MACROECONOMIC VARIABLES AND FOREIGN DIRECT INVESTMENT INFLOWS IN TANZANIA: 1990-2017

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN ECONOMICS OF THE OPEN UNIVERSITY OF TANZANIA

2019

CERTIFICATION

The undersigned certifies that he has read and here by recommends for acceptance by the Open University of Tanzania a dissertation entitled: ***"Macroeconomic Variables and Foreign Direct Investment Inflows in Tanzania: 1990-2017",*** in partial fulfillment of the requirements for the degree of the Master of Science in Economics of the Open University of Tanzania.

.....

Dr Gwahula Raphael (PhD)

(Supervisor)

.....

Date

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DECLARATION

I, **Alfred Nyakusha Irangi,** do hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

……..……
Signature

…….……
Signature

DEDICATION

This Dissertation is honestly dedicated to my wife Revina Sylvester and my lovely daughter Sophia and Maria for their support and encouragement during my study.

I also dedicate this work to my lovely late Brother, Mr. Amos Joseph Irangi. My lovely parents Joseph John Irangi and Sophia Sigera Pangani. My younger brothers Dr. Nathan Waryoba Irangi, David Joseph Irangi, Frank Joseph Irangi. My younger sisters Devotha Joseph Irangi, Zawadi Pangani, Elizabeth Joseph Irangi and my lovely uncle Captain (TPDF). Robert Keganyero Pangani for his unremarkable and priceless gift of encouragement and support in ensuring that I accessed higher education and this is all that you wanted for me, Mwita Pangani. Also my Grandparent Bikukura Pangani, all deserved to appear on this page for their endless encouragement and spiritual support.

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ABSTRACT

The aim of this paper was to analyze macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The study conducted through the annual time series data which covered the period from1990-2017, with the help of stata software. Unit roots test by using Augmented Dickey Fuller test was employed in this study to see stationary and non-stationary of the variables that is if the variable has the unit root or not.The study used descriptive design, which is designed to investigate if variables employed in the study possessed normality property. Multiple linear regressionas used to examine the relationship between foreign direct investment inflow and its macroeconomic variables which were selected in the sample of the study.Data collected from the World Bank Development indicators. Market size, trade openness, inflation rate, interest rate and exchange rate are among of the selected sample variables in this study. The results found that exchange rate is a major determinant of foreign direct investment inflow into Tanzania and this indicates that the fluctuated exchange rate policy adopted by the country leads to the inflow of foreign direct investment in the country. Therefore, the policy makers and responsible authority should continue to adopt effective policy measures so as to attract more foreign investors. The inflation rate and interest rate was found to be significant but with the negative sign which indicates that the small inflation rate and interest rate discourages the inflow offoreign direct investment in the country. The government needs to make more effort in the expansion ofthe inflation rate and interest rate in order to attract more foreign investors. Openness to trade and Market sizeratewere found to have insignificant relationship with foreign direct investment inflow in the country.

Keywords: FDI, foreign direct investment, unit roots test and Tanzania.

TABLE OF CONTENTS

CERTIFICATION ..... **ii**

COPYRIGHT ..... **iii**

DECLARATION ..... **iv**

DEDICATION ..... **v**

ACKNOWLEDGEMENT ..... **vi**

ABSTRACT ..... **vii**

LIST OF TABLES ..... **xiii**

LIST OF FIGURES ..... **xiv**

LIST OF ABBREVIATIONS ..... **xv**

CHAPTER ONE **1**

INTRODUCTION **1**

1.1 Overview of the Study 1

1.2 Background of the Study 1

1.3 Statement of the Problem 11

1.4 Significant of the Study 15

1.5 Objective of the Study 16

1.5.1 General Objective 16

1.5.2 Specific Objectives of this Study 16

1.6 Research Hypothesis 16

1.7 Scope of the Study 17

1.8 Limitations of the Study 18

1.9 Organization of the Study 19

CHAPTER TWO 21

LITERATURE REVIEW 21

2.1 Overview 21

2.2 Conceptual Definitions 22

2.2.1 Direct Investment 22

2.2.2 Direct Investor 22

2.2.3 Foreign Direct Investment 22

2.2.4 Exchange Rate 24

2.2.5 Inflation Rate 25

2.2.6 Market Size 25

2.2.7 Interest Rate 25

2.2.8 Trade Openness 26

2.2.9 Characteristics of FDI 27

2.3 Theoretical Literature Review 27

2.3.1 Macro-Economic Theories of Foreign Direct Investment 28

2.3.1.2 Neoclassical Growth Theory- Solow Growth Model (1956) 28

2.3.1.3 Dynamic Macroeconomic FDI Theory 28

2.3.1.4 New Keynesian Theories of Inflation and Output 29

2.3.1.5 Capital Market Theory 32

2.3.1.6 Eclectic Paradigm Theory to FDI 32

2.3.1.7 Product Life Cycle Theory 35

2.4 Empirical Literature Review 36

2.4.1.1 Empirical Literature Review World Wide 36

2.4.1.2 Empirical Literature Review in Africa 38

2.4.1.3 Empirical Literature Review in Tanzania 50
2.5 Research Gap 52
2.6 Conceptual Framework 54
2.6.1 Conceptual Framework Diagram 54
2.6.3 Summary of Literature Review 55
CHAPTER THREE 57
RESEARCH METHODOLOGY 57
3.1 Overview 57
3.2 Research Philosophy/Paradigm 57
3.2.1 Research Philosophy Theory 57
3.2.2 Research Philosophy Selection and Justification 58
3.3 Research Design and Sources of Data 59
3.4 Area of the Study 59
3.5 Specification of the Empirical Model 60
3.6 Theoretical Model 60
3.7 Theoretical Econometric Model 61
3.7.1 Variable and Measurement Procedure 63
3.8 Estimated Models 63
3.9 Testable Hypothesis 64
3.9.1 Summary of the Variables 64
3.10 Scope and Data Sources 64
3.11 Estimation Technique 65
3.11.1 Testing for Stationarity (Unit Root Test) 65
3.11.2 Multiple Regression Analytical Method 67

3.11.3 Johansen Co-Integration Test 67

3.11.4 Serial Correlation Test 69

3.11.5 Multicollinearity Test 69

3.11.6 Test of Significance 70

3.11.7 Heteroscedasticity Test 70

CHAPTER FOUR 71

DATA ANALYSIS, RESULTS AND DISCUSSION 71

4.1 Introduction 71

4.2 Data Analysis 71

4.3 Finding 72

4.3.1 Descriptive Analysis 72

4.3.2 Correlation Analysis 75

4.3.3 Unit Root Tests 79

4.3.4 Cointegration Tests 82

4.3.4.1 Johansen Test Cointegration 85

4.3.5 Regression Analysis 90

CHAPTER FIVE 99

SUMMARY, CONCLUSION AND RECOMMENDATIONS 99

5.1 Introduction 99

5.2 Summary 99

5.3 Conclusion 100

5.4 Limitations of the Study 101

5.5 Recommendation 101

5.5.1 Policy Recommendations for Policy Makers 101

5.6 The Areas for Further Study 102

REFERENCES RÉFÉRENCES REFERENCIAS 104

APPENDICES 109

LIST OF TABLES

Table 1.1: Tanzania's Ease of Doing Business Rankings 8

Table 1.2: FDI Distribution by Sector 2013 - 2017 9

Table 2.1: Summary of Literature Review 56

Table 3.1: Summary of the Variable and Measurement Procedure 63

Table 4.1: Summary Result for the Descriptive Statistics of the Variables 73

Table 4. 2: Possible Interpretation 76

Table 4.3: Correlation Analysis 76

Table 4.4: Augmented Dickey Fuller Tests for Stationary at Level 81

Table 4.5: Augmented Dickey Fuller Tests for Stationary at First Difference 82

Table 4.6: The Co-integration of both Variables Results 85

Table 4.7: Johansen Tests for Cointegration Result (Trace Stat) 86

Table 4.8: Johansen Cointegration Test Result (Max-Eigen Stat) 88

Table 4.9: Regression Results for Dependent and Independent Variables 93

LIST OF FIGURES

Figure 1.1: FDI Inflows in Europe, Africa and Asia for the Years 1990, 2000 and 2008 5

Figure 2.1: Interaction among Independent Variables to Foreign Direct Investment Inflows 54

Figure 3.1: Tanzania Inflation Rate (2005-2015) 42

LIST OF ABBREVIATIONS

ADF	Augmented Dickey Fuller
ATPC	Africa Trade Policy Centre
EPZs	Export Processing Zones
GDP	Gross Domestic Product
FDI	Foreign Direct Investment
TIC	Tanzania Investment Centre
IPC	Investment Promotion Centre
TNC	Trans National Corporation
MNCs	Multinational Companies
UNCTAD	United Nations Conference on Trade and Development
URT	United Republic of Tanzania
OECD	Organization for Economic Co-operation and Development
OPEN	Openness to trade
IR	Interest rate
MRT	Market size rate
INFL	Inflation rate
EXCHR	Exchange rate
NBS	National Bureau of Statistic

CHAPTER ONE

INTRODUCTION

1.1 Overview of the Study

The research intended to examine the Macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. This chapter presents an initial introduction of the study; it contains background to the problem, statement of the problem, objectives of the study, Research Hypothesis, Scope and Limitation of the Study, Significance of the study and Organization of the study.

1.2 Background of the Study

Foreign direct investment is one of the key drivers of economic growth of a country as it can assist the transfer of new technology and also increase the domestic capital formation. Foreign direct investment strengthens the export capabilities of domestic economies and facilitates access to export markets (Ngowi, 2001). The presence of a foreign direct investment in the host country increases competition and thus encouragegreater efficiency for domestic firms. It provides also good technologies and modern environment management system and enhances skills and management techniques (Mwega, 2007). Foreign direct investment has been considered as external sources of finance for under developing countries like Tanzania when the domestic resources are limited to finance development requirement (Asiedu, 2002).

Foreign direct investment can be also define as per OECD Benchmark concept of Foreign Direct Investment (1996) that FDI is the long run association between foreign investor who is resident person in one economy and make direct investment in another

economy, has meaningful control over the management of host country. In the foreign direct investment, initial transaction and succeeding capital transactions are involved (Chaudhuri and Mukhpoadhyay, 2014). Schwab (2018) revealed that, in the last 30 years, large economic changes have appeared and massive investment has taken place at the global level. It has all happened because of trade of goods and services between different countries around the world. Globalization and shifting of capital from one country to another country accelerate economic growth of the hosting country. Globalization enables poor and developing countries towards skilled labor, technology transfer, trade openness and inflow of capital. When domestic firms do business with multinational firms then trade and flow of capital increases.

In developing countries low labor cost, small saving, small investment and low production level need foreign investment to boost their economies. Developing countries access to international markets, technology transformation, raise in efficiency level and increase in economic output and macroeconomic level changes occur to gain prosperity and economic activities. Scattered global markets turning into aggregate global platform to strengthen investment sector and flow of foreign investment increasing with the course of time.Global economies struggling to liberalize their economies and making policies to attract more and more investment (Chaudhuri and Mukhopadhyay, 2014).

Foreign direct investment playing its role in different form such a JV (Joint Venture), M&As (Merger and Acquisitions) and Greenfield investment. In joint venture, foreign firm makes agreement with firms of host country or government institution. In merger and acquisition, existing ownership replaced by foreigners in which selling, buying

and combining is included. In the Greenfield, there is no such kind of facility available in the host country. In which production, distribution, and other facilities begin newly so this form of investment is very costly for foreigners. Therefore, government policies can make it easy to gain economic activities like employment opportunities and value added for the host country (Pazienza, 2014).

Trade liberalization enhance the market size and provide an edge in labor division, access to international markets, raise in productivity, advantage of specialization and increase in innovation activities. Trade openness changes the competiveness of firms and it effect the export and economic growth of the country. Few countries leading the world in technology and innovation so transfer of both is only possible through trade openness and foreign direct investment (Hofmann, 2013).

According to the Kearney Foreign Direct Investment Confidence Index (FDICI 2018), United States is still top of the list to gain investor trust. US is the largest market in the world with the perspective of FDI for the last six year. China and USA competed each other during 2010 to 2014 with respect to FDI but US did upswing to attract FDI in large part. US making such kind of policies that are attracting foreign investor like reduction in corporate tax rate. United States, Canada and Germany are taking lead to attain confidence of foreign investor as per FDICI 2018. China dropped down its position to fifth place. Foreign investors reluctant to invest in Chinese market and perceive atmosphere is becoming less appropriate or less favorable for foreign investment. European countries perform well to provide favorable platform to foreign investors.

(Organization for International Investment 2017 and FDIUS 2017) Foreign firms commence new investments every year, which provide advantages to the American Economy in different ways. Foreign companies construct new factories, invest in R&D, and begin well-established operation in US. Foreign investors provide many well-paid jobs to Americans. United States still attractive location for foreign investment and once again world prime destination for FDI.(Morrison 2018) explored that economists and financial expert say that main reason behind the rapid economic growth of China is the large-scale capital investment. It consists of two major determinants, foreign direct investment and large domestic savings. Chinese economic reforms boost national economy and enhance resources to gain further foreign investment. China is the world's largest manufacturer according to UNO and Global Manufacturing Competitiveness Index.

However, US would overtake China again by 2020 to turn into the world's most manufacturing competitive economy because of its huge investment in R&D, top ranked universities, and large capital investment in advanced technologies. China placed 28th position out of 138 world economies in Global Competitive Index 2016-2017 as per The World Economic Forum meanwhile US placed 3rd position. (UNCTAD 2018) United States, China, and Hong Kong China placed 1st, 2nd and 3rd positions in inward foreign direct investment with respect to top 20 hot economies. In the meantime, United States, China and Japan ranked 1st, 2nd and 3rd positions in outward foreign direct investment in terms of top 20 home economies. The whole world FDI decreased by 23% in 2017 while FDI trend fell in developed countries and remained stable in developing countries like Tanzania in 2017.

Foreign Direct Investments Flows in Africa unlike those of the developing Asia have remained minimal,(Figure 1.1) Africa's share in developing countries inflow of FDI declined from 12 percent in 1980s, to 5 percent and rose thereafter reaching nine percent in 2005 (UNCTAD, 2006). Factors such as political and macroeconomic instability, low economic growth, weak infrastructure, poor governance, unwelcoming regulatory environments, and improper investment promotion strategies, are responsible for the poor FDI performance in the region.

Globalization and the increase in the world trade have increased the competition forForeign Direct Investments even in developing countries. There is a need for concerted efforts in trading between regional and international levels. African countries should pay more attention to the improvement of relations with existing investors and offer them incentives to assist in marketing domestic investment opportunities to potential foreign investors (Chantal and Osakwe, 2005).

FDI inflows US$.

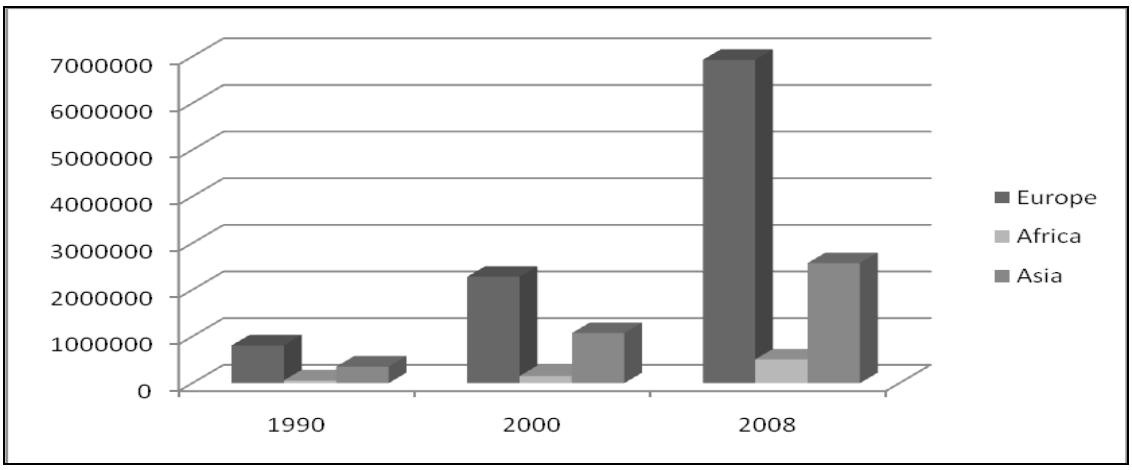

Figure 1.1: FDI Inflows in Europe, Africa and Asia for the Years 1990, 2000 and 2008

Source: UNCTAD 2006

There are several development challenges faced by most African countries including Tanzania and one of the challenges is to influence foreign direct investment inflow into the country. Despite the number of efforts that have been put forward by most African countries in the past to boost foreign direct investment inflow, did not make any significant impact. The reason for being unsuccessful was a failure to confront challenges posed by the globalization process towards foreign direct investment attraction to the country (Onyeiwu and Shrestha, 2004). Foreign direct investment requires a long run commitment as it include very high sunk costs and it is very difficult in a short term for foreign direct investors to recover their initial investment if there is a quick risk change that is related to their location. Therefore, the decision of foreign direct investors to enter into a host country mainly relies on the investment environment (Wheeler and Mody, 1992).

The flow of private capital in the form of foreign direct investment was among the main features of globalization in the 1990s. Foreign direct investment can also reduce balance of payments restrictions on growth as it acts as the source of foreign exchange as well as supplement the domestic investment resources. Many countries especially developing countries by considering foreign direct investment its economic benefits and importance for promoting economic growth, new national policies have been formulated so as to encourage more foreign direct investors. Better environment for investment is required to attract foreign capital in the country.

In most African countries, the improvement of investment climate has been influenced by recognition of foreign direct investment benefits over the past decades as it was considered as the key component for economic integration of the country and a source

of finance for capital investment. Foreign direct investment became the key and more stable external source of finance compared to portfolio flows in most African countries. This has been proved by both theoretical and empirical studies which have been documented the positive significant impact of foreign direct investment inflows on economic growth of the country (Alfaro, 2003).

