (Mortal and Zakari, 2017).

Generally, the host countries offer many incentives to foreign investors in order to attract more FDI. This attraction can be from both inside and outside the country. The inflow from an outside source can be useful for the country's development (Jeon et al, 2008). In many countries, especially a developing country like Tanzania, due to the lack of finance and capital to execute developmental projects, the government needs to attract foreign investors to facilitate infrastructural development.

Although, there are some vital tourist attractions in Tanzania like the highest mountain in African, the biggest lake across East Africa, numerous national parks, the center of the slave trade in terms of history as well as fertile land for agriculture and farming, the major foreign investments have been diverted to mining projects. There are many factors influencing the investment decisions of foreign firms in certain countries. Exchange rates, interest rates, balance of payment (BOP), government debt, terms of trade (TOT), political stability, economic performance, recession and speculation are some of the factors (BOT, 2018).

1.2 Research statement

During 1995, the exchange rates opened up in Tanzania. However, it is doubtful to say if this liberalization has a significant contribution in terms of attracting FDIs. Potentially, FDI has a positive contribution in terms of the country's economic growth (BOT, 2018). Foreign investors want to achieve profits in the long-run (Ashwini, 2003). The exchange rate regime is one of the determinants of a country's macroeconomic stability in combination with the monetary policy undertaken to deal with inflation. The floating exchange rate regime in Tanzania has been characterized by considerable volatility, fluctuating between a historical low and high in recent years against foreign currencies (BOT, 2018). Moreover, the exchange rate is frequently altered intentionally or unintentionally through monetary policies to allow the economy to compete globally. Studying the relationship between exchange rates and FDI has become a major academic responsibility (Cushman, 1985).

Many studies have been carried out in different countries, including sub-Saharan countries with mixed findings, determining that exchange rate fluctuations have major effects on FDI on different sectors. It would be interesting to conduct a study on

Tanzania to learn how exchange rates affect the FDI flows. This research, therefore, is aimed at filling in the research gap by answering the following question: “What is the impact of exchange rates on FDI in Tanzania?”

1.3 Objective of the study

The main objective is to examine the impact of exchange rates on FDI in Tanzania.

The specific objectives include the following:

1. To study the trends of the exchange rate and FDI in Tanzania from 1995 to 2017.
2. To examine the impact of real exchange rates on FDI inflows in Tanzania. How do the fluctuations of the real exchange rate affect the FDI inflow in Tanzania?

1.4 Significance of the study

The main significance of this study is the fulfillment of the requirement for the awarding of a Master’s Degree in Business Administration in the Eastern Mediterranean University (EMU). Furthermore, the study will help to provide knowledge that can help the policy makers in Tanzania to appreciate the significance of exchange rates while coming up with monetary policies that may deliberately influence the flow of FDI.

Moreover, academic researchers dedicated to the study of FDI inflows in the country will benefit from this empirical study focused on impact of exchange rates on FDI. It is important to note that no study previously has carried out a similar analysis in Tanzania.

Chapter 2

LITERATURE REVIEW

2.1 Economic overview of Tanzania

Tanzania has sustained relatively high economic growth over the last decade at an average of 6 to 7% a year. The poverty rate in the country has dropped. Despite the lower poverty rate, the number of poor people has stagnated due to the high population growth. The country's overall population was about 55 million in 2016. The national poverty rate declined from 34.4% in 2007 to 28.2% in 2012, and then to 26.8% in 2016 (World Bank, 2019). The following are some of economic indicators of the country.

2.2 Exchange rate

The exchange rate is a price of a nation's currency in terms of another country's currency. The Foreign Exchange Market (FEM) is a special place where the currency of one country is exchanged with another. The Tanzania Foreign Exchange Market (FEM) contains the Central Bank, Commercial Banks and Bureau de Change Shops only. Exchange Rate Fluctuation (ERF) occurs when the value of one currency is increased or decreased in terms of the value of the other currency (BOT, 2018). A high demand for a particular currency increases the value of that currency. In turn, an increase in the supply of particular currency lowers its value. The value of currency may fluctuate daily, weekly, monthly, quarterly, half yearly or annually with the changing market forces of supply and demand for currencies from one country to another. The exchange rate fluctuation (ERF) in Tanzania has been problematic in past decades (BOT, 2018).

2.3 Interest Rate

Interest rate is the price paid to borrow or lend money. Sometimes the interest rate is referred to as the cost to rent money. Therefore the interest rate is the cost of holding money (BOT, 20180). The interest rate is the most important factor affecting currency exchanges. The Central Bank of Tanzania is responsible for making decisions on the interest rate and the Bank of Tanzania's official interest rate is the discount rate (BOT, 2018). Any change in the interest rate affects the currency's value and the dollar value exchange rate. In general, a higher interest rate increases the value of money of the country while the other factors remaining constant. In addition, a lower interest rate decreases the value of money of the country most of the time (World Bank, 2018).

Increasing the interest rate makes the country's currency more appreciate because a higher interest rate provides higher rates of return to lenders. The benchmark interest rate in Tanzania was last recorded at 7%. The interest rate in Tanzania averaged 12.02% from 1972 to 2019. The highest interest rate of all time reached 67.50% in December 1994 while the lowest was 3.70% in October 2009 (World Bank, 2018).

