

**AN ANALYSIS OF THE EFFECTS OF FOREIGN CAPITAL INFLOWS  
ON UNEMPLOYMENT: A CASE STUDY OF KENYA.**

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**152368**

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## ABSTRACT

Unemployment remains a critical socio-economic challenge in Kenya despite the increasing inflow of foreign capital. This study examines the impact of disaggregated foreign capital inflows on unemployment in Kenya using the Auto-Regressive Distributed Lag-Error Correction Methodology (ARDL-ECM) over the period 2008Q1 to 2023Q4. The foreign capital inflows analyzed include Foreign Direct Investment (Greenfield and Brownfield), Foreign Portfolio Investment (Equity), Diaspora Remittances, Foreign Debt, and Official Development Assistance (Bilateral and Multilateral). Various diagnostic tests, including autocorrelation, heteroscedasticity, normality, stability, and stationarity, were conducted to ensure data robustness. The findings indicate the presence of a co-integrating relationship between disaggregated foreign capital inflows and unemployment. Empirical results suggest that Greenfield FDI has a significant negative relationship with unemployment in both terms. While, diaspora remittances, FPI Equity and multilateral ODA contribute to reducing unemployment in both periods but insignificant in the long term. Conversely, Brownfield FDI, bilateral ODA, and population growth exhibit a positive relationship with unemployment. The impact of external debt and GDP is mixed, with GDP showing no significant effect in both the short and long run, while external debt has a negative and significant influence in the short run. The study was grounded in the Solow Neoclassical Growth Theory, Dual-Gap Theory, and Keynesian Multiplier Effect Theory to explain the interaction between foreign capital inflows and employment dynamics. Based on the findings, the study recommends that the government foster an investor-friendly environment, support high-potential companies in going public, and enhance collaborations between foreign and domestic firms to maximize technology spillover effects. A key limitation of this study was its reliance on secondary data, which may not fully capture qualitative aspects influencing unemployment trends. Future research could explore the role of the informal sector in employment generation.

*Keywords: Foreign Capital Inflows, Unemployment*

## **DECLARATION**

I affirm that this research is my original work and has not been submitted for any degree or diploma at another institution. All sources of information cited in this dissertation have been duly acknowledged.

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## **Approval**

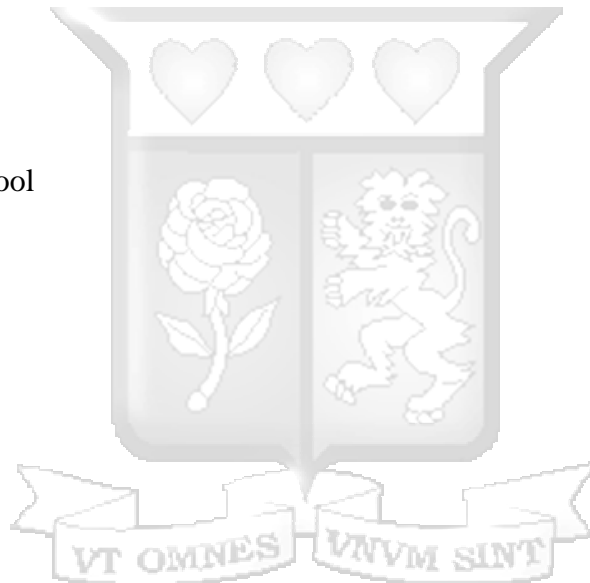
The Dissertation of Marlaine Muhorakeye was reviewed and approved by the following:

Dr. Farida Abdul



12<sup>th</sup> March 2025

Strathmore Business School



## **DEDICATION**

This thesis is dedicated to my beloved family, whose sacrifices and prayers have been my foundation. I devote this work to all my mentors who challenged and inspired me to achieve more than I thought possible.



## **ACKNOWLEDGEMENT**

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## TABLE OF CONTENTS

<b>ABSTRACT</b> .....	<b>ii</b>
<b>DECLARATION</b> .....	<b>iii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>v</b>
<b>TABLE OF CONTENTS</b> .....	<b>vi</b>
<b>LIST OF FIGURES</b> .....	<b>ix</b>
<b>LIST OF TABLES</b> .....	<b>x</b>
<b>ABBREVIATION AND ACRONYMS</b> .....	<b>xi</b>
<b>DEFINITION OF TERMS</b> .....	<b>xii</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1    Background of Study .....	1-2
1.1.1 Unemployment .....	2-3
1.1.2 Foreign Capital Inflow.....	4-9
1.1.3 Unemployment in Kenya.....	9-12
1.2    Statement of the Problem.....	13-14
1.3    Research Objectives .....	14
1.3.1 General Objectives.....	14
1.3.2 Specific Objectives .....	14
1.4    Research Questions .....	14
1.5    Scope of the Study .....	14-15
1.6    Significance of the Study .....	15
1.6.1 Policy makers .....	15
1.6.2 International Institutions.....	15
1.6.3 Research scholars .....	15
1.7    Organization of the study .....	15
<b>CHAPTER TWO</b> .....	<b>16</b>
<b>LITERATURE REVIEW</b> .....	<b>16</b>
2.1    Introduction.....	16
2.2    Theoretical Review .....	16

2.2.1 The Solow neoclassical Growth Theory.....	16-17
2.2.2 The Dual- Gap Theory.....	18-19
2.2.3 The Multiplier effect Theory .....	19-20
2.3 Empirical Review.....	21
2.3.1 Foreign Direct Investment and Unemployment .....	21-23
2.3.2 Foreign portfolio investment and Unemployment.....	24-25
2.3.3 Diaspora Remittances and Unemployment .....	25-27
2.3.4 Foreign debt and Unemployment .....	27-29
2.3.5 Official Development Assistance and Unemployment .....	29-31
2.4 Overview of Identified Knowledge Gap.....	32-34
2.5 Conceptual Framework.....	35
2.6 Operationalization of the Variables.....	36
<b>CHAPTER THREE .....</b>	<b>37</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>37</b>
3.1 Introduction.....	37
3.2 Research Philosophy.....	37
3.3 Research Design.....	37-38
3.4 Population and Sampling.....	38-39
3.5 Data Collection Methods .....	39
3.6 Diagnostic Tests .....	40
3.6.1 Durbin-Watson test for autocorrelation.....	40
3.6.2 Breusch-Pagan test for heteroskedasticity .....	40
3.6.3 Normality Test.....	40
3.6.4 Stability Test.....	40
3.6.5 Stationarity Test.....	40
3.7 Data Analysis .....	41
3.7.1 Econometric model.....	41-43
3.8 Ethical Issues in Research.....	43
<b>CHAPTER FOUR.....</b>	<b>44</b>
<b>PRESENTATION OF RESEARCH FINDINGS.....</b>	<b>44</b>
4.1 Introduction .....	44
4.2 Data Description and Descriptive Analysis .....	44-46

4.3 Diagnostic Testing.....	47-49
4.3.1 Autocorrelation Test.....	47
4.3.2 Heteroscedasticity Test.....	47
4.3.3 Normality test.....	48
4.3.4 Stationarity Test.....	48-49
4.3.5 Stability Test.....	49
4.4 Bounds Test for Cointegration.....	50
4.5 ARDL MODEL.....	50-53
4.5.1 Long Run Coefficient.....	50-52
4.5.2 Short run Coefficients.....	52-53
4.6 Conclusion.....	53-54
<b>CHAPTER FIVE .....</b>	<b>55</b>
<b>DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>55</b>
5.1 Introduction.....	55
5.2 Summary of the Study.....	55
5.3 Discussion of Findings.....	56-64
5.3.1 Impact of Foreign Direct Investment (FDI) on Unemployment.....	56-57
5.3.2 Effect of Foreign Portfolio Investment (FPI) on Unemployment.....	58
5.3.3 Role of Diaspora Remittances in Reducing Unemployment.....	59-60
5.3.4 Influence of External Debt on Unemployment.....	60-61
5.3.5 Effect of Official Development Assistance (ODA) on Unemployment.....	61-63
5.3.6 The effect of Macroeconomic variables on unemployment.....	63-64
5.4 Conclusions.....	64
5.5 Policy Recommendations.....	64-65
5.6 Suggestions for Further Research.....	66
5.7 Limitations of the Study.....	66
<b>REFERENCES.....</b>	<b>67-78</b>
<b>APPENDICES .....</b>	<b>79</b>
Appendix I: Data Extraction Tool for Kenya.....	79-81
Appendix II: Ethical Review Committee Approval.....	82
Appendix III: NACOSTI Research Approval.....	83

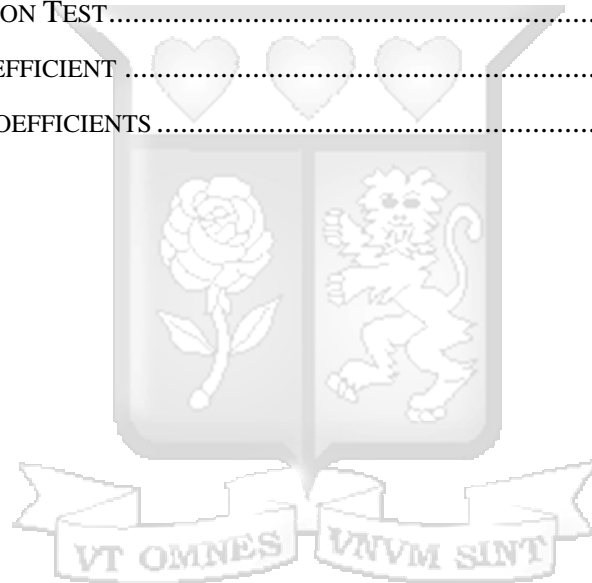
## LIST OF FIGURES

FIGURE 1: FOREIGN CAPITAL INFLOWS.....	4
FIGURE 2: UNEMPLOYMENT RATE .....	9
FIGURE 3: COUNTIES AFFECTED BY UNEMPLOYMENT RATE .....	10
FIGURE 4: CONCEPTUAL FRAMEWORK.....	35
FIGURE 5: CUSUM SIGNIFICANT.....	49



## LIST OF TABLES

TABLE 2.1 OVERVIEW OF KNOWLEDGE GAP .....	32
TABLE 2.2 :OPERATIONALIZATION OF THE STUDY VARIABLES .....	36
TABLE 4.1 DESCRIPTIVE ANALYSIS .....	44-45
TABLE 4.2: DURBIN- WATSON DW .....	47
TABLE 4.3 BREUSCH-PAGAN AND KOENKER TEST .....	47
TABLE 4.4 UNIT ROOT TEST AT LEVEL .....	48
TABLE 4.5 FIRST DIFFERENCING .....	49
TABLE 4.6 STABILITY TEST.....	49
TABLE 4.7 CO-INTEGRATION TEST.....	50
TABLE 4.8 LONG RUN COEFFICIENT .....	50-51
TABLE 4.9 SHORT RUN COEFFICIENTS.....	52-53



## **ABBREVIATION AND ACRONYMS**

**ARDL:** Auto Regressive distributive Lag

**BODA:** Bilateral Official Development Assistance

**CBK:** Central Bank of Kenya

**EDS:** External debt stocks

**FCI:** Foreign capital Inflows

**FDI:** Foreign Direct Investment

**FPI:** Foreign Portfolio Investment

**GDP:** Gross Domestic Product

**IMF:** International Momentary Fund

**KNBS:** Kenya National Bureau of Statistics

**MODA:** Multilateral Official Development Assistance

**OECD:** Organization for Economic Co-operation and Development

**UNCTDA:** United Nations Conference on Trade and Development

**UNDP:** United Nations Development Program



## **DEFINITION OF TERMS**

**External Capital Inflows** : refers to the inflow of funds into the home country from foreign sources, which can include loans from international governments, multilateral organizations such as the World Bank, as well as diaspora remittances, official development Aid, FPI and FDI (UNCTDA, 2024).

**Foreign direct investment**: (OECD, 2024a) defines it as a form of international investment where an investor from one country progressively acquires a significant ownership stake and considerable control over a company in another country. The foreign investor must hold ten percent or more of the shares in the local company.

**Foreign Portfolio Investment**: FPI refers to investments made by foreign investors in a country's financial assets, such as stocks, bonds, or other securities, with the goal of earning a return without gaining control or ownership in the companies or entities they invest in (World Bank, 2023).

**Remittance**: refers to the money that is sent back home by a worker in a foreign country (central bank of kenya, 2024). Diaspora remittances specifically highlight the economic contributions of expatriates.

**External debts**: is a debt to nonresidents that is refundable in cash, products, or goods and services. It also includes the total of contingent liabilities, and private nonguaranteed debt (World, 2024).

**Unemployment rate**: represents most people without employment. Individuals classified as unemployed are those of working age who do not currently hold a job, are available for employment, and are actively looking for employment within the past four weeks (OECD, 2024c).

**Official development assistance (ODA)**: refers to foreign assistance that expressly targets and promotes the welfare and economic development of underdeveloped nations, such as donations and monies received from philanthropists (OECD, 2024b)

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

Globally, countries are actively seeking strategies to achieve or maintain full employment within their economies. Unemployment has posed significant challenges for numerous nations, including Kenya. High unemployment rates are often associated with increased risks, as they contribute to social, economic, and political instability. In Kenya, despite having a relatively well-educated population, numerous governmental and policy driven efforts, a large proportion remains unemployed (World Bank, 2024).

One possible solution to the unemployment challenge is through the attraction of foreign capital inflows, which could be a key instrument in boosting economic activity and job creation in Kenya. Foreign capital inflows refer to the transfer of financial resources from foreign investors into the domestic economy, which takes the form of foreign direct investment (FDI), portfolio investment, remittances, external debt and foreign aid (Kenya National Bureau of Statistics, 2023). Foreign capital inflows have played a significant role in terms of socio-economic development by alleviating persistent balance of payments difficulties. (Asongu & Odhiambo, 2024) state that an increase in foreign capital inflows can help bring down account deficit relative to GDP. Such a rise in foreign capital can take place through different financial resources such as private capital inflows, government loans, or official transfers, among others. These inflows are seen as catalysts for economic growth, as they increase investment in various sectors, enhance productivity, and create new employment opportunities (UNCTDA, 2023a)

Kenya has been a recipient of foreign capital inflows for decades, particularly since the liberalization of its economy in the early 1990s. In recent years, foreign direct investment has played a major role in the development of key concepts such as infrastructure, manufacturing, and goods and services. For example, projects like the Standard Gauge Railway (SGR), funded by foreign investors, have not only improved the country's transportation network but also created thousands of jobs both directly and indirectly (Machio & Kariuki, 2020).

Similarly, foreign capital inflows into Kenya's financial and technological sectors have fostered innovation and job creation, particularly in the digital economy. Kenya has experienced fluctuating levels of foreign capital inflows, including Foreign Direct Investment (FDI), remittances, and foreign aid. These inflows are essential for financing development projects, enhancing infrastructure, and stimulating economic growth. According to the 2023 Foreign Investment Survey, FDI stock in Kenya increased significantly, reflecting a growing interest from foreign investors, particularly from countries like the United Kingdom and the Netherlands. In 2023, the country received \$759 million in greenfield investments and \$503 million in remittances (central bank of kenya, 2024). The upward trend continues into 2024, with the Nairobi Stock Exchange recording its highest equity value of KSH 3 million in March 2024 (KNBS, Q1, 2024). Despite this growth, unemployment is projected to rise from 5.6% in 2023 to 6.61% in 2024 (World Bank, 2024).

Foreign capital inflows remain vital in contributing to economic growth and generating employment opportunities. However, the extent to which these inflows can reduce unemployment requires a nuanced understanding of the types of investments being made and the policies in place to ensure their optimal utilization. This research aims to assess the effect of foreign capital inflows on unemployment in Kenya, covering data from 2008 to 2023. By analyzing the correlation between foreign capital inflows and employment trends, the research seeks to provide insights into the purpose of external financial resources in creating Kenya's labor market dynamics.

### **1.1.1 Unemployment**

Since the 2008 global financial crisis, unemployment rates have remained elevated in many parts of the world. While unemployment trends vary across regions, they collectively represent a significant challenge within the global political economy. The concept of a "labor-scape" has emerged to highlight the uneven distribution of unemployment while recognizing its broader economic and social implications (ILO, 2023). Progress toward achieving sustainable employment and economic growth, as outlined in Sustainable Development Goal 8, faces numerous obstacles. The lingering effects of the COVID-19 pandemic, rising geopolitical tensions, increasing debt burdens in developing economies, and ongoing conflicts all contribute to global economic uncertainty (UNDP, 2024).