There are various significant steps that have been undertaken by Tanzania government to attract foreign direct investment. In order to support the investment related objectives, FDI specific regulatory frameworks have been adopted by Tanzania. According to United Nations Conference on Trade Development (UNCTAD), FDI specific regulatory framework has been established in 45 countries out of 50 in Africa and the changes include the establishment of the specialized scheme to attract investment such export processing zones (EPZs) and setting up of investment promotion facilities and agencies. Some African countries also signing an international investment agreement such as double taxation and bilateral investment treaties.

Tanzania is ranked 131 out of 183 economies in the ease of doing business in the World Bank report for doing business in the year 2010. Tanzania's position for the year 2009 was 126 and it is declining in all aspects of business attraction. Table 1.1 below summarizes the factors which are considered in that ranking and compares the countries position for the years 2009 – 2010. In view of this report and overall FDI inflows in the country Tanzania has a big challenge in improving investment climate in the country.

Table 1.1: Tanzania's Ease of Doing Business Rankings

ACTIVITY	2010	2009	CHANGE
Ease of Doing Business	131	126	-05
Starting a Business	120	111	-09
Dealing with Construction permits	178	175	-03
Employing Workers	131	133	02
Registering property	145	145	0
Getting credit	87	84	-03
Protecting investors	93	88	-05
Paying Taxes	119	113	-06
Trading Across Borders	108	105	-03
Enforcing Contracts	31	31	0
A business	113	113	0

Source: Doing Business Report 2010

Tanzania is among one of the most preferred destinations for foreign investment in Africa. FDI flows to the United Republic of Tanzania remained at a very low level before the 1990s, averaging $4.4 million during the period 1970-1990 (UNCTAD, 2007). It is explained further that since the mid-1990s, they started to rise in response to the reform programme and privatization and have continued to grow to high levels in the following years, averaging $456 million during 1999-2005.

Since reform of the parastatal sector in June 1993, TNCs have assumed an important role in the Tanzanian economy through a series of cross-border mergers and acquisitions related to the privatization programme in particular, the sectors with impressive growth rates since the mid-1990s, namely mining, manufacturing, financial services and tourism, have been dominated by TNCs (Ngowi, 2002). Most of the non-natural resource FDI and a majority of privatized firms are geared to

supplying the domestic market. FDI flows into agriculture as a back bone of the country are still minimal, Table 1.2.Between 1990 and May 2017; 2 288 projects with a total investment of 8 180 billion Tanzanian shillings were registered with the Tanzania investment Centre (TIC). UNCTAD (2008) reports that, Tanzania was among the top 10 destinations for FDI inflows among the African LDCs in 2017. The sectoral distribution of FDI in Tanzania indicates high concentration of investment in few sectors including mining and quarrying, wholesale and retail trade, manufacturing and financing and insurance. The four sectors together accounted for 84% of stock of FDI in year 2017 (TIR, 2017).

Table 1.2: FDI Distribution by Sector 2013 - 2017

Activity	**FDI inflows US$ Millions Years**				
	2013	**2014**	**2015**	**2016**	**2017**
Total Registered projects	1072	1590	1133	1706	5877
Agriculture	50	146	72	466	533
Mining & Natural resources	55	64	29	16	176
Tourism	90	121	141	227	683
Manufacturing	204	228	390	462	1243
Transport & infrastructure	25	834	214	138	1254
Construction	590	56	203	195	1248
Other	58	141	86	200	741

Sources: Tanzania Investment Centre and Bank of Tanzania

According to UNCTAD 2019 World Investment Report, in 2017 the inflow in Tanzania reached to USD 1.10 billion and showed an increase compared to last year (USD 938 million). Also, country is still among the 10 biggest recipients of FDI in Africa. According to UNCTAD, the current FDI stock is estimated at USD 20.7

billion and represents 35.8% of the GDP. The mining sector, the oil and gas industry, as well as the primary agricultural products sector (coffee, cashew nuts and tobacco) draw most FDI.

In 2017, Tanzania approved new regulations in the mining sector that allows the government to tear up and renegotiate mining contracts, partially nationalize mining companies, introduce higher royalties, enforce local beneficiation of minerals and bring in strict local-content requirements, which could put foreign investments at risk. The country's primary investors are China, India, Kenya, Uganda, Rwanda, United Kingdom, Mauritius, Oman, the United Arab Emirates, Canada, the United States, the Netherlands, South Africa, and Germany.

In the late period of 1980's and 1990's due to an adoption of economic liberalization policies, Tanzania was planning to use the private sector as the main key factor of economic development. In order to attract foreign direct investment inflow in Tanzania, the government set up the investment authority namely Investment Promotion Centre (IPC) in 1990. Investment Promotion Centre was operating for seven years until 1997 after the government changed to Tanzania Investment Centre (TIC) is the primary agency of the Government of Tanzania to coordinate, encourage, promote and facilitate investment in Tanzania and to advise the Government on investment related matters. TIC is a focal point for investors.

It is the first point of call for the potential investors; it is a "one stop facilitative Centre for all investors", engaging in the business of marketing Tanzania as an investment destination.The aim of promoting investment was to reduce the level of poverty, to

sustain the economic growth and to stimulate the smooth and favorable integration of country's economy into the global international economy. Tanzania has also been struggling to establish the openness clear policy to foreign investment that can create a better environment to invest for the development of the country (Tanzania Investment Report, 2009).

There are many benefits that foreign direct investment offers to host countries and therefore policy makers are naturally interested in knowing the foreign direct investment determinants or in other words what factors attracting FDI. According to Alfrao (2003), many academics and policy makers are suggesting that foreign direct investment can have important positive impacts on a host country is development effort. Several studies demonstrate factors that influencing the inflow of foreign direct investment but this study is different in a sense that it will help the policy makers in Tanzania to determine the factors influencing FDI inflows, difficulties faced by most countries to attract more foreign direct investment and solution to address the issue and to achieve the intended objectives.

1.3 Statement of the Problem

Foreign direct investment plays important role in bringing innovative technology, marketing techniques, up to date management and encouragement of national economic development. Foreign direct investment in East African Countries can never be underestimated (Mwega and Ngugi, 2007). Despite the efforts done by the government of Tanzania on creating jobs, alleviating poverty and growing the economy but still there is little emphasis on definitive policy to create lucrative packages that would attract more FDI inflow. According to African Trade Policy

(2005), foreign direct investment could push domestic firms into bankruptcy due to increased competition or could lead to loss of political sovereignty and environmental degradation.

In the past two decades, foreign direct investment (FDI) by transnational corporations (TNCs) has become the prime source of external financing for developing countries. Foreign direct investment (FDI) is generally considered, by many international institutions, politicians and economists, as a factor, which enhances host country economic growth, as well as the solution to the economic problems of developing countries (Mencinger, 2003).

Usually FDI is defined as an investment involving the transfer of a vast set of assets, including financial capital, advanced technology and know-how, better management practices. Moss, Ramachandran, and Shah (2004) argued that much of African doubt toward foreign direct investment is rooted during post -independence period, history and ideology.

The role of foreign direct investment as the source of finance has increasingly become important to Tanzania government as the income level and domestic saving in the country are very low and therefore more external funds is needed to boost domestic savings so as to encourage investment and economic growth. Also for local Tanzanian entrepreneurs, foreign currency inflows from foreign direct investment have become a major concern as the high inflows of funds from foreign investors gives them a competitive edge in the economic activities of the country. This is because foreign direct investors are considered as the part of the large international organization with a

huge capital base as in any form of market competition they are capable of pulling in more funds for the means of subsidizing operations.

Most African countries rely on two forms of foreign finance that are official loans such as the loan from World Bank and foreign direct investment because most they do not have entrance to the global international capital market. Since most foreign investors have a wide choice of locating their investment in developing countries, to attracting more FDI inflow depends on country's ability to provide a competitive factor of production such as labor and favorable foreign direct investment regime.

Most of the countries around the world have tried to make their investment environment-friendly for absorbing global opportunities by influencing more foreign investable funds into the country over the recent years. Foreign direct investment inflow determinants have become an important topic not only for policy makers and the government but also for academic researchers and this has arisen due to the failure performance of the previous policies which have been implemented to attract more foreign direct investment in the country.

According to (Pigato, 2000), most foreign investors desire those countries or locations that are able to improve the quality of their productive factors, tackling competition, providing steady and clear rules for private businesses over time. Even though in most African countries there has been a significant improvement of foreign direct investment policy regime but still have not been significant enough to influence more foreign direct investment in larger shares.The effort made to attract foreign investors in Tanzania has been ineffective. The investments authority and institution that

supporting foreign direct investment in Tanzania are weak, fragmented and uncoordinated as their services are quite basic which mainly focusing on short term basis. (Tanzania Investment Report, 2001), foreign direct investment inflows into Tanzania had not been given the attention they deserved as the lack of timely and reliable data on foreign capital inflow in the country making the evaluation and implementation of the macroeconomic policies that are related to capital inflow ineffective. The investment authority although have targeted many developed countries by extending their services but still their coverage has remained minimal and therefore much effort is needed to attract foreign direct investment so that at the end the country through FDI will attaining sustainable development.

According to African Trade Policy Centre (2005) for African countries to achieve the Millennium Development Goals set by the United Nations too many efforts are needed in improving economic policies so that to increase the macroeconomic level performance and reach the minimum economic growth rate. The sustainable economic growth and development in the country can be achieved through an increase in investment level by mobilization of both domestic and international financial resources. As the result of low share of African countries in global international trade, high risk of short term capital flow, the unpredictability of foreign aid inflow, at least in a short run the desired increase in investment has to be achieved through an increase in foreign direct investment inflows.

Empirically, a variety of studies considers that FDI generate economic growth in the host country. However, there is also evidence that FDI is a source of negative effects. Among the studies that have concluded that FDI does not cause economic growth are

those of Haddad and Harrison (1993), Grilli and Milesi-Ferretti (1995) and Javorcik (2004). Others share the widespread view that FDI generates economic growth, especially Blomström (1986), De Gregorio (1992), Mody and Wang(1997), Nair-Reichert and Weinhold (2001), and Lensink and Morrissey (2006) studies. It is in line of the above authors 'ambiguity in results that this study intends to investigate the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017.

1.4 Significant of the Study

This study seeks to evaluate the determinants of FDI inflows and to see which factors are most significant in attracting FDI inflow into Tanzania. The study also shed more light on the current state of the economy in Tanzania for foreign investors especially for those contemplating entry into the Tanzania market and also will provide useful understanding for current foreign investors operating in the country. This helps investors when wants to make their investment decisions. The findings of this study also make a significant contribution to knowledge for both the readers and policymakers as it identifies the role foreign direct investment inflow into Tanzania economy and Africa in general. The study also prevent the policymakers from wastage of resources by putting too much effort on unnecessary areas to attract foreign direct investment as the results will be used as the source of information for designation and implementation of national policies. Furthermore, this study will help Tanzania Investment Authorities to review their regulation and laws based on the results of this study so as to cope with the reality. In order to achieve the outlined objectives, this study uses the extensive secondary method of research. The study

utilized various data obtained by other scholars of the study. In short, by conducting this study readers and policymakers will be able to understand more about macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. Lastly the study will enable the researcher to meet the requirements to be awarded a degree of masters of Science in Economies.

1.5 Objective of the Study

1.5.1 General Objective

Our focus in this study is to identify the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017.

1.5.2 Specific Objectives of this Study

The study was guided by the following specific objectives

(i) To examine the relationship between exchange rate and FDI inflows.

(ii) To examine the relationship between inflation rate and FDI inflows.

(iii) To examine the relationship between market size and FDI inflows.

(iv) To examine the relationship between interest rates and FDI inflows.

(v) To examine the relationship between openness to trade and FDI inflows.

1.6 Research Hypothesis

(i) The first hypothesis (H1) that there is a positive significant relationship between exchange rate and foreign direct investment inflow is rejected. There is negative coefficient, which is significant relationship exists between the dependent variable (FDII). This indicates that small exchange rate decreases the amount of foreign direct investment inflows into the country.

(ii) The second hypothesis (H2) that there is a positive significant relationship between inflation rate and foreign direct investment inflow is rejected. There is negative coefficient which is significant relationship exists between the dependent variable (FDII). This indicates that small inflation rate decreases the amount of foreign direct investment inflows into the country.

(iii) The third hypothesis (H3) that there is a positive significant relationship between market rate and foreign direct investment inflow into the country is accepted. Market size rate in this study shows the positive sign coefficient which is significant relationship exists with foreign direct investment inflows into the country.

(iv) The fourth hypothesis (H4) that there is a positive significant relationship between interest rate and foreign direct investment inflow is rejected. There is negative coefficient which is significant relationship exists between the dependent variable (FDII). This indicates that small interest rate decreases the amount of foreign direct investment inflows into the country.

(v) The fifth hypothesis (H5) that there is a positive significant relationship between Openness to trade and foreign direct investment inflow into the country is accepted. Openness to trade in this study shows the positive sign coefficient, which is significant relationship exists with foreign direct investment inflows into the country.

1.7 Scope of the Study

The study intends to explore the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. Therefore the findings and results from

this study may not necessarily apply to other countries.The main focus of this study is to make theinvestigation on the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The reason for this chosen study will be due to the fact that Tanzania has experienced a declinein the amount of foreign direct investment inflows even though various macroeconomics programs andreforms have been implemented by the government soas to promote and attract foreign investors to come andinvest in the country.

Also, this study wasmorebeneficial especially for potential investors as they have a critical look at the investment environment beforetaking the decision of investing or doing business inTanzania. The data in this study was collected secondary information through content analysis method. Content analysis consists of analyzing the contents of documentary materials such as books, magazines, newspapers and the contents of all other verbal materials, which can be either spoken or printed. Secondary data will be obtained from Tanzania Investment Centre (TIC), Bank of Tanzania (BOT), National Bureau of Statistics (NBS), World Bank Official Website will be used in order to accomplish the target of as well as the World DevelopmentIndicator which acts as the primary World Bankdatabase.

1.8 Limitations of the Study

One of the limitations of this study is shortage of time as a challenging factor to the study because the researcher is working with Local Governmental Authorities (Kyerwa District Council) where he is utilizing his day time on work. However, the researcher utilized his night time and weekends to accomplish the findings.Another limitations of this study is lack of fund which makes the study to rely on secondary

data as the collection of primary data needs more money and time. In reviewing literature, this research face the problem of accessing journals with relevant materials as some websites could not be accessed as they were secured. Some journals, subscriptions were made so as to gain access to materials needed.

The study also face a big problem in acquiring the software used for data analysis and it took time (a month) for the researcher to learn the software and apply it to the work hence the timely aspect of the work was delayed. Also the absence of specific data for some of the variables such as market size and trade openness which made the researcher to use the proxy data to estimate these variables. Sometimes the use of proxy in the empirical tests may lead to inaccurate results.

In this study, only few variables were included due to some reasons such as unavailability of data, limited time, among others but still, there are many macro-economic variables which are influencing foreign direct investment inflow into the country and the inclusion of many variables will help in providing more accurate results of the research.Lastly, Lack of fund, the researcher is private sponsored so face the challenges of getting adequate finance of some research materials and bought some document like pamphlets, journals and internet bundles are expensive. They make the study to be completed in a difficult situation.

1.9 Organization of the Study

This research organized in five chapters. Chapter one starts with the introduction part then followed by problem statement, objectives of the study (both the main and specific objectives), the significance of the study, scope of the study and organization

of the paper. The literature review which includes both theoretical and empirical review was discussed in the chapter two.

In this chapter, the study tries to provide the evidence from the other previous research regarding the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017 both theoretical and empirical. Chapter three presents study methodology, describes the model specification, estimation methods used, thesis variables and their measurement research model, sample size, type and source of data, data analysis methods as well as different sources in which the data for the variables will be collected.The fourth chapter discusses the estimation results and interpretation of the findings. Lastly, the fifth chapter includes the conclusions, relevant policy recommendation to be adopted by policy makers and government in general and suggestions to be considered for future researchers.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This section of the study seeks to find out what others have written about the subject matter. The section primarily deals with what other authors have done in regard to this subject matter. This includes Theoretical literature review, Empirical literature review and also conceptual framework.

Several theories have explained the FDI's, according to Harvey A. Andruss Library of Bloomsburg University of Pennsylvania, a literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research. The review should enumerate, describe, summarize, objectively evaluate and clarify this previous research. It should give a theoretical base for the research and help determine the nature of research. The literature review acknowledges the work of previous researchers, and in so doing, assures the reader that work has been well conceived. It is assumed that by mentioning a previous work in the field of study, that the author has read, evaluated, and assimilated that work into the work at hand.

A literature review creates a "landscape" for the reader, giving her or him a full understanding of the developments in the field. This landscape informs the reader that the author has indeed assimilated all (or the vast majority of) previous, significant works in the field into her or his research.

In writing the literature review, the purpose is to convey to the reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are. The literature review must be defined by a guiding concept (examples are research objective, the problem or issue you are discussing, or argumentative thesis). It is not just a descriptive list of the material available, or a set of summaries.

2.2 Conceptual Definitions

2.2.1 Direct Investment

Defined by the International Monetary Fund (IMF) as "Investment that is made to acquire a lasting interest in an enterprise operating in an economy other than that of the investor, the investor's purpose being to have an effective voice in the management of the enterprise." In practice, this translates to an equity holding of 10 percent or more in the foreign firm.

2.2.2 Direct Investor

Maitena and Banco (2003) defined direct investor as an individual, an incorporated or unincorporated private or public enterprise, a government, a group of related individuals, or a group of related incorporated and/or unincorporated enterprises which have a direct investment enterprise, operating in a country other than the country of residence of the direct investor.

2.2.3 Foreign Direct Investment

Foreign direct investment is defined as an investment involving a long term relationship and reflecting a lasting interest and control by a resident entity in one economy. It is also defined as “investment made to acquire lasting interest in the

enterprises operating outside of the Economy of the Investor`` (AshisK.Vaidya, (2006). Foreign Direct Investment (FDI) is the name given to the process where a firm from a country provides capital to an existing or newly created firm in another country (Jonathan Jones and Colin Wren (2006).Foreign Direct Investment (FDI) refers to long term participation by a country A into country B. It involves participation in management, joint venture, transfer of technology and expertise (Shim J.K.et al, 1995).