2.4 Inflation rate

Achieving sustainable economic growth while keeping inflation stable is one of the main goals of any country in the world. Achieving this aim will improve the living standard of the citizens in the country. The changes in market inflation influence the changes in the currency exchange rate. When inflation is low, the prices of goods and services in the country are more stable most of the time (World Bank, 2018). The annual inflation rate in Tanzania, on average, has been 7.09% since 1999 up to 2018. The highest inflation rate was 19.8% in December 2011. A high inflation rate generally

leads to the depreciation of the country's currency. Thus, theoretically, the higher inflation periods coincide with periods of lower currency value (World Bank, 2018).

2.5 An overview of foreign direct investment in developed countries.

Foreign direct investment is defined as cross border expenditures to acquire or expand the corporate control of productive assets. FDI has grown dramatically as a major form of international capital transfer over the past decade (Froot, 1993). Global foreign direct investment (FDI) flows fell by 23 % to \$1.43 trillion. This is in stark contrast to the accelerated growth in GDP and trade. The fall was caused in part by a 22 % decrease in the value of cross-border mergers and acquisitions . But even discounting the large one-off deals and corporate restructurings that inflated FDI numbers in 2016, the 2017 decline remained significant. The value of announced greenfield investment an indicator of future trends, also decreased by 14 %. Inward FDI flows to developed economies fell sharply, by 37 %, to \$712 billion. Cross-border Mergers and Acquisitions registered a 29 % decrease, with fewer of the megadeals and corporate restructurings that shaped global investment patterns in 2016. The strong decrease in inflows was in large part the effect of a return to prior levels in the United Kingdom and the United States, after spikes in 2016 (UNCTAD, 2018).

2.6 Overview of foreign direct investment in developing countries

Flows to developing Asia remained stable, at \$476 billion. The region regained its position as the largest FDI recipient in the world. FDI to Latin America and the Caribbean rose 8 per cent to reach \$151 billion, lifted by that region's economic recovery. This was the first rise in six years, but inflows remain well below the 2011 peak during the commodities boom. FDI remains the largest external source of finance for developing economies. It makes up 39 % of total incoming finance in developing

economies as a group, but less than a quarter in the LDCs, with a declining trend since 2012 (UNCTAD, 2018).

It is not surprising that there has been a lot of discussion about Africa's apparent lapse in attracting FDI. Like other parts of LDCs, Africa's regional and national FDI inflows are highly uneven. In 1998, for example, 32% of Africa's FDI went to North Africa (UNCTAD, 2016). Of the seven North African countries that received FDI, Algeria, Egypt, and Tunisia received the most. This represented 84% of North Africa's FDI and 27% of Africa's. Egypt alone accounted for 41% of FDI flows to the region, which represents 13% of the FDI flow to Africa (UNCTAD, 2016). West Africa, with the second highest share, attracted 26% of FDI flows to Africa in 1998 (UNCTAD, 2016). Within this region, Nigeria accounted for 68%, which is 18% of the FDI flow to Africa. Other countries that have accounted for significant shares in the FDI flow to Africa include South Africa, Angola, and Morocco, which accounted for 19%, 10%, and 7%, respectively, over the period 1995-1999 (UNCTAD, 2016). A few other countries (e.g. Lesotho, Mozambique, Uganda, and Tanzania) have also improved their performance in relation to attracting FDI over the last decade. Other countries (e.g. Gabon, Libya, Mauritania, and Somalia) have not improved at all at attracting FDI (Musila et al, 2006). Tanzania is the leading country in East Africa in terms of the inflow of FDI (World Bank, 2018).

2.7 The relationship between FDI and economic growth in developed countries

Theoretically, the literature seems to suggest that FDI increases economic growth through capital accumulation, and incorporation of new inputs and foreign

technologies that leads to productivity and efficiency gains by local firms. (Anochiwa, et al, 2018). However the empirical evidence on the relationship is not unanimous.

Different scholars examined the nexus in both developed and developing countries and submit diverse findings. For instance, Choe (2003), examined the impact of FDI on economic growth over the period 1971-1995 and found that the FDI granger causes economic growth in developed countries. Acaravci and Ozturk (2012), found that there is a positive relationship between FDI, export and economic growth in four countries among of the OECD countries. Abdul et al, (2017), examined the impact of FDI on economic growth in Singapore for the period 1970 – 2013. The result showed that FDI exhibits positive impact.

On the contrary some studies opposes the hypothesis that FDI has positive impact on economic growth in developed countries. For examples, Agosin and Machado, (2005), found that there is a negative relationship between FDI and economic growth in developed countries. The study of Acaravci and Ozturk, (2012), found that the relationship between the FDI and economic growth among ten OECD countries, six countries have a negative relationship considering the period from 1995 to 2008.

2.8 The relationship between FDI and economic growth in developed countries in developing countries

Few studies are reviewed concerning the association between FDI and economic growth. Antwi et al (2013) used OLS test to measure the impact of FDI to economic growth and the result showed that there is a positive relationship between FDI and economic growth in Ghana. Similarly, Seiko (2016) used dynamic GMM estimator to investigate the impact of FDI to economic growth in 14 Eastern Africa and found the

relationship between FDI and economic growth is positive. Sunde (2017) found that the relationship between FDI on economic growth in South Africa is a positive. Anachiwa (2013) on his study concluded that FDI is positively related to economic growth and human capital in Nigeria. Khaliq and Noy (2007) used 2SLS to examine the impact of FDI on economic growth and the result showed that the FDI promotes economic growth in Indonesia.