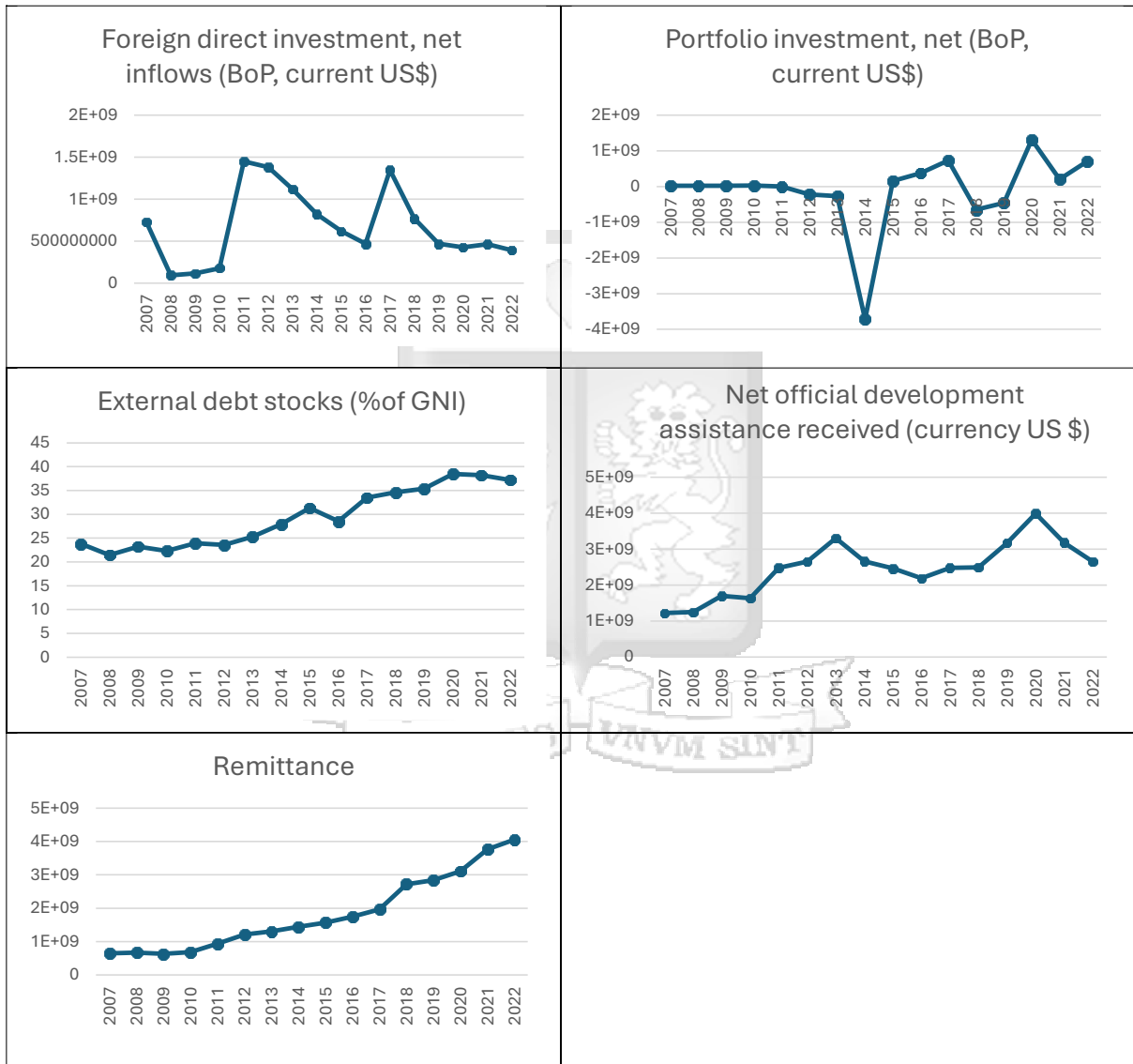
Although the global unemployment rate reached a historic low of 5% in 2023, significant barriers remain in achieving widespread access to decent work opportunities. Certain demographics, particularly women and youth, continue to experience disproportionately high unemployment rates. Informal employment remains a major concern, with over two billion workers working in the informal sector as of 2023 (UNSD, 2023). This issue is particularly prevalent in Least Developed Countries (LDCs), sub-Saharan Africa, and Central and Southern Asia, where nearly 90% of the workforce operates in informal employment. Furthermore, over 20% of young people are classified as not in education, employment, or training (NEET), highlighting the difficulty of labor market integration for this demographic. Additionally, compliance with fundamental labor rights has weakened, exacerbating vulnerabilities in employment conditions (World Bank, 2023).

Unemployment is influenced by various structural and cyclical factors. In developing economies, labor market mismatches often result in structural unemployment, where job seekers' skills do not align with industry demands. In contrast, advanced economies frequently experience cyclical unemployment due to economic downturns and financial crises. Youth unemployment remains a particularly urgent issue, as many young individuals struggle to transition from education to stable employment. This challenge extends beyond economic stagnation, contributing to increased crime rates, mental health concerns, and broader social instability (ILO, 2023).

Despite global efforts to mitigate unemployment through policy initiatives such as job creation programs, skills training, and economic reform, substantial gaps persist. The rapid expansion of automation and digitalization further disrupts traditional employment structures, posing additional challenges to workforce stability (WEF, 2023). Addressing global unemployment requires a multifaceted approach that includes education reform, investment in vocational training, promotion of sustainable industries, and support for entrepreneurship. Without comprehensive and adaptive strategies, unemployment will continue to hinder economic growth and social development worldwide (UNDP, 2024). This study examines the role of foreign capital inflows in reducing unemployment in Kenya. The findings of this research can provide valuable insights for other developing countries seeking to leverage foreign investment to address unemployment challenges.

### 1.1.2 Foreign Capital Inflow

The term "foreign capital inflow" describes the inflow of funds into one's own nation via foreign nations. This can be seen as loans from multilateral institutions like the World Bank, foreign remittances, official development assistance (ODA), foreign investment (FDI or FPI), or loans from international government (UNCTDA, 2024).



**Figure 1: Foreign Capital Inflows**

**Data from database: World Development Indicators**

**Last Updated: 03/28/2024**

OECD, (2024a) explains foreign direct investment (FDI) as an investment made in a domestic country by a foreign investor. Evidence of such a relationship can be seen when a shareholder from one economy has at least 10% of the voting power in a business located in another. Contrary to foreign portfolio investments, which do not grant investors ownership, say in how an enterprise is run, or long-term interest, foreign direct investment (FDI) does (Darvas et al., 2016). One way to conceptualize FDI is net inflows and net outflows. The four things that corporations look for are markets, assets, natural resources, and efficiency; these are the key drivers of FDI. Companies invest abroad for a variety of reasons, including accessing untapped markets, developing resources, natural resources, and new or complementary skills, reducing labor expenses, and boosting productivity (E.Bank, 2024).

Foreign Direct Investment (FDI) in Kenya has seen steady growth over the past decade, positioning the country as a key investment hub in East Africa. In 2023, FDI inflows reached \$759 million, with investments primarily concentrated in infrastructure, technology, and renewable energy projects (World Bank, 2024). Major initiatives such as the Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) Corridor and the development of the Standard Gauge Railway (SGR) have attracted significant foreign capital, enhancing Kenya's strategic importance in regional trade. Additionally, Kenya's emerging technology sector, often referred to as the "Silicon Savannah," has drawn substantial interest from venture capital and multinational firms, making Nairobi a growing hub for innovation and fintech. Despite this positive trajectory, the distribution of FDI across sectors remains uneven causing no effect on the unemployment rate. Investments in Greenfields and brownfields are examples of FDI that will be analyzed in the study.

A portfolio investment, according to the International Monetary Fund (2023), is any cross-border transaction involving equities or debt securities that aren't part of direct investment or reserve assets. A shift in the ownership of a company's shares can impact managerial decision-making authority and portfolio investments made in the form of bonds or other debt, known as foreign portfolio investment, or FPI. Investing in international portfolios then happens when investors buy securities or not, or stocks of foreign enterprises. By shifting their assets to places where they anticipate a high return, the investors make the most of their amassed money. Makoni & Marozva, (2018) assert that FPI promotes developing markets. The explanation offered was that the involvement of foreign investors in the domestic market lowers the risk premium on stocks.

As a result, local investors are prompted to sell their timepieces when prices rise. Subsequently, they procure stocks of other firms that are trading at reduced prices, so augmenting the total market capitalization at the security exchange. As a result of investors' faith in the stock market as a source of capital and the mobilization of resources, the capital market is expanding. Initial public offerings, private settlements, or the sale of debt securities like corporate bonds are among possible methods of sourcing.

FPI flows to developing and emerging markets have been rising over time, according to (Kamwaro, 2013). He went on to say that the initial phase of the financial markets in the 1990s caused a change in external financing from government development aid and long-term bank loans to private capital inflows, which is why the FPI increased. Since the mid-1990s, Kenya's capital markets have undergone several liberalization measures, which have opened the market to international portfolio investment (Nyaga, 2017). Due to the increase in international investors seeking high returns and diversification, Kenya has been able to profit from foreign portfolio investment as more of them have invested through the National Security Exchange (NSE). The nation's cost of capital has decreased as a result of foreign portfolio inflows, allowing businesses to finance expansion by listing on the NSE (Nyaga, 2017). Despite the increase in Foreign Portfolio Investment (FPI), unemployment continues to rise beyond the country's projected levels. This indicates that the influx of portfolio capital has not effectively translated into the anticipated improvements in the labor market, highlighting that there is more research between foreign portfolio inflows and employment generation. The study consists of two types of foreign portfolio investment: equity and debt investments.

Saani et al., (2023) defines remittance as the goods or products that migrants send back home in the form of cash to support their families. Migration, both domestic and international, has become a coping mechanism for families and people in developing nations dealing with economic hardship and poverty. In addition to trying to better their own lot in life, migrants also try to send a substantial amount of their earnings back to their relatives back home. According to World Bank (2020), Kenya received US dollars 2.8 billion in inflows in 2019; this positioned Kenya as the third-highest beneficiary in sub-Saharan Africa, following Ghana and Nigeria. Informal channels of remittances could contribute as least 50 percent to the recorded worldwide flows (Saani et al., 2023). Remittances to poor nations have climbed about 15 percent annually on average since 2000.

According (Maara et al., 2019), The large number of formal and informal money transfer institutions as well as the sharp rise in both local and international remittances serve as indicators of the significance of remittances in Kenya. With the help of mobile phone service providers' electronic money transfer services, the domestic money transfer system has grown. In addition to official money transfers, there are unofficial routes such as person-to-person transfers and unofficial agreements with public transportation providers, particularly bus companies. Despite significant inflows of foreign remittances to Kenya in recent years, poverty remains a persistent challenge, affecting a substantial portion of the population. While remittances are widely recognized as a beneficial external funding source for emerging countries, their impact on unemployment reduction in the Kenyan context is not well understood. There is a need to comprehensively examine the role of foreign remittances in alleviating job creation in Kenya and identify the impacts to which remittances contribute to unemployment reduction. The study will analyze diaspora remittances, which contribute to the growth of the economy.

Foreign debt, also called external charges, is the money that a country's government and organizations have borrowed from governments and organizations outside (OECD, 2019). For the most part, emerging nations have relied heavily on external debt to augment their own cash streams for development. Borrowing has become mandatory in low emerging countries due to their low levels of domestic savings. According to Daniel Onisanwa & Adaji, (2015), when tax income is insufficient and the government wants to avoid jeopardizing macroeconomic stability through increased money printing, borrowing emerges as a preferable option for financing infrastructure development initiatives. Both local and foreign markets experience public borrowing (Galindo & Panizza, 2018). However, when it is abused in the home market, it can cause economic instability and push out private companies. Because of this, nations mostly use foreign borrowing for capital investments. However, countries may find themselves in a worse financial situation if these debts are not used wisely, which might have severe short and long-term implications on macroeconomic conditions. Thus, excessive debt has acted as a barrier to both sustainable economic growth and the reduction of unemployment, according to (Berensmann, 2004).

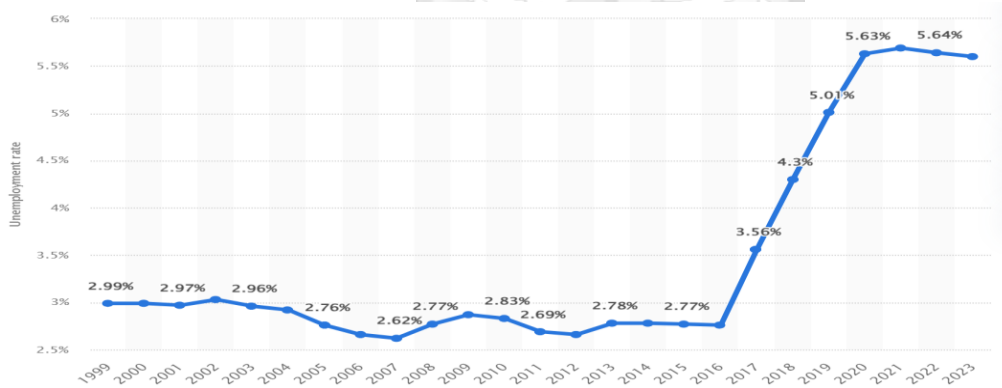
As a result, many nations, specifically those in Sub-Saharan Africa, are currently experiencing a severe economic crisis due to their high levels of debt. Although debt has traditionally been seen as a global issue, frontier resources, such as those in Sub-Saharan Africa, are more negatively impacted by it than are western ones (Senadza et al., 2018). In a similar vein, ABDULMUMIN & Ayoola, (2022) noted that although external debt fosters economic expansion, it can also deter investment due to the crowding out impact of rising interest rates, which could lead to a large decline in overall private investment spending. The first rise in overall investment spending is mitigated by this decrease in private investment. External debt typically provides countries with additional capital, which can potentially lead to employment creation. However, in Kenya, limited research has analyzed the correlation between external debt and unemployment, despite the country having high rate of external debt (IMF, 2023). This research will examine the effect of external debt stock on employment generation in Kenya as it becomes a viable option for developing nations.

Overseas development Aid (ODA) is defined as support intended to advance the welfare and economic advancement of underdeveloped nations. As a result of the global economy being stimulated by foreign aid, more resources and goods may become available for sharing between the two nations. It can also contribute to these nations' development by implementing much-needed jobs, healthcare, and environmental programs. As donor nations increase their aid contributions, it's crucial to maintain the effectiveness of this assistance in promoting economic growth and reducing unemployment levels (Nchofoung et al., 2022). Kengdo et al., (2020); Ngouhouo et al., (2021) stated that developing nations' lack of financial resources, particularly in Africa, drives them to rely on debt and outside help. The advanced demand for government development assistance made by developing countries is linked to the theory of Keynesian. OECD, (2024b) stated that the latter has been increasing in Africa, in terms of US dollars, Ethiopia took home the most share with 3.8 billion, followed by Nigeria (3.3 billion) and Kenya (2.3 billion). In 2023, Kenya received substantial ODA from international partners, including the United States, the European Union, and other multilateral organizations like the World Bank and the International Monetary Fund (IMF) (IMF, 2023). Despite the increase in Official Development Assistance (ODA) to Kenya, there has been insufficient evidence that this funding has been effectively utilized

to address the issue of unemployment. The study analyzes bilateral and multilateral Aid as the ODA of the state.

### 1.1.3 Unemployment in Kenya

Global Unemployment has caught the attention of many, requiring the need for intervention to be able to deal with it and the resulting effects. As a result, it is addressed in the Sustainable Development Goals, namely under Goal 8 (Council & Council, 2019), purpose is to support equitable labor for productive employment, consistent and creating a sustainable economic growth. Inspired by the Millennium Development Goals (MDGs), which were administered from 2000 to 2015, the SDGs were created. The UNECOSOC (2019) report further highlights Labor productivity, which is calculated as GDP per employed person by the total labor input. Unemployment has been rising globally since the global economic collapse of 2009 and has been steadily growing since 2010. In Kenya, beginning in 2016, the unemployment rate experienced a significant increase, driven by the slowdown in key concepts of the economy, including manufacturing and agriculture, alongside rapid population growth (World Bank, 2016).



**Figure2: Unemployment Rate**

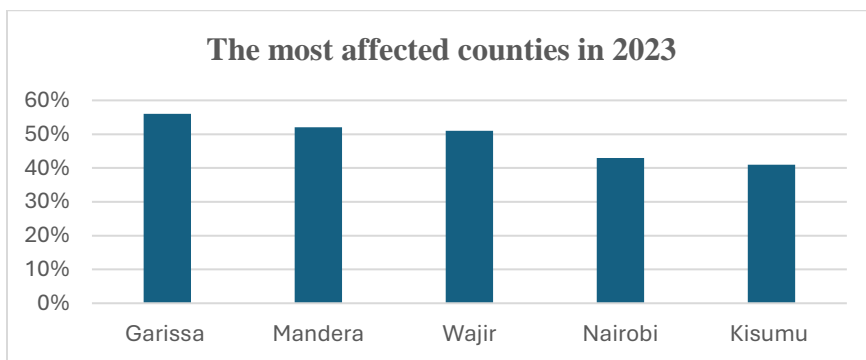
**Source: World bank 2023**

[www.macrotrends.net/countries/KEN/kenya/Unemployment-rate](http://www.macrotrends.net/countries/KEN/kenya/Unemployment-rate)

More than 2.97 million Kenyans were unemployed in the quarter ending in December 2023, highlighting the labor market problems in the increase of prices and a decline in the country's main industry, agriculture (World Bank, 2024). As to the most recent data issued by the (OECD, 2024c) there was a 2.94 percent rise in the number of jobless individuals from 2.89 million in September. This indicates that in the three months after the August 9 General Elections, the economy lost more

than 80,000 jobs. In an environment struggling with reduced hiring due to poor corporate profits, young people under 29, especially recent college and high school graduates, were the most severely impacted by unemployment.

The jobs report was made public a few days after Governor Patrick Njoroge of the Central Bank of Kenya revised down his prediction of the nation's economic growth from 6.1 percent to 5.8 percent in 2022 due to a downgrade in the outlook for the agriculture sector. The KNBS defines the unemployed population as people who are actively seeking work and are at least 15 years of age and above, as well as those who have given up and stopped looking for work.



**Figure3: Counties affected by unemployment rate**

**Source: Business daily, 2023**

According to an article from (Otieno & Musya, 2024), most affected counties are; Garissa with 56% of unemployed young men who stays in Dadaab, refugees from Somalia Mandera (52%), from its high population of those that have completed their first degree and are looking for a job which surpasses the labor market, wajir (51%) high fertility rate, Nairobi (43%) rural to urban migration, most affected are women with a higher percentage than male and Kisumu CIDP (2022–2023) estimates that the unemployment rate in the county is almost 60% of the total population of 1,155,574, which is made up of 556, 942 men and 594,609 women. Regrettably, because of the county's increasing population between the age of 15 to 64, 41% of them still do not have a job. Since gaining independence in 1963, Kenya has introduced various national strategies and policies to foster investment growth and support. In 1964, the government enacted the Foreign Investment Protection Act to offer basic protection for investors. In 1982, the Investment Advisory and Promotion Centre was re-established, and in 1986, it was renamed the Investment Promotion Centre (IPC) to encourage both domestic and foreign private investments. With the passage of the

Investment Promotion Act in 2004, the IPC became the Kenya Investment Authority (KenInvest). The purpose of the Investment Promotion Act was to assist investors in securing the resources necessary to operate businesses, thereby stimulating and enhancing investment.