The World Trade Organization defines FDI as: “FDI occurs when an investor based in one country (the home country) acquires an asset in another country (the host country) with the intent to manage the asset. The management dimension is what distinguishes FDI from portfolio investment in foreign stock, bonds and other financial instruments,” An investment made by a company or entity based in one country, into a company or entity based in another country. Foreign direct investments differ substantially from indirect investments such as portfolio flows, wherein overseas institutions invest in equities listed on a nation's stock exchange. Entities making direct investments typically have a significant degree of influence and control over the company into which the investment is made. Open economies with skilled workforces and good growth prospects tend to attract larger amounts of foreign direct investment than closed, highly regulated economies.

FDI is defined as cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by

the direct investor on the management of the enterprise. Ownership of at least 10% of the voting power, representing the influence by the investor, is the basic criterion used, (OECD, 2013).

The Balance of Payments Manual (BPM5) published by the International Monetary Fund (IMF) defines Foreign Direct Investment "as an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor". FDI in primary products may have negative effects on economic growth while investment in manufacturing and the oil sector in Nigeria is known to have positive effect (Alfaro, 2003).Foreign direct investment refers to an investment involving a long-term relationship and reflecting a lasting interest and controls of a resident entity in one economy in an enterprise resident in an economy other than that of the investor (OECD, 2006)

Foreign Direct Investment (FDI) can also be defined as international interest in which a resident in one country obtains a lasting interest in an enterprise resident in another. It is a situation where a foreign country creates a subsidiary to provide goods and services. Thus, a firm undertakes FDI in a foreign market if it possessed an ownership advantage over the local competitors. The ownership of the foreign investment usually remains in the investing country. FDI represents the primary means of transfer of private capital being physical or financial, technology, personnel and access to brand names and marketing advantage (Makola, 2003).

2.2.4 Exchange Rate

Exchange-rate movement is regularly monitored by Central banks for macroeconomic analysis and market-surveillance purposes. Notwithstanding the pioneering study of

Meese and Rogoff (1983), which shows the superiority of the random-walk model in out-of-sample exchange-rate forecast, there is some evidence that exchange-rate movement may be predictable at longer time horizons.Exchange rate is defined as the rate at which one currency may be converted into another. The exchange rate is used when simply converting one currency to another for trading in the foreign exchange market. According to Giancarlo (1995) Exchange rate is defined as price the comparison of one currency in terms of another currency.

2.2.5 Inflation Rate

Inflation rate is defined as the rate at which the general level of price for goods and services is rising and subsequently purchasing power is falling. Inflation is defined as a rise in the general level of price of goods and services in an Economy over a period of time (Shim J.K. et al., 1995).

2.2.6 Market Size

The number of individuals in a certain market who are potential buyers and/or sellers of a product or service. Companies are interested in knowing the market size before launching a new product or service in an area. Tarzi (2005) who made a research on foreign direct investment into developing countries found that market size is considered to be an important factor for foreign investors. Any anwu (2012) found positive relationships between market size and flow of foreign direct investment into Africa which was measured by using urban population size.

2.2.7 Interest Rate

An interest rate is the amount of interest due per period, as a proportion of the amount lent, deposited or borrowed (called the principal sum). The total interest on an amount

lent or borrowed depends on the principal sum, the interest rate, the compounding frequency, and the length of time over which it is lent, deposited or borrowed. Either it is defined as the proportion of an amount loaned which a lender charges as interest to the borrower, normally expressed as an annual percentage. It is the rate a bank or other lender charges to borrow its money, or the rate a bank pays its savers for keeping money in an account. Additionally, interest rates are expressed in terms of annual percentages. Singhania (2011) argues that interest rate is the amount of money an investor reaps from an investment. Direct foreign investors normally survey economies with low interest rates because they will enable them to obtain higher returns from the investments. Consequently, interest rates directly impact on foreign direct investment.

2.2.8 Trade Openness

Trade openness refers to the outward or inward orientation of a given country's economy. Outward orientation refers to economies that take significant advantage of the opportunities to trade with other countries. Inward orientation refers to economies that overlook taking or are unable to take advantage of the opportunities to trade with other countries. Some of the trade policy decisions made by countries that empower outward or inward orientation are trade barriers, import-export, infrastructure, technologies, scale economies and market competitiveness.

According to many empirical studies, the growth rate of GDP is positively related to the growth rate of trade openness (Edwards (1992), Wacziarg (2001), Sinha D. and Sinha T. (2000)). However, not everyone agrees that openness to trade is of outstanding importance. Rodriguez and Rodrik (1999) show that the positive

correlation between openness and growth is not robust as a result of problems in openness measures or lack of the appropriate control variables. For instance, Rodrik et al. (2002) demonstrate that the strong effect of trade on growth, in both Alcala and Ciccone (2002) and Dollar and Kraay (2003), comes from their choice of measuring openness by using “real openness”, instead of the conventional measures of openness, which always results in positive biased estimations of openness on growth. In addition to this, it is possible that omitted variables may create a positive relationship between openness and growth (Rodriguez and Rodrik (2001); Hallak and Levinsohn (2004)). If one includes a geography measure or a measure of institutional quality, then the effect of openness on growth is mitigated and becomes less significant.

2.2.9 Characteristics of FDI

FDI is an investment that crosses national borders. Dahl (2002) regards FDI as an investment that have the following three characteristics:

Equity capital: The foreign direct investor’s purchase of shares to enterprise in a country other than its own.

Reinvested earnings – the investor’s share of earnings not distributed as dividends by affiliates.

Intra-company loans or intra-company debt transactions – this is the short- or long-term borrowing and lending of funds between direct investors and affiliate enterprises.

2.3 Theoretical Literature Review

Theoretical review the purpose of this form is to concretely examine the corpus of theory that has accumulated in regard to an issue, concept, theory, phenomena. The theoretical literature review help establish what theories already exist, the

relationships between them, to what degree the existing theories have been investigated, and to develop new hypotheses to be tested. Often this form is used to help establish a lack of appropriate theories or reveal that current theories are inadequate for explaining new or emerging research problems. The unit of analysis can focus on a theoretical concept or a whole theory or framework.Harvey A (Andruss Library of Bloomsburg University of Pennsylvania).

2.3.1 Macro-Economic Theories of Foreign Direct Investment

2.3.1.2 Neoclassical Growth Theory- Solow Growth Model (1956)

One of the first theoretical approaches to understanding foreign direct investment is the neoclassical growth theory. Solow (1956) attempted to express a growth model into a simple production function and to explore key variables that could provide steady growth rates. In his model, he captures macroeconomic factors of foreign direct investment inflows in economic growth rates. On the other hand, within the endogenous growth theory, FDI flows may contribute either directly or indirectly to the economic growth of an economy.

2.3.1.3 Dynamic Macroeconomic FDI Theory

Dynamic macroeconomic FDI theory according to which the timing of investments depends on the changes in the macroeconomic environment (SanjayaLall 1997). The macroeconomic environment consists of gross domestic product, domestic investment, real exchange rate, productivity and openness which are the determinants of FDI flows.

This theory states that FDIs are a long term function of multinational companies' strategies. Similar to these two theories, FDI theories based on exchange rate tried to

show the relationship between FDI and exchange rate. The theory tries to explain how the flow of FDIs affects the exchange rates. The theory describes FDIs as a tool of exchange rate reduction (Cushman, 1985). Another macroeconomic FDI theory is based on economic geography which focuses on countries and explained why internationally successful industries emerge in particular countries (Porter, 1990; Nachum 1999).

These explanations were based on the differences among countries in terms of availability of natural resources, nature of labour force and local demand, infrastructure and so on, the FDI theories based on economic geography also covers the ways in which governments can affect the resources within the jurisdiction by various policy actions since economic unit of analysis is defined by political boundaries. Again the theory explains why some regions or cities within countries are economically successful (Storper 1996, 1997; Sassen 1991, 1994).

2.3.1.4 New Keynesian Theories of Inflation and Output

New Keynesian economics is a school of thought in modern macroeconomics thatevolved from the ideas of John Maynard Keynes. New Keynesian economics emerged as aresponse to the theoretical challenge of rational expectations and new classical economics inthe 1970s.New Keynesian economics attempts to derive Keynesian propositions with rationalexpectations and optimizing behaviors. New Keynesian economics can be considered asattempts to provide plausible micro foundations to explain wages and prices rigidities in theold Keynesian spirit.

Within New Keynesian Theories of Inflation and Output, The Phillips curve is an empirical relationship first observed by A.W. Phillips in 1958. Phillips documented

that there was a relatively stable relationship between wage inflation and the rates of unemployment in the United Kingdom from 1861 to 1957. The original Phillips curve was only an empirical phenomenon, lacking theoretical underpinning.

Lipsey (1960) provided the first major theoretical underpinning through the combination of two postulated relationships: First, a positive linear relationship between the rate of increase in money wage and excess demand for labour. Second, a negative non-linear relationship between excess demand for labour and unemployment rate. By combining these two postulated relationships, Lipsey was able to provide the rationale that the rate of change of money wages depends on the degree of excess demand (or supply) in the labour market as proxy by the rate of unemployment (Snowdon and Vane, 2005, pp.137-139).

One of the main reasons why the Phillips curve was quickly adopted by the Keynesians was it provided an explanation of price determination and inflation, which was missing in the Keynesian macroeconomic literature based on the ISLM model at that time. Keynesians thought that the price level was fixed and unresponsive to changes in aggregate demand. Only when full employment is reached will changes in aggregate demand affect the price level.

The Phillips curve allowed the Keynesian theory of output and employment determination to be linked to a theory of wage and price inflation (Snowdon and Vane, 2005, p.142). Following Samuelson and Solow's (1960) influential contribution, the Phillips curve was interpreted by many Keynesians as the existence of a stable trade-off between inflation and unemployment. In addition, this trade-off

has generally been expressed in terms of price inflation instead of wage inflation (Snowdon and Vane, 2005, p.144).

In the late 1960s and early 1970s many countries experienced high levels of unemployment and inflation simultaneously, a phenomenon that theories based on the Phillips curve could not explain. The idea of a stable relationship between inflation and unemployment was challenged independently by Milton Friedman (1968) and Edmund Phelps (1967, 1968) (Snowdon and Vane, 2005, p.144).Friedman's (1968) and Phelps' (1967, 1968) 'natural rate hypothesis' states that there is a natural rate of unemployment and that monetary policy cannot keep unemployment below this level indefinitely.

Friedman and Phelps argued that the idea that nominal variables such as money supply or inflation could permanently affect real variables such as output or unemployment was unreasonable; as in the long-run, real variables are affected by real forces. Permanent expansionary monetary policy would eventually change the way wages and prices are set. There is no reason for workers and firms to settle on different levels of employment and real wage just because inflation is higher (Romer, 2001, p.245-246).

Subsequently whether there is a permanent output-inflation trade-off became an important debate in modern macroeconomics. These issues have important implications for modelling the dynamics of inflation, unemployment and output and the scope for stabilization policy. In general, the monetarist and neoclassical models imply that stabilization policies are ineffective. On the other hand, the Keynesian and New Keynesian models imply that stabilization policies are effective and should be

implemented. An alternative way of stating this difference is that while monetarists argue that changes to nominal demand have no real effects, Keynesians argue that they have significant real effects.

2.3.1.5 Capital Market Theory

Capital market theory is one of the oldest theories of FDI. According to this theory, FDI is determined by interest rates. Capital market theory is a part of portfolio investment (Iversen, 1935; Aliber, 1971). Boddewyn‘s (1985) Capital market theory talked about three positions which attract FDI to the less developed countries (LDCs). First is the undervalued exchange rate, which allows lower production costs in the host countries. Second position said that since no organized securities exist, therefore long term investments in LDCs will often be FDI rather than purchase of securities. And the third position is that since there is limited knowledge about host countries' securities that is why it favorsFDI which allows control of host country assets.

2.3.1.6 Eclectic Paradigm Theory to FDI

A most popular conceptualization and theoretical framework for macroeconomics factors of foreign direct investment is the 'Eclectic Paradigm Theory'.In the 1970s one of the most robust and comprehensive theories of FDI was developed byDunning (Read, 2007). In his path breaking work, Dunning (1977 and 1979) amalgamated the major imperfect market-based theories discussed above – the oligopolistic and internalization theories – and added a third dimension in the form of location theory to explain why a firm opens a foreign subsidiary. Location theory addresses the important questions of who produces what goods or services in which locations, and why? Location theory has also been frequently applied by researchersin attempting to

understand the factors that influence locations of MNC units. Among others, they enumerated factors such as host country policies, economic fundamentals, firm strategy and agglomeration economies.

On the basis of the above, Dunning (1993) put forward his theory, which came to be known as the eclectic paradigm or OLI paradigm. Dunning suggested that a firm would engage in FDI if three conditions were fulfilled; It should have ownership advantages vis-à-vis other firms (O);It is beneficial to internalize these advantages rather than to use the market to transfer them to foreign firms (I);There are some location advantages in using a firm's ownership advantages in a foreign locale (L).

Ownership advantages are those which are specific to a firm. These advantages, which may be enjoyed over domestic and foreign competitors, are in the form of both tangible and intangible assets. These ownership advantages lead to reductions in a firm's production costs and allow it to compete with firms in a foreign country.

Location advantages of different countries play a significant role in determining which country will play host to the activities of multinational corporations. As indicated above, a firm gains from avoiding market imperfections in terms of uncertainty, problems of control, lack of desirability of giving full information to potential buyers etc. The internalization gains make it more profitable to carry out transactions within the firm than to depend on external markets.

The essential feature in the eclectic theory is that all three types of conditions must be satisfied before FDI occurs. Dunning (1980) stated that the "OLI triad of variables

determining FDI and MNCs activities may be likened to a three-legged stool; each leg is supportive of the others, and the stool is only functional if the three legs are evenly balanced". What this means is that a firm having ownership advantage, and where there are internationalization gains but no locational advantage is incurred by setting up a unit in a foreign country, will very likely choose to increase its production at home and export its product(s) abroad. In the same way, a firm having ownership and locational advantages will find it more profitable to produce abroad than to produce domestically and export its product(s); however, if there are no internalization gains then the firm will be better off licensing its ownership advantage to foreign firms.

The major contribution by Dunning's eclectic paradigm to the existing literature on FDI was to combine several complementary theories, and identify a set of factors that influence the activities of MNCs. For this reason his theory gained wider acceptance than other imperfect market-based theories. Dunning (1980) empirically tested his theory and obtained satisfactory results. However, one of the main criticisms of the eclectic paradigm is that it includes so many variables that it loses any operational practicality. Dunning himself accepted this fact and stated that it was an inevitable consequence of trying to incorporate the different motivations behind FDI into one general theory.

The result of this criticism was the "Investment Development Cycle or Path" (IDP) theory that proposes a link between a country's level of economic development measured in GDP per capita and its international investment positions – the net outward FDI stock per capita. The basic hypothesis is that when a country develops, the conditions encountered by foreign and local firms will change. This will affect the

flows of inward and outward FDI. This, in turn, will have an impact on the economic structure of the country. Thus, there is a dynamic interaction between the two. Unlike the earlier paradigm, the new theory accepts the fact that a Government can influence the country's condition through its policies, thereby affecting FDI flows and domestic firms' ownership advantages. In this way, IDP introduced a new notion of dynamic approach to the eclectic theory.

2.3.1.7 Product Life Cycle Theory

Product life cycle theory (Vernon 1966) gives a clear understanding on how and why export is replaced by foreign direct investment. The theory provides the significant contribution for the analysis of FDI as it analyzed four production stages that beginning with the creation of new product. His work was based on the United States companies for the domestic market and later on moved to international market. He tried to understand the reason for companies to shift to the international market and international investment.

At the initial stage, firms try to focus more on the domestic market and when the product get matures, firms start exporting to developed countries. Firms standardized its product when the demand increases and in this stage, companies think to expand more of its production in less developed countries. Labour cost, transportation, economies of scale are among of determinant factors for location choice. According to Vernon, not only low-cost location is leading firms to decide and invest in other countries as he argued that any threat to the companies can be seen as the stimulating forces for the action.

2.4 Empirical Literature Review

2.4.1.1 Empirical Literature Review World Wide

Holland et al (2000) reviewed several studies of Eastern and Central Europe, producing evidence of the importance of market size and growth potential as macroeconomic factors of foreign direct investment.

Tasi (1994) analysed the decades of 1970 and 1980 and addressed the endogeneity problem between foreign direct investment and growth by developing a system of simultaneous equations. When foreign direct investment was alternately measured as a flow and as a stock, market size turned out to be more important foreign direct investment inflow than growth. The trade surplus presents a negative sign and is significant for foreign direct investment, while the flow of foreign direct investment decreases as the nominal wage decreases.

Satomi K. at el (2007), in their study on Macro Determinants of Foreign Direct Investment Inflows to Japan found a positive relationship between source country size and foreign direct investment because, larger economies imply greater availability of capital resources and intangible assets (technical knowledge and marketing expertise) that can be used to establish foreign production to meet consumer demand in a target country. Therefore, they suggest that countries with a large number of competitive multinational firms should be able to make larger investments in the international market.

Dunning (1970) also wrote on the determinants of US direct investment in Europe and found market size to be the most influential factor. Loree and Guisinger (1995)

studied the determinants of foreign direct investment in the United States and concluded that variables related to host country were significant in developed countries; only infrastructure was an important determinant in all regions.

A causality test between foreign direct investment and product growth was proposed by Nair-Reichert and Weinhold (2001) based on panel data for 24 developing countries between the years of 1971 and 1985. The main conclusion here was that the relation between investments, whether foreign or domestic and product growth was strongly heterogeneous, and that foreign direct investment efficiency was positively influenced by a country's degree of trade openness.

Cheng and Kwan (2000) in their empirical evidence on governmental capabilities and resources found that governments are major source for economic restructuring and location attraction of inward foreign direct investment. For example, when the Chinese government launched an open door policy in 1993, it influenced positively on China to become the largest recipient of foreign direct investment in the world followed by US.