Contrarily, Kentor, (1998) used OLS regressions to examine the interactions between FDI and GDP in less developed countries. The result revealed that there is an inverse relationship between FDI and GDP. Adams, (2009) examined the interaction among the FDI, private investment and economic growth in 42 less developed countries. The findings showed that there is negative relationship among the variables. Jilenga et al, (2016) concluded that there is a negative relationship between FDI and economic growth in Tanzania. Therefore, the determinants of FDI, the benefits and challenges of FDI in Tanzania are discussed below.

2.9 Factors that make Tanzania attractive to Foreign Direct Investors

The political stability of the country is one of the most important factors attracting FDIs to Tanzania. The political situation and performance of the country is very stable compared with its neighboring countries like Kenya, Rwanda Uganda, Ethiopia, and Burundi. There is no violence before, during and after the elections in Tanzania. Meanwhile, the neighboring countries have been experiencing political crisis, social unrest and humanitarian crisis over the years (UNCTAD, 2018).

The second factor is the availability of natural resources like the gas discovered across the country. This helps investors to use gas instead of electricity and charcoal in their

production. As a result, the cost of production reduces because gas is cheaper than any other energy resource in production. On the other hand, Tanzania competes with Mali, which is Africa's largest gold producer and it is in third position in the world. At the same time, there is Tanzanite, which is a very special diamond produced in Tanzania only. The availability of diamond is another factor that influences FDI in Tanzania. The results showed that 7,060,000-ounces of ore is being processed monthly (BOT, 2018).

The Foreign Investment policy related to the foreign Investors is very encouraging. Through the Tanzania investment window, investors can apply and register their company and obtain their investment certificates, work permits and exemptions from tax. All of this can be done through the internet and it can actually facilitate the contract between the foreign investors and the government. Hence, it helps the investors to start their registration from anywhere in the world. They do not need to be in Tanzania to initiate their investment (BOT, 2018).

2.10 Benefits of Foreign Direct Investment in Tanzania

It is expected that FDI creates employment. The investors and companies employ many Tanzanian skilled and non-skilled workers as lawyers, accountants, cashiers, marketer, drivers, gardeners, human resource staffs, receptionists and the like depending on the company (Habib et al, 2013).

Another benefit of FDI in Tanzania is the increase in foreign exchange reserves. When foreign companies from the US invest in Tanzania, they exchange dollars for Tanzania shillings in order to buy land and equipment and to pay wages, thus the foreign exchange reserve increases (Ali & Malik, 2017).

The foreign companies may introduce new technologies and train local personnel after they have been working for several years. Thus, the foreigners transfer their knowledge to the local people. This happens when the employee leaves and establishes his or her own enterprise or when they work for another local company (Lee, et al, 1998).

FDI creates a new export market. This occurs through the forward vertical foreign direct investment process. For example, the mining companies that invest in Tanzania sell gold, diamonds and tanzanite outside of the country (Rahmadi & Ichihashi, 2012).

FDI increases government revenue through the taxation charged by the government to the companies. In Tanzania, a government agent collects taxes. The Tanzania Revenue Authority is responsible for charging and collecting tax on behalf of the government. Normally, the authorities charge 30% of the companies' annual earnings (BOT, 2018).

Lastly, through investment in the tourism sector, the country becomes more popular around the world. For example, Italians invest in the construction of hotels of different classes, including five star hotels and three star hotels. Thus they make the country popular around the world through the advertisement of the hotels (BOT, 2018).

2.11 Challenges of Foreign Direct Investment in Tanzania

Tanzania is one of the developing countries in East Africa trying to attract FDI. Even though a number of countries attract investment, Tanzania is among the countries that has a high tax rate at almost 30%. This is one the challenges for investors. Taxes actually lower the company's profits so investors try to find a country that has a low tax rate (BOT, 2018).

Poor communication in the context of infrastructure, sewage problems, inefficient transportation systems and an inadequate electricity supply hinders the creation of a positive environment for investments in Tanzania. For example, an inadequate road network and an epileptic electricity supply that can sometimes be cut-off for days poses a major challenge for investments in Tanzania (BOT, 2018).

Infrastructure is necessary for a country's development and a lack of it increases the cost of investments. Firms have to construct some of the infrastructure to facilitate their businesses. Government interaction is another challenge for investors in Tanzania. It is clearly seen in the conflict between foreign investors with the government in 2018. For instance, the Acacia, Symbion Power and Eco Energy have filed arbitrations against Tanzania in international courts over soaring business relations. These cases have yet to start but the firms are claiming millions of dollars in compensation (Mbani, 2017).

The conflict between the construction company from Japan and the government is another example. In 2016, the firm went to court in the United States and sued the Tanzanian Government to enforce the payment of compensation of \$ 60 million dollars (Tsh 130 billion) against Tanzania over a 2009 road construction dispute. The International Chamber of Commerce in London was the intermediary for arbitration, pitying Konoike and the Tanroads agent concerning the Tanzania roads (Mbani, 2017). The dispute occurred during the construction of the Manyoni to Singida roads. Finally, the government paid a \$60 million dollars to the Konoike as compensation for breaking the contract. In the same period, they paid \$ 38 million dollars to Stirling Civil Engineering of Canada. The Tanzanian government paid the money when the Canadian company seized a new Bombardier plane bought by the government for Air

Tanzania. The Canadian company was ejected from a road project in Dar Es Salaam for going against the rules of the contract (Mbani, 2017). Corruption and poor governance has been found by some government leaders. For example, Tanzanian Prime Minister Edward Lowassa tendered his resignation after being implicated in an energy deal corruption scandal in February 2008 (Ntetema, 2008). This makes the citizens worry about the country's resources and they feel that some of the government leaders are not patriotic. They use their power within the corporations of foreign companies or investors in order to exploit the resources of the country.