Foreign capital investments in Kenya have been gradually increasing because of the Chinese expressing interest and numerous other nations providing opportunities for young people to work there. Kenya has experienced an increase of foreign capital. This has become the backbone of the economy, with the aim of achieving economic recovery through structural adjustment programs. Over this period, Kenya has also been unable to generate enough employment for the growing number of labor market entrants. The economy has not been able to absorb the new entrants and as a result, the number of unemployed continues to grow. A major concern has been the fast-growing number of youths who are unable to find work. Being that they are first time entrants into the labor market, they are faced with the difficult task of trying to find work. This implies that the jobs created by foreign capital were taken by adults and not the youth; foreign capital is usually very volatile and can crowd out jobs that are usually taken by the youth.

In 2023, Kenya experienced a slightly decrease in foreign capital inflows due to the devaluation of the currency, the tax rate effect and the devalued of the NSE, whereby some companies shifted their investment to another country in Africa for a better return. Due to the above factors, those employed by the foreign companies have been mostly affected, whereby in 2023, 100,000 jobs were lost due to the movement of those companies and foreign investors removing USD3.4 billion of their investment in Kenya (Standard, n.d.,2023). According to UNCTDA (2016), Kenyan FCI inflows rose by 27% from 1.2 billion USD in 2017 to 1.6 billion USD in 2022. Many of the infrastructure investments were often originated from China, since the Chinese were able to acquire funding for a railway project estimated to cost \$14 billion that would connect the whole region of East and Central Africa (Kenya National Bureau of Statistics, 2023). In 2024, Kenya has experienced a notable increase in foreign capital inflows, with heightened engagement from global partners. During the most recent East African Summit, the president emphasized Kenya's openness to trade, underscoring the country's commitment to fostering robust economic growth and promoting dynamic job creation. Additionally, Kenya has seen an uptick in bilateral support from both the United States and China, further enhancing the country's economic prospects. Despite these developments, the unemployment rate remains stagnant, with little to no observable change

in employment figures, indicating that the increased capital inflows have yet to translate into significant labor market improvements.

Foreign capital investment usually leads to an increase in GDP since it raises the quantity and quality of the production factors through spillover effects and brings stable long term capital inflows which are invested in long-term projects. During the period between 2000 to 2020 the government has tried to make policies that support creation of employment through foreign funds both in the medium and long term. Some examples of these policies include programs such as Jobs for the youths and major developments in rural areas coordinating with foreign companies to achieve those objectives, offering tax incentives to foreign firms in SEZ. Many initiatives have been promoted by the government which include job creation and women employment through, youth and women empowerment programs. The measurement policies that were taken have targeted sectoral growth and development which include the Agricultural Sector Development Strategy (ASDS) and National Industrialization policy framework for Kenya (Omolo, 2013).

Kenya has one of the substantial economies in East Africa and serves as a regional hub for trade, finance, and technology, making it a significant case study for the dynamics of foreign capital and its effects on employment. The country has experienced substantial foreign direct investment (FDI) inflows of late, driven by its strategic location, political stability, and investment-friendly reforms (World Bank, 2020). Despite this, Kenya faces persistent unemployment challenges, particularly among the youth, with an unemployment rate that disproportionately affects the educated population (UNCTDA, 2021). Furthermore, Kenya's Vision 2030 and Big Four Agenda highlight the role of foreign capital in fostering industrialization and job creation, making it a relevant context for exploring how external financial resources can address unemployment.

This study will examine how various forms of foreign capital inflows—such as brownfield and greenfield investments, portfolio equity, portfolio debt, remittances, external debt, and multilateral and bilateral aid can be effectively leveraged to reduce the high levels of unemployment in Kenya. Given Kenya's relatively advanced development compared to other countries in Eastern and Central Africa, the findings from this research could be a valuable reference in the neighboring economies.

## 1.2 Statement of the Problem

Frontier countries have increasingly become prime destinations for foreign capital inflows due to their lower labor costs and growing populations, which present attractive opportunities for foreign investors. In 2023, Kenya received a substantial amount of foreign capital inflows of \$759 million from FDI and \$503 million in remittances (central bank of kenya, 2024). The CBK stated that foreign capital inflow will continue to grow. Despite this significant influx of foreign capital inflow, Kenya continues to grapple with high unemployment rates. Kenya's young population, characterized by high energy levels and readiness to work, remains underutilized, with many individuals unable to employ their skills effectively. This persistent unemployment has led to severe national issues, including elevated poverty rates, high rate of drugs intake and an increase in terrorism. Despite extensive efforts by the government, policymakers, and researchers to reduce unemployment through various strategies, these initiatives have largely been ineffective (UNCTDA, 2024).

Numerous researchers have explored the effect of foreign capital investment on unemployment across developed and developing economies. Notable studies in this area include (Orji et al., 2018), who assessed the effects of Foreign Direct Investment (FDI), Remittances, and Foreign Portfolio Investment (FPI) on unemployment in Nigeria. Some researchers have focused on individual components; for instance, Asongu & Odhiambo, (2024) studied the effect of foreign support on unemployment in Kenya, while (Atilaw Woldetensaye et al., 2022) analyzed the effect of FDI on unemployment in the East African Community (EAC). The findings from these studies have been inconsistent, with some emphasizing short-term effects and others examining long-term outcomes. Additionally, there is lack of clarity regarding the specific types of capital inflows and their distinct impact on unemployment. Notably, there is a discernible gap in the literature that comprehensively addresses the influence of all components of capital inflow on unemployment. The effect of Foreign Portfolio Investment (FPI) on unemployment has been largely overlooked in existing research (Mlambo, 2022). There's a gap in more focused case studies on individual countries for ODA (Nchofoung et al., 2022).

To address these gaps, this research aimed to evaluate the comprehensive effects of all aspects of foreign capital inflows on unemployment. Break them into their most effective. Employing the ARDL model, this research has analyzed both short and long-term relationships among the

variables. Furthermore, most existing studies have concentrated on Nigeria, as a country with an economic structure markedly different from Kenya's, particularly due to its oil production and its highest GDP. This research focused to fill these gaps by providing a clear analysis of the effects of foreign capital inflows on unemployment in Kenya.

### **1.3 Research Objectives**

#### **1.3.1 General Objectives**

The aim of this research was to analyze the Effect of foreign capital inflows on unemployment in Kenya.

#### **1.3.2 Specific Objectives**

- i. To Evaluate the effect of Foreign Direct Investment (FDI) on unemployment in Kenya.
- ii. To Investigate the effect of Kenya's foreign Portfolio investment on the country's unemployment.
- iii. To Evaluate the effect Kenya's external Debt on the country's unemployment.
- iv. To Examine the influence of diaspora Remittances on unemployment in Kenya.
- v. To Investigate the influence of official development assistance on unemployment in Kenya.

### **1.4 Research Questions**

- i. Does Greenfield and Brownfield foreign direct Investment affect unemployment in Kenya?
- ii. Does Foreign portfolio investment in equity affect unemployment in Kenya?
- iii. To what extent does foreign debt affect unemployment in Kenya?
- iv. Does Diaspora remittances affect unemployment rate in Kenya?
- v. To what extent does Bilateral and Multilateral ODA influence unemployment in Kenya?

### **1.5 Scope of the Study**

The study focused on investigating the effect foreign capital inflows on unemployment in Kenya. It employed quantitative methods, gathered time series data on various forms of foreign capital entering Kenya, including Overseas direct investment (FDI), International portfolio investment (FPI), external debt, remittances, and official development assistance (ODA). The study's scope was limited to examining foreign capital inflows in Kenya from 2008 to 2023. The reason of this duration was informed by different reforms that happened in the years such as the new constitution reform in 2010, the economic reform such as the improvement of fiscal management, the attraction

of FCI into the country and the diversification of the economy beyond agriculture, the infrastructure development such as the construction of the SGR in 2013, the execution of the sustainable development goal of 2030 in 2008 and lastly, the technological innovation through the creation of Mpesa in 2008.

## **1.6 Significance of the Study**

The results and recommendations of this study will be valuable to several groups, as outlined below.

### **1.6.1 Policy makers**

The research will be beneficial to policy makers such as the government in formulation of regulatory and policy structures as they indicate insights into the components of foreign capital inflows rate in Kenya. This study informs policy decisions relating to the management of foreign capital inflows, investment priorities, and strategies for addressing unemployment.

### **1.6.2 International Institutions**

The findings and recommendations from this study will act as a guide to international organizations in designing policies and development programs that prioritize investments in sectors with high potential for job creation and sustainable growth.

### **1.6.3 Research scholars**

The study will be useful in supporting research on how unemployment can be controlled, an area that is still not highly covered in research, while adding to the body of knowledge on why unemployment remains high even after countries have implemented various policies.

## **1.7 Organization of the study**

This study is structured into five main chapters. Chapter one introduces the study, providing the background, research problem, objectives, research questions, and concludes with the scope and significance of the study. Chapter two reviews relevant theoretical and empirical literature that supports and contextualizes the research. Chapter three outlines the research methodology used in the study. Chapter four focuses on data analysis, presenting and interpreting the study's results. Finally, chapter five summarizes the findings, which explore the impact of foreign capital inflows on unemployment in Kenya and offers key recommendations for governments to address employment challenges.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter outlines the research on the effect of foreign capital inflows on unemployment in Kenya. It explores various theoretical frameworks related to capital inflows and unemployment, such as the Solow Neoclassical Growth Model, the Dual-Gap Model, and the Keynesian Multiplier Effect Theory. The Solow Neoclassical Growth Theory examines the effects of international business Investment (FDI) and Overseas Portfolio Investment (FPI), while the Dual-Gap Theory focuses on external debt. The Keynesian Multiplier Effect Theory looks at the impact of Overseas Development Assistance (ODA) and remittances. Additionally, this chapter includes a review of the components of foreign capital investment (FCI) and investigates the relationship between foreign inflows and unemployment in Kenya.

#### **2.2 Theoretical Review**

This aspect of the literature review focuses on the theories. It explains the concept behind the Solow neoclassical growth theory, the Dual-gap theory and Keynesian Multiplier effect theory

##### **2.2.1 The Solow neoclassical Growth Theory**

The Solow Neoclassical Growth Theory, developed by Robert Solow in the 1950s, is a foundational economic model that explains sustain growth of the economy by focusing on growth inflation, technological progress, and labor. The Solow model of economic growth was a competitor of the Harrod Domar growth model. Furthermore, Solow expanded the production function by including technology as an exogenously determined element. Solow thus argues that three things that leads to economic growth are: advances in technology; increases in capital via saving and investment; and improvements that changes both the amount and quality of labor due to population growth and education (Ahuja, 2022; Smith, 2001). According to the Solow model, FDI contributes to capital accumulation and leads to an increase in productivity and the growth in economy. This process can, in turn, influence employment dynamics.

FDI increases the capital stock per worker, leading to higher productivity and potentially higher wages. As firms expand and become more productive, they may hire more workers, thus reducing unemployment. According to Solow, Foreign Direct Investment (FDI) is associated with the introduction to the host nation of cutting-edge technologies which enhances the overall

productivity and competitiveness of domestic enterprises. Consequently, it can lead to job creation and a decline in the rate of unemployment. The presence of multinational corporations may generate positive spillover effects for local businesses, such as improved supply chains and increased demand for local products and services, thereby further boosting employment opportunities (albany, 2015). According to the Solow Growth Model, Foreign Portfolio Investment (FPI) can contribute to the liquidity and depth of financial markets, facilitating easier access to capital for firms aiming to expand and operate. This access to capital can stimulate business growth and job creation, thereby mitigating unemployment. By diversifying their funding sources, companies can lower their cost of capital, which may encourage investment in new projects and expansion. Consequently, this can lead to an increase in employment. Additionally, FPI can serve as a signal of international investor confidence in the host nation's economy, potentially attracting further domestic and foreign investments, fostering economic growth, and creating additional job opportunities.

The Solow Growth Theory incorporates technological progress as a central component of its framework and Kenya's openness to trade and investment has attracted significant FDI, particularly in the technology sector, with global companies such as google establishing their African headquarters in Nairobi. These investments have facilitated technological diffusion and increased productivity, providing new employment opportunities in technology-driven industries. The Solow Neoclassical Growth Theory provides a valuable framework for understanding the effects of FDI and FPI on economic growth and employment in Kenya. Both forms of foreign capital contribute to capital accumulation, productivity improvements, and job creation, particularly when accompanied by technological advancements. The Kenyan experience reflects the model's insights, as FDI and FPI plays a critical role in conducting economic growth and employment creation in the country.

Several critics have pointed out limitations in the Solow growth model. Criticism by Robert Lucas (1988) Lucas argued that the Solow model underestimates the role of human capital in economic growth. Unlike physical capital, human capital investments (education, skills, and knowledge) can generate increasing returns rather than diminishing ones.

### 2.2.2 The Dual- Gap Theory

Chenery and Strout, (2019) created the dual-gap theory in 1966 to explain how external debt can help a nation's internal savings. As per the dual-gap theory, external debt is crucial in assisting with the growth of the economy in borrowing countries by filling the funding gaps resulting from insufficient low foreign exchange gains from trade imbalances, savings, and investments. The dual-gap hypothesis suggests that emerging nations should be given access to significant foreign loans to lower their unemployment rates. The dual-gap model of economic development was created by Hollis Chenery and several other authors.

Chenery & Strout (2019) states that the procedure for growth in emerging countries that have less savings is dependent upon the accumulation of outside capital. They introduced foreign capital with the understanding that developing nations might utilize the savings and foreign exchange deficits created by foreign savings coming into their economies as capital inflows which will lead to job creation in the domestic home (Alimot et al., 2022). (Ngouhouo et al., 2021) also stated that, through the dual gap theory, external financing can support industrial development, which in turn creates jobs and reduces unemployment. Savings and foreign exchange, for example, are examples of dual gaps that may be illustrated using the overall income equation identities as follows:

$$I - S = E - Y = M - X$$

Where;

S = National Saving, M = imports, X = exports, I = investment, S = savings, and E = national expenditure, Y = national output. The foreign exchange gap is represented by (M-X) and the domestic savings gap by (I-S) (Uzoamaka & Lucy, 2018). The Dual-Gap theory assists in determining the number of foreign resources needed to address the savings gap, which is crucial for developing countries in order to attain sustainable growth (Uzoamaka & Lucy, 2018).

Kenya, like many developing nations, faces a savings-investment gap, where domestic savings are insufficient to fund the level of investment required for sustained economic growth. The country's low savings rate, influenced by factors such as high levels of poverty and limited financial inclusion, hinders its ability to accumulate enough capital for significant infrastructure development, industrialization, or technological advancements (Cahyadin & Ratwianingsih, 2020). According to the Dual Gap Theory, Kenya must rely on external sources of capital, including FDI and foreign aid, to finance its development projects.

For example, the Big Four Agenda, aims to focus on manufacturing, low-end housing, healthcare, and food security, requires substantial investment, much of which is financed through foreign inflows (KNBS, 2023). Kenya also experiences a foreign exchange gap due to its trade deficit, where import needs exceed export earnings. The country relies heavily on imports for capital goods, machinery, and technology essential for industrialization and infrastructure projects. However, Kenya's export base, primarily dominated by agricultural commodities like tea, coffee, and horticultural products, often struggles to generate sufficient foreign exchange to meet the demands of its import-dependent economy (Asongu & Odhiambo, 2024). The disparity between export revenues and import demands makes foreign capital inflows essential for financing the balance of payments deficit.

Various criticisms have been directed at dual theory. For instance, (Rajaram et al., 2022) argued that while foreign debt can have positive effects under specific conditions, its overall impact on unemployment rate is highly variable and context dependent. They suggested that the theory should encompass multiple financing mechanisms to effectively address unemployment.

### **2.2.3 The Multiplier effect Theory**

The Multiplier effect was first introduced by John Keynes the British economist in his 1936 book titled "The General Theory of Employment, Interest, and Money". Keynes proposed that an initial increase in expenditure in an economy can result in a bigger rise in overall economic activity. This is because the initial spending sets off a chain reaction of additional spending as the money circulates through the economy. The multiplier is the marginal impact of changing one economic variable on another. Examples of such marginal effects include the impact of changing primary employment on total employment and the effect of changing investment on national income. When a country receives Official Development Assistance (ODA), the initial impact is typically an increase in financial resources available for government expenditure.

These funds can be allocated towards infrastructure development, social services, and other public goods, thereby stimulating economic activity. Infrastructure projects, for example, can directly generate employment in the construction sector and indirectly in related sectors such as manufacturing and services. By boosting demand for products and services, ODA can contribute to reducing unemployment, particularly in sectors connected to the funded projects.

An illustrative example is the Kenyan Development Response to Displacement Impacts Project, which is financed by foreign aid and aims to achieve multiple objectives, including providing jobs. Supported by the World Bank and more development partners, this project is expected to create a multiplier effect, resulting in job creation and subsequent reductions in poverty and inequality (World Bank, 2024). The magnitude of the multiplier effect is contingent upon the efficiency of expenditure and the economy's capacity to absorb the additional demand. Adugna, (2002) notes that ODA directed toward infrastructure projects significantly contributes to job creation and local business growth, particularly in rural areas, enhancing the multiplier effect in regions with limited access to investment.