According to Benassy-Quere et al (2001) on the study of the impacts of exchange rate on foreign direct investment flows, the impact of exchange rate on foreign direct investment flows depends on the type of investment (horizontal foreign direct investment or vertical foreign direct investment). In the case of horizontal foreign direct investment, a depreciation of the host country's exchange rate will have a positive impact on the flows it receives through reduced cost of capital; and the appreciation of the local currency will also increase the flows of foreign direct

investment because the local consumers will have a higher purchasing power. In the case of vertical foreign direct investment, an appreciation of a local currency has a negative effect on foreign direct investment inflows because items produced locally are becoming expensive abroad. The depreciation of a local currency, on the other hand, has a positive effect on foreign direct investment inflows because the products are less expensive. Other authors such as Aliber (1993) also support this argument. He stated that a depreciation of US dollars will increase foreign direct investment while appreciations of US dollars will foreign direct investment.

Iyoha (2001) examined the effects of macroeconomic instability and uncertainty, economic size and external debt on foreign private investment inflows. He shows that market size attracts foreign direct investment to Nigeria whereas inflation discourages it. The study confirms that unsuitable macroeconomic policy acts to discourage foreign investment inflows into the country.

UNCTAD (1999) revealed that the big inflows of foreign investments in the developing countries led to the development of local investment, however the foreign companies/firms dominate the local firms in the sense that they can provide access to the input that is not available locally, they have good technology and improved management systems and they expand and diversify production and export capacities.

2.4.1.2 Empirical Literature Review in Africa

There have been several empirical studies on the macroeconomic factors of foreign direct investment inflows in Africa economies: a case study of Tanzania. Researchers have used different sample countries, period, variables and methods in examining the

factors that attract foreign direct investment. Some studies in order to get a deeper understanding of the macroeconomic factors influencing foreign investors decisions used macro firm level data while others have tried to look into bilateral foreign direct investment flows between countries. Also, some studies tried to look at whole or aggregate foreign direct investment inflows into a host country or a panel data of countries.

The use of different methods or approaches mainly depended on the availability of data, time. Scholars tested different variables such as market size, trade openness, inflation, exchange rates, infrastructure, government policies, and natural resources among others to see whether these variables have positive or negative significant orinsignificant effect to FDI inflow into the host country but some of their empirical results are conflicting each other.

The aim of this study is not to resolve the conflicting empirical results but to examine the extent to which the variables that were included in studies explain the difference in foreign direct investment for my sample and analyze whether these variables have the different effect on FDI inflow into Tanzania.

Trade Openness

Many empirical studies find that country with higher degree of trade openness attracts more foreign direct investment. Kandieru and Chitiya (2003) also found that there is a significant relationship between FDI inflows and openness to trade after analyzing the impact of openness on foreign direct investment in 51 African countries. Salisu (2003) found that trade openness has the positive and significant effect on foreign direct

investment in Nigeria. Asiedu (2002) also comes to the same conclusion for SSA countries by using import and export to proxy openness to trade. Vijayakumar et al. (2010) found that trade openness has a significant impact on FDI inflows into BRICs. Therefore the empirical evidence supports the openness to trade as an important determinant of FDI inflow.

Chakrabarti (2001) found that openness to trade which is measured by imports plus exports to GDP has been positively correlated with foreign direct investment. For a sample of 29 African countries, Morisset (2000) found a positive and significant correlation between the investment climate and trade openness. Bende-Nabende (2002) by studying the most factors that significantly influence long-term investment decision process of investors in 19 SSA countries found that trade openness, market growth and liberalization as the most important long-term determinants of FDI.

Exchange Rate

The exchange rate also considered to be an important macroeconomic factors inward foreign direct investment into a country. The study of Awan and Zaman (2010) revealed that inflation rates caused positive significant effect of FDI inflows in Pakistan. Twimukye (2006) also finds the inflation rate to have a negative relationship with FDI flows into Africa.

Kandiero and Chitiga (2014) found a negative correlation between foreign direct investment inflows and real exchange rate appreciation after examined 38 African countries. The findings from Asiedu (2006) shows that a low level of inflation has a positive effect on FDI inflow into SSA Onyeiwu and Shrestha, (2004) found out that

inflation is a significant variable which influences foreign investors who wish to invest in Africa. Nonnemberg (2004), shows that FDI is correlated to the level of inflation in developing nations. A low level of inflation is likely to encourage more FDI inflows as it indicates that an economy has sound macroeconomic policies.

Coleman and Tettey (2008) tried to examine the relationship between exchange rate volatility and foreign direct investment inflows in Africa Countries like Tanzania a study case. Their empirical results found that volatile exchange rate has a negative effect on FDI inflows which means that volatility of exchange rate which is a measure of risky reduces the inflow of foreign direct investment into the country. They conclude that exchange rate plays an important role in attracting foreign direct investment. Also in the analysis of 11 Sub Saharan African countries (Yasin, 2005) found that exchange rate has a positive and significant effect on FDI flows. Bende-Nabende (2002) after investigating the macro locational determinants of foreign direct investment for the case of 19 SSA countries his findings suggested that the real effective exchange rate has a positive co-integration with the inflow of foreign direct investment.

Inflation

As foreign companies enter into a long-term contract in the host country, high rate of inflation can be a cost of doing business. Foreign firms may lose out when actual rate of inflation turned to be very different from the anticipated rate of inflation as their purchasing power declines. Hailu (2010) found that high rate of inflation has a negative effect on attracting inflows of foreign direct investment. Twimukye (2006) also found that high rate of inflation has a negative relationship with foreign direct

flows into Africa. Naude and Kruggell(2007), as well as Onyeiwu and Shrestha (2004), found that inflation is among of the significant variable, which attracts foreign investors who want to invest in Africa.

Low level of inflation has a positive impact on foreign direct investment flows into Sub Saharan Africa according to the finding from (Asiedu 2006). Also, Nonnemberg and Mendonca (2004) found that there is a correlation between foreign direct investment and level of inflation in developing countries as the country with a low level of inflation is likely to attract more foreign investment inflows because it indicates an economy has sound macroeconomic policies. Wadhwa and Reddy (2011) focused on three motives of investment in examining the determinants of foreign direct investment in 10 Asian countries and results suggest that efficiency seeking factors which include inflation positively affect FDI inflows.

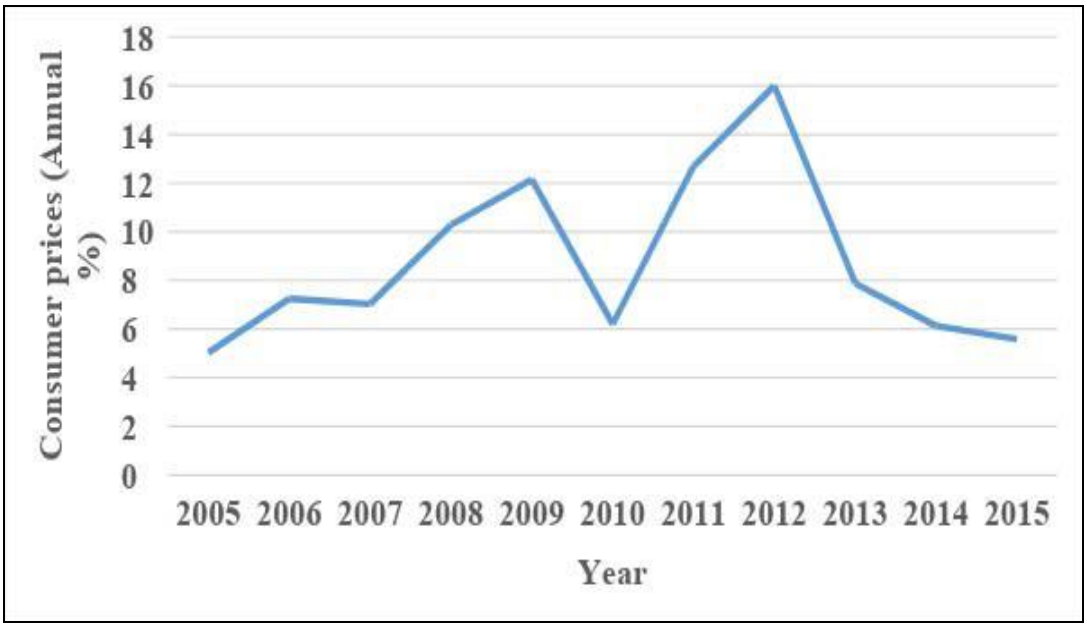

Figure 3. 1: Tanzania Inflation Rate (2005-2015)

Source: World Development Indicators (2017)

Most countries including Tanzania measured inflation rate by looking at the consumer price index changes in percentage from one year to another year. The inflation rate around 2-3 percent per year considered to be very low to cause any problems for household and businesses in general so countries try to keep inflation somewhere around these percent. In 2015 the inflation value was 5.59% (consumer price annual %) and the high value of inflation of 36.15% in 1984 was the maximum value over the past 49 years and the minimum value was 3.49 % in 1970.

Market Size

If foreign investors want to sell their products in the host country, large domestic markets are found to be important in encouraging the inward of foreign direct investment. Market seeking foreign direct investment has been increased over the years. In African countries due to increase in population as well as economic growth become an incentive for foreign companies to make market seeking investment in the continent.

Ezeoha and Cattaneo (2012), as well as Asiedu (2006), found that large local market insignificant in encouraging foreign direct investment into SSA countries. Tarzi (2005) who made a research on foreign direct investment into developing countries found that market size is considered to be an important factor for foreign investors. Any anwu (2012) found positive relationships between market size and flow of foreign direct investment into Africa which was measured by using urban population size.

Mohamed and Sidiropoulos (2010) also found that the size of the economy attracts foreign direct investment flows into the Middle East and North African (MENA) by

using the panel of 36 countries. Nabende (2002) finds that in Sub Saharan African growing markets are the long run- determinant of foreign direct investment based on analysis of 19 countries. Chakrabarti (2001) after investigating the determinants of foreign direct investment in developed and developing countries conclude that market size of the host country measured by GDP per capita has a positive and significant impact on FDI.

Vijayakumar, Sridharan and Rao (2010) the annual data set to examined the factors determining the inflow of foreign direct investment into BRICs countries and they found market size to have a positive significant impact on foreign direct investment inflow into those countries and also similar results have been obtained by Ranjan and Agrawal (2011) who studied the same issue in BRICs countries.

Abundant Natural Resources

There are several studies found natural resources to be one of the factor the that attracting foreign direct investment inflow into the country. For example, in Africa, natural resources attracted many foreign investors and this can be supported by the research which was undertaken by Asiedu (2006) who find the natural resources availability encourage foreign direct investment inflows into Sub Saharan Africa countries.

He also finds that countries with limited availability of natural resources must improve their institutions by ensuring that laws are well enforced so as to obtain inward foreign direct investment. Also, Mohamed and Siridipoulos (2010) find that natural resources are an important factor of foreign direct investment inflow into the

Middle East and North Africa. Another study conducted by Anyanwu (2012) who examined fifty-three African countries finds that oil which is part of country's natural resources attract foreign direct investment inflow into Africa. According to Hailu(2010) after examined the determinant of FDI inflows into the African nation found natural resources to be a significant factor.

Natural resources in Tanzania offers a wide range of FDI opportunities, for example, minerals, tourist attractions, and arable lands are possible areas waiting for FDI flow. Tanzania is renowned for wildlife attractions abundance and unexploited mineral reserves. The mining and tourism sector are the main recipient of FDI and are the growth sector of the economy (Tanzania Investment Centre, 2012).

Poelhekke and Ploeg (2010) estimate and suggest that the net effect of resource endowments on total outward FDI quickly become negative and it is positive when inward FDI is the concern, especially for countries that are geographically close to many other big markets. Our results are robust to different measures of resource reserves.

Technological and Infrastructure Factor

Technology and innovation are the paramount driving force for socio-economic development of human civilization. They have become major force towards gaining competitive advantages in many societies, Tanzania being one of them. Technological development and the application of information and communication development (ICT) as well as the use of energy source have created great opportunities for socio-economic development (Msolla, 2009). In spite of the essence of some achievement

on technology an innovation but yet the lack of inadequate technology in Tanzania has become a vital challenge in development of different sectors in the country that paving the way to Foreign direct investment (FDI) inflow in Tanzania. MNCs transferring new technology into the country whereby international organization subsidiaries would be able to relocate in the host country and hence attaining the succession of FDI inflow. Technology transformed the agriculture and mining economy in Tanzania by 75% percent of production by the application of automating machine which also minimize time and reducing the cost of production which also increasing the country revenue (Tanzania Investment Centre, 2012).

Tanzania Breweries can provide a good example of how an FDI can transfer technology through backward linkage. For example, with backward linkage the Tanzania Breweries initiated a comprehensive programme of local sourcing. In the context of this strategic development therefore, Tanzania Breweries identified a number of inputs to the production of beer that could be sourced locally from the primary inputs (barley) to other intermediate inputs in the packaging process. It is approximated that Tanzania‘s Breweries sources about 30 percentage of its barley requirement from domestic sources. For this purpose it has set up malting plant inMoshi to systemize the purchase of barley from over 500 farmers in the region.

In 2000, approximately US$ 2.4million was paid to farmers for the crop, representing the single largest source of direct income for farmers in the region. In the near future, TB plans to meet the entire barley requirement from local sources (increasing from 6,000 to 26,000 tones) through further investment in research and development of the

crop to improve yields and deepening of the present linkages with the farming community.

Infrastructure is also among of the important factor that influencing FDI flows in the host country as it reduces the operating costs of doing businesses. Bartels, Alladina, and Lederer (2009) find that infrastructure is one of the motivating factors that encourage FDI inflow in Sub Saharan African countries and also the study conducted by Asiedu (2006) find the similar result to the same countries.

In addition, in order to cut down the transaction costs faced by foreign investors, the host country government needs to improve the quality of its infrastructure as Dupasquier and Osakwe (2006) find that one of the reasons Africa to receive low levels of foreign direct investment compare to other developing countries is due to poor infrastructure. Not all researchers, however, find infrastructure to be a significant factor. Onyeiwu andShrestha (2004) after examining 29 African countries found that infrastructure has an insignificant impact in attracting FDI flows. They find that factors such as natural resources, openness to trade and other macroeconomic factors may be more significant to attract foreign investors.

Despite of Tanzania's infrastructure performs fairly well compared to its African peers, but quality is still too poor and has a negative impact on the economy's productive capacity. Infrastructure in Tanzania has witnessed impressive investment in recent years and there is more to come. Transport and utilities infrastructure projects worth $19 billion are in the pipeline.

Infrastructure projects in Africa currently take an average of seven years from project preparation to development. The AfDB recently launched the Africa Infrastructure Fund, which aims to raise $500 million by the first half of 2014 to help shorten the project period to less than three years. Dar es Salaam port, which provides vital access to world markets for six landlocked countries, is now constrained by inadequate space to store and process containers (Ihucha, 2014).

Both seaport and railway networks serve a large market, which includes the country's hinterland and the landlocked countries of Burundi, Rwanda, DR Congo, Uganda, Zambia and Malawi. Recent economic indicators for this region show that it has about 168 million people, a combined GDP of $83 billion and an annual volume of trade exceeding $27 billion. Tanzania is expected to become one of the fastest-growing economies in the world. Key drivers will be recent natural gas discoveries, regional integration supported by an extension of transport infrastructure networks and long-term stable democracy (Smith, 2013).

Government Terms and Regulation

According to (Tanzania Investment Centre, 2012) Tanzania offers a well-balanced and competitive package of fiscal incentives in comparison with other African countries. Aiming at providing competitive fiscal regime on foreign trade, Tanzania has signed double taxation treaties with Denmark, India, Italy, Norway, Sweden, Kenya, Uganda, Zambia and Finland. Countries with which negotiations are continuing include South Africa, Republic of Korea, Zimbabwe, United Arab Emirates, Russia, Seychelles, Mauritius, Egypt, Yugoslavia and Oman.

Investments in Tanzania are guaranteed against nationalization and expropriation. Tanzania is a signatory of several multilateral and bilateral agreements on protection and promotion of foreign investment. Among other international agreements and membership, Tanzania is a member of Multilateral Investment Guarantee Agency (MIGA) and International Centre for Settlement of Investment Disputes (ICSID) (Tanzania Investment Centre, 2012). Busse and Groizard (2008) stated that as compared to the less regulated countries, the more regulated economies are less able to take advantage of the presence of multinational companies. This result is further evidence of the fact that important host country characteristics can lead to a positive impact of foreign investment inflows on growth rates.

Mudambi, Navarra, and Delios (2013) claims in this paper that they have developed a theoretical model in which the volume of FDI and the level of corruption are jointly determined by the extent of the government regulatory burden. The level of corruption emerges as an outcome of the interaction between multinational firms and government. Governments that have very short time horizons are more likely to choose heavier regulatory burdens since they place less value on future inflows of FDI. In contrast, governments that have longer time horizons choose lighter regulatory systems. Such policies have two self-reinforcing effects.

Government Policies

Government policies have been also considered as the factor that attracting foreign direct investment inflow into a country. This can be supported by Asiedu (2010) who finds that government policy is an important determinant of foreign direct investment inflow into Sub Saharan Africa countries. Tax rebates, tax holidays, infrastructure

investments are among of incentives that government can offer to potential foreign investors. Also, government policy that aims to improve the skills of labor through training attracts foreign investors. The government must also ensure that there is transparency in the economy.

There are many factors that encourage the inflow of foreign direct investment into the host countries and different results have been obtained from different empirical studies. The most measured variables include market size, infrastructure, trade openness, labor costs, foreign aid, human capital, financial development, exchange rate, market stock, inflation, international interest rate, government policy, total factor productivity and economic growth. Each of these variables according to the evidence from empirical review varies across the countries, regions, methodology and time. According to Ericsson and Iran oust (2010), there are very few studies that are relating to the group of countries that belong to economic blocs in Africa region, therefore, this study intends to accompany the existing literature by examining the determinants of foreign direct investment inflow into Tanzania.