2.12 Theoretical framework of the study

The theoretical background of this study is based on Blonigen's model (1997) which explains the link between the exchange rate movement and FDI. According to Blonigen, there is a linkage between the exchange rate and FDI, stating that "short run fluctuations in FDI flow follow movements in the exchange rate". In the model, Blonigen (1997, p.449) maintains that the "casual empiricism of the exchange rate movement of the dollar in the 1980's reveals a possible correlation between a depreciating dollar and boom periods. The "acquisition FDI may be correlated with the exchange rate movements supporting foreigner investors in buying assets and technology for a cheap price in the U.S when the dollar is weak." Hence, the fluctuations of exchange rate in the country significantly affect FDI. Therefore the above study is relevant in terms of explaining the impact of the exchange rate in Tanzania. It has therefore been adopted in this study.

2.13 Empirical literature review

The debate on the impact of exchange rates on FDI is a long-standing one. There have been mixed revelations from many previous studies as to whether there is a positive or negative relation between exchange rates and FDI (Cushman, 1985). In different

countries, some studies lend their support to the hypothesis presented in this thesis while others question the potency of said hypothesis.

In an attempt to support the impact of the exchange rate on FDI argument, Cushman (1985) analyzed the annual levels of FDI in the US and the other five major industrial countries (Canada, France, Germany, Japan and the United Kingdom). Through empirical tests, he concluded that the appreciation of the real exchange rate of a given country has a positive effect on FDI (Cushman, 1985). Cushman (1985) found that the real exchange appreciation and FDI flows are in the same direction in his analysis. Goldberg and Kolstad (1994) found that the appreciation of the exchange rate has a small significant impact on FDI, even though the intensity of the exchange rate fluctuation has a positive effect on FDI. Udomkerdmongkol et al (2006) documented that there is positive relationship between the real effective exchange rate and FDI. The devaluation of the real effective exchange rate attracts foreign direct investment in the US in the data period 1990 - 2002. Becker and Hall (2009) concluded that the increase in the covariance of the Euro and the sterling in the European Monetary Union influenced foreign investment from the Euro area coming into the UK. Nagubady and Zhang (2011) indicate there to be a positive influence from the depreciation and volatility on the real exchange rate of the host country on the bilateral FDI between the US and Canada. Kogut and Chang (1996) found that the movement of the exchange rate is the main key determinant of FDI for Japanese electronics firms in the US.

Meanwhile, the findings of Baek and Okawa (2001) documented that an appreciation of yen against the both dollar and the Asian currencies was increasing in FDI by Japanese investors in the manufacturing sector of Asia. The study of Combes et al, (2011) and Jeon et al (2008) showed the presence of a significant relationship between

the exchange rate of the host country and FDI inflows. The studies further revealed that the uncertainty of the exchange rate in Japan is positively related to FDI in the countries of South Asia as in the study by Gottschalk and Hall (2008). Dhakal et al (2010) examined the effect of exchange rate on FDI in China, Indonesia, the Philippines, South Korea and Thailand. This is because these countries have continued to attract considerable FDI inflows while also experiencing a great deal of volatility in exchange rates. Dhakal et al (2010) submitted that exchange rate volatility has favorable effect on FDI in their sampled countries. There is significant relationship between FDI inflow and exchange rates fluctuation in the host country (India) documented by Khandare (2016). Bilawal et al (2014) investigated the impact of exchange on FDI in Pakistan. Their findings conclude that there is a positive significant relationship between the exchange rate and foreign direct investment. The devaluation of Pakistan's currency has positive influence on FDI inflow. Crowley and lee (2003) searched and found that there is a weak existence of association between the volatility of the exchange rate and FDI if the exchange rate fluctuation is low. However, it is strong when the fluctuation is excessive.

The study of Ogun et al (2012) found that there is a statistically significant relationship between the real exchange rate and FDI in Sub-Saharan Africa. Mortal and Zakari (2017) examined the relationship between foreign exchange rate and FDI and the impact of FDI on gross domestic product (GDP) in Nigeria. Mortal and Zakari (2017) concluded that there is a strong positive relationship between the foreign exchange rate and FDI and a weak positive relationship between FDI and Gross Domestic Product (GDP). Suliman et al (2015) examined the Exchange Rate and Foreign Direct Investment (FDI) in Sub-Saharan Africa and found that the depreciation of the real

exchange rate draws more FDI to Sub-Saharan African countries. Otieno (2012) found that the impact of the exchange rate fluctuation on FDI in Kenya is significant and they noted that if there is an increase in exchange rate fluctuation, then this leads to an increase FDI inflow even though the impact is weak.