The multiplier effect theory explored remittances as a factor that can benefit not only one person but the whole community, leading to a multiplier effect. Remittances significantly enhance the income of recipients, who subsequently spend a portion of these funds, thereby stimulating local demand. This increase in local demand can lead to higher production levels and potentially generate employment in local economies. By augmenting household incomes, remittances provide a financial buffer for families, reducing the immediate reliance on unemployment trainings. Additionally, recipients may invest in small businesses or skill development, further contributing to employment opportunities. Mwenga (2009) highlights that remittances have been instrumental in poverty alleviation in Kenya, particularly in rural areas, where they boost household consumption and stimulate local economic activity.

In Kenya, both ODA and remittances act as catalysts for the multiplier effect, stimulating broader economic activity beyond their initial injection into the economy. While ODA provides funding for large-scale infrastructure and social programs, remittances directly impact household consumption and small-scale investment, both devoting to economic growth and deficiency reduction. By leveraging the multiplier effect of these financial inflows, Kenya can continue to enhance its economic resilience and development trajectory.

Some studies offer alternative perspectives on the multiplier effect theory. For example, Ono (2006) argues that the multiplier effect is fundamentally flawed and can mislead evaluations of public works projects. He demonstrates that in the context of unemployment, ineffective public works projects are comparable to unemployment relief expenditures.

## **2.3 Empirical Review**

The empirical research that shows the link between the variables is the main topic of this portion of the literature review. There are subsections in this section that emphasize empirically the connection between FCI and unemployment.

### **2.3.1 Foreign Direct Investment and Unemployment**

Job creation opportunities are one of the advantages of foreign direct investment (FDI) and offers the recipient nation. Creating an environment that is favorable to foreign direct investment (FDI) is one way to lower the unemployment rate in economies. FDI is believed to provide new technology and expertise that will improve locals capacities and consequently offer employment possibilities (World Bank, 2024). The host nations have been pushed to create open and efficient policies for drawing foreign direct investments (FDIs), even though the benefits do not happen overnight (Palat, 2011). Given that FDI is positively correlated with higher productivity (UNCTDA, 2023) a decline will inevitably out- turn in a rise in the unemployment rate. One factor that influences foreign direct investment (FDI) and, in turn, increases the employment rate in the host nation is the availability of inexpensive labor (Slavica & Andreja, 2014).

Zekarias (2016) investigated the effect of (FDI) on unemployment in Ghana, using annual figures from 1990 to 2020. The Autoregressive Distributed Lag (ARDL) model was utilized in the research to evaluate the long-term relationship for major economic factors and unemployment, including FDI, GDP, exports, and evident capital evolution. The findings revealed a significant association between unemployment and FDI. The study employed annual data, which may introduce limitations in capturing short-term dynamics and could result in biased findings regarding the relationship between FDI and unemployment. Utilizing semi-annual data would provide a more comprehensive analysis by allowing the examination of both term effects. This approach would offer more precise insights, enabling policymakers to comprehend the immediate and sustained effects of FDI on unemployment, thereby facilitating more informed decision-making.

Grahovac (2017) evaluates the impact of foreign direct investment (FDI) from 2000 to 2014 on the rate of unemployment in Western Balkan nations. The study highlighted a notable decline in net investments since 2009, particularly in FDI, attributed to weakened domestic and external demand. The study aggregated Foreign Direct Investment (FDI) as a singular group of foreign capital inflow, without differentiating between its various forms or types.

Johnny et al. (2018) explored the effect of foreign direct investment (FDI) on the rate of unemployment in Nigeria over the period 1980 to 2015. The analysis employed 2 independent variables FDI and capital evolution and a dependent variable. The findings show a decrease but statistically insignificant correlation between FDI and the rate of unemployment. Conversely, a positive and statistically notable relationship was observed between capital evolution and unemployment. The study treated FDI and capital formation as distinct explanatory factors in its analysis.

Kyalo (2019) assessed the correlation between foreign direct investment (FDI), economic development, and employment in Kenya using time series data from 1990 to 2016. The research used the Ordinary Least Squares (OLS) method, with FDI as the explanatory variable, while inflation, government expenditure, and exchange rates have been considered final results. The results indicated a positive relationship between FDI and employment, highlighting FDI's critical role in influencing both economic development and employment in Kenya. However, the study did not differentiate between brownfield and greenfield investments, treating FDI as a single undifferentiated variable.

Anetor et al. (2020) analyzed the effects of foreign direct investment (FDI), trade, and foreign assistance on reducing poverty in Sub-Saharan African countries, utilizing panel data from 29 nations over the period 1990 to 2017. The research applied the Feasible Generalized Least Squares (FGLS) method within a single model framework. The analysis revealed a contrary correlation between both FDI and foreign aid and poverty reduction, suggesting that these inflows had not been effectively transmitted, thereby failing to alleviate poverty. While the study addressed human development index (HDI) aspects, it did not consider key variables such as unemployment.

Alalawneh and Nessa (2020) investigated the effect of FDI in 6 Middle Eastern and North African countries Egypt, Jordan, Lebanon, Morocco, Tunisia, and Turkey regions characterized by high unemployment rates. The research utilized data spanning from 1990 to 2018, applying three economic models: the Fixed Impact Model (FIM) and Random Effect Model (REM) for long-term evaluation, and the Panel VAR model, including Granger causality tests, for short-term dynamics. The findings demonstrated that FDI contributed to reducing overall unemployment, and in both male and female rates of unemployment, in the long run.

The study focused on Middle East and North African (MENA) countries, which have distinct economic, political, and structural differences compared to Kenya. Additionally, the nature and composition of Foreign Direct Investment (FDI) in these regions differ significantly from those observed in Kenya. Fathia et al., (2021) identified and tested economic indicators that might moderate the relation of FDI and unemployment in Indonesia across a 17-year span and 36 Indonesian provinces using an integrated alternative model. Their research showed the connection for both FDI and rate of unemployment is directly mediated by GDP and provincial minimum salaries, while that differs from that of Kenya.

Mkuya and Ngaruko (2021) conducted a comparative analysis of the effects of FDI inflows in youth unemployment for founding member states of the East African Community (EAC), specifically Kenya, Tanzania, and Uganda. Using the intervals data from 1990 to 2016 and applying the Autoregressive Distributed Lag (ARDL) model, the research found that FDI had a notable impact in reducing unemployment in Kenya, with a 0.708% decline in the rate of unemployment attributing to FDI inflows. The study looked at youth unemployment, which has a subset of the broader unemployment issue and often has different determinants and effects compared to overall unemployment.

Mkombe et al ( 2021) analyzed the effect of foreign direct investment (FDI) on unemployment in the Southern African Development Community (SADC) region, utilizing data from the World Bank covering the period from 1994 to 2017. The findings indicated that FDI has a negligible impact in the reduction of youth unemployment in the region. While the study examines all 16 member states of SADC, this broad scope may lead to less precise findings due to the inclusion of multiple countries. A more focused approach, concentrating on Kenya, would allow for a detailed, country-specific analysis that considers local factors and conditions influencing FDI and unemployment.

Mwangangi and Makambi (2023) examined the impact of FDI on employment and welfare in Kenya, using time series data from 1990 to 2020. Through the application of the Autoregressive Distributed Lag (ARDL) model, the study concluded that both government expenditure and FDI carry a positive effect on employment. The research stated that Foreign direct investment affect employment negatively in the short term, as it impacts it positively in long run. While Mwangangi's study focuses on employment, it does not directly address the unemployment rate.

### **2.3.2 Foreign portfolio investment and Unemployment**

The ideal moment to buy stocks can be determined by investors using unemployment rates. In the past, stock values have gone up during periods of low unemployment and down during periods of high unemployment. The risk-free rate of interest, among other three basic criteria, is what (Alper, 2018) point out determines stock prices and the expected rate of growth of companies. Therefore, news concerning unemployment must tell investors about one or more of these primitives if it has an impact on stock prices, which it obviously does. During economic downturns, bond prices do not significantly respond to increasing unemployment, whereas stock prices do, showing a substantial negative reaction. This suggests that bond prices may lack information about future interest rates during these phases of the business cycle, as they remain stable despite rising unemployment. In contrast, during expansions, the announcement of rising unemployment leads to a notable increase in both bond and stock prices. This suggests that in expansionary periods, negative labor market data might indicate a decrease in anticipated future interest rates, as shown by the bond response. Additionally, changes in development expectations and the risk premium could explain why market prices rise during expansions, even though they might not need to (Alper, 2018).

The stock rationality of bond price reactions to local market news was examined by (Venkateshwarlu & Babu, 2011). His research focused on how the market responded when more trustworthy information became available following revisions to the unemployment statistics. His research revealed that the statements about unemployment had a significant impact on market prices. Evans (2002) used high frequency data spanning four and a quarter year to analyze how U.S. Treasury rates responded to various macroeconomic pronouncements throughout the maturity spectrum. They discovered that news about unemployment had a greater impact on the yields of intermediate-term bonds. Based on theoretical reasoning, Ojjo (2023) states that good news in bad times and bad news in good times are typically linked to increasing variability, which raises the equity risk premium that investors need to pay when buying companies. Makoni & Marozva (2018) found a negative correlation to the evolution rate of per capita labor income and monthly stock returns. Given that variations in per capita labor income are primarily driven by hours worked rather than pay rates, these results align with the positive correlation observed in our data set between the growth rate of joblessness and stock returns.

The impact of FPI on unemployment in Kenya has received less attention compared to FDI. However, globally, studies such as Mazher et al (2020) regulated a research on the effect of international Direct Investment and international securities Investment on Unemployment in Pakistan. The research focused on analyzing the relationship between FPI and unemployment in Pakistan, specifically addressing how FPI can enhance financial market liquidity, thereby promoting business growth and job creation. The study applied time series data from 1972 to 2014. To analyze this data, the Auto-Regressive Distributed Lag (ARDL) model was used to investigate short-term and long-term correlations between variables. The research does not differentiate between various types of Foreign Portfolio Investment (FPI), such as stocks or bonds, to assess which financial instruments contribute more significantly to capital inflows. As a result, it lacks insight into which sectors of the economy should be prioritized to effectively reduce unemployment.

Kioko (2024) conducted a study examining the relationship between foreign direct investment (FDI), portfolio investment, and youth unemployment in Kenya. The study analyzed data spanning the period from 1993 to 2022, employing a multiple regression analysis to assess the impact of these capital inflows on unemployment among individuals aged 15 to 24 years. The findings indicated that both FDI and portfolio investments had a statistically insignificant effect on youth unemployment within the specified age group. The study solely examines unemployment among individuals aged 15–24, which may not fully capture the broader impacts of FDI and portfolio investments on overall unemployment. Given that many young people within this age range are still in school or vocational training, their employment status may not accurately reflect the labor market's responsiveness to foreign investments.

A more detailed analysis of FPI would provide valuable information on which financial instruments have the greatest potential to influence employment outcomes.

### **2.3.3 Diaspora Remittances and Unemployment**

The significance of diaspora remittances to a nation's economic growth cannot be overstated, especially for those with less established banking systems. It is believed by many economists and decision-makers that remittances promote welfare, increase household consumption, and encourage investment. A lot of research has been done in the literature on the correlation between remittances and deficiency reduction, however little has been done in relation to unemployment.

Salman, (2016) utilized variables from remittances household survey to explore the connection between employment, migrant remittances, and welfare in Nigeria. He found that remittances reduced the chances of recipients becoming employed by 28.4%. The research examines the effects of remittances on households; however, it does not examine the broader macroeconomic effect of remittances on the overall rate of unemployment. This leaves a gap in understanding how remittances influence national labor market dynamics and unemployment trends at a more aggregated level.

Asad et al., (2016) studied Nexus between workers, unemployment, labor migration and GDP growth in Pakistan. Time series data from 1975 to 2010 was applied for analysis. The study used the OLS model. It concluded that remittances positive impact on economic activity and production levels will surely result in a drop in Pakistan's unemployment rate. The research identified a long-term relationship between workers and unemployment, but its primary focus was on the broader economic effects of remittances in Pakistan. The effects of remittances specifically on unemployment was addressed only peripherally, limiting the depth of analysis regarding how remittances directly influence unemployment rates.

Ikechukwu & Opara, (2022) examined the relationship of Remittance Inflow and Unemployment in Nigeria. The research used the data period from 1981 to 2019. After estimating an Instrumental Variable Regression model, it was discovered that remittances had an increase and major impact on unemployment. The research used an IVR model to evaluate the impact of remittances on unemployment. This Model addresses potential endogeneity issues as it does not look at the variability of the variables. Additionally, the model employed does not account for short-term and long-term dynamics, which limits its effectiveness in providing actionable insights for policymakers and stakeholders seeking to understand the immediate impact of remittances on unemployment.

Mukoka, (2020) investigated the relationship between diaspora remittances and economic development for Zimbabwe. Annual time series data from 1990 to 2019 were used. The study employed error correction model. The study found diaspora remittance to be statistically notable in assessing economic growth. The impact of remittances on economic growth may not directly translate to their effect on unemployment rates, which requires a different analytical approach. The

study looks at Zimbabwe, which has different economic structures, labor markets, and remittance patterns to Kenya.

Mazher et al. (2020) investigated the impact of foreign direct investment (FDI) and foreign remittances on unemployment in Pakistan, using annual time series data from 1972 to 2014. The research applied the Autoregressive Distributed Lag (ARDL) model for analysis. The results indicated that for long-term both FDI and foreign remittances significantly contribute to reducing unemployment in Pakistan. However, for the short-term, the relationship between these variables was indicated to be statistically insignificant. The use of annual data in this study may have smoothed out short-term fluctuations and trends in remittances and unemployment.

Kibet & Rono (2021) analyzed the impact of diaspora remittances on various macroeconomic variables within the East African Community, using data from 2011 to 2020 and a descriptive research design. The study found that diaspora remittances had an increase on GDP growth, a decrease on inflation, a positive effect on exchange rates, and a reduction in unemployment rates. While the study addressed several macroeconomic indicators, including GDP growth, inflation, and exchange rates, it did not delve into the specific short and long-term impacts of remittances on unemployment. Additionally, by examining six countries, the study may have overlooked the more nuanced findings that could emerge from focusing on a single country.

Similarly, Okeke (2021) employed the Two-Stage Least Squares method to study the effect of offshore remittances on unemployment in Nigeria. The results indicate a one-way relationship between these two factors, with remittances from abroad migrants negatively affecting unemployment. The study needs more models such as ARDL to validate the study. Nigeria receives a higher volume of remittances compared to Kenya, which may lead to different findings regarding the impact of remittances on unemployment (UNCTDA, 2023b).

### **2.3.4 Foreign debt and Unemployment**

It is widely recognized that job creation within a nation is directly linked to profitable investments. Cohen (1995) discusses the correlation for external debt and investment, emphasizing that this link can be realized if appropriate funds are effectively utilized to generate sufficient repayment to cover debt servicing charges. Studies like Benyovszki et al (2015) highlight a reverse correlation between public debt and public investment, that discourages national governments from high public debt as there is no translation into investments that could enhance employment within the

economy. External funding is crucial for national governments as to give funds in profitable divisions and generate jobs. However, the problem lies in poor governance, which often leads to the misappropriation of substantial amounts of externally sourced funds. Supporting the inverse correlation between unemployment and foreign debt, (Nguyen, 2018) looked at the correlation between External Debt, Economic Development, Unemployment and National Expenditure in Vietnam from 1987 to 2016, The research found there is a direct relationship between unemployment, GDP as well as national Expenditure. The study used unemployment as their independent variable.

Cahyadin and Ratwianingsih (2020) investigated the impact of external debt and rate on unemployment in certain ASEAN countries from 1980 to 2017. To achieve their research objectives, the Granger Causality Test (GCT) and Autoregressive Distributed Lag Error Correction Model (ARDL-ECM) were used in the investigation. The evaluation revealed short-term effects associated with each of the variable models examining external debt, rates, and unemployment. It is noteworthy that the levels of debt in ASEAN countries differ from those in Kenya.

Mukhtar and Brueckner (2021) explored the effect of public debt on unemployment in Nigeria, utilizing an Autoregressive Distributed Lag Vector Error Correction Model over the period from 1985 to 2020. The analysis covered annual data spanning 36 years and included various econometric tests. The findings indicated a long-term correlation between external debt and unemployment in Nigeria. Although the study differentiated between domestic and foreign debt, it did not specify the amount of foreign debt held by the country, limiting the ability to evaluate the relative impacts of foreign versus domestic debt on unemployment. Additionally, the use of annual data may overlook short-term fluctuations and more immediate effects of public debt on unemployment.

Alnaa (2023) assessed the correlation between external debt and unemployment in Sub-Saharan Africa, utilizing data in 25 countries. The study found a distinct correlation between external debt and unemployment in the region. The author noted that unsustainable external borrowing can impair national governments' capacity to invest in foreign projects, which subsequently carries an impact on job creation. However, this broad regional analysis may obscure country-specific factors, including unique economic conditions, debt structures, and labor market dynamics in

Kenya. Additionally, the study does not differentiate between short and long-term effects of public debts on unemployment.

Ehikioya et al. (2020) investigated the dynamic relationships in external debt and economic development in African countries, utilizing the Johansen Cointegration test and the System Generalized Method of Moments for analysis. The study encompassed 43 African nations over the period from 2001 to 2018. The findings provided evidence of a sustainable relationship between public debt and economic development in Africa. However, the study did not specifically evaluate the effects of public debt on unemployment. It is crucial to know that while many African countries face debt crises, the terms, conditions, and types of external debt differ considerably across nations.

Mwangangi & Makambi, (2023) examined how FDI affected the well-being and employment in Kenya. The time series data shown was annual and covered the years 1990–2020. The study discovered that FDI and government spending had a favorable long-term effect on employment using the ARDL model. The study stated that Foreign direct investment affect employment negatively in the short term, as it affects it positively in long run. While Mwangangi's study focuses on employment, it does not directly address the unemployment rate. Employment and unemployment are related but distinct measures, as employment can increase without necessarily overseeing a proportional decrease in unemployment.