2.4.1.3 Empirical Literature Review in Tanzania

URT (2001) revealed that underdeveloped infrastructure is often pointed out as one ofthe key constraints to exploiting Tanzania's Development Potential. The infrastructure network, therefore, needs to be upgraded to facilitate improve accessibility to productivelocation.

The transport network in Tanzania is geared towards serving an economy dependent on the outside world for output markets and imported inputs. This has left major gaps

in terms of creating a relatively more cohesive network that would have fostered the development of a domestic market for the country's economic activities which are distributed partly following the location of nature endowments (World Bank and URT, 2001).

Report on Foreign Private Investment in Zanzibar (2004) examined that FDI factors assessed under infrastructure are inland transport, access to seaport, air transportation, and port operation. Perceptions on all infrastructure factors were favorable except for port operations, which remained unchanged. Although investors' perceptions on inland transport show improvement, there is a need for more improvements particularly on the rural and feeder roads. These improvements were due to Government's efforts in constructing new roads and undertaking roads maintenance and repairs.

The Zanzibar trade Policy (2004) has revealed that the inflows of foreign investments made the Revolutionary Government of Zanzibar see the development of transportation to be crucial for economic prosperity due to its importance of moving goods and services from one point to another. Therefore, a number of programs and projects to develop the transportation network on land, water and air were set up; such programs include the construction of tarmac roads, improving the facilities in the air ports and both on Unguja and Pemba ports. The implementation of those programs and projects started since 1986/87 and is now on progress.

The study examines transport sector and finds that it is very crucial to the development of the state economy. Due to the inflow of a number of foreign

investments, the government reviewed the transport policy of 1986 in order to cope with the currentenvironment and provide more attractiveness to foreign investors including homeinvestors (Zanzibar National Transport Policy study, 2004).Kombo, (2006) did his own study on FDI and the performance of the Tanzania Economy. His work is mainly discussion of past research works. However, he came to the same view that FDI has positive significant effect of economic growth.

2.5 Research Gap

The gap of this study is justified by the main incentives of FDI inflowsand there are variations of results over the variables examined as foreign direct investment inflows, exchange rate, and interest rate, openness to trade, inflation rate and market size rate to the economics of Tanzania. Noorbakhsh & Paloni (2001), Kok & Ersoy (2009) and Pearson et al. (2012) focus on macroeconomic concepts as main incentives of FDI inflows; Market size (in terms of GDP) is the most commonly mentioned. Larger markets (economies) will attract a larger volume of FDI due to the influence of the economies of scale in the context of market-seeking investments. In some cases, this factormay bethe key factor of foreign investment (Sharma & Bandara, 2010).

Although the name of this factor for each study differs, all investigations refer to Gross Domestic Product, either it is called Market size (Mateev, 2009; Riedl, 2010; Sharma & Bandara, 2010; Khachoo & Khan, 2012), Economic size (Tang, 2011), The size of the economy (Jurcau et al., 2011), Size of domestic market (Arbatli, 2011), or directly GDP (Hayakawa et al., 2013; Kersan-skabic, 2013). Nevertheless, the methodology is different, as for example: Sharma & Bandara (2010) and Riedl (2010) apply the level of GDP in currency units, Mateev (2009) and Kersan-

Skabic (2013) use GDP per capita, other researchers use the logarithm of GDP (Tang, 2011; Jurcau et al., 2011). Almost all investigations discovered a positive significant effect of the Market size on FDI flows.

Another macroeconomic factor that is considered to influence FDI flows is Inflation, which is meant to measure instability at the macro level (Kersan-Skabic, 2013). However, only two out of four identified researches obtained statistically significant results, although they were opposite and do not provide credible assumptions: Kok & Ersoy (2009) state that inflation affects negatively FDI flows, while Kersan-Skabic (2013) received a positive sign of the relation, contrary to expectations.It is widely known opinion that openness to trade might stimulate the attraction of foreign investments. Therefore, Trade in its different aspects is found to be a determinant of foreign investment. Only a half of the detected researches obtained statistically significant results: Kok & Ersoy (2009), Kersan-Skabic (2013) and Noorbakhsh & Paloni (2001) state that Trade has a positive impact on FDI flows, as expected. The macroeconomic factor of Exchange Rate is also considered to be an influential factor when studying foreign investment. Arbatli (2011) proposes two variables to investigate it: Real exchange rate and Exchange Rate Classification. The first one does not have any statistically significant relationship with FDI. For Exchange Rate Classification the author introduces dummy variables on the basis of IMF's de facto classification of exchange rate arrangements and obtains significant results, stating that the exchange rate fixation or volatility affects foreign capital inflows.The analysis of specialized literature demonstrates that the group of economic factors is the most frequently studied, which was expected

due to economic nature of the concept of Foreign Direct Investment. Therefore, there is a lot of empirical evidence regarding the influence of this group of macroeconomics factor on cross-border investments. Thus, the gap justifies the need for the study.

2.6 Conceptual Framework

Conceptual framework explain the relationship between the dependent and independent variables. Also include conceptual framework diagram.

2.6.1 Conceptual Framework Diagram

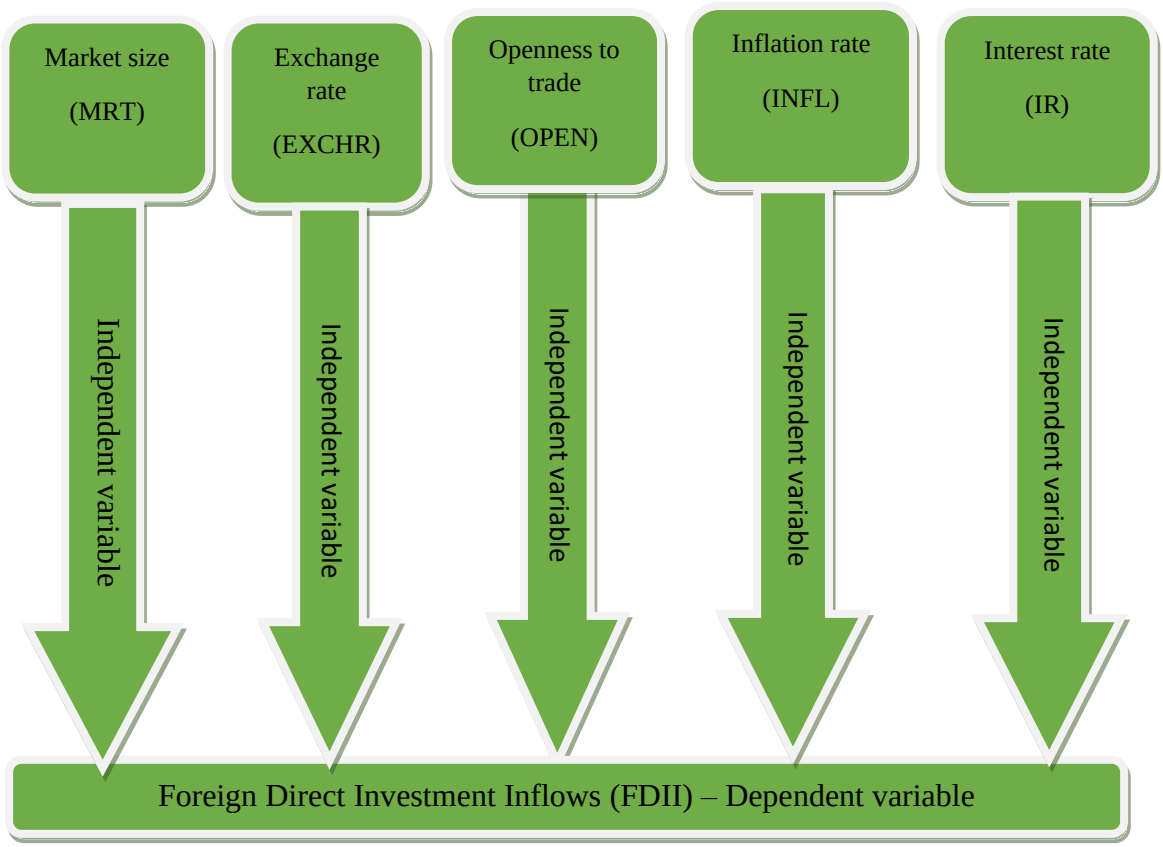

Figure 2.1: Interaction among Independent Variables to Foreign Direct Investment Inflows

From the conceptual framework model, Foreign Direct Investment Inflows (FDII) is a dependent variable while Market Size (MRT), Openness to Trade (OPEN),Exchange

Rate(EXCHR), Interest Rate (IR) and Inflation Rate (INFL) are independent variables.

2.6.3 Summary of Literature Review

This is a synopsis of theories and empirical studies regarding the concept of macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. Most theoretical reviews such as Dunning's Eclectic Approach theory and the Heckscher-Ohlin model analyze more on ways in which MNC's choose areas where they establish their subsidiaries. This in essence creates a platform for the host countries to improve the environment so as to attract more FDI.

FDI has been viewed as a benefit arising from globalization. It is more of an outcome rather than a contributing factor to the process of globalization (Blomstrom, 1990). In Tanzania FDI has been more of a contributing factor towards the achievement of financial globalization. Kinuthia (2010) notes that, FDI not only contributes to the growth of an economy but also to the financial openness of an economy. Over the period of 1980 to 2000s Tanzania has been an unattractive destination for investment but since 2010s when the recovery strategy paper was established Tanzania has been attracting a lot FDI which has led to economic globalization.

Tanzania could be one of the last frontiers for financial and economic globalization through FDI and establishment of MNC's. Therefore this study tries to establish the extent to which this occurrence is true and to bridge this knowledge gap that concentrates more on growth and development rather than capital flow determinants.

Table 2.1: Summary of Literature Review

Variable(s)	Country	Methodology	Findings	Author(s)
Trade Openness	A sample of 29 African countries	Imports plus exports to GDP	Country with higher degree of trade openness attracts more foreign direct investment and found a positive and significant correlation between the investment climate and trade openness.	Chakrabarti (2001), Morisset (2000), Bende-Nabende (2002), Kandieru and Chitiya (2003).
	Sub Saharan African countries	The real openness measures	The positive correlation between openness to trade and foreign direct investment inflows	Rodriguez and Rodrik (1999).
		The conventional measures	The strong effect of trade on FDIs and positive biased estimations of openness on growth and FDIs.	Rodrik et al. (2002), Alcala and Ciccone (2002), Dollar and Kraay (2003)
Interest rates	India	An annual percentage	Direct foreign investors normally survey economies with low interest rates because they will enable them to obtain higher returns from the investments.	Singhania (2011)
Market size	Eastern and Central Europe	Urban population size	Producing evidence of the importance of market size and growth potential as macroeconomic factors of foreign direct investment	Holland et al (2000)
	SSA countries		Positive relationships between market size and flow of foreign direct investment into Africa	Ezeoha and Cattaneo (2012), Asiedu (2006), Tarzi (2005) and anwu (2012)
Inflation rate	Africa countries	An annual percentage	Found that high rate of inflation has a negative effect on attracting inflows of foreign direct investment	Hailu (2010), Twimukye (2006), Naude and Kruggell (2007) and Onyeiwu and Shrestha (2004
Exchange rate	SSA countries	A measure of risky reduces the inflow of foreign direct investment into the country	found a negative correlation between foreign direct investment inflows and real exchange rate appreciation after examined 38 African countries	Kandiero and Chitiga (2014), Coleman and Tettey (2008),

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

Kothari (2004) defines research methodology as a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. This study examined macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The study used secondary data from various institutions; the data collected are foreign direct investment inflows (FDII), inflation rate (INFL), interestrate (IR), Openness to trade(OPEN), market size (MRT) and exchange rate (EXCHR). The data used by the researcher in this study ranges from 1990 to 2017 periods. The studies will not involve sampling since it involves the use of secondary data and provided the methodologically to be followed throughout the research. This chapter covered the research philosophy/paradigm, research design, area of the study, data collection method, data analysis techniques.

3.2 Research Philosophy/Paradigm

3.2.1 Research Philosophy Theory

Saunders et al., (2009), have explained that the well-established recognized guidance or knowledge base to formulate and conduct a research work is considered as the research philosophy. The research philosophy has been first developed by Plato and Aristotle. The reason to apply the research philosophy in a research is that it guides how validly the further elements of the research methodology will be set. There are three major research philosophies and these are the positivist research philosophy,

interpretive research philosophy and the realism research philosophy. The Positivism is the research philosophy, which guides to collect different previously studied research related reliable and valid research data and create hypothetical growth to conduct a research.

The major advantage to use the research philosophy to conduct a research is that it helps to collect valid and reliable research data, provides high level of control over the research operation and ensures maximum easy research operation. But the major weakness of the research philosophy is that it restricts the contribution of researcher within the research. The research philosophy guides to conduct a research by interpreting the behavior and nature of human and objects. The major advantage of the philosophy is that it helps to collect highly in-depth research data and allows researchers contribution.

In contrast, it can lead high bias propensity to conduct the research as it will suggest investigating very limited number of research respondents (Kasi, 2009). Realism is the research philosophy which suggests collecting research data and information only based on the experiment and practical experience oriented issues. This is why it is highly efficient to be applied in scientific research whereas it will not be suitable to apply in business research as there are different issues in a business research not possible to be experienced practically (Murname & Willett, 2011).

3.2.2 Research Philosophy Selection and Justification

In the current research operation positivism research philosophy has been applied where previously published reliable and valid data regarding current research has been

collected first and then a hypothetical ground has been created based on the data to conduct the research (Saunders et al., 2007). The justification to apply the positivism research philosophy is that it has guided to collect only valid and reliable research data and generated desired level of control over the research operation that has ensured easy operation of the research (Saunders et al., 2009). But, in case of high propensity of biasness, the interpretivist research philosophy has been avoided whereas in case of unsuitability to apply in a business research, the realism research philosophy has not been applied here (Kasi, 2009 and Murname & Willett, 2011).

3.3 Research Design and Sources of Data

The study relied essentially on secondary data which was sourced from various publications. Specifically, data was obtained from various issues of: Central Bank of Tanzania (BOT), National Bureau of Statistical (NBS), Annual Reports and Statements of Accounts as well as the Economic and Financial Reviews of the BOT; publications of the National Bureau of Statistics (NBS); publications of the Ministry of Finance. National Insurance Corporation (NIC). Other sources included: The World Bank Policy Research Working Papers, United Nations Conference on Trade and Development (UNCTAD) Publications, IMF and OPEC Working Papers.

3.4 Area of the Study

This study conducted in Tanzania as we want to find out macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The United Republic of Tanzania specifically its economy was the study area. The Tanzania Investment Centre (TIC), Bank of Tanzania (BOT) and National Bureau of Statistics (NBS) was used as a source to obtain Data about the economy.

3.5 Specification of the Empirical Model

The time series data issued in this study to represent both independent and dependent variables. The multiple- regression model will be used to analyze the time series data. The study analyses the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The study model demonstrates foreign direct investment inflows (FDI) as the macroeconomic factors of the exchange rate (EXCHR), inflation rate (INFL), market size (MRT), Interest rate (IR) and openness to trade (OPEN).

In this model the again the independent variables areexchange rate (EXCHR), inflation rate (INFL), market size (MRT), Interest rate (IR) and openness to trade (OPEN) and the dependent variable is foreign direct investment inflows (FDI). The model is adapted from Farhan et al. (2012) for the purpose of the present analysis and it is specified as under:

Foreign direct investment inflows (FDI) = f (exchange rate (EXCHR), inflation rate (INFL), market size (MRT), Interest rate (IR) and openness to trade (OPEN)).In mathematical form, the model is as given by equation (1) to the part of theoretical model.

3.6 Theoretical Model

The conceptual frame is developed by using the multiple regression models estimated to test the mentioned-hypotheses in this study explained by Carlos and Bonilla (2012).The model is presented as follows:

FDI = f (EXCHR, INFL, MRT, IR, OPEN)…….……. (1)

Where:

FDI = Foreign direct investment (Dependent variable)

f = Function of

EXCHR = Exchange rate (Independent variable)

INFL = Inflation rate (Independent variable)

MRT = Market size (Independent variable)

IR = Interest rate (Independent variable)

OPEN = Openness to trade (Independent variable)

3.7 Theoretical Econometric Model

In order to fulfill the intended objectives, a model is developed using macroeconomic factors as independent variables and foreign direct investment inflows as dependent variable. The base of an econometric model is from the empirical literature. The study will adopt particularly the multiple regression models which is existed in most literature which is explained above (1).

The model is presented as follows:

$Y = B0 + BX + \mu$……..……...… (2)

Where:

Y means the dependent variable

B0 means the constant term,

B means the coefficient of an independent variable of the study,

X means the independent variable and

M means a normal error term.

Therefore, this study is based on a conceptual mode adopted from Fowad and Taqadus (2013). Accordingly, an estimated model that will be used in this study is modified and presented as follow:

FDII=β0 +β1EXCHR +β2INFL+ B3MRT + B4IR + β5OPEN +μ…… ….. (3)

Where:

β0: Constant amount

β1 – β5: Coefficients of the variables

μ: Error term

FDII = Foreign direct investment inflows (Dependent variable)

EXCHR = Exchange rate (Independent variable)

INFL = Inflation rate (Independent variable)

MRT = Market size (Independent variable)

IR = Interest rate (Independent variable)

OPEN = Openness to trade (Independent variable)

The coefficient of an explanatory variable will be estimated by the use of Ordinary Least Square (OLS) technique. It is customary, however, to use natural logarithm in specifying the model such that equation (3) becomes;

InFDII= β0+β1 In(EXCHR)+β2 In(INFL)+B3 In(MRT)+B4 In(IR)+β5 In(OPEN)+μ……(4)

3.7.1 Variable and Measurement Procedure

Table 3.1: Summary of the Variable and Measurement Procedure

Variable	Measurement	Expected sign	Author
Market size	Currency units	Positive	Sharma &Bandara (2010) and Riedl (2010)
	GDP per capita	Positive	Mateev (2009) and Kersan-Skabic (2013)
Inflation	Instability at the macro level	Positive	Kersan-Skabic, 2013
	Instability at the macro level	Negative	Kok&Ersoy (2009)
Openness to trade	Statistically significant	Positive	Kok&Ersoy (2009), Kersan-Skabic (2013) and Noorbakhsh & Paloni (2001)
Exchange Rate	Statistically significant	Negative	Arbatli (2011)
Interest rate	Average real interest rates	Negative	Arbatli (2011)
	The natural logarithm	Positive	Khachoo & Khan (2012).
FDI flows	aggregate different factors into a composite	equivocal	Crespo &Fontoura (2007)
	Past changes in FDI to GDP ratio	equivocal	Noorbakhsh&Paloni (2001)

Source: Researcher data 2019.