On the other hand, some studies have opposed the hypothesis that “exchange rate fluctuation has a positive impact on Foreign Direct Investment”. For example, the study of Ruiz, Isabel and Pozo (2008) examined the exchange rate and the US direct investment into Latin America. The study revealed that exchange rate uncertainty has a negative impact on US investment flows into Latin America. Vita and Abbott (2007) showed that there is strong negative relationship between the exchange rate and FDI flows into the UK. On the other hand, the level of the real exchange rate is found to have a statistically insignificant effect on FDI. The study of Khandare (2016) revealed that there is negative correlation between the exchange rate and FDI in China through the regression analysis of the data between 1991 and 2014. The findings of Kiyota and Urata (2004) found there to be an inverse relationship between the volatility of the exchange rate and FDI. However, the appreciation of yen attracts FDI in Japan. Erdal (2002) revealed that while Turkey offers several location advantages to foreign investors in terms of market size, infrastructure, the openness of the economy and market attractiveness, the exchange rate and economic instability has hindered her efforts to harbor a much higher volume of FDI.

Fatemeh et al. (2014) concluded that there is a significant and inverse relationship between the exchange rate fluctuation and FDI in Iran. The research hypothesis was analyzed based on the time series data for the period from 1995 – 2012. Ibrahim and Omar (2017) examined the influence of the exchange rate on FDI in Somalia. The

study concluded that there is a negative effect of exchange rate fluctuations on FDI and that there is a significant positive relationship between inflation and domestic investment on FDI. The work of Jin and Zang (2013) revealed that there is negative correlation between FDI and the real effective exchange rate through the regression of data over the period of Jan 1997 through to Sept 2012. In the long term, the mutual influence between the two variables is significant. Nyarko and Amposah (2011) analyzed and found that there is no significant relationship between exchange rate regimes and FDI in Ghana. According to Fontagné et al (2001), there is a negative effect of exchange rate volatility on FDI in developing countries.

The different reviews mentioned above show that, for both developed and developing countries, there are mixed results concerning the analysis of the impact of exchange rates on FDI. Although in East Africa, only in Kenya was similar research conducted. There is no similar study for Tanzania. This research is the first to be conducted in Tanzania and it can be useful to decision makers and government institutions such as the Tanzania Revenue Authority, the Bank of Tanzania, the Tanzania Investment Centre, the Zanzibar Investment Promotion Authority and Investors. This research can be used as a reference for further studies.

Chapter 3

METHODOLOGY

3.1 Research Methodology

A research methodology is a way of scientifically solving the research problem. This chapter sets out the direction on how the study was conducted, including the design of the study, the target population, the type of study, the selection of the study area, the sample size and sample techniques, the nature and source of the data as well as the data collection and analytical methods.

3.2 Design of the Study

A research design is the arrangement of conditions for the collection and analysis of the data in a manner that aims to combine relevance with the purpose of the research (Kotha, 2004). The design of the study is an explanatory statistical study aimed to examine the impact of exchange rates on FDI in Tanzania. This study used time series secondary data to analyze the effect of the exchange rate fluctuations on FDI inflows in Tanzania from 1995 up to 2017, which covers 23 years. 1995 is the year that many things started in Tanzania, including first election of the multiparty system. This selected period enables us to have a representative analysis of data for both the FDI inflows and exchange rates. This was thus considered to be an appropriate data sample to use to draw reasonable conclusions.

3.3 Target Population

The target population of this study is all of the sectors of the Tanzanian economy. The data about FDI and the exchange rates was obtained from the Bank of Tanzania, the Tanzania Revenue Authority (TRA), the Tanzania Investment Centre (TIC) and the Zanzibar Investment Promotion Authority (ZIPA). For the foreign exchange rate, the yearly average of the real exchange rates was used and for FDI, it was the net disbursements to Tanzania for each year that was the focus.

3.4 Sample Size

The sampling frame for this research is based on the annual time series data related to the independent and dependent variables from 1995 to 2017. The sample of this study is based on the data that is available on the real exchange rate and FDI on the World Bank open data website and the Central Bank of Tanzania respectively.

3.5 Nature and Sources of Data

Data is very important for research and the nature of the data in any study depends entirely on the objectives and the type of the research (Onwumere, 2005). To conduct this research, the secondary data of the exchange rates and FDI inflow was collected. This research is designed to examine the exchange rate trends in a floating exchange rate regime, which prevails to this date. Thus, time series data was collected from 1995 to 2017. The data started in 1995 because the floating exchange rate regime was adopted in Tanzania in that year and it has not changed since then.

The exchange rates data were extracted from the Central Bank of Tanzania while the FDI inflow data and all the control variables were obtained from the World Bank open data website (World Development Indicators). This study focuses on observing the

correlation and regression analysis in order to examine the impact of the real exchange rate on FDI.

3.6 Selection of the Study Area

This study was conducted in the United Republic of Tanzania. Tanzania is the leading destination of FDI in the East African Community (EAC) from 1995 to 2015 (World Bank, 2018). The importance of FDI in terms of boosting Tanzania's economic growth is enormous.

The economic growth of the country reveals that Tanzania is yet to exploit the full potential of its GDP. Through FDI, there are many things achieved such as the development of infrastructure, road maintenance and the improvement of communication systems and so on (BOT, 2018).

This research is the first study conducted in Tanzania and it can be useful for decision makers and government institutions such as the Tanzania Revenue Authority, the Bank of Tanzania, the Tanzania Investment Centre, the Zanzibar Investment Promotion Authority and Investors.