Mugo & Mugendi, (2024) looked at public debt, private investments and unemployment rate in Kenya. A Longitudinal research approach where time series data from 2001 to 2021 was gathered. The research revealed that domestic debt has an impact but a crucial relationship with the rate of unemployment. External debt, however, was found to have a positive and a positive correlation with the unemployment rate. study examines both domestic and external debt in relation to unemployment but does not delve deeply into the specific channels through which external debt influences unemployment.

### **2.3.5 Official Development Assistance and Unemployment**

The subject of whether assistance can raise people's standard of life has been covered meticulously in literature. The former must be utilized to fund investments in industries that create jobs to encourage job development. According to Boone (1996), in this context, aid funds consumption is as opposed to investments. Urban development assistance relies primarily on supporting urban expansion by establishing an environment that is business friendly, whereas rural development aid

produces jobs locally and provides the resources needed for rural communities to continue existing (Gamso & Yuldashev, 2018).

Martínez (2019) reviewed non-African studies on the effects of development assistance on exports and job creation in Germany. The results show a long-term correlation between growing German products exports and German aid. They argue that there is a correlation between the aid-induced rise in sectoral exports and the gross domestic employment of roughly 200,000 unemployed people. The study primarily focuses on the impact of foreign aid on export sectors, while overlooking the effects of aid directed towards non-export sectors. This focus limits the understanding of how different forms of foreign aid influence employment across a broader range of economic activities and sectors beyond those directly related to exports. Mendez & Willem, (2017) studied the effects of aid on EU employment and trade. The study used a two-step GMM technique from 1989 to 2014. The finding is that bilateral assistance is directly connected to the decrease of unemployment in the UK. European foreign aid helps to increase exports and create jobs within the European countries. While aid reduces unemployment and boost exports, the UK receives a different type of Aid comparing to African countries such as Kenya.

Rodrigues (2020) investigated the effects of foreign assistance in trade inflows on the diversification of sectoral employment across 112 countries between 2002 and 2015. Though the impacts range throughout sub-samples, the study concludes that these initiatives help recipient countries' agricultural, industrial, and service sectors diversify their employment. While the study highlights sectoral employment diversification, it does not explicitly analyze how foreign aid impacts overall unemployment rates, which is a key concern for understanding employment outcomes in Kenya. Gichanga, (2018) study was analyzing the interrelation between economic growth and ODA inflows in Kenya from 1970 to 2016. The study used ARDL to investigate the relationships between the variables. The results showed that there is a positive and insignificant relationship. This finding does not provide detailed insights into how ODA inflows might influence employment outcomes.

Tanveer et al., (2019) investigated the association between foreign aid and the creation of jobs in Pakistan from 1980 to 2015 through an empirical analysis utilizing the ARDL technique. Their findings suggest that the creation of jobs has been favorably impacted by foreign aid. The study does not distinguish between bilateral and multilateral aid, which can have different impacts on

job creation and unemployment. Understanding these distinctions is crucial for formulating effective policy recommendations for Kenya. Assadi et al. (2024) explored the connection between international aid and unemployment in Afghanistan, using data from 1990 to 2021 and employing the Autoregressive Distributed Lag (ARDL) model for analysis. The results indicated that the foreign aid variable, specifically Official Development Assistance (ODA), has a statistically significant negative effect on the unemployment level in the country.

The study treated Official Development Assistance (ODA) as a general factor, without distinguishing between its various forms. However, a country's ODA can be composed of different types, such as bilateral or multilateral aid. Analyzing ODA as a single, aggregated variable may lead to incomplete or misleading results, as the distinct impacts of each type of aid may not be captured. Distinguishing between different types of Official Development Assistance (ODA) received by a country enables policymakers to identify which types are most effective in generating employment. This differentiation allows for more informed decision-making regarding which forms of ODA should be prioritized to maximize job creation and address employment challenges effectively.

By using an analytical method, (Page & Söderbom, 2015) did not find any evidence that aid was given to nations that had been effective in producing jobs. They contend that help was disproportionately given to countries whose growth was not kept up with the creation of jobs. The majority of the money was utilized to support health and education; nothing was done to encourage structural transformation and the creation of jobs. Using GMM and instrumental variable to it regressions.

By using the GMM technique, Ssozi et al., (2019) demonstrate a substantial positive connection between development assistance and agricultural production, confirming the favorable influence of aid on agricultural output in Africa. More recently, Martorano et al., (2020) used disparity in approximations and a corresponding method to look into the influence of Chinese assistance on three social growth outcomes in Sub-Saharan Africa: nutrition, child health, and schooling. Their results show that while Chinese aid programs have little effect on child nutrition, they do raise educational attainment and lower child mortality in the areas where they are implemented. Building on these findings, we hypothesize that official development aid has a positive effect on employment in Kenya.

## 2.4 Overview of Identified Knowledge Gap

This chapter reviewed various components of foreign inflow of funds and unemployment. The research is grounded in theories such as the Solow neoclassical growth theory, the dual gap theory, and the multiplier effect theory. Several studies within the Kenyan context were examined, including (Mkombe et al., 2021), who explored the effect of overseas investment on unemployment in the Southern African evolution, and (Atilaw Woldetensaye et al., 2022), who investigated the correlation between unemployment and FDI in East African countries.

Additionally, (kyalo, 2019) conducted a comparative evaluation of FDI, economic development, and employment in Kenya, while Mwangangi & Makambi, (2023) assessed the impact of FDI and welfare in Kenya.

However, these researchers did not comprehensively address all components of foreign capital inflow and their relationship to unemployment. Table 1 outlines the knowledge gaps identified in the literature review.

**Table 2.1 Overview of knowledge Gap**

Author	Topic	Findings	Research Gap
(Orji et al., 2018)	Nigeria's unemployment rate with inflows of foreign capital	Trade openness, foreign investment, and foreign private investment are negatively affecting the level of unemployment, while remittances and the real foreign exchange exhibit an effective correlation with unemployment.	The study focused primarily on direct investment, foreign portfolio investment, and remittances. This research will extend the analysis by incorporating official development assistance (ODA) and foreign financial obligation into the examination.
Chukwuma et al., (2020)	Foreign inflows and Nigeria's unemployment rate.	Foreign investment supports the creation of jobs in the recipient economy and helps in bridging imbalanced resources.	The study focused on multilateral and bilateral debts leaving behind other external debts such as PPG, PNG and other more. This study will look at external debt stocks considering all debts.

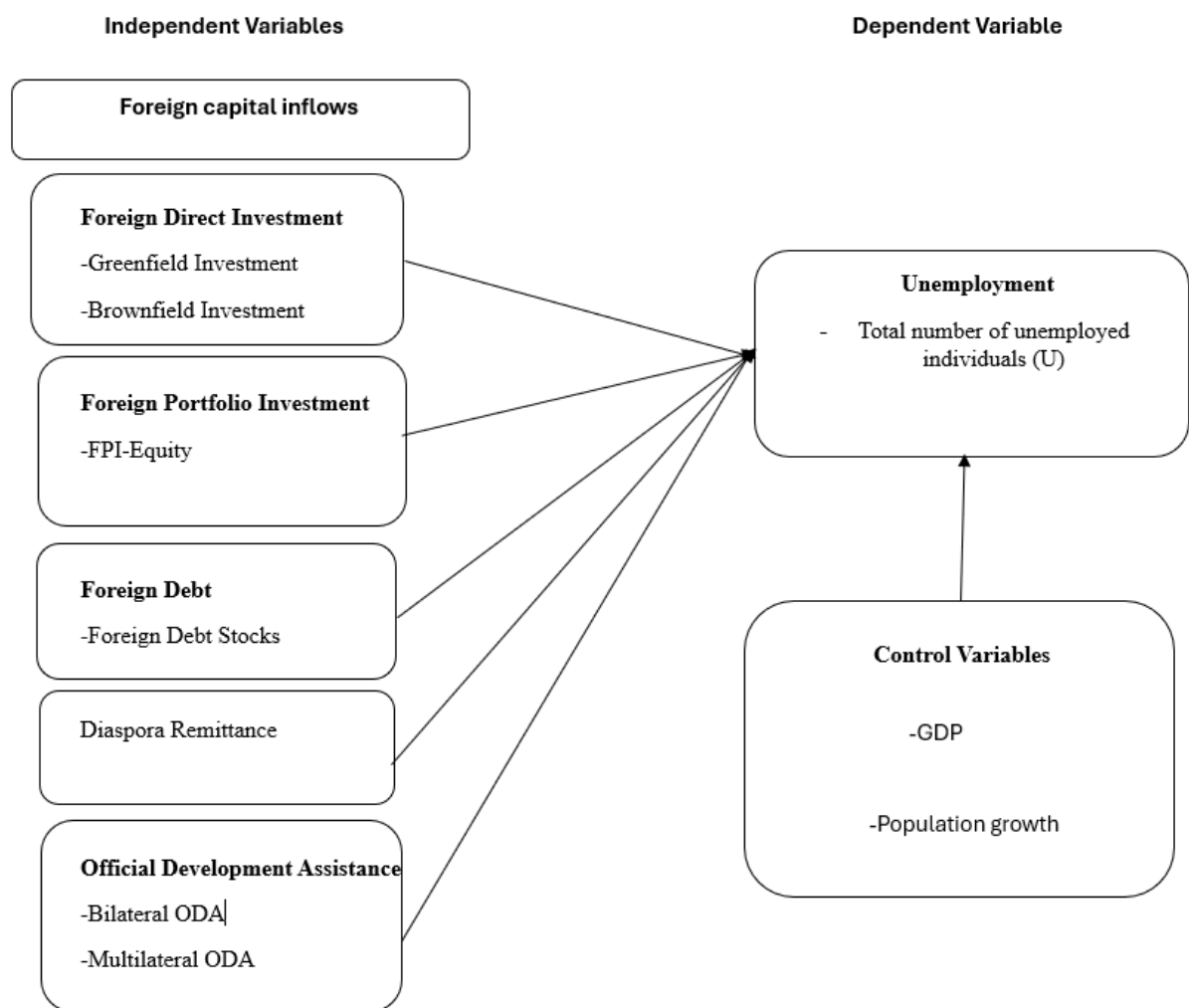
(Kibet & Rono, 2021)	The effect of remittances on macroeconomic factors in EAC community.	The research revealed that diaspora remittances reduce unemployment and inflation, while positively influencing GDP and exchange rates.	The study focused on short term period and unemployment as part of GDP of the EAC, not as a component alone.
(Sevencan, 2023)	Growth and development, unemployment, and remittances.	Remittances have a more significant impact on human evolution in deprived economies compared to other nations; however, there is no clear relationship between remittances and development in low-income countries, nor unemployment in the countries of origin.	The impact in the level of unemployment on the amount received was not found to be significantly supported by empirical data in this study.
(Atilaw Woldetensaye et al., 2022)	The Nexus between Foreign Direct Investment (FDI) and unemployment rates in IGAD member countries of East Africa.	Unemployment is significantly impacted negatively by foreign direct investment.	The study focused on FDI as homogenous entity, without been specific on the types.
(Alalawneh & Nessa, 2020)	The impact of overseas Direct Investment (FDI) on employment generation across six Middle Eastern and North African countries were examined.	The results revealed that, over time, FDI contributes to a reduction in unemployment rates for both men and women.	The economic structures of the Middle East and North Africa regions differ significantly from that of Kenya
(Mlambo, 2022)	The effect of foreign portfolio investments on the economic development of African	The observation indicated the relationship between portfolio investments and	The study looks at foreign portfolio investment (FPI) as a broad category of capital inflows, and the literature on FPI's impact on

	nations. Nigeria, South Africa, Botswana, Kenya, and Mauritius.	economic development is not very strong.	unemployment is noticeably lacking.
Serem, (2021)	The influence of Cross-Border Direct Investment, overseas securities Investment, and settlements from the diaspora on Kenya's economic growth.	Economic growth is significantly impacted by these three capital flows.	The study focused on GDP in measuring growth and only three components were identified as foreign capital inflows.
(Alnaa, 2023)	The correlation between foreign financial obligation and unemployment in Sub-Saharan Africa.	The likelihood of rising unemployment rates in the economy increases with the number of times national governments seek foreign funding.	The study focused on how external debt affect the government capacity of correcting tax revenue, excluding the exact effect of external debt on unemployment
(Mugo & Mugendi, 2024)	Public debt, private investments and unemployment rate in Kenya	A remarkable correlation was observed between the level of unemployment and external debt.	Instead of using FPI as the private investment, the study used external debt as PI which does not yield profit.
(Nchofoung et al., 2022)	Instead of providing me fish, teach me how to fish: foreign employment and development assistance in Africa.	The findings show that official development assistance negatively impacts African employment.	There's a gap in a more focused case studies on individual country especially those with unique political or economic contexts such as Kenya.

*Source; Garuba et al; (2023)*

## 2.5 Conceptual Framework

Figure 2.1 illustrates the correlation between the dependent, independent, and control variables. The dependent variable in the study is unemployment rate, which was measured using the international labor organization unemployment rate category of the age ranging from 15 and above. Foreign capital inflows were independent variables, measured using semi-annual brownfield and greenfield investment, FPI inflows such as foreign portfolio equity and foreign portfolio debt(securities) and diaspora remittances, foreign debt stocks and official development assistance as Bilateral and multilateral Aid. The control variables that can lead to an impact on unemployment rate are GDP such as the growth of the economy and a rise in working population.



**Figure 1: Conceptual Framework**

*Source; OECD (2022)*

## 2.6 Operationalization of the Variables

**Table 2.2 :Operationalization of the study variables**

<b>Variables</b>	<b>Type</b>	<b>Measurements in Million US \$</b>	<b>Supporting Literature</b>	<b>Data source</b>
Foreign Direct Investment	Independent	Brownfield and Greenfield Investment inflows	(Ehigiamusoe & Lean, 2019)	UNCTAD
Unemployment	Dependent	Total number of unemployed individuals (u)	(Alam et al., 2020)	KNBS
Foreign Portfolio Investment	Independent	Equity Inflows	(Mlambo, 2022)	World Bank
Diaspora Remittance	Independent	Inflow of remittances	(Maara et al., 2019)	CBK
External debt	Independent	Total External debt stock	(Alnaa, 2023)	World Bank/ IMF
ODA	Independent	Bilateral/Multilateral Aid Inflow	(Martorano et al., 2020)	UNCTDA/OECD
GDP	Control Variables	GDP per capita	(Alam et al., 2020)	KNBS/World Bank
Population ages 15-64	Control Variables	Total population	(Baah-Boateng, 2016)	World Bank

*Source; Edmonds (2018)*

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the research methodology that addresses the study's objectives and questions. It is organized as follows: Section 3.2 covers the research philosophy; Section 3.3 describes the research design; Section 3.4 explores the population and sampling methods; Section 3.5 details the data collection methods, focusing on secondary data sources; Section 3.6 explains the data collection procedure; Section 3.7 discusses the diagnostic tests; Section 3.8 presents the planned data analysis techniques; Section 3.9 assesses the research quality; and Section 3.10 considers the ethical aspects guiding the study.

#### **3.2 Research Philosophy**

Research philosophies are a set of presumptions and viewpoints regarding the advancement of knowledge that affects how a researcher perceives the world (Burrell & Morgan, 2017). The five main research philosophies are interpretivism, postmodernism, positivism, pragmatism, and critical realism. Interpretivism holds that reality is not independent but is instead created by the observer via their perception of it. The positivist philosophy is rooted in the idea that knowledge should be based on observable, measurable phenomena and that the researcher should maintain neutrality and objectivity. The study employed a positivist approach, as it involves collecting quantitative data on foreign capital inflows and unemployment rates in Kenya, along with control variables such as GDP and population growth. The analysis and measurement of these variables were based on numerical data. This approach is suited to the study's goal of identifying measurable relationships between the variables, making a positivistic research philosophy appropriate.

#### **3.3 Research Design**

Research design refers to a blueprint and structure of directing a research study and aims to detail the process required for collecting data (Geoffrey & Matteo, 2005). The study adopted a longitudinal research design. Longitudinal research designs represent samples of change and help establish the direction and magnitude of causal relationships. Every variable was measured during four separate time intervals. This enabled the researcher to track how variables change over time (Anastas, 2014). The goal of longitudinal study was to track changes of different foreign capital inflows on unemployment over several years in Kenya. By collecting data at multiple time points, the study analyzed trends and determined whether fluctuations or changes in foreign capital

inflows impact any changes in unemployment over time. The longitudinal research design was chosen for this research due to its competence to identify and analyze temporal patterns and causal relationships. It allows for the observation of the same subjects over an extended period, thereby providing a comprehensive view of how foreign capital inflows affect unemployment. This design is particularly advantageous for examining the long-term impacts and trends that may not be evident in cross-sectional studies. Additionally, it helped in controlling individual differences and reduces the variability that can arise from comparing different subjects. The study employed time series analysis to examine macroeconomic trends by assessing the relationship between foreign capital inflows and unemployment rates over multiple years. This approach enabled the identification of patterns, fluctuations, and potential correlations within the data, providing insights into the long-term impact of foreign capital inflows on unemployment dynamics. By adopting a longitudinal approach with time series analysis, the study ensured a rigorous and detailed examination of the dynamic relationship between foreign capital inflows and unemployment in Kenya.

### **3.4 Population and Sampling**

A population is the total set of components from which conclusions can be drawn, and it refers to all potentially interesting instances for a research study (Ghauri, 2020). Grove, (2016) defines society as the complete set of units whereby the data will be collected from. This research is a case study focusing on Kenya. The study analyzed Kenya as a whole and used secondary data spanning from 2008 to 2023, sourced from various UN e-government websites, international institutions and publicly available national websites. Since the study aimed to analyze the entire country, no sampling was required. Quarterly data was employed in the study to strike a balance between capturing detailed trends and managing the data volume. With 4 quarters data points per year over 15 years, the study yields 64 data points, sufficient for robust statistical analysis and the identification of meaningful patterns.