3.8 Estimated Models

It is customary in econometric analysis modeling to start by specifying the functional form of the model, and this is given as:

$FDI_t = f (EXCHR_t, INFL_t, MRT_t, IR_t, OPEN_t)$……...…… (5)

Where

FDIt=is a proxy used for Foreign direct investment rate

$EXCHR_t$=is for Exchange rate

INF=Inflation rate

MRT = Market size rate

IR_t =Interest rate/lending rate

$OPEN_t$=Openness to trade rate

3.9 Testable Hypothesis

In order to examine the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017, the following hypotheses were designed and will be used for testing:

H1: There is a positive significant relationship between openness to trade and foreign direct investment inflows.

H2: There is a negative significant relationship between exchange rate and foreign direct investment inflows.

H3: There is a negative significant relationship between inflation rate and foreign direct investment inflows.

H4: There is a positive significant relationship between market size and foreign direct investment inflows.

H5: There is a negative significant relationship between interest rate and foreign direct investment inflows.

3.9.1 Summary of the Variables

This study hypothesizes the expectation of positive and negative significant relationship between foreign direct investment inflows into Tanzania and the market size, trade openness, exchange rate, interest rate and inflation rate.

3.10 Scope and Data Sources

This study wasuses annual time series data for the figure related to foreign direct investment inflows together with the macro- economic variables covering the period between1990-2017. The study will selects the five important variables based on availability of data for the period covered and to include many variables does not

mean the model will be the best as sometimes more variables can make it difficult in getting the dynamic relationships of the most significant variables. Also, most of these data in this study were collected from the World Bank Development Indicators.

3.11 Estimation Technique

Data related to foreign direct investment inflows into Tanzania measured by the current price in US dollars which is proxied by the natural logarithm of total annual foreign direct investment net inflows. Market size (MRT) is proxied by the GDP per capita for the period of study. Openness to foreign trade is captured by the ratio of imports plus exports to GDP which is denoted as (OPEN). Exchange rate (EXCHR) is stated by conversion rate from Tanzania shillings to US dollars. The inflation rate (INFL) is captured by changes in consumer price level annually in percentage, Interest rate (IR) captured by changes in interest rate from the Central bank of Tanzania.

3.11.1 Testing for Stationarity (Unit Root Test)

Unit root test will be used to check the stationary nature of the variables used for this study. The unit root test shows how variables have to be a difference in a number of times so as to come to a stationary state.A time series variable is said to be stationary if and only if its mean, variance and auto covariance are constant (finite) and independent of time.

There are various methods of testing for unit root such as Classical economic theory variables that are to be differenced in order to achieve the value of stationary are known as 1 (1) and those which are stationary are known as 1 (0) series.

Dickey-Fuller and the Phillip-Perron tests. In this study the Augmented Dickey-Fuller (ADF) test is used since it allows addition of more lags to achieve white noise error term, which is required for the distributional results to be valid (no autocorrelation). The null hypothesis tested under the Augmented Dickey Fuller (ADF), is rejected when the absolute value of the computed t-static is greater than the absolute of the critical value. The unit root results will be reported in chapter four. The Augmented Dickey Fuller (ADF) Test takes the following formulation; with a drift and trend model specification representation;

$$\Delta P_t = \alpha_0 + YP_{t-1} + \alpha_2 t + \sum_{i=1}^{n} B_i \Delta P_{t-1} + \varepsilon_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (6)$$

Where

α_0Is a drift Component and is trend component.

B_1Is a measure of Lag length and is a measure of unit root.

The null hypothesis:

Ho: Y = 0 for existence of unit root while

H1: Y< 0 for no unit root.

The test is done by “augmenting” the DF equations by adding the lagged values of the dependent variable. The lag length is chosen to make sure that any autocorrelation in$\Delta P_t$is taken away. The optimal lag length is identified so as ensure the error term is white noise. If we do not reject the null hypothesis we can conclude that the series under study has a unit root and hence no stationary. $\alpha_2 t$, a trend component takes to account the possibility of autocorrelation in residual and ΔP_{t-1} is the lagged difference to accommodate serial correlation in the error ε.

3.11.2 Multiple Regression Analytical Method

Multiple regression analytical method was also used to estimate the equation. The reason of using this technique is due to its unbiasedness, simplicity, efficiency, minimum variance and it has been used by many researchers in their previous studies and results were meaningful. Alsohelp to determine the relationship between independent variables and dependent variables keeping other variables constant and gives the optimize results (Danish and Akram, 2014). The method is very helpful to understand the long run relationship among the variables.

Multiple regression analytical method has applied on data because it utilizes the data very efficiently and easily well understandable and interpretable of statistical values. Multiple regression analytical method technique is considered as the simplest technique of linear regression to use and easy to understand. The aim of multiple regression analytical method is to fit the function with the data and minimization of the sum squared errors from the data. The correlation matrix will also employed in this study so as to test if the selected variables are correlated.

3.11.3 Johansen Co-Integration Test

Two variables are said to be co-integrated if they have a long run equilibrium, relationship between them. If two variables, dependent and an independent, are individually non-stationary but their residual (combination) is stationary, the variables are co-integrated on the long run (Gujarati, 2004). Therefore the researchers used the Johansen co-integration test to test co-integration since it is the only test which can estimate more than one co-integration relationship if the data set contains two or more time series as well as gives the maximum rank of co-integration.

Co integration test involves estimating the following equation:

LR_{max} **(r/n+1)**$=-T^{*}\log(1-\lambda)$ ……(7)

Where;

λ means the maximum Eigen value and

T means a sample size.

A trace statistics investigates a null hypothesis of 'r' cointergrating relations against the alternative of 'n' cointergrating relations, where "n" refers to the number of variables in the system for$r = 0,1,2,\ldots\ldots n-1$. Its equation is computed according to the following formula:

$LR_{tr}(r/n = -T^{*}\sum_{i=r+1}^{n}\log(1-\lambda_i)$……(8)

There are two main methods of testing co integration which include; Engle–Granger (EG) Approach for Univariate Models and Johansen Approach for the Multivariate Models. However, for the purpose of this study the Engle-Granger approach is utilized which is simple in implementation and interpretation of the test, and also the approach is suitable for small sample size. Nevertheless, there are some problems with this Engle-Granger approach (Verbeek, 2008) among others include; the residual based test tends to lack power because it does not exploit all the available information about the dynamic interactions of the variables, the results of the tests are sensitive to the left-hand side variable of the regression, and it is only possible to test for one co integrating vector as it does not provide a sufficient framework for more than two variables.

The Johansen's approach overcomes the drawbacks of the Engle-Granger approach, the approach is used in testing for number of co integrating vectors that is being able

to detect multiple co integrating vectors in avoiding the problem of having to select one variable as dependent variable in avoiding carrying errors one from step to another, and lastly the approach provides joint procedure; testing and maximum likelihood estimation of the vector error correction model and long-run equilibrium relations.

Though, the Johansen's approach has the following shortcoming; the method can't be agreed as appropriate one since an estimated point which is obtained for co integrating vector may not be particularly meaningful when given the small sample size. The 36 problem of multiple long-run relationships is presumably being seen as an identification problem (Granger, 1986). Also, its procedure is very sensitive to the misspecification of the lag length of the VAR model we start with. Engle-Granger representation theorem, explain that when the variables are co integrated, there is a long-term, or equilibrium, relationship among the variables.

3.11.4 Serial Correlation Test

To ensure that our results are free from autocorrelation we have tested the serial correlation using LM test (Lagrange multiple test). The LM test is particularly useful because it is not only suitable for testing for autocorrelation of any order, but also suitable for models with or without lagged dependent variables.

3.11.5 Multicollinearity Test

Multicollinearity refers to a simultaneous movement of two or more independent variables in the same direction and approximately at the same rate. When Multicollinearity exists in a model it is very difficult and sometimes impossible to

separate the effect of each variable on the dependent variable. Multicollinearity can make it difficult to detect significant relationships. Guideline is Mean VIF should be less than 5 and for the individual variables should not be greater than 10.

3.11.6 Test of Significance

Inferential statistics such as non-parametric test which, include analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of significance. Coefficient of correlation (r) will be used to determine the magnitude of the relationship between the dependent and the independent variables. Coefficient of determination (r2) was also be used to show the percentage for which each independent variable and all independent variables combined would be explaining the change in the dependent variable. LM test for Autoregressive conditional heteroscedasticity with Ho: no ARCH effect, if p value is less than 5% we reject null but we accept null if p-value is greater than 5%.

3.11.7 Heteroscedasticity Test

Heteroscedasticity is a problem where error term does not have constant variance. The test will use Breusch-Pagan with the null hypothesis constant variance, if p value is less than 5% we reject null but we accept null if p-value is greater than 5%. In time series we test.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter is about data analysis and discusses the main themes of the study as a reflection of the research objectives. However, the chapter presents the analysis plan which gave out the results of the findings. The unit root test and the Johansen cointegration test results are presented. Nevertheless, the Cointegration Regression Analysis results of macroeconomic variables give a detailed analysis of the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017.

4.2 Data Analysis

The data for this study was obtained from Central Bank of Tanzania (BOT), National Bureau of Statistical (NBS), Annual Reports and Statements of Accounts as well as the Economic and Financial Reviews of the BOT; publications of the National Bureau of Statistics (NBS); publications of the Ministry of Finance. National Insurance Corporation (NIC). Other sources included:

The World Bank Policy Research Working Papers, United Nations Conference on Trade and Development (UNCTAD) Publications, IMF and OPEC Working Papers. The data was analyzed using descriptive analysis, correlation analysis and multiple linear regressions to answer the research objectives using STATA (The name STATA is a syllabic abbreviation of the words statistics and data).

STATA is a general-purpose statistical software package created in 1985 by Stata Corp. Most of its users work in research, especially in the fields of economics, sociology, political science, biomedicine and epidemiology.

4.3 Finding

This sections presents the descriptive results of this study which measures of Central tendency, the trends analysis for Foreign direct investment inflow (FDII), Exchange rate (EXCHR),Inflation rate (INFL), Market size rate (MRT), Interest rate/lending rate (IR) and Openness to trade rate (OPEN).

4.3.1 Descriptive Analysis

Normality test is carried out to investigate if the variables used in the study possessed normality property. Descriptive statistics (mean, median, mode, standard deviation, maximum, minimum, skewness, and kurtosis) are useful for exploring and examining data (such as how data are distributed or dispersed) prior to performing statistical tests and subsequently carrying out statistical analysis and data interpretation. The Kernel density estimation indicates that not all the variables behave normally in levels as shown in the appendix also the summary statistics in levels shows that the variables are not normally distributed.

In eliminating non-normality of the variables, the variables were transformed by using logarithmic operator. The logarithm operator eliminates the non-stationary of the variables hence interpretation of the estimated coefficients becomes easier because are expressed in form of elasticity.

Table 4.1: Summary Result for the Descriptive Statistics of the Variables

Statistics	FDII	EXCHR	INFL	MRT	IR	OPEN
Mean	2.945925	1078.413	12.99643	20.37584	21.40518	16.663
Median(p50)	2.7025	1062.852	7.9	16.138	16.3435	17.044
Standard deviation (sd)	1.272197	572.1882	9.607115	15.64834	8.267225	3.824778
Maximum	5.664	2238.881	35.8	82.09	42.833	24.075
Minimum	1.0025	183.6984	4.7	6.053	14.14	10.025
Summation (sum)	82.4859	30195.57	363.9	570.5234	599.345	466.564
Kurtosis	2.302967	2.343283	2.914521	10.30832	3.138878	2.263565
Skewness	0.3713189	0.361435	1.094275	2.633843	1.138813	-0.1995084
Observations (Obs)	28	28	28	28	28	28

Where

FDII=Foreign Direct Investment Inflow**, EXCHR**=Exchange Rate,**INFL**=Inflation Rate, **MRT**=Market Size Rate,**IR**=Interest Rateand **OPEN**=Openness to Trade Rate**.**

Discussion of finding

According to Kaur P, Stoltzfus J, Yellapu V. Descriptive statistics. Int J Acad Med 2018;measures of central tendencyis the value that describes the entire set of data as a single measurement. The three primary measures of central tendency are the mean, median, and mode.Measures of dispersion (how data is spread out) are range-difference between the highest and lowest value, variance-how widely observations vary and standard deviation (SD)-a measure how for observations are from the sample average.

Measures of normality are kurtosis-measures the peakness on flatness of the distribution of the series and includes the **Mesokurtic**: a normal distribution with a Kurtosis of 3, **Leptokurtic:** positive kurtosis (peaked-curve), higher values and **Platykurtic**: negative kurtosis (flatted-curve), more lower values. Skewness-Measures the degree of the asymmetry of the series or probability distribution of a real-valued

random variable about its mean. The skewness value can be **Normal skewness**: has a **0** skew, distribution is symmetric around its mean, **Positive skewness**: long right tail, higher values and **Negative skewness**: long left tail, lower values.Interpretation of the table above note that, the Normal skew: 0, Mesokurtic: Kurtosis of 3.

FDII**:** The results of variable from the table found that the skewness is0.3713189 means Normal skewness because has a 0 skew and the Kurtosis is 2.302967 means Platykurtic Kurtosis because 2.302967 is less than 3 (2.302967<3).

EXCHR: The results of variable from the table found that the skewness is 0.361435 means Normal skewness because has a 0 skew and the Kurtosis is 2.343283 means Platykurtic Kurtosis because 2.343283 is less than 3 (2.343283<3).

INFL: The results of variable from the table found that the skewness is 1.094275 means Positive skewness because has a long right tail, higher values and the Kurtosis is 2.914521 means Platykurtic Kurtosis because 2.914521 is less than 3 (2.914521<3).

MRT: The results of variable from the table found that the skewness is 2.633843 means Positive skewness because has a long right tail, higher values and the Kurtosis is 10.30832 means Leptokurtic: positive kurtosis (peaked-curve), higher values Kurtosis because 10.30832 is greater than 3 (10.30832 >3).

IR: The results of variable from the table found that the skewness is 1.138813 means Positive skewness because has a long right tail, higher values and the Kurtosis is 3.138878 means Leptokurtic: positive kurtosis (peaked-curve), higher values Kurtosis because 3.138878 is greater than 3 (3.138878>3).

OPEN: The results of variable from the table found that the skewness is -0.1995084 means negative skewness because has a long left tail, lower values and the Kurtosis is 2.263565 means Platykurtic Kurtosis because 2.263565 is less than 3 (2.263565<3).

Positive and negative skewness in the above table indicates that the results or outcomes are almost or not normally distributed and the low standard deviations indicate that variables are largely in the same range of value.In addition, the range of deviation between the maximum and minimum of each individual series is found to be reasonable in comparison to the mean.

4.3.2 Correlation Analysis

Correlations summarize the bivariate linear relationship between two variables. In this study, the correlation coefficient analysis will help to determine the relationship between the dependent and independent variables so as to test the hypotheses. The correlation coefficient will measure the degree of multi co linearity of the variables that are selected in this study. According to Gath go and Ragui (2014), the correlation matrix is used also to determine the most significant variables among the hypothesized selected independent variables. Therefore the correlation test in this study will help to determine which variables are more significant to the dependent variable.

The correlation analysis obtained to the stata by using PW Corps Command (pwcorr), through Pairwise Correlation or Correlation and Covariance option. By using either Pairwise Correlation or Correlation and Covariance option we get basically the exact same output because both calculate Pearson correlation coefficients using the PW

Corps Command (pwcorr). Pairwise Correlation or Correlation and Covariance option describe the relationship between two continuous variables a minus 1 to +1 scale when the correlation is negative it means that as the value of one variable goes up the other one goes down, positive correlation means that as the value of one variable goes up the other one goes up and the closer a relationship is to 0 the less related the two are changes in one variable do not appear to correspond to changes in the other it can be hard to make correlations concrete. The results are expressed on a -1 to +1 scale as shown to the table below:

Table 4. 2: Possible Interpretation

P	**Possible Interpretation**
-1.0	Perfectly negative relationship
-1.0, -0.5	Stronger negative relationship
-0.5, -0.1	Weaker negative relationship
-0.1, 0.1	Little to no relationship
0.1, 0.5	Weaker positive relationship
0.5, 1.0	Stronger positive relationship
1.0	Perfectly positive relationship

Sources: Website (www.josephncohern.org)

Table 4.3: Correlation Analysis

	FDII	**EXCHR**	**INFL**	**MRT**	**IR**	**OPEN**
FDII	1.0000					
EXCHR	0.4919	1.00000				
INFL	-0.5812	-0.6965	1.0000			
MRT	0.3418	0.1145	-0.1136	1.0000		
IR	-0.5910	-0.7274	0.8544	-0.3379	1.0000	
OPEN	0.3046	0.3200	0.0804	0.1603	0.0154	1.0000

Sources: Calculated from data used for analysis

Where

FDII=Foreign Direct Investment Inflow, **EXCHR**=Exchange Rate, **INFL**=Inflation Rate, **MRT**=Market Size Rate, **IR**=Interest Rate and **OPEN**=Openness to Trade Rate.

Discussion of finding

According to Gath go and Ragui (2014), the correlation matrix is used also to determine the most significant variables among the hypothesized selected independent variables. Therefore the correlation testabove table: Correlation analysis shows that the correlation on the diagonal is always 1.0000 because what this calculates is the correlation between FDII and FDII and it's just there for show but really giving any information the diagonal is always going to be 1.