3.7 Data Analysis

To evaluate the impact of the exchange rates on FDI, descriptive and inferential analysis was used. The variables for the analysis are the yearly exchange rates and FDI net flows to Tanzania over the 23 year period from 1995 to 2017. The period was chosen based on the data availability in order to capture the flexible exchange rate regime adopted in 1995. To analyze the impact of the exchange rates on FDI, correlation and linear regression analysis were used. The linear relationship between exchange rate and FDI has been specified in the following model.

$$FDI = f (EXR, CPI, GCF, INTR, GDP) \quad (1)$$

It is assumed that FDI is a function of the exchange rate values (EXR) as in Equation (1).

$$FDI = \beta_0 + \beta_1 EXR + \beta_2 CPI + \beta_3 GCF + \beta_4 INTR + \beta_5 GDP + \varepsilon \quad (2)$$

FDI is the dependent variable and EXR, CPI, GCF, INTR are the independent variables. This relationship is expressed in Equation (2).

FDI = Foreign Direct Investment

EXR = Real Exchange Rate

CPI = Inflation rate (consumer price index)

GCF = Gross capital formation

GDP = Gross Domestic Product

INTR = Interest rate (Lending rate)

β_0 is the interception of Equation (2), $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the coefficients of the independent variables while ε is the error term.

Hypothesis: The value of the real exchange rate has a significant impact on Foreign Direct Investment in Tanzania.

Null hypothesis: The values of the real exchange rate do not have a significant impact on Foreign Direct Investment in Tanzania.

Chapter 4

ANALYSIS

4.1 Trend Analysis

Table 4.1. Trends in FDI and the real exchange rate

YEAR	Foreign direct investment in Million Dollars (FDI)	Real exchange rate
1995	119.07	562.5
1996	150.89	606.5
1997	157.89	619.62
1998	172.31	676.08
1999	516.7	979
2000	516.7	805
2001	516.7	917
2002	549.27	976.65
2003	395.57	1063.62
2004	442.54	1042.96
2005	935.52	1165.51
2006	403.04	1261.64
2007	581.51	1132.09
2008	1383.26	1280.3
2009	952.63	1313.29
2010	1813.2	1453.54
2011	1229.36	1566.66
2012	1799.65	1571.62
2013	2087.26	1589.29
2014	1672.55	1736.37
2015	1604.58	2157.81
2016	1365.39	2178.26
2017	1180.21	2232.31

Source: World Bank World development indicators (WDI)

FDI is the investment by an individual or firm from one country in terms of their business assets located in another country. FDI has two primary components. These are the Greenfield investment and an Acquisition or merging investment. The exchange rate (EXR) is the price of a nation's currency in terms of another currency. It can be either a nominal exchange rate or a real exchange rate. The nominal exchange rate is the number of units of domestic currency that are needed to purchase a unit of a given foreign currency. For example, if the value of a dollar in terms of the Tanzania shilling (Tsh) is 2300, then this means that the nominal exchange rate between the dollar and Tsh is 2300. We need to give Tsh 2300 to buy one dollar (Kumar, 2017). The real exchange rate is the ratio of a foreign price level and domestic price level multiplied by the nominal exchange rate as presented in Equation (3).

$$R = (E.P^*) / P \quad (3)$$

Where: R is the real exchange rate, E is the nominal exchange rate, P* is the foreign price level and P is the domestic price level (Kumar, 2017). Table 4.1 presents the trends in FDI and real exchange rates in Tanzania from 1995 to 2017. The FDI in Tanzania was US \$ 119.07 million in 1995. This went up to US \$ 549.27 million in 2002 and it dropped to US \$ 395.57 million before reaching US \$ 2087.26 million in 2013. It then went down to US \$ 1180.21 million in 2017. The highest FDI increment and decrement was US \$ 860.57 million and US \$ -430 million in 2010 and 2009 respectively.

On average, the FDI in Tanzania was US \$ 893.2978 million with an average annual increase of US \$ 46.10 million per year during the study period. The average annual growth rate is 5.16%. The real exchange rate of the Tanzania shilling in US dollars is

Tsh.562.5 and this increased to Tsh.2232 with the average annual growth of Tsh being 7.60% and 6.30% in 1995 and 2017 respectively.

The highest real exchange rate fluctuation was in 2015 where the real exchange rate increased by Tsh.421.44 when the value of the real exchange rate dropped to its lowest in 2000 and when the value of US \$ dropped by Tsh174.

4.2 Correlation analysis

Table 4.2. Correlation

Correlation	FDI	EXRATE	CPI	GCF1	INTRATE	GDP
FDI	1.000000					
EXRATE	0.791253	1.000000				
CPI	0.838273	0.973388	1.000000			
GCF1	0.829180	0.960354	0.991573	1.000000		
INTRATE	-0.556695	-0.586373	-0.525140	-0.471597	1.000000	
GDP	0.826812	0.980473	0.991700	0.992618	-0.541806	1.000000

Source: Author's computation using EVIEWS 10

The purpose of this study is to examine the relationship between the real exchange rates and FDI in Tanzania. For this aim, a correlation test was conducted. The above mentioned correlation result in the Table 4.2 portrays that the correlation coefficient of the real exchange rate is 0.791, meaning that there is a strong positive relationship at a 1% level between the variables where $p = 0.00$. In addition, FDI has a strong positive relationship with CPI and GCF but it has a negative relationship with GDP and INTR.