Quarterly data was selected for this study to address the limitations associated with alternative timeframes. Weekly and monthly unemployment figures, where available, are often influenced by seasonal and short-term fluctuations, which may obscure underlying structural trends. Quarterly data helps to mitigate these issues by smoothing short-term volatility, thereby enabling a clearer investigation of the connection between foreign capital inflows and unemployment.

Conversely, annual data, while less volatile, may overlook intermediate changes, potentially delaying actionable insights. The use of quarterly data strikes a balance by offering a manageable timeframe that captures significant trends while providing timely and relevant policy implications. The period from 2008 to 2023 was selected due to significant economic development and structural changes in the region, such as the implementation of the 2030 Sustainable Development Goals (SDGs). The study period selected for this research spans from 2008 to 2023. this period.

The period from 2008 to 2023 also reflects a time of considerable transformation in Kenya's economic landscape, including the diversification of the economy beyond Agriculture, as well as the opening doors for foreign capital inflows and trade. Analyzing data from these years provided insights into how foreign capital inflows have influenced unemployment within the context of these developments.

### **3.5 Data Collection Methods**

Data collection is the methodical procedure a researcher does to get primary or secondary data Brown (2009). EViews was used to analyze the data. Relevant databases, such as the World Bank, UNCTAD, and Kenya National Bureau of Statistics (KNBS), were used to gather data. The form found in Appendix I was used to extract the chosen study data. Greenfield and brownfield investment were collected from the United Nations conferences on trade and development (UNCTDA), FPI, foreign debt stocks, and ODA were gathered from the world development measures from the world bank and diaspora remittances and unemployment were collected from KNBS. The validity of the study was ensured through the use of reputable and widely recognized data sources, which have undergone rigorous quality assurance procedures before being published. The data collected from these sources are accurate, reliable, and reflective of the variables being studied. Additionally, the study's use of widely accepted databases such as the World Bank and UNCTAD ensured that the data aligns with international standards, further enhancing the validity of the findings. The reliability of the data was supported by the consistency and standardization of these databases. Since the organizations used adhere to established methodologies in data collection and processing, the data was considered stable and dependable for analyzing trends over time. Furthermore, the form found in Appendix I was used to systematically extract the chosen study data, ensuring consistency in the data collection process across different variables.

### **3.6 Diagnostic Tests**

The study data collected was time series in nature, making it necessary to conduct various diagnostic tests to ensure the data met the requirements for time series regression analysis. The tests described in the subsequent sections were adopted in this study.

#### **3.6.1 Durbin-Watson test for autocorrelation**

Autocorrelation in regression occurs when consecutive error terms are interrelated, violating the Ordinary Least Squares (OLS) assumption that residuals should be independent across time.

To test for the presence of autocorrelation, the Durbin-Watson (DW) was employed, given its relative flexibility and fewer restrictions compared to other tests designed for similar purposes.

#### **3.6.2 Breusch-Pagan test for heteroskedasticity**

The study employed the Breusch-Pagan (BP) and koenker test to check for heteroscedasticity. A significant level greater than 0.05 was considered evidence that the data did not exhibit heteroscedasticity, as determined through the outcomes of the statistical analysis of variance.

#### **3.6.3 Normality Test**

For OLS to be applied, the error terms should be normally distributed (Gujarati, 2004). The Jarque Bera Test was used to test normality.

#### **3.6.4 Stability Test**

To evaluate parameter stability, the study employed the cumulative sum (CUSUM) of residuals tests (Pesaran, 1997). The study used tables and graphs to explain the stability of the model at 5% significant level.

#### **3.6.5 Stationarity Test**

As noted by Shrestha & Bhatta (2018), stationarity of data is a critical concern for most modeling strategies in time series analysis. The study began with a visual inspection to gain a general understanding of the series' stationarity, followed by statistical validation. Final decisions were based on statistical testing. To provide evidence for the constancy of the study variables, a unit root analysis was conducted as part of the investigation. The unit root test was conducted using the ADF to establish the stationarity level of the variables.

### 3.7 Data Analysis

Data analysis involved transforming raw data and figures into meaningful insights to understand the relationships between variables (Ogunleye, 2008). This study was distinctive as it employed the ARDL approach to evaluate both the short- and long-term impacts of foreign capital inflows on unemployment in Kenya. According to Kripfganz and Schneider (2021), the Autoregressive Distributed Lag (ARDL) model assesses positive relationships in time series data within a single-formula framework. The autoregressive aspect of the model allowed the present value of the dependent variable to be influenced by its own past values, while the distributed lag component considered both past and present values of other descriptive variables.

The variables were categorized as non-stationary, stationary, or a mix of both. In this model, the dependent variable depended on its previous lagged values as well as the present and past values of other variables. This approach was thus referred to as the Autoregressive Distributed Lag model.

#### 3.7.1 Econometric model

The objectives of the study were to evaluate the effect of foreign capital inflows on unemployment, with population and gross domestic product as control variables. The research utilized ARDL analysis to examine the correlations among the variables.

Model 1:

$$U_{\tau} = \beta_0 + \beta_1 GFFDI_{\tau} + \beta_2 BFFDI_{\tau} + \beta_3 FPE_{\tau} + \beta_4 DR_{\tau} + \beta_5 EDS_{\tau} + \beta_6 MODA_{\tau} + \beta_7 BODA_{\tau} + \beta_8 GDPPC_{\tau} + \beta_9 PG_{\tau} + \sum_{\tau=1}^n \delta_{\tau} D_{\tau} + \varepsilon_{\tau} \dots \dots \dots 1$$

Where:

$U_{\tau}$  represents the level of unemployment.

GFFDI is the amount of FDI inflow into Greenfield investments.

BFFDI is the amount of FDI inflow into Brownfield investment

FPE relates to the total number of Foreign Portfolio Equity

DR is the level of inflow of diaspora remittances into the country.

EDS is the level of External Debt Stock.

MODA refers to the level of multilateral aid from international institutions.

BODA refers to the value of bilateral aid granted by other countries to the Kenyan government.

GDPPC<sub>t</sub> represents the gross domestic product level per capital.

P is the total Population ages 15-64

$\beta_0$  is the constant associated with regression models

$\delta_t$  are the coefficients for the time dummies

D<sub>t</sub> are the dummy variables

$\tau$  is denote quarterly observations on each variable

$\varepsilon$  is the inaccuracy term of the model applied

The variable that had the greatest influence on the dependent variable was identified by testing the implications of each individual regression coefficient at a 95% confidence level. This section provided a thorough explanation of the methods and approaches employed to analyze the data, ensuring a comprehensive understanding of the effect of foreign capital inflows on unemployment in Kenya. Prior to conducting the regression analysis, the data obtained from secondary sources underwent preparation and cleansing procedures to ensure its accuracy and completeness. Missing data was resolved using techniques such as mean imputation or interpolation where necessary. Statistical methods, including Z-scores and the Interquartile Range (IQR), were employed to identify and address outliers. Additionally, normalization and scaling techniques were implemented to ensure comparability of data, particularly when integrating data from various sources.

Detailed statistics were computed to succinctly describe the key attributes of the dataset, providing an initial understanding of the data. These included measures such as the mean and median, measures of dispersion, including the standard deviation and ranges. To verify that the data satisfied the prerequisites for multiple regression analysis, several diagnostic tests were conducted as discussed in Section 3.7. The data was presented using tables and graphs to effectively illustrate the findings. Descriptive statistics tables detail the data for all variables.

A correlation matrix displayed the correlations between the variables to demonstrate the strength and direction of relationships. Detailed regression output tables, comprising coefficients, standard errors, t-values, probability, and significance levels, were utilized to summarize the results.

### **3.8 Ethical Issues in Research**

The study followed the requisite ethical procedures and adhered to them to improve the study's quality. This research used secondary data, and there were no foreseeable risks to anyone during the study. The study used data from the World Bank, UNCTAD, and KNBS websites, which were publicly available and thus did not require any processes of seeking permission to use the information in the research.

The research ensured that all data used, modified, or adopted from other studies and journal articles were acknowledged by making in-text citations and providing a comprehensive list of references to avoid any plagiarism. Additionally, the study adhered to ethical guidelines set by the Kenya National Council for Science, Technology, and Innovation (NACOSTI). Ethical clearance was obtained from NACOSTI prior to the commencement of the research, ensuring compliance with national research ethics standards. This process involved a review to ensure the study was conducted with integrity, maintaining high standards of transparency and accountability. The quality, validity, and reliability of the data were enhanced by conducting diagnostic tests before running the analysis.



## CHAPTER FOUR

### PRESENTATION OF RESEARCH FINDINGS

#### 4.1 Introduction

This chapter presents the data analysis and interpretation of the research findings. It begins with descriptive statistics and diagnostic tests that align with the study's objectives. Following this, the ARDL model was applied to assess the effect of foreign capital inflows on unemployment in Kenya. The study adopted a 5% significance level ( $\alpha = 0.05$ ) for the regression analysis. This threshold is commonly used in empirical research in social sciences and economics because it provides a balanced trade-off between the risks of Type I errors and Type II errors. According to Maddala (2001), the 5% level is generally accepted as a reasonable standard for ensuring the robustness and reliability of statistical conclusions, especially when dealing with real-world economic data.

#### 4.2 Data Description and Descriptive Analysis

Table 4.1 below presents the descriptive statistics of the study variables. This section is crucial for providing a simplified interpretation of the data. The analysis calculated the mean, minimum, maximum, and standard deviation of the study variables, including; unemployment as the dependent variable (U). The independent variables were foreign capital inflows components such as; foreign direct investment in the form of brownfield (BF-FDI) and Greenfield investment (GF-FDI), Foreign Portfolio Investment in the form of Equity (FPI-E) and Debts/Bonds (FPI-B), External debts stock (EDS), Diaspora Remittances (PR) and Official Development Assistance in the form of Bilateral (BODA) and multilateral (MODA), which was measured as inflows. The other variables included were to test for the control variables and these were GDP and Population growth.

**Table 4.1 Descriptive Analysis**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>
U(million)	63	654,090	299,181.2	141,263.8	1,448,505
GF-FDI (million)	63	2,054,828	1,016,075	774,456.3	7,867,700

BF- FDI(million)	63	3,491,610	1,931,958	116,256.3	7,717,874
FPI- E(million)	63	-20,396.59	674,656.7	-2,735,396	954,338.8
DR(million)	63	1,796,106	956,370.5	631,460.9	4,166,667
EDS(million)	63	21,309,918	11,303,841	7,915,263	45,769,900
B- ODA(million)	63	3,248,365	493,115.7	2,226,975	4,535,740
M- ODA(million)	63	993,588.5	789,052.1	158,650.5	3,678,901
GDP(million)	63	71,703,614	22,073,217	37,508,169	110,000,000
P(million)	63	26,203,560	2,987,424	21,448,290	32,990,012

**Source: Author computation (2024)**

The data output tabled above shows that the mean unemployment was 0.654 million people, with a standard deviation of 0.299 million. The minimum and maximum value of unemployment was 0.141 million and 1,448 million respectively. The results further showed a mean value of USD 2.054 million for Greenfield investment indicates a relatively high level of investment, typically associated with new business establishment and infrastructure development. The standard deviation of USD 1,016 million suggests moderate variation across the observations, showing some differences in the amount of Greenfield in the sample. The range of volatile USD 0.774 million to USD 7.058 million respectively. Brownfield FDI has a mean of USD 3,491 million, which indicates a moderate investment level directed towards existing businesses or acquisitions. The higher standard deviation of USD 1.931 million suggests that the values are more spread out around the mean, indicating more variability in the level of Brownfield FDI. The minimum and maximum values are USD 0.116 million and USD 7,718 million respectively, showing that the level of Brownfield FDI fluctuates, though the variation is still within a reasonable range.

The mean value for foreign portfolio investment Equity was USD -20.396 million while the mean of USD 0.674 million for Foreign Portfolio Investment in Debt indicates a slight positive average, suggesting that debt-based investments are more stable or slightly profitable on average. For both foreign portfolio investments, the standard deviation is large, whereby the std for equity is USD 0.674 million and USD 0.945 million respectively. The range of Equity is USD -2,735million and USD 0.954 million respectively, while in debt the minimum value is USD -3.716 million and a maximum of USD 1,313 million reflecting the high risk and potential for both gains and losses in foreign debt.

Diaspora remittances (DR) have a mean value of USD 1.796 million, which reflects a high number of inflows on average from diaspora, with a standard deviation of 0.956 suggesting that remittance inflows are relatively stable. The minimum and maximum value of DR was USD 0.631 million and USD 4.166 million indicates that there is some fluctuation in the level of diaspora remittances. External debt stocks (EDS) show a mean value of USD 21.309 million, indicating a relatively high level of external debt on average. The standard deviation is 11.303, with minimal variation across the observations. The minimum and maximum values of USD 7.915 million and USD 45,769,900 million respectively.

The Mean of Bilateral ODA has a very stable mean value of USD 3.248 million, indicating consistent aid flow, with a small standard deviation of USD 0.493 million. The lowest and highest ranges from USD 2.226 million to USD 4,535 million reinforce the stability and predictability of this variable. Multilateral ODA has a mean of USD 0.993 million, indicating a moderate level of development assistance. However, the large standard deviation of USD 0.789 million suggests significant variability in the amount of multilateral aid. The minimum and maximum values, ranging from USD 0.158 million to USD 3.678 million, further illustrate the potential for large fluctuations in M-ODA. The average value of GDP was USD 71,703,614 million, indicates a strong economic performance on average, with a standard deviation of USD 22.156,217 million indicates that GDP values are tightly clustered around the mean, with minimal variation across the observations. The range of USD 37,508.169 million to USD 110,000,000 million further reflects this stability. Population has a mean value of 26,303,560 people. The very low standard deviation of 2,987,290 million indicates minimal variation in the population size across 2008 to 2023. The population values range from 21,448,290 million to 32,990,012 million.

### 4.3 Diagnostic Testing

Diagnostic tests were performed to verify that the assumptions of the classical linear regression model were upheld. These tests included assessments for normality, heteroscedasticity, autocorrelation, stability, and stationarity.

#### 4.3.1 Autocorrelation Test

OLS assumptions require that residuals should not exhibit correlation over time, as this could result in a biased estimate of the regression parameters. The Durbin-Watson (DW) test was applied to check for serial autocorrelation by performing a regression analysis between the variables. The DW statistic ranges from 0 to 4, where values close to 2 indicate no autocorrelation, values between 0 and 2 suggest positive autocorrelation, and values between 2 and 4 indicate negative autocorrelation. Generally, values between 1.5 and 2.5 are considered normal and not concerning. The results in Table 4.2 show that the residuals had a DW statistic of 2.067, indicating normal autocorrelation between the variables.

**Table 4.2: Durbin- Watson DW**

Model	Test
1	Durbin- Watson statistics= 2.067

Source: Author computation (2024)

#### 4.3.2 Heteroscedasticity Test

The Breusch-Pagan and Koenker (BP) test statistic roughly follows a chi-squared distribution with k degrees of freedom. Heteroscedasticity is present if the test statistic's p-value is less than 0.05, rejecting the null hypothesis of homoscedasticity.

**Table 4.3 Breusch-Pagan and Koenker Test**

Test statistics	Chi2 (1)	Prob>chi2
BP	0.0468	0.0581

Source: Author computation (2024)

From the results above, the p-value of 0.0581 is greater than 0.05, indicating that the null hypothesis cannot be rejected. This suggests that the residuals are homoscedastic.

### 4.3.3 Normality test

The Jarque Bera test statistic was used to test for normality based on the hypothesis below:

**Table 4.4 Normality Test Results**

<b>Statistics</b>	<b>Prob</b>	<b>JB</b>
	0.617	0.964

**Source: Author computation (2024)**

Based on the results in Table 4.4, the obtained p-value is 0.617. Since this value exceeds the significance level of 0.05, the null hypothesis cannot be rejected. Therefore, the sample data was normally distributed.

### 4.3.4 Stationarity Test

The Augmented Dickey-Fuller (ADF) test was used for unit root tests in order to determine whether the variables were stationary or non-stationary. This was done because using non-stationary series could result in inaccurate t-statistic calculations and false regression findings. The findings of the stationarity test are summarized in Table 4.5 below. It displays the associated ADF statistic along with the crucial values at various significant levels. The findings show that brownfield FDI, FPI Equity, MODA, GDP and P were stationary at 5% significant level.

**Table 4.5 Unit Root Test at Level**

<b>Variables</b>	<b>ADF Test</b>	<b>Prob.*</b>	<b>5%</b>	<b>Comment</b>
U	1.120	0.930	-1.946	N-stationary
GF-FDI	-0.969	0.758	-2.912	N-Stationary
BF-FDI	-3.269	0.021	-2.909	Stationary
FPI-E	-2.532	0.012	-1.946	Stationary
DR	-1.668	0.442	-2.911	N-Stationary
EDS	-0.308	0.917	-2.911	N-Stationary
B-ODA	-0.611	0.448	-1.946	N-Stationary
M-ODA	-9.477	0.000	-2.911	Stationary
GDP	-4.379	0.004	-3.489	Stationary
P	-3.671	0.032	-3.489	Stationary

**Source: Author computation (2024)**

Unemployment, Greenfield FDI, Diaspora Remittances, External debt and Bilateral ODA composite exhibited non-stationary trends and thus another unit root test was conducted at first difference. The results of the first difference are presented in Table 4.6 below which shows that at first difference the variables became stationary.