Exchange rate (EXCHR) has 0.4919 the weaker positive relationship correlation with foreign direct investment inflows (FDII).

Inflation rate (INFL) found to have -0.5812 the stronger negative relationship correlation with foreign direct investment inflows (FDII).Also the Inflation rate (INFL) found to have -0.6965 the stronger negative relationship correlation with Exchange rate (EXCHR).

Market size (MRT) also found to have 0.3418 the weaker positive relationship correlation with foreign direct investment inflows. The Market size (MRT) also found to have 0.1145 the weaker positive relationship correlation with Exchange rate (EXCHR). Also The Market size (MRT) also found to have -0.1136 the little to no relationship correlation with Inflation rate (INFL).

Interest rate (IR) also found to have -0.5910 the stronger negative relationship correlation with foreign direct investment inflows (FDII). The Interest rate (IR) also

found to have -0.7274 the stronger negative relationship correlation with Exchange rate (EXCHR). Also the Interest rate (IR) found to have 0.8544 the stronger positive relationship correlation with Inflation rate (INFL) and the Interest rate (IR) found to have -0.3379 the weaker negative relationship correlation with Market rate (MRT).

Lastly, Openness to Trade (OPEN) has seemed to also have a 0.3046 the weaker positive relationship correlation with foreign direct investment inflows (FDII). Openness to Trade (OPEN) has seemed to have a 0.3200 the weaker positive relationship correlation with Exchange rate (EXCHR). Openness to Trade (OPEN) has seemed to have a 0.0804 the little to no relationship correlation with Inflation rate (INFL). Openness to Trade (OPEN) has seemed to have a 0.1603 the weaker positive relationship correlation with Market rate (MRT) and Openness to Trade (OPEN) has seemed to have a 0.0154 the little to no relationship correlation with Interest rate (IR).

The problem of multi co linearity arises only when there is the existence of the high correlation between two independent variables and the result of this problem will make the significant variable to be insignificant as it will increase the standard error of the variable. In such case if the standard error goes up, t- value will go down and hence come up with the high p-value. Therefore that particular variable becomes insignificant but in a real situation, it is not insignificant. It is bad to have a relationship between independent variables but it is good to have a relationship between dependent variable and independent variables. Only three variables (Exchange rate, Market rate and Openness to Trade) were found to have a positive correlation with foreign direct investment inflows (FDII). The exchange rate has 90 percent correlation with FDI which is the very strong relationship while Market

sizeand Openness to Trade has almost 68 percent correlation with FDI which is considered as the weaker positive relationship correlation.

4.3.3 Unit Root Tests

Augmented Dickey-Fuller (ADF) Unit Root Test

In order to test the significance of the independent variables in this study, we used the technique which was done by Dickey Fuller in 1976. There might be autocorrelation problem for the case of Dickey Fuller Test therefore in order to tackle the problem of autocorrelation Dickey Fuller developed a test called Augmented Dickey Fuller Test (ADF).

This helps to know whether the variable is stationary or not stationary. The null hypothesis indicates no stationary of the variable which means the variable has a unit root while the alternative hypothesis indicates the variable is stationary. Also, the ADF test statistics will be compared with the critical value. In this case, we will only reject the null hypothesis if the t-statistics is more than the critical value. On the other hand, if the probability value (pvalue) is greater than the critical value which usually at level 5% it means we cannot reject the null hypothesis of non-stationary.

The hypotheses for the test:

Firstly, the null hypothesis for this test is that there is a unit root.

Secondly, alternate hypothesis differs slightly according to which equation we're using. The basic alternate is that the time series is stationary (or trend-stationary).There might be autocorrelation problem for the case of Dickey Fuller Test therefore in order to tackle the problem of autocorrelation Dickey Fuller developed a

test called Augmented Dickey Fuller Test (ADF). This helps to know whether the variable is stationary or not stationary. The null hypothesis indicates no stationary of the variable which means the variable has a unit root while the alternative hypothesis indicates the variable is stationary.

Before run an ADF test, we must inspect our data to figure out an appropriate regression model. For example, a nonzero mean indicates the regression will have a constant term. The three basic regression models are:

Firstly, no constant, no trend: $\Delta yt = \gamma yt\text{-}1 + vt$

Secondly, constant, no trend: $\Delta yt = \alpha + \gamma yt\text{-}1 + vt$

Thirdly, constant and trend: $\Delta yt = \alpha + \gamma yt\text{-}1 + \lambda t + vt$

The Augmented Dickey Fuller adds lagged differences to these models:

Firstly, no constant, no trend: $\Delta yt = \gamma yt\text{-}1 + \sum_{s=1}^{m} as\Delta y_{t-s} + vt$

Secondly, constant, no trend: $\Delta yt = \alpha + \gamma yt\text{-}1 + \sum_{s=1}^{m} as\Delta y_{t-s} + vt$

Thirdly, constant and trend: $\Delta yt = \alpha + \gamma yt\text{-}1 + \lambda t + \sum_{s=1}^{m} as\Delta y_{t-s} + vt$

We need to choose a lag length to run the test. The lag length should be chosen so that the residuals aren't serially correlated. We've got several options for choosing lags: Minimize Akaike's information criterion (AIC) or Bayesian information criterion (BIC), or drop lags until the last lag is statistically significant.

Using Software will run the test, it's usually up to us to interpret the results. The ADF test statistics will be compared with the critical value. In this case, we will only reject

the null hypothesis if the t-statistics is more than the critical value. On the other hand, if the probability value (p value) is greater than the critical value which usually at level 5% it means we cannot reject the null hypothesis of non-stationary.The stationary test was performed so as to avoid spurious regression problem in time series data. The Augmented Dickey Fuller (ADF) test was used for estimating the unit root. The results of ADF test are presented in tables:

Table 4.4: Augmented Dickey Fuller Tests for Stationary at Level

Variable	Test Statistic	5% Critical Value	Findings
FDII	-2.342	-3.596	Non stationary
EXCHR	-1.444	-3.596	Non stationary
INFL	-1.986	-3.596	Non stationary
MRT	-2.990	-3.596	Non stationary
IR	-2.340	-3.596	Non stationary
OPEN	-3.523	-3.596	Non stationary

Source: Compiled by the author

The unit root results from the above table indicate that the Test Statistic for all the variables (FDII, EXCHR, INFL, MRT, IR and OPEN) are absolute value of each variable is lower than the all six variables 5% Critical value so we cannot reject the Null Hypothesis and that indeed the series of a log of variables FDII, EXCHR, INFL, MRT, IR and OPEN are non-stationary. All the variables are non-stationary which means each variable got a unit root therefore in order to achieve the stationary of the variable we tested for the unit root in first and second difference.

Table 4.5: Augmented Dickey Fuller Tests for Stationary at First Difference

Variable	Test Statistic	5% Critical Value	Findings
FDII	-2.342	-1.714	Stationary
EXCHR	0.928	-1.714	Non stationary
INFL	-1.929	-1.714	Stationary
MRT	-2.857	-1.714	Stationary
IR	-1.614	-1.714	Non stationary
OPEN	-3.756	-1.714	Stationary

Source: Compiled by the author

The results from the above table indicate that the Augmented Dickey Test statistics for the variables EXCHR and IR it shows the absolute values is lower than 5% Critical value so we cannot reject the Null Hypothesis and that indeed the series of a log of variables EXCHR and IR are non-stationary and we accept the alternative hypothesis that the series is stationary therefore Ordinary Least Square (OLS) regression model can be conducted as the result will not be spurious.

Also, the results from the above table indicate that the Augmented Dickey Test statistics for the variables FDII, INFL, MRT and OPEN it shows the absolute values is higher than 5% Critical value so we have to rejects the Null hypothesis and we accept the alternative that now the log of variables FDII, INFL, MRT and OPEN are stationary and the Null hypothesis of Unit root is rejected in these cases that are with the inclusion of the trend term and even look at the trend time is not significant but the constant is significance in these regression.

4.3.4 Cointegration Tests

Cointegration tests analyze non-stationary time seriesprocesses that have variances and means that vary over time. In other words, the method allows us to estimate the long-run parameters or equilibrium in systems with unit root variables (Rao, 2007).

Simple cointegration model, when two or more variables arecointegrated it means they are individually non-stationary but a linear combination of those variables is stationary and the reason why this is going to be so useful is we can interpret that linear combination as a long run steady state equilibrium level. When we have deviations from level we can use that to predict future corrections hence the error correction model that takes advantage of a cointergrating relationship.

Two sets of variables are cointegrated if a linear combination of those variables has a lower order of integration. For example, cointegration exists if a set of I (1) variables can be modeled with linear combinations that are I (0). The order of integration here I (1) tellsus that a single set of differences can transform the non-stationary variables to stationarity. Although looking at a graph can sometimes tell us if we have an I (1) process, you may need to run a test such as the KPSS test or the Augmented Dickey-Fuller test to figure it out.

Tests for Cointegration

Tests for cointegration identify stable, long-run relationships between sets of variables. However, Rao (2007) notes that if the test fails to find such a relationship, it isn't proof that one doesn't exists, it only suggests that one doesn't exist.Tests for cointegration we verify both variables are integrated of order 1 through Dickey-fuller unit root test on the levels and the returns for both of our variables and we want to verify that both variables are integrated of order 1 so meaning non-stationary and levels but stationary in differences step.

Three of the most popular tests are: Firstly, the Engle-Granger method first constructs residuals (errors) based on the static regression. The residuals are tested for the

presence of unit roots using ADF or a similar test. If the time series is cointegrated, then the residuals will be practically stationary.

A major issue with the Engle-Granger method is that choice of the dependent variable may lead to different conclusions (Armstrong, 2001), an issue corrected by more recent tests such as Phillips-Ouliaris and Johansen's.

H0: No cointegration exists

H1: Cointegration exists

This test is usually performed by software such as MATLAB or STAT (using the egranger command).

Secondly,the Philips-Ouliaris (1990) is a residual-based unit root test. It is an improvement over the Engle-Ganger test; Prior to 1987, tests for cointegration worked on the assumption that regression errors are independent with common variance—which is rarely true in real life (Chaovalitwongse et. al, 2010).

H0: No cointegration exists

H1: Cointegration exists

The Philips-Ouliaris test takes supplementary variability into account (stemming from the fact that residuals are estimates instead of the actual parameter values). The tests is also invariant to normalization of the cointegration relationship (either which variable is counted as the dependent variable).

Thirdly, Johansen's test is another improvement over the Engle-Granger test. It avoids the issue of choosing a dependent variable as well as issues created when errors are

carried from one step to the next. As such, the test can detect multiple cointergrating vectors.

Let's use the Dickey-fuller unit root test on the variables FDII, EXCHR, INFL, MRT, IR and OPEN without including a drift or a trend term because generally we want to verify our results by looking for robustness to specification and it will turn out the same results to each variable tested by use the Dickey-fuller unit root test.

Table 4.6: The Co-integration of both Variables Results

		Interpolated Dickey-Fuller		
	Test statistic	**1% critical value**	**5% critical value**	**10% critical value**
Z(t)	-2.342	-3.743	-2.997	-2.629

MacKinnon approximate p-value for Z (t) = 0.1588

From the Table 4.6 shows that both variables are not co integrated since test statistic is less than 1% critical value.

4.3.4.1 Johansen Test Cointegration

The study applied Johansen Test Cointegrationto investigate whether there is more than one cointegration relationship among the variable of interest. The variables must be non-stationary at level but when we convert them into first differenced, they must be stationary. Our variables FDII, EXCHR, INFL, MRT, IR and OPEN they are non-stationary at level but when we convert them into first differenced, they will be stationary. The Cointegration test results are showed in Table4.7and 4.8.

Table 4.7: Johansen Tests for Cointegration Result (Trace Stat)

Tsset Year, yearly

Time variable: Year, 1990 to 2017

Delta: 1 year

Vecrank FDII EXCHR INFL MRT IR OPEN, trend (constant)

Johansen tests for cointegration

Trend: constant — Number of obs = 26

Sample: 1992 - 2017 — Lags = 2

maximum rank	parms	LL	eigenvalue	trace statistic	5% critical value
0	42	-458.22975	.	106.7689	94.15
1	53	-435.52461	0.82563	61.3586*	68.52
2	62	-423.13608	0.61440	36.5816	47.21
3	69	-415.35827	0.45025	21.0259	29.68
4	74	-408.55573	0.40742	7.4209	15.41
5	77	-405.32261	0.22019	0.9546	3.76
6	78	-404.8453	0.03605		

Where

Rank	**Means**
0	No cointegration
1	One cointegration
2	Two cointegration
3	Three cointegration
4	Four cointegration
5	Five cointegration

The guideline is that when the Trace statistic is more than 5% Critical value we can reject the Null hypothesis and accept the Alternative hypothesis. Our Null hypothesis actually here called zero and zero is the Null hypothesis meaning that there is no cointegration.

If that Trace statistic is less than 5% Critical value we can accept the Null hypothesis and reject the Alternative hypothesis meaning that there iscointegration.

Discussion of finding

According to Johansen Test Cointegration interprets the table 4.7 from page number 78 as follows:

Rank 0: We can reject the Null hypothesis because the Trace statistic of 106.7689 is more than 5% Critical value of 94.15 and accept the Alternative hypothesis. Our Null hypothesis actually here called zero and zero is the Null hypothesis meaning that there is no cointegration.

Rank 1: We can accept the Null hypothesis because the Trace statistic of 61.3586* is less than 5% Critical value of 68.52 and reject the Alternative hypothesis meaning that there is one cointegration in the Johansen Test Cointegration.

Rank 2: We can accept the Null hypothesis because the Trace statistic of 36.5816 is less than 5% Critical value of 47.21 and reject the Alternative hypothesis meaning that there is two cointegration in the Johansen Test Cointegration.

Rank 3: We can accept the Null hypothesis because the Trace statistic of 21.0259 is less than 5% Critical value of 29.68 and reject the Alternative hypothesis meaning that there is three cointegration in the Johansen Test Cointegration.

Rank 4: We can accept the Null hypothesis because the Trace statistic of 7.4209 is less than 5% Critical value of 15.41 and reject the Alternative hypothesis meaning that there is four cointegration in the Johansen Test Cointegration.

Rank 5: We can accept the Null hypothesis because the Trace statistic of 0.9546 is less than 5% Critical value of 3.76 and reject the Alternative hypothesis meaning that there is five cointegration in the Johansen Test Cointegration.

Table 4.8: Johansen Cointegration Test Result (Max-Eigen stat)

Vecrank FDII EXCHR INFL MRT IR OPEN, trend (constant) max

Johansen tests for cointegration

Trend: constant Number of Obs= 26

Sample: 1992 - 2017 Lags = 2

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maximum rank	parms	LL	eigenvalue	max statistic	5% critical value
0	42	-458.22975	.	45.4103	39.37
1	53	-435.52461	0.82563	24.7771	33.46
2	62	-423.13608	0.61440	15.5556	27.07
3	69	-415.35827	0.45025	13.6051	20.97
4	74	-408.55573	0.40742	6.4663	14.07
5	77	-405.32261	0.22019	0.9546	3.76
6	78	-404.8453	0.03605		

Discussion of findings

According to Johansen Test Cointegration interprets the Table 4.8 as follows:

Rank 0: We can reject the Null hypothesis because the Trace statistic of 45.4103 is more than 5% Critical value of 39.37 and accept the Alternative hypothesis. Our Null hypothesis actually here called zero and zero is the Null hypothesis meaning that there is no cointegration.

Rank 1: We can accept the Null hypothesis because the Trace statistic of 24.7771 is less than 5% Critical value of 33.46 and reject the Alternative hypothesis meaning that there is one cointegration in the Johansen Test Cointegration.

Rank 2: We can accept the Null hypothesis because the Trace statistic of 15.5556 is less than 5% Critical value of 27.07 and reject the Alternative hypothesis meaning that there is two cointegration in the Johansen Test Cointegration.

Rank 3: We can accept the Null hypothesis because the Trace statistic of 13.6051 is less than 5% Critical value of 20.97 and reject the Alternative hypothesis meaning that there is three cointegration in the Johansen Test Cointegration.

Rank 4: We can accept the Null hypothesis because the Trace statistic of 6.4663 is less than 5% Critical value of 14.07 and reject the Alternative hypothesis meaning that there is four cointegration in the Johansen Test Cointegration.

Rank 5: We can accept the Null hypothesis because the Trace statistic of 0.9546 is less than 5% Critical value of 3.76 and reject the Alternative hypothesis meaning that there is five cointegration in the Johansen Test Cointegration.

The decision of discussion of finding is that:

There are two statistics one is Trace statistic and other is Max statistic. The trace and Max statistic we have seen that variables are cointegrated and they have one cointegration. Both tests it has been double checked, double confirmed that our variables are cointegrated or they have long run association ship and we can easily run Vector Error Correction Model (VECM).

4.3.5 Regression Analysis

Regression analysis is a powerful statistical method that allows us to examine the relationship between two or more variables of interest. While there are many types of regression analysis, at their core they all examine the influence of one or more independent variables on a dependent variable.

Regression analysis is a reliable method of identifying which variables have impact on a topic of interest. The process of performing a regression allows us to confidently determine which factors matter most, which factors can be ignored, and how these factors influence each other.

The regression analysis comprehend the Dependent Variable: this is the main factor that we're trying to understand or predict. Independent Variables: these are the factors that we hypothesize have an impact on our dependent variable.

Regression models involve the following parameters and variables:The unknown parameters, denoted as **ß**, which may represent a scalar or a vector, the independent variables, **X** and the dependent variable, **Y**.

A regression model relates **Y** to a function of **X** and **ß.**

$$\mathbf{Y = f(X, B)}$$

Regression analysis includes several variations, such as linear regression, multiple linear regression, and nonlinear regression. The most common models are simple linear and multiple linear. Nonlinear regression analysis is commonly used for more complicated data sets in which the dependent and independent variables show a nonlinear relationship.

Regression Analysis – Linear model assumptions

Linear regression analysis is based on six fundamental assumptions:The dependent and independent variables show a linear relationship between the slope and the intercept. The independent variable is not random. The value of the residual (error) is zero. The value of the residual (error) is constant across all observations. The value of the residual (error) is not correlated across all observations. The residual (error) values follow the normal distribution.