4.3 Regression analysis

Regression analysis was used to portray the accuracy and appropriateness of the model and how much the independent variable is correlated with the dependent variable.

Table 4.3 Result of the regression

Dependent Variable: Log of Foreign Direct Investment (FDI)				
Method: Least Square				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(EXRATE)	1.700881	0.476676	3.568212	0.0024
LOG(CPI)	1.727675	0.657083	2.629309	0.0176
LOG(GCF1)	3.375790	0.320302	10.53938	0.0000
INTRATE	-0.022523	0.004997	-4.507043	0.0003
LOG(GDP)	-8.510862	0.761817	-11.17179	0.0000
CONSTANT	161.6563	15.83234	10.21051	0.0000
R-squared	0.901998	Adjusted R-squared		0.873174
F-statistic	31.29332	Durbin-Watson stat		2.443535
Prob (F-statistic)	0.000000			
Source: Author's computation using EVIEWS 10. *** denotes 1% level of significance				

Table 4.3 above contains the regression estimates about the impact of exchange rate on FDI in Tanzania. The dependent variable is Foreign Direct Investment (FDI) while the exchange rate (EXRATE), inflation (CPI), capital formation (GCF), GDP and interest rate (INTRATE) are the independent variables. The result shows that the real exchange rate (EXRATE), inflation (CPI) and capital formation (GCF) have positive association with FDI whereas the GDP and interest rate (INTRATE) have a negative relationship with FDI. The magnitude of the coefficient shows that a 1% increase in the real exchange rate, inflation, GDP and capital formation leads to about a 1.7%, 1.73% and 3.38% increase in FDI respectively. Conversely, a 1 % increase (decrease) in GDP and interest rate brings about a 8.51% and 0.02% decrease (increase) in FDI respectively. This indicates that the depreciation of the Tanzanian shilling increased domestic investment and domestic price instability, in turn, attracted FDI into the country. On the other hand, high rate of interest rate (lending rate) discourages investment in the country. The estimates of the coefficients are statistically significant at 5% as indicated by the p-values, which are less than 0.05. This shows that EXRATE, GCF, CPI, GDP and INTRATE are significant determinants of FDI in Tanzania.

The R-square is 0.901998 and the F-statistic (31.29332) is significant at 1%. This shows the overall significance and fitness of the model. The R-square indicates that changes in the independent variables explained about 90.2% of the variation in FDI. In addition to this, the Durbin Watson statistic is approximately 2.44, indicating the absence of a serial correlation. Therefore, the estimates of the model are valid for policy inferences in this study.

Chapter 5

CONCLUSION

5.1 Discussion

This study examines the relationship between the real exchange rate and FDI in Tanzania. There is a strong positive correlation between the exchange rate and FDI in Tanzania. This disproved the null hypothesis that the real exchange rate does not have a significant impact on Foreign Direct Investment in Tanzania. The reason for this is that Tanzania is a developing country with rich natural resources and low labor costs. When foreign companies invest in the local currency of Tanzania, they spend a small amount of US dollars and gain more. Simply put, it means that the companies get a higher profit from investing in Tanzania because the investment cost is reduced as they buy more Tsh with the same amount of US dollars. The investment cost is reduced as the value of Tsh goes down. The firms export either semi-finished or finished commodities outside of the country, sell them in international currencies through international markets and maximize their profits. The research has proven that the depreciation of the value of Tsh has a positive impact on FDI in Tanzania. This conforms to the theoretical background put forward by Blonigen (1997). In addition, inflation (CPI), capital formation (GCF), Gross domestic product (GDP) and interest rate (INTRATE) are the significant drivers of FDI in Tanzania

5.2 Conclusions

Tanzania is a developing country with rich natural resources and low labor costs. In East Africa, Tanzania tops the ranking in terms of natural resource deposits, good national parks and many tourist sites like the highest mountain in Africa (World Bank, 2018). These characteristics plus a low value of domestic currency attracts FDI to the country. As the value of Tanzania shillings against US \$ falls, the country becomes cheaper for foreign investors. As found out in the analysis, the real exchange rate plays a vital role in attracting foreign investors.

The study investigates the impact of the exchange rate on FDI in Tanzania with the specific focus of using annual data for the period between 1995 and 2017. The results of the correlation and regression analysis show strong evidence that the exchange rate has significant effect on the annual FDI inflows in Tanzania over the period considered. Therefore, the study concludes that the impact of the exchange rates on FDI in Tanzania is both positive and highly significant.

5.3 Recommendations

FDI is the one way of financing the economy without burdening the government budget. Thus, the government should do the following to attract more investors to the country.

It should create conditions to make a stable economy and to provide financial security in order to reduce the economic and political risks of investment for foreign investors. Normally, foreign investors consider three main risk sources when they want to invest in a foreign country. These risks are:

- 1) Economic risk. This refers to the country's ability to pay back its debts: Tanzania's debts have increased almost every year up to 2017. The debt is equivalent to 37.4 percent of the country's gross domestic products (GDP). The average of Tanzania's debt has been 34.9% from 2001 to 2017 (Badie et al, 2011). A country that has stable finances and a stronger economy should provide a more favourable investment environment than a country with weaker finances or with an unsound economy (Badie et al, 2011). The government should minimize both domestic and foreign debt.
- 2) Political risk refers to the risks caused by the political decisions made within a country that might result in unexpected losses for the investors. Sometimes even if a country's economy is strong, if the political situation within the country is not friendly with investors, then the country may not be a good place for investment (Badie et al, 2011). Therefore, the government of Tanzania should maintain the stability of the political situation within the country to protect investors from political risks.
- 3) Sovereign risk is the risk that is caused by the central bank changing its foreign exchange rate rules and regulations, significantly reducing or invalidating the value of its foreign exchange contracts (Badie et al, 2011).
 - Infrastructural reformation including improving ports and the development of roads and communication networks of both water and air are also important requirements of investors.