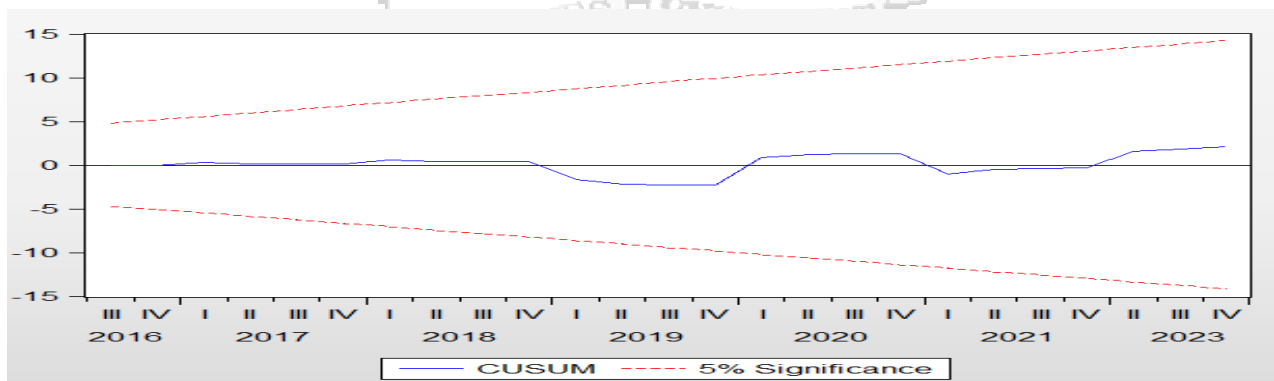
**Table 4.6 First Differencing**

Variables	ADF Test	Prob.*	5%	Comment	I(D)**
DU	-3.400	0.001	-1.946	Stationarity	I(1)
D(GF-FDI)	-3.317	0.018	-2.912	Stationarity	I(1)
DDR	-10.279	0.000	-2.911	Stationarity	I(1)
DES	-8.241	0.0000	-2.911	Stationarity	I(1)
DB-ODA	-2.91697	0.0498	-1.946	Stationarity	I(1)

Source: Author computation (2024)

#### 4.3.5 Stability Test

The model's stability under the null hypothesis that all of the coefficients were stable was assessed using the Cumulative Sum of Recursive Residuals (CUSUM) test. The investigation was unable to reject the null hypothesis because, as shown in figure 5, the CUSUM graph falls inside the crucial boundaries at a 95 percent confidence level. From figure 5 above, the Model is stable at 5% significant level.



**Figure 2: Cusum Significant**

#### 4.4 Bounds Test for Cointegration

Autoregressive distributed lag (ARDL) bounds testing IS applied to examine the co integration relationship of the variables.

**Table 4.7 Co-integration Test**

Test Statistics	Value	Significance	I(0) Bound	I(1) Bound
F-statistics	8.079	10%	1.76	2.77
		5%	2.04	2.08
		2.5%	2.24	3.35
		1%	2.46	3.68

Source: Author computation (2024)

Table 4.8 shows that there is a long-term correlation between the variables, reason been that the F-statistics is at 8.079, higher than the lower and upper bound at 5% law significant.

#### 4.5 ARDL MODEL

The Autoregressive Distributed Lag (ECM) model technique was used to measure results because the variables in the model have a combination of stationarity levels of I(O) and I(1).

##### 4.5.1 Long Run Coefficient

**Table 4.8 Long run coefficient**

UNEMP.	Coef.	Std.err	T-statistics	P.	95% conf.	Interval
GF-FDI	-0.4871	0.6730	-0.7237	0.0533	-0.1170	0.0229
BF-FDI	0.1418	1.4265	0.6875	0.6463	0.0052	0.2095
FPI-E	-0.00019	0.0019	0.0969	0.2263	-0.0001	0.0004
DR	-0.00074	0.0012	-0.0065	0.6361	0.00008	0.0001
EDS	0.00015	0.0003	-0.4508	0.5178	0.0001	0.0004
B-ODA	0.00084	0.0009	0.7928	0.6849	0.00007	0.0002
M-ODA	-0.00017	0.0006	-0.1112	0.3830	-0.0005	-0.00026

GDP	0.00011	0.0002	0.6088	0.0206	-0.00007	-0.00004
P	0.2882	0.718	0.4013	0.1955	0.0498	0.0773

Source: Author computation (2024)

### Long-Run Relationship of Foreign Capital Inflows on Unemployment

Table 4.9 presents the results of the long-run effects of foreign capital inflows on unemployment. The analysis indicates that Greenfield Foreign Direct Investment (GF-FDI) is associated with the decrease in unemployment. Specifically, the coefficient for Greenfield FDI is -0.4871, suggesting that a 1-unit increase in GF-FDI is associated with a 0.4871-unit decrease in unemployment. On the other hand, brownfield is positively correlated with unemployment in the long run. These findings are consistent with prior research examining the effects of aggregated FDI on unemployment. For instance, Onyinye (2018) found that FDI significantly reduced unemployment in Nigeria, while Wondimhunegn (2022) reported that FDI inflows led to decreased unemployment in East African countries. Likewise, Mazher (2020) established a significant negative effect of FDI on unemployment in Pakistan. Notably, a substantial share of FDI in these countries comprises of greenfield investments.

The coefficient for FPI-Equity is -0.00019, indicating a slight negative relationship with unemployment. These findings aligns with Onyinye (2018), who identified a negative relationship between aggregated FPI and unemployment in Nigeria, and differs from Garuba (2023), who reported a positive relationship between FPI and unemployment. Since these prior studies analyzed aggregated FPI, their results were mixed, which led to a challenge in discerning the distinct effects of FPI-Equity. Therefore, this study addresses that gap by analyzing the effect of the foreign portfolio investment in equity on unemployment.

Diaspora Remittances (DR) show a negative coefficient of -0.00074, implying that an increase in diaspora remittances reduce unemployment, Similarly, External Debt (ED) has a positive coefficient of 0.00015, stating that External debts increases unemployment in the long run. In contrast, Bilateral Official Development Assistance (B-ODA) and Multilateral ODA (M-ODA) exhibit different trends. B-ODA has a coefficient of 0.00084, indicating an increase in unemployment. Meanwhile, M-ODA has a coefficient of -0.00017, suggesting a negligible decrease in unemployment. GDP has a coefficient of 0.0001, indicating that economic growth is

associated with a small increase in unemployment, implying that GDP growth alone does not necessarily reduce unemployment in this context. Lastly, Population (P) has a positive coefficient of 0.2882. However, Greenfield investment is the only variable that exhibits a statistically significant relationship with unemployment in Kenya, while other factors such as GDP, population, external debt, foreign portfolio investment (FPI-equity), brownfield investment, bilateral ODA, multilateral ODA, and remittances are found to be statistically insignificant. This suggests that these variables do not have a sustained impact on unemployment over an extended period.

#### 4.5.2 Short run Coefficients

**Table 4.9 Short Run Coefficients**

Variables	Coef.	Std.err	T-statistics	P.	95% conf.	Interval
C	-882,828	239,143	-3.69	0.0009	-1,371,226	-394,431
U(-1)	-0.026	0.0404	-0.6432	0.5249	0.8914	1.0565
D(GF-FDI)	-0.0579	0.0128	-4.507	0.0001	-0.0842	-0.0317
GF-FDI(-1)	-0.0126	0.0059	-2.118	0.0425	0.0157	0.0748
D(BF-FDI)	0.3018	0.0260	11.605	0.0000	0.2487	0.3549
BF-FDI(-1)	0.0255	0.0099	2.561	0.0157	-0.3349	-0.2182
D(FPI-E)	-0.0015	0.0092	-16.808	0.0000	-0.0017	-0.0013
FPI-E(-1)	0.0005	0.0045	0.1104	0.9128	0.0013	0.0017
D(DR)	-0.00026	0.00003	-7.99	0.0000	-0.0003	-0.0002
DR(-1)	-0.000019	0.000008	-2.212	0.0347	0.0002	0.0003
D(EDS)	-0.00016	0.00002	-8.178	0.0000	-0.0002	-0.0001
EDS(-1)	-0.000004	0.000004	-0.995	0.3273	0.0001	0.0002
D(BODA)	0.000211	0.000022	9.325	0.0000	0.0016	0.0002

BODA(-1)	0.0255	0.0099	2.561	0.0157	-0.0002	-0.0001
D(MODA)	-0.00035	0.00005	-13.98	0.0000	-0.0004	-0.0003
MODA(-1)	-0.000002	0.00002	-0.096	0.9239	0.0003	0.0004
D(GDP)	0.00006	0.000006	10.062	0.0000	0.00005	0.00008
GDP(-1)	0.0000031	0.0000016	1.881	0.0696	-0.00007	-0.00005
D(P)	3.121	0.6122	5.097	0.000	1.8707	4.371
P(-1)	0.0075	0.0124	0.601	0.5518	-4.366	-1.860

**Source: Author computation (2024)**

The constant term (C) indicates the baseline impact on the dependent variable when other factors are absent and is statistically significant at 1% level. In the short run, variables such as Greenfield FDI, Diaspora remittances, FPI-Equity, external debt and Multilateral ODA (MODA) show a negative relationship with unemployment, implying that their increase results in reduced unemployment. Lagged values also indicate sustained effects. Greenfield FDI's lagged values highlight a significant negative impact.

Conversely, Brownfield FDI, FPI debt, bilateral ODA and population are associated with increased unemployment, demonstrating a positive effect. Lastly GDP has a negative short run relationship that is insignificant.

#### **4.6 Conclusion**

This study aimed to answer research questions. These were: Does foreign direct investment such as Greenfield and Brownfield FDI affect unemployment in the short and long term; Does foreign portfolio such as Equity affect unemployment in the short and long term, Does external Debts affect unemployment in the short and long run, Does diaspora remittances influence unemployment in the short and long run, Does Official development Assistance such as Bilateral and Multilateral Investment affect unemployment in the short and long run. The study also looked at control variables such as GDP and population as to how it can affect the unemployment level. ARDL regression and Multiple regression models were applied to test the research objectives of the study.

The following results were obtained: Greenfield investment demonstrates a Reduction in unemployment in both terms. Brownfield investment, on the other hand, consistently shows a positive effect on unemployment in the short run, while in the long run, it has an insignificant positive relationship with unemployment. Foreign Portfolio Investment (FPI), equity is found to have an insignificant negative relationship with unemployment in the long run and a negative relationship in the short run. Diaspora remittances exhibit an inverse correlation with unemployment across both short and long periods.

External debt shows a negative relationship in the short run, while in the long run it is positive. Bilateral Official Development Assistance (ODA) exert a positive influence on unemployment in the short and long run, Additionally, Multilateral ODA shows an Inverse relationship with unemployment in both the long and short term. Regarding the macroeconomic variables, GDP shows a modest negative relationship in the short run and a positive one in the long run. Lastly, Population growth has a consistently positive influence on unemployment in both time periods.

The findings on the impact of foreign capital inflows on unemployment in Kenya reveal unexpected outcomes in both the short and long run. These results challenge conventional expectations and highlight critical areas for policy attention and strategic management. Despite Kenya receiving substantial foreign capital inflows, the study findings indicate that only Greenfield investment exhibits a statistically significant relationship with unemployment in both the short and long run. This suggests that, over time, Kenya does not derive substantial employment benefits from overall foreign capital inflows. These findings are consistent with Kioko (2024), who examined the relationship between foreign direct investment (FDI), foreign portfolio investment (FPI), and youth unemployment in Kenya, concluding that the relationship is statistically insignificant.

## CHAPTER FIVE

### DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a detailed discussion of the research findings, drawing conclusions based on the results obtained in Chapter 4. The study aimed to analyze the effect of foreign capital inflows on unemployment in Kenya, focusing on different forms of inflows, Overseas Business Investment, International Securities Investment, remittances, external debt, and Official Development Assistance (ODA). The chapter concludes with policy recommendations, limitations of the study, and suggestions for future research.

#### 5.2 Summary of the Study

African nations, particularly Kenya, have become significant targets for foreign investment, attributable to their favorable investment climate and rich cultural diversity. Consequently, there has been a substantial increase in foreign capital inflows into the country. However, this trend has been accompanied by a rise in unemployment, which, in turn, has adversely impacted the overall economic growth of Kenya. This research aimed to analyze the effect of foreign capital inflows on Labor market disengagement (unemployment) in Kenya, with a focus on determining whether these inflows contribute to reducing unemployment when appropriately utilized.

The research was grounded in three principal economic theories. The first was the Keynesian theory, which examines the relationship between Overseas Business Investment and international Securities Investment and their effects on the recipient country. According to this theory, an increase in FDI can lead to higher production levels, which subsequently fosters job creation and reduces unemployment. The second theoretical framework was Dual-Gap theory, which addresses the saving gap in developing countries. This theory posits that the inflow of foreign debt can facilitate job creation by bridging gaps in domestic investment capabilities, thereby contributing to a reduction in unemployment. The final theory considered was the multiplier theory, which explains how economic injections impact not only the initial recipients but also secondary and tertiary actors within the economy. This ripple effect suggests that the benefits of foreign capital inflows extend beyond direct recipients, amplifying economic activity and potentially mitigating unemployment through broader economic participation. Overall, the study hypothesized that foreign capital inflows, when effectively directed, have the potential to reduce unemployment in Kenya.

## **5.3 Discussion of Findings**

### **5.3.1 Impact of Foreign Direct Investment (FDI) on Unemployment**

The first objective of the study was to determine the effect of FDI on Unemployment in the short and long run in Kenya. FDI was measured using two indicators namely Greenfield FDI and Brownfield FDI. The relationship between FDI and unemployment was tested using a regression model ARDL. The study reveals that Greenfield Foreign Direct Investment (FDI) consistently demonstrates a negative influence on unemployment in Kenya in both periods. This implies that increases in Greenfield FDI are associated with reductions in unemployment over the period from 2008 to 2023. Greenfield investments, which involve establishing new business operations and infrastructure, typically lead to job creation due to their direct need for labor, such as construction, manufacturing, and service-sector roles. This negative relationship suggests that as more foreign companies establish new operations in Kenya, there is a tangible increase in employment opportunities. The period from 2008 to 2023 saw significant infrastructure development, such as the Standard Gauge Railway (SGR) and the growth of Special Economic Zones (SEZs), which were largely driven by Greenfield FDI. These projects not only required a substantial workforce for construction but also created long-term employment in logistics, operations, and maintenance. This study aligns with previous studies. For example, Onyinye (2018) found that FDI significantly reduced unemployment in Nigeria by creating direct employment opportunities in various sectors. Similarly, Wondimhunegn (2022), in a study of East African countries, concluded that FDI plays a crucial role in job creation by introducing new industries and modern technologies. Mazher (2020) also reported that FDI in Pakistan led to long-term reductions in unemployment due to their capacity to foster industrial growth and innovation.

The findings also revealed that Brownfield Foreign Direct Investment (FDI) in Kenya has a persistent positive relationship with unemployment, in both terms but it is statistically insignificant in the long run, the reason behind would be that portfolio investments are being channeled to non-labor absorbing sectors. A significant portion of FDI in Kenya is in the form of mergers and acquisitions (Brownfield investment), which does not necessarily create new jobs but rather involves ownership transfers and potential labor restructuring. Lucrative sectors for investors include mobile money transfers, agricultural processing, banking sector, health care services, information communication technology, renewable and non-renewable energy, extractives, retail trade, transport infrastructure and hospitality industry, all these sectors are attractive for portfolio

investments (GIIN and OCA, 2015) which have not contributed to the reduction of unemployment thus the insignificant effect of the coefficient. Additionally, Brownfield investments often focus on enhancing productivity and efficiency in existing firms rather than expanding operations or creating new jobs. For instance, when multinational corporations acquire local firms, they implement technological upgrades and cost-cutting measures that lead to job redundancies. As firms modernize and automate processes, fewer employees are needed, thus contributing to increased unemployment.

Studies in similar contexts have corroborated to these findings. For instance, Garuba (2023) found that in several Sub-Saharan African countries, FDI investment such as acquiring of existing firms were more likely to prioritize profit maximization and operational efficiency over employment growth.

The findings support critiques of Keynesian economic theory, which argue that capital injections do not always lead to proportional decrease in unemployment. In the period studied, Kenya experienced significant foreign acquisitions, particularly in sectors such as manufacturing, banking, and telecommunications. While these sectors benefited from capital inflows and technological advancements, the outcomes frequently included downsizing and mergers, which ultimately reduced employment opportunities, leading to an increase in unemployment in the country. The Solow model suggests that FDI leads to capital accumulation, technological transfer, and productivity growth, which in turn lowers unemployment. The finding on Greenfield FDI supports this argument, as new businesses and industries require labor, leading to job creation. However, Brownfield FDI's insignificance contradicts the theory, as mergers and acquisitions do not necessarily create new jobs but may lead to workforce restructuring and redundancies. Meanwhile, While the Solow model provides a strong foundation for understanding FDI's role in job creation, it does not distinguish between Greenfield and Brownfield investments. The study confirms that only Greenfield investments align with the theory, whereas Brownfield investments do not contribute significantly to employment in Kenya's context.

### **5.3.2 Effect of Foreign Portfolio Investment (FPI) on Unemployment**

The second objective was the Effect of foreign Portfolio Investment on unemployment in Kenya. FPI was represented by Equity. The ARDL model results reveal that Foreign Portfolio Investment in Equity (FPIE) was ascertain in the long run, while showing a negative relationship in the short run. The short-run negative relationship suggests that inflows of foreign equity investment may have an initial stimulative effect on employment. The reason is that in the short run there is an Increase in liquidity in financial markets, enabling businesses to expand and invest in short-term job-creating projects. While companies have improved their access to capital, it allows them to scale operations and temporarily boost employment. However, in the long run, despite the short term effect, FPI in equity does not show a significant long-term impact on unemployment. Unlike Foreign Direct Investment (FDI), which creates physical assets and jobs, FPI in equity mainly involves trading stocks or buying shares of companies, which does not directly lead to job creation. FPI investors often seek short-term gains and can withdraw capital quickly, leading to volatility in financial markets rather than stable, long-term employment opportunities. In Kenya, most FPI equity investments are channeled into capital-intensive sectors such as banking, telecommunications, and financial services. These industries do not absorb large numbers of workers compared to labor-intensive sectors like agriculture and manufacturing. Additionally, FPI equity do not always translate into investment in productive sectors, they fuel stock market growth, benefiting investors not creating jobs and most of the companies on the NSE are capital intensive companies.