Regression Analysis – Simple linear regression

Simple linear regression is a model that assesses the relationship between a dependent variable and one independent variable. The simple linear model is expressed using the following equation:

$$\mathbf{Y = a + bX + \epsilon}$$

Where: Y – dependent variable**, X –** independent (explanatory) variable**, a –** intercept**, b –** slope**, ϵ –** residual (error)

Regression Analysis – Multiple linear regression

Multiple linear regression analysis is essentially similar to the simple linear model, with the exception that multiple independent variables are used in the model. The mathematical representation of multiple linear regression is:

$$\mathbf{Y = a + bX_1 + cX_2 + dX_3 + \epsilon}$$

Where:Y – dependent variable, **X1, X2, X3** – independent (explanatory) variables, **a** – intercept, **b, c, d** – slopes, **ϵ** – residual (error).

Multiple linear regression follows the same conditions as the simple linear model. However, since there are several independent variables in multiple linear analysis, there is another mandatory condition for the model:

Non-collinearity: Independent variables should show a minimum of correlation with each other. If the independent variables are highly correlated with each other, it will be difficult to assess the true relationships between the dependent and independent variables.

This study employs the statistical tool called multiple regression analysis so as to determine macroeconomic factors of foreign direct investment inflows in Africa economies: a case study of Tanzania. Rsquare, Durbin-Watson, and P-value in this model are used for making a decision based on the results. P-value will be much used for testing the hypotheses in this study so as to know if the tested hypotheses must be rejected or accepted.

A P-value less than or equal to 10% indicates that the hypothesis is accepted at 10% level of significance. A P-value less than or equal to 5% indicates that the hypothesis is accepted at 5% level of significance. A P-value less than or equal to 1% indicates that the hypothesis is accepted at 1% level of significance. When the hypotheses are rejected, it implies that alternative ones have to be accepted. The adjusted R-square in this study is used to determine then goodness fit of the model. Durbin-Watson statistic

in this study will help to test the serial correlation in the errors of a multiple regression model. The table 11 below indicates the regression results of this study.

Table 4.9: Regression Results for Dependent and Independent Variables

```
. regress FDII EXCHR INFL MRT IR OPEN
```

Source	SS	df	MS		
Model	22.8212916	5	4.56425831	Number of obs =	28
Residual	20.8777923	22	.94899056	F(5, 22) =	4.81
Total	43.6990839	27	1.61848459	Prob > F =	0.0040
				R-squared =	0.5222
				Adj R-squared =	0.4137
				Root MSE =	.97416

FDII	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
EXCHR	-.0003836	.0005937	-0.65	0.525	-.0016149	.0008477
INFL	-.0708017	.0413843	-1.71	0.101	-.1566275	.0150241
MRT	.0138022	.014235	0.97	0.343	-.0157195	.0433239
IR	-.0320272	.0545312	-0.59	0.563	-.1451179	.0810636
OPEN	.1259821	.0600929	2.10	0.048	.001357	.2506071
_cons	2.584839	1.384962	1.87	0.075	-.2873959	5.457074

Sources: Calculated from data used for analysis

Discussion of findings

According to the legendary mathematician Carl Friedrich Gauss who discovery of statistical regression “trivial”state his finding that regression is a statistical tool for investigating the relationship between variables. It is frequently used to predict the future and understand which factors cause an outcome.

Interpretation of basic regression outputs based on table above as Carl Friedrich Gauss, we get the R-squared value which is basically the proportion of variation and

the dependent variable accounted for by the predictors or the independent variables in the model so that's R-squared = 0.5222.

The F Test (Prob>F = 0.0040) it's a significant test and we are basically testing the null hypothesis that the population R-squared is equal to zero and the alternative hypothesis is that population R-squared is greater than zero and we find that F Test (Prob>F = 0.0040) indicating that statistical significant and we conclude that or infer that the population R-squared is greater than zero.

The adjusted R-squared (Adj R-squared) which is reflecting well as Adj R-squared = 0.4137, the adjustment to this R-squared value for the number of predictors and the sample size when we have a larger number of predictor and smaller samples we end up running a greater risk of the model over fitting the data. The R-squared value can end up being somewhat inflated and sort of a computational adjustment to the R-squared that we had originally and the adjustment reflects is basically an adjustment for the number of predictors and sample size.

Basically we have amounts to the ANOVA summary table above which indicates that: The sum of squares (ss) due to the regression sum of squares do the residual the degree of freedom (df) do the regression is 5 in the case because we have five predictors in the model.

The degree of freedom (df) do residual is 22 essentially that's just the total sample size minus 5 which is the number of predictors minus 1 and then when we divide the sums of squares (ss) by their degrees of freedom (df) we obtain the mean square since

mean square do the regression mean square do the residual and we take a ratio of the mean square regression to the residual and we end up with F (5, 22) = 4.81.

The regression table above essentially indicates the regression coefficients and we will denote these with a latter **B** for theregression coefficients.

The _cons (Constant) means the intercept for the model basically denoted by **Bo** that is the predicted value on **Y** are the score on achievementwhen the predictors are set to **0.** The value of _cons (Constant) denoted by **Bo** is 2.584839 when the predictors are all zero on achievement.

Then we have the regression coefficient for each of the predictors as following:

EXCHR denote by B_1 which is -0.0003836.

INFL denote by B_2 which is -0.0708017

MRT denote by B_3 which is 0.0138022

IR denote by B_4 which is -0.0320272

OPEN denote by B_5 which is 0.1259821

The mathematical representation of multiple linear regression is:

$$\mathbf{Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_4 + \epsilon}$$

Where:Y – dependent variable, $\mathbf{X_1, X_2, X_3, X_4, X_5}$ – independent (explanatory) variables, $\mathbf{B_0}$ – intercept, $\mathbf{B_1, B_2, B_3, B_4, B_5}$ – slopes and ϵ – residual (error).

FDI = 2.584839-0.0003836EXCHR–0.0708017INFL+0.0138022MRT-0.0320272IR+0.1259821OPEN

From the equation above, here:

The intercept term of the equation is 2.584839 but it is not statistically significant.

It shows that the negative coefficient of -0.0003836EXCHR which is significant relationship exists between the dependent variable (FDII) and Exchange Rate (EXCHR) with the P-value of 0.525 at level 1%. This indicates that small exchange rate decreases the amount of foreign direct investment inflows into the country.

In this case, the first hypothesis (H1) that there is a positive significant relationship between exchange rate and foreign direct investment inflow is rejected. In this situation also the variable found to be significant but with the negative sign so this implying that the sign might be caused by the proxy that was used to estimate the variable but since the variable found to be significant it indicate that the variable is still important for Tanzania as the macroeconomic variable of foreign direct investment inflows.This can also be supported by some scholars such asArbatli (2011) proposes two variables to investigate it: Real exchange rate and Exchange Rate Classification. The first one does not have any statistically significant relationship with FDI. For Exchange Rate Classification the author introduces dummy variables on the basis of IMF's de facto classification of exchange rate arrangements and obtains significant results, stating that the exchange rate fixation or volatility affects foreign capital inflows.

It shows that the negative coefficient of -0.0708017INFL which is significant relationship exists between the dependent variable (FDII) and Inflation Rate (INFL) with the P-value of 0.101 at level 1%. This indicates that small inflation rate decreases the amount of foreign direct investment inflows into the country. In this case, the

second hypothesis (H2) that there is a positive significant relationship between inflation rate and foreign direct investment inflow is rejected. In this situation also the variable found to be significant but with the negative sign so this implying that the sign might be caused by the proxy that was used to estimate the variable but since the variable found to be significant it indicate that the variable is still important for Tanzania as the macroeconomic factor of foreign direct investment inflows.This can also be supported by some scholars such as Kersan-Skabic (2013) and Kok & Ersoy (2009) state that inflation affects negatively FDI flows, while Kersan-Skabic (2013) received a positive sign of the relation, contrary to expectations.

Market size rate (MRT) in this study shows the positive sign coefficient of 0.0138022MRT which is significant relationship exists with foreign direct investment inflows into the country with the P value of 0.0343 at level 1%. The third hypothesis (H3) that there is a positive significant relationship between market rate and foreign direct investment inflow into the country is accepted. This can also be supported by somescholars such as (Yasin, 2005), Bende-Nabende (2002) and Vijayakumar, Sridharan and Rao (2010) who found the positive significant relationship between foreign direct investment inflows and the macroeconomic factors.

It shows that the negative coefficient of –0.0320272IR which is significant relationship exists between the dependent variable (FDII) and Interest rate (IR) with the P-value of 0.563 at level 1%. This indicates that small interest rate decreases the amount of foreign direct investment inflows into the country. In this case, the fourth hypothesis (H4) that there is a positive significant relationship between interest rate and foreign direct investment inflow is rejected. In this situation also the variable

found to be significant but with the negative sign so this implying that the sign might be caused by the proxy that was used to estimate the variable but since the variable found to be significant it indicate that the variable is still important for Tanzania as the macroeconomic factor of foreign direct investment inflows.This can also be supported by some scholars such as Arbatli (2011) uses average real interest rates in G-7 countries under the name International liquidity and discovers a negative influence of this factor on FDI, as expected: lower interest rates tend to increase FDI flows.

Openness to trade (OPEN) in this study shows the positive sign coefficient of 0.1259821OPEN which is significant relationship exists with foreign direct investment inflows into the country with the P value of 0.048 at level 1%. The fifth hypothesis (H5) that there is a positive significantrelationship between openness to trade and foreign direct investment inflow into the country is accepted. This can also be supported by some scholars such as Kok & Ersoy (2009), Kersan-Skabic (2013) and Noorbakhsh & Paloni (2001) state that Trade has a positive impact on FDI flows, as expected.

Also since the general Prob. F-Statistics (Prob>F = 0.0040) found to be statistically significant at level 1%, therefore, this indicates that independent variables can jointly attract dependent variable. The Adjusted R- Squared (Adj R-squared) value of 0.4137 implies the good fitness of the study model. Root MSE value of 0.97416 also indicates the non-existence of autocorrelation in the data.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusion, recommendations, limitations of the study and suggestionareas of further study will be established.

5.2 Summary

The objective of this study was to find the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. FDI inflows (FDII) was established as the dependent variable while Exchange rate (EXCHR), Inflation rate (INFL), Market rate (MRT), Interest Rate (IR) and Openness to trade (OPEN) were used as independent variables.

This study was used descriptive analysis, Correlations analysis which summarize the bivariate linear relationship between two variables, Unit root Tests through The Augmented Dickey Fuller Test (ADF) is unit root test for stationarity, Cointegration tests which analyze non-stationary time series processes that have variances and means that vary over timeand applied Regression Analysis – Multiple linear regression (MRM) which essentially similar to the simple linear model, with the exception that multiple independent variables are used in the model on secondary data so as to know themacroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017.This study was used the data for 1990 to 2017 year and the data was analyzed using STATA software.

5.3 Conclusion

The main reasons for conducting this dissertation study was after finding out that Tanzania has been experienced the high fluctuation of Foreign direct investment inflows (FDII).Also, the high significance level of foreign capital inflows into other developing countries like neighbors countries such as Kenya, Uganda, Rwanda and Burundi and some emerging economy such as India, China, and Nigeria is among of the reason for conducting this study. There are numbers of policies and programs that the government has been put in place and implemented since 19990 so as to promote and attract foreign direct investment inflow into the country but still, much effort is needed tobe done by both policy makers and responsibleauthorities to ensure the investments environment are good for foreign investors.

By applied Regression Analysis – Multiple linear regression (MRM) method to analyze the time spanning 28 years data (1990-2017) the results showed that the Openness to trade (OPEN) and Market size rate (MRT) were the key determinant of foreign direct investment into the country. Interest rate (IR), Inflation rate (INFL) and Exchange rate (EXCHR) was found to be significant at level one percent but with the negative sign which was opposite to our expectation implying that the small Interest rate (IR), Inflation rate (INFL) and Exchange rate (EXCHR) reduces the inflow of foreign direct investment into the country.

The study also did not find any significant relationship between Openness to trade (OPEN) with Foreign direct investment inflows (FDII) into the country and in such case, it implies that despite effort made by the government towards trade liberalization but still the policy did not play a significant role in attracting more foreign investors

into the country. Market size rate (MRT) is also found to be statistically insignificant though positive related to foreign direct investment inflows. In this study, many variables were dropped from the investigation list due to various reasons such as unavailability of data, limited time, variables similarity and some variables to be irrelevant to Tanzania.

5.4 Limitations of the Study

This study was limited to the six variables which means one dependent variable named Foreign direct investment inflows (FDII) and five independent variables named as Openness to trade (OPEN), Market size rate (MRT), Interest rate (IR), Inflation rate (INFL) and Exchange rate (EXCHR) as the macroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017. The list of variables is by no means exhaustive.

The interpretation analysis of results found was concerns to the macroeconomic variables of foreign direct investment inflows and was restricted to the variables under study. The study covered Tanzania and did not consider other countries in the world so as to provide a more broad based analysis.Lastly, the descriptive and correlation analysis to the study relied on secondary data which had already been compiled by Bank of Tanzania (BOT) and National Bureau of Statistics (NBS) of Tanzania and data were used as they were obtained.

5.5 Recommendation

5.5.1 Policy Recommendations for Policy Makers

Foreign direct investment inflows as mentionedearlier play an important role in the economy of Tanzania in term ofthe creation of employment, transfer of new

technologywhich in general enhance the economic growth andimprove the living standard of the people in the country.The main recommended policies for the policy makersand the government include the following;

Firstly, the market size rate (MRT) and openness to trade (OPEN) have a positive impact on foreign direct investment inflow into the country, it indicates that fluctuated of market size rate and openness to trade policy adopted by the Government increases the inflow of foreign direct investment for the period of the study, therefore, the policy makers should continue to adopt the effective policy measures so as to attract more foreign investors for generating new employment for the people in the country.

Secondly,the results found that interest rate (IR), inflation rate (INFL) and Exchange rate (EXCHR) was significant with foreign direct investment inflows (FDII) to Tanzania but with the negative sign, it indicates that small interest rate, inflation rate and exchange rate discourage the inflows of foreign direct investment into the country, therefore, the government should make more efforts to ensure that the interest rate, inflation rate and exchange rate are expanded so as to attract more FDI inflows to Tanzanian economy.

5.6 The Areas for Further Study

This dissertation was used descriptive analysis, Correlations analysis which summarize the bivariate linear relationship between two variables, Unit root Tests through The Augmented Dickey Fuller Test (ADF) is unit root test for stationarity, Cointegration tests which analyze non-stationary time series—processes that have variances and means that vary over time and applied Regression Analysis – Multiple

linear regression (MRM) which essentially similar to the simple linear model, with the exception that multiple independent variables are used in the model, all this was used as the simple technique of estimation for about 28 years of the sample period of study.

Thereforefurther research studies are needed on themacroeconomic variables and foreign direct investment inflows in Tanzania: 1990-2017by using othermeasuring methods or techniques and also becausethis study investigates only five variables towardsforeign direct investment inflows, further studies shouldrely on other variables such as labour cost, infrastructures, political instability, natural resources,human capital development and taxation so as toensure the maximum exhaustion and exploration of thefactors that can give the strong results. These importantvariables were not included in this study due to somereasons such as unavailability of data, the reliability ofdata, limited time and sample period size used. All thementioned reasons present the limitation of the study.

Also since the government of Tanzania have been adopted different macroeconomics reforms and programmes to promote foreign direct investment in the country, no or little research has been done so far to assess the impact and significance of these promotional programmes as a key tool for influencing foreign direct investment inflow into the country, therefore, necessary research has to be done in this area of study by the other researcher in their future research.

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APPENDICES

Appendix 1.0: Observations from quarterly data 1990 to 2017

OBS	Year	FDII	EXCHR	INFL	MRT	IR	OPEN
1	2017	2.213	2,238.881	5.300	12.870	17.620	15.140
2	2016	2.743	2,184.036	5.200	18.114	15.958	16.350
3	2015	3.387	2,045.341	5.600	13.795	16.105	17.105
4	2014	3.347	1,663.164	6.100	20.333	16.289	18.069
5	2013	4.569	1,615.317	7.900	12.978	15.861	19.012
6	2012	4.539	1,581.396	16.000	16.194	15.556	22.372
7	2011	3.547	1,586.153	12.700	16.173	14.963	21.634
8	2010	5.664	1,442.711	6.200	30.445	14.545	19.608
9	2009	3.276	1,320.817	12.100	54.561	15.030	18.194
10	2008	4.951	1,195.696	10.300	82.090	14.982	19.465
11	2007	2.662	1,237.091	7.000	35.980	16.070	19.831
12	2006	2.161	1,248.758	7.300	14.750	15.652	18.415
13	2005	5.085	1,122.894	5.000	19.671	15.249	16.983
14	2004	2.654	1,086.967	4.700	25.547	14.140	16.040
15	2003	2.091	1,038.737	5.300	13.850	14.517	15.088
16	2002	2.797	962.078	5.300	14.106	16.398	14.277
17	2001	4.044	884.678	5.100	19.954	20.057	13.832
18	2000	3.464	818.487	5.900	16.103	21.578	10.809
19	1999	4.065	816.354	7.900	7.759	21.894	10.163

OBS	Year	FDII	EXCHR	INFL	MRT	IR	OPEN
20	1998	1.404	655.625	12.800	7.038	22.893	10.025
21	1997	2.055	676.852	16.100	8.732	26.270	16.218
22	1996	2.310	600.480	21.000	9.670	33.965	19.937
23	1995	2.282	540.772	27.400	6.053	42.833	24.075
24	1994	1.108	479.025	34.100	15.430	39.000	20.614
25	1993	0.480	419.201	25.300	15.430	31.000	17.983
26	1992	0.264	308.486	21.800	15.430	31.000	12.442
27	1991	0.000	241.877	28.700	15.430	31.000	10.262
28	1990	0.000	183.698	35.800	15.430	31.000	12.621

Source: UNCTAD, FDI/TNC database and BOT