In Tanzania, the central bank is responsible for the adoption of strategies to control the exchange rate. All strategies and methods that can be adopted to implement the

exchange rate can be divided into two main groups. These groups are direct and indirect methods and unilateral, bilateral and multilateral methods respectively.

- Direct and indirect methods: If the exchange control strategy affects the conversion rate straight away, then it is called the direct method. If the decision affects other factors before the exchange rate, then it is an indirect method of controlling the exchange rate (Badie et al, 2011).
- Unilateral methods are those implemented by the central bank of a country without taking into consideration the opinion of the other countries. Bilateral and multilateral methods are those in which the exchange rate control mechanisms are applied with mutual consent of two or more countries (Bénassyet al, 2001).

The government should invest in mining from the starting process of begging through to the end so as to gain more profit for the country and for its citizens.

The government should respect the contracts signed between foreign investors and country in different projects such as road construction, mining, leasing and the like.

Providing incentive and supporting packages may attract more foreign investors. For example, tax exemption in the earlier years of production such as 3 years to 5 years can increase the inflow of FDI. For the time being, companies pay tax as soon as they start production in Tanzania. That is, budding companies are not given tax holidays. Therefore the cost of starting operation is high and it discourages the inflow of FDI.

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APPENDIX

year	CPI	EXRATE	FDI	GCF	GDP	INTRATE
1995	28.56	562.50	119.07	2351.91	13812.70	42.83
1996	34.55	606.50	150.89	2290.82	14440.40	33.97
1997	40.11	619.62	157.89	2300.43	14949.46	26.27
1998	45.25	676.08	172.31	2620.03	15503.86	22.89
1999	48.82	979.00	516.70	2795.33	16257.95	21.89
2000	51.71	805.00	516.70	2972.44	16992.94	21.58
2001	54.37	917.00	516.70	3361.63	18024.55	20.06
2002	57.26	976.65	549.27	3647.63	19303.06	16.40
2003	60.30	1063.62	395.57	4196.44	20591.11	14.52
2004	63.15	1042.96	442.54	4659.85	22136.23	14.14
2005	66.33	1165.51	935.52	5608.10	23791.21	15.25
2006	71.14	1261.64	403.04	6534.35	25345.30	15.65
2007	76.14	1132.09	581.51	7532.93	27060.81	16.07
2008	83.97	1280.30	1383.26	9264.19	28599.60	14.98
2009	94.16	1313.29	952.63	9995.19	30106.54	15.03
2010	100.00	1453.54	1813.20	10250.08	32014.25	14.54
2011	112.69	1566.66	1229.36	11684.98	34470.43	14.96
2012	130.72	1571.62	1799.65	12689.06	36021.66	15.56
2013	141.01	1589.29	2087.26	15719.68	38464.49	15.86
2014	149.66	1736.37	1672.55	17228.07	41054.10	16.29
2015	158.02	2157.81	1604.58	16742.60	43583.29	16.10
2016	166.20	2178.26	1365.39	18306.79	46576.21	15.96
2017	175.04	2232.31	1180.21	20767.68	49736.72	17.62

Correlation analysis

Table 4.2 Correlation

Variables	FDI	EXRATE	CPI	GCF1	INTRATE
FDI	1.000000				
EXRATE	0.791253	1.000000			
CPI	0.838273	0.973388	1.000000		
GCF1	0.829180	0.960354	0.991573	1.000000	
INTRATE	-0.556695	-0.586373	-0.525140	-0.471597	1.000000

Source: Author's computation using EVIEWS 10.

Regression result

Dependent Variable: LOG(FDI)

Method: Least Squares

Date: 09/19/19 Time: 12:19

Sample: 1995 2017

Included observations: 23

HAC standard errors & covariance (Quadratic-Spectral kernel, Newey-West
fixed bandwidth = 3.0000)

No d.f. adjustment for standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(EXRATE)	1.700881	0.476676	3.568212	0.0024
LOG(CPI)	1.727675	0.657083	2.629309	0.0176
LOG(GCF1)	3.375790	0.320302	10.53938	0.0000
INTRATE	-0.022523	0.004997	-4.507043	0.0003
LOG(GDP)	-8.510862	0.761817	-11.17179	0.0000
C	161.6563	15.83234	10.21051	0.0000
R-squared	0.901998	Mean dependent var		6.490430
Adjusted R-squared	0.873174	S.D. dependent var		0.876938
S.E. of regression	0.312300	Akaike info criterion		0.729754
Sum squared resid	1.658034	Schwarz criterion		1.025970
Log likelihood	-2.392176	Hannan-Quinn criter.		0.804252
F-statistic	31.29332	Durbin-Watson stat		2.443535
Prob(F-statistic)	0.000000	Wald F-statistic		400.6560
Prob(Wald F-statistic)	0.000000			