Garuba (2023) found that increased foreign portfolio investments in African countries, including Kenya, resulted in higher unemployment due to the volatility of these investments and the focus on capital efficiency over labor-intensive growth. In contrast, some studies suggest that FPI can reduce unemployment in the long run. Mazher (2020) found that sustained FPI inflows in Pakistan led to job creation and economic growth by enhancing market confidence and encouraging business expansion. Adeniyi et al. (2012) argued that FPI can provide critical capital for developing industries and infrastructure projects, resulting in long-term employment growth.

While FPI is anchored to the Solow Model theory, The study partially supports the theory in the short run but challenges its assumptions in the long run. FPI does not lead to sustained job creation because it does not directly contribute to capital formation or labor-intensive industries in Kenya.

### **5.3.3 Role of Diaspora Remittances in Reducing Unemployment**

The third objective of the study was to examine the effect of diaspora remittances on unemployment in Kenya. The findings indicated a negative relationship between diaspora remittances and unemployment in both terms. Between 2008 and 2023, Kenya witnessed a significant rise in remittance inflows, which have become one of the most critical sources of foreign income for the country. This consistent flow of remittances has contributed to economic stability and reduced unemployment, particularly by supporting domestic consumption, entrepreneurial activities, and skills development. In the short run, remittances help to ease household financial pressures, enabling recipients to meet immediate needs such as healthcare, education, and basic living expenses. This increased household spending stimulates demand for goods and services, leading to job creation in retail, services, and construction sectors. Moreover, remittances help to boost local entrepreneurship by providing the capital needed to start small businesses, which further reduces unemployment.

Research by World Bank (2020) supports this view, showing that in developing economies like Kenya, remittances often have a multiplier effect on the local economy. Studies such as those by Sander & Maimbo (2005) also argue that diaspora remittances often function as an economic cushion during periods of economic instability or global financial crises, reducing the adverse impacts on unemployment in the short term. Remittances have provided critical support to rural areas, where unemployment is high, by facilitating small-scale business ventures and contributing to the financial independence of many households. This has been especially vital in the post-2008 period, as Kenya faced numerous challenges, including the aftermath of the 2007-2008 post-election violence and the global economic recession.

The study findings indicate that remittances have a more profound impact in the long run; however, their effect remains statistically insignificant over time. In the short run, remittance recipients contribute to small-scale job creation, but in the long run, remittances do not significantly reduce unemployment in Kenya. The reason behind this would be that a significant portion of remittances in Kenya is used for household consumption, including food, healthcare, education, and housing, rather than being invested in productive economic activities that generate long-term employment. While this improves living standards, it does not contribute directly to job creation. Additionally, most long-term investments that are made from remittances often go into real estate and land purchases, which have low employment multipliers.

Many remittance recipients engage in micro-enterprises, such as small shops or boda boda (motorcycle taxi) businesses, which provide subsistence income but do not expand to absorb significant labor. Keynesian theory assumes that higher spending leads to sustained employment, but in Kenya, remittances are mostly used for consumption rather than business creation. Stating that the findings align with the theory in the short run, while in the long run the injection does not have an effect.

#### **5.3.4 Influence of External Debt on Unemployment**

The Fourth objective is the effect of External Debts on unemployment in Kenya in the short and long run. The regression results indicate a small negative relationship between External Debt (ED) stock and unemployment in the short run, and a positive relationship in the long run. Kenya's external debt stock has played a pivotal role in financing critical development projects, significantly influencing the country's unemployment levels. After gaining independence in 1963, Kenya embarked on a path of economic growth and development, which necessitated borrowing from external sources to fund its ambitious development goals. In the short run, projects such as the Standard Gauge Railway (SGR) project from Mombasa to Nairobi (Phase 1), which was financed through an external loan from China's Exim Bank with the Kenyan government covering approximately 10% of the total cost, have significantly contributed to employment. The project is reported to have generated approximately 30,000 direct jobs during construction, thereby providing short-term employment opportunities for the country (IMF, 2019). Another example is the expansion of the Mombasa Port, which was financed through an external loan, supplemented by grants from various international institutions. The project is estimated to have generated approximately 3,000 jobs during the construction phase.

Over time, the impact of external debt on unemployment becomes insignificant and even slightly positive (suggesting a rise in unemployment) due to several structural and economic factors. Kenya allocates a significant portion of its revenue to debt repayment, reducing fiscal space for development spending and employment-generating projects. As debt servicing costs rise, the government may implement austerity measures (e.g., cutting public sector jobs, reducing social programs), indirectly increasing unemployment. Large infrastructure projects does not create sustainable jobs beyond the construction phase.

Critics of the dual gap theory argue that external debt can do more harm than good, particularly for low-income developing countries. They contend that these countries often struggle to utilize their own domestic capital due to the ongoing burden of repaying previous debts. Additionally, external debt can create a dependency on borrowing, hindering the country's ability to generate its own capital. From this perspective, it is argued that countries should only resort to external borrowing when necessary, and not simply for the sake of financing projects without a clear and critical need for external funds.

While the Dual-Gap Theory assumes that borrowing leads to economic expansion, Kenya's experience suggests that external debt is often misallocated or used for recurrent expenditures rather than productive investments, leading to a controversy on the theory.

### **5.3.5 Effect of Official Development Assistance (ODA) on Unemployment**

The fifth objective was the effect of ODA on unemployment rate. ODA was in the form of bilateral and Multilateral assistance. The Model revealed that Multilateral ODA (MODA) has a negative relationship with unemployment, although its impact is statistically insignificant in the long run. Conversely, Bilateral ODA (BODA) exhibits a positive relationship with unemployment in the short run, but its effect remains insignificant over time. Bilateral Official Development Assistance (Bilateral ODA) refers to aid provided by one country directly to another, such as assistance from China, the United States, and the United Kingdom. In developing countries, this aid often comes with restrictions and, in some cases, high interest rates or conditions that limit its effectiveness in reducing unemployment. Some bilateral aid projects involve foreign contractors and technical staff, leading to limited employment opportunities for local workers. Chinese-funded projects in Kenya, for instance, often employ Chinese labor for technical and managerial roles, reducing direct employment benefits for Kenyans.

Moreover, bilateral aid frequently comes with stipulations requiring the use of goods and services from the donor country, a practice known as tied aid. This requirement can crowd out local industries by limiting opportunities for Kenyan businesses to participate in these projects, ultimately contributing to increased unemployment. Additionally, while large-scale infrastructure projects funded through bilateral aid may improve long-term economic potential, they do not always generate sustainable employment opportunities for the local population. The preference for foreign contractors and labor in such projects further undermines local employment prospects,

leading to a scenario where, despite the influx of bilateral aid, unemployment remains high. Moreover, the effectiveness of bilateral ODA in reducing unemployment is hampered by issues such as corruption, mismanagement, and lack of transparency. Funds intended for development projects are usually diverted, reducing their impact on job creation. Studies such as Mburu (2019) have highlighted cases where corruption in Kenya led to ineffective use of development assistance. Furthermore, delays in project implementation due to bureaucratic hurdles reduce the timeliness and effectiveness of aid, limiting its potential to generate employment in both the short and long run. In the long run, High dependency on donor priorities, which shift over time, leading to unpredictable funding patterns that do not support consistent job growth. Aid volatility, where bilateral ODA levels fluctuate based on diplomatic relations, reducing its reliability for long-term employment planning.

The study findings indicate that Multilateral ODA (MODA) has a negative relationship with unemployment, although its impact is statistically insignificant in the long run. This indicates that an increase in multilateral ODA leads to a reduction in unemployment levels. This relationship is attributed to the nature and structure of multilateral aid, which often targets critical sectors such as capacity-building programs areas that generate employment opportunities directly. In the Kenyan context, the period between 2008 and 2023 saw key multilateral-funded initiatives such as the Kenya Vision 2030 flagship projects, including the Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) Corridor and various renewable energy projects like the Lake Turkana Wind Power Project. These projects not only provided immediate employment opportunities but also contributed to creating an enabling environment for sustained economic growth and job creation.

However, the effect of Multilateral ODA on unemployment in the long run is ascertain. Many MODA-funded projects are time-bound, meaning jobs created during project implementation disappear once the projects are completed. For example, infrastructure projects (roads, energy, and water systems) create jobs during construction but do not provide long-term employment. MODA projects are often government driven, which does not help in the labor-intensive sectors such as industries, failing to generate sustainable employment opportunities.

Keynesian theory suggest that an increase in government spending through Aid can lead to job creation, Inefficient allocation, corruption, and donor-imposed conditions have limited its effectiveness. Thus, ODA's role in job creation depends more on how funds are utilized rather than the mere presence of financial aid.

### **5.3.6 The effect of Macroeconomic variables on unemployment**

The study incorporated Gross Domestic Product (GDP) and population growth as control variables to evaluate their influence on Kenya's unemployment. The regression results indicate that Gross Domestic Product (GDP) has a negative relationship with unemployment in the short run and a positive relationship in the long run, although both relationships are statistically insignificant. In the short term, economic growth (GDP expansion) may be expected to reduce unemployment due to increased economic activity and labor demand. However, the observed insignificant negative relationship suggests that short-term GDP growth does not translate into immediate employment gains.

Kenya has experienced periods of GDP growth without proportional job creation, particularly in capital-intensive sectors such as telecommunications, banking, and extractives, where economic gains do not necessarily lead to large-scale employment. While GDP growth may expand in certain industries, there is often a mismatch between labor supply and industry demand. Many graduates and job seekers lack the skills required in high-growth sectors such as ICT and finance, leading to persistent unemployment despite economic expansion. Not forgetting that a large proportion of Kenya's workforce (over 80%) is employed in the informal sector, which is not always captured in GDP statistics. Additionally, Economic policies and investments take time to materialize into job opportunities. For example, infrastructure projects funded through GDP growth may boost employment only after several years of implementation.

Over time, GDP growth is expected to support job creation, but the insignificance suggests that Kenya's long-run economic expansion does not effectively reduce unemployment. Kenya's labor force is growing rapidly, with approximately 1 million new job seekers entering the workforce annually (KNBS,2023). Even with GDP growth, job creation does not keep pace with population expansion, leading to persistent unemployment despite economic gains.

From our findings, we saw that economic growth in Kenya is concentrated in urban centers (e.g., Nairobi, Mombasa) and specific sectors, while rural areas and labor-intensive industries (e.g.,

agriculture, manufacturing) lag behind. Kenya's economy is highly dependent on agriculture, tourism, and external trade, which are vulnerable to global shocks (e.g., climate change, commodity price fluctuations, and geopolitical instability).

Population growth is said to have a positive influence on unemployment. According to the UNDP (2023), a large proportion of Kenya's youth remain unemployed or underemployed, which restricts their access to education, skills development, and economic opportunities. This lack of productive engagement leads to a cycle where young individuals, without sustainable means of supporting themselves, may resort to actions that inadvertently contribute to high birth rates and increase substance abuse. The socio-economic pressures and limited access to family planning services further exacerbate this trend.

#### **5.4 Conclusions**

The study's findings reveal that different types of foreign capital inflows have distinct impacts on unemployment in Kenya. Greenfield foreign direct investment, External debts, diaspora remittances and multilateral ODA exhibit significant potential to reduce unemployment. However, Foreign Portfolio Investments (FPIs), both in equity and debt forms, show a mixed relationship with unemployment. Brownfield foreign direct investment, bilateral ODA, GDP and population growth both demonstrate a positive influence on unemployment.

#### **5.5 Policy Recommendations**

For foreign capital inflows to have a significant impact on reducing unemployment, this study recommends that the country implement strategic measures to maximize the employment benefits of such investments. Despite receiving substantial capital inflows, these investments are primarily directed toward capital-intensive sectors and paying back previous debts which do not generate employment opportunities. According to the Kenya National Bureau of Statistics (KNBS, 2023), small and medium-sized enterprises (SMEs) account for 85% of businesses in Kenya and employs over 15 million people. Given the sector's crucial role in economic growth and employment generation, the government should prioritize investments in SMEs to enhance productivity, expand operations, and create sustainable jobs. By directing a portion of foreign debt inflows into SME development, the government can foster a more inclusive economic model, ensuring that foreign investments contribute meaningfully to unemployment reduction and overall economic resilience.

The study also found that while Kenya receives substantial greenfield and brownfield investments, the job creation resulting from these investments does not correspond proportionally to the inflow volume. The government should ensure that incoming companies source materials from local industries. This approach would stimulate broader economic growth by strengthening local supply chains and enhancing the overall economic impact of foreign investments, thereby reducing unemployment. Additionally, the government should facilitate spillover effects that enable local industries to leverage foreign technology. This would enhance domestic competition, ultimately contributing to a reduction in unemployment.

The government should partner with financial institutions, including banks and mobile money platforms such as M-Pesa, to create financial products that enable remittance recipients to invest a portion of their funds in assets like bonds, mutual funds, and other investment opportunities. This strategy would help reduce the country's reliance on external debt by fostering increased use of domestic capital. An increase in domestic investment will enable the country to undertake projects that facilitate job creation, ultimately contributing to a reduction in unemployment levels.

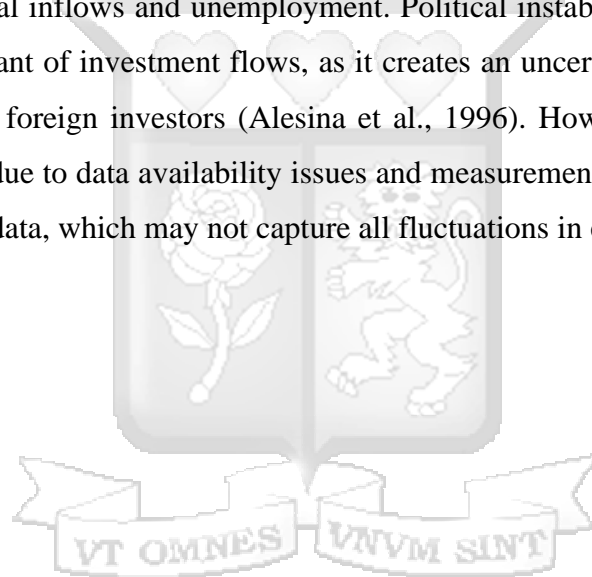
Additionally, the government should adopt policies that streamline the process of establishing foreign companies in Kenya, thereby creating a more business-friendly environment that encourages investment and supports job creation. Lastly, the government should ensure external borrowing is directed towards labor-intensive sectors, such as infrastructure and agriculture, rather than consumption or recurrent expenditures. Additionally, transparency in debt management should be enhanced to avoid excessive debt burdens that crowd out private sector growth. There should be an increase in transparency in the management and use of external debt by regularly reporting on project performance, debt servicing, and overall economic impact. This will help ensure accountability and the efficient use of borrowed funds for long-term growth and a decrease in long-term unemployment.

## **5.6 Suggestions for Further Research**

Future research could explore the sectoral impacts of foreign capital inflows, investigating which sectors benefit most from different types of inflows. Additionally, further studies should investigate other variables such as political instability, inflation and exchange rates on the relationship between foreign capital inflows and unemployment. Studying the informal sector of unemployment can also help in checking the effect of foreign capital inflow on unemployment as a high number of unemployed are in the informal sectors.

## **5.7 Limitations of the Study**

The study faced various limitations such as the data constraints and potential model specification issues. A notable limitation of this study was the exclusion of political instability as a variable influencing foreign capital inflows and unemployment. Political instability is widely recognized as a significant determinant of investment flows, as it creates an uncertain environment that can deter both domestic and foreign investors (Alesina et al., 1996). However, this factor was not included in the analysis due to data availability issues and measurement challenges. The analysis was limited to quarterly data, which may not capture all fluctuations in economic conditions.



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## APPENDICES

### Appendix I: Data Extraction Tool for Kenya

	FDI		FPI		EDS	DR	ODA		GDP	P
	G-FDI	B-FDI	FPI-E	FPI-D			BODA	MODA		
2008										
Q1										
Q2										
Q3										
Q4										
2009										
Q1										
Q2										
Q3										
Q4										
2010										
Q1										
Q2										
Q3										
Q4										
2011										
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Q2										
Q3										
Q4										
2012										
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Q4										
2022										
Q1										
Q2										
Q3										
Q4										
2023										
Q1										
Q2										
Q3										
Q4										

## Appendix II: Ethical Review Committee Approval



7<sup>th</sup> October 2024

Ms Muhorakeye Marlaine,  
marlaine.muhorakeye@strathmore.edu

Dear Ms Muhorakeye,

**RE: The Impact of Foreign Capital Inflows Components such as FDI, FPI, External Debts, Remittances and ODA on Unemployment. A Case Study of Kenya**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2396/24**. The approval period is from **7<sup>th</sup> October 2024 to 6<sup>th</sup> October 2025**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.


Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".


Mr Ambrose Rachier,  
Chairperson; SU-ISERC

### Appendix III: NACOSTI Research Approval



**REPUBLIC OF KENYA**


Ref No: **145027**



**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **25/October/2024**

**RESEARCH LICENSE**




**This is to Certify that Miss. Marline Muhorakeye of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: The Impact of Foreign Capital Inflows Components such as FDI, FPI, External Debts, Remittances, and ODA on Unemployment. A Case Study of Kenya. for the period ending : 25/October/2025.**

License No: **NACOSTI/P/24/41481**

Applicant Identification Number: **145027**

Director General  
**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

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