EFFECT OF FOREIGN CAPITAL INFLOWS ON HUMAN CAPITAL DEVELOPMENT: A STUDY OF SUB-SAHARAN AFRICA

By

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DECLARATION

Declaration by Candidate

I declare that this project is my original work and has not been presented to any other institution. No part of this project may be reproduced without prior or express permission of the author and/or Moi University

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DEDICATION

I dedicate this project to my wife, friend, and life partner Muthoni Kaburi and our two lovely children Martin and Wanjira who, made the journey possible and bearable. Special recognition to my dad Githaiga Kimathi, a man I am always proud of, three decades after his demise. Thanks, mom Wanjira Githaiga, the matriarch of the Githaigas'. To my brother Kimathi Githaiga, I celebrate your sacrifice towards my education posthumously. To my other siblings Wanjiku Githaiga, Karimi Githaiga, and Wanjiru Githaiga, you've been great people in my academic life.

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ABSTRACT

A nation's socio-economic growth depends on its level of investment in the education and health of its population. Thus, human capital development is central to the government's policy agenda, as manifested by the massive budgetary allocations in education, vocational training, and health care. Though previous studies have reported tremendous improvement in the quality of human capital in developed countries, over the past four decades, the level of human capital development in Sub-Saharan African remains unsatisfactory mainly because of budgetary constraints. Interestingly, the region receives a fair share of foreign capital transfers such as foreign direct investment, migrants' remittances, and official development assistance. Therefore, the main objective of this study was to assess the impact of foreign capital flows on human capital development in Sub-Saharan Africa (SSA). The specific objectives were to determine the effect of foreign remittance, official development assistance and foreign direct investment on human capital development in Sub-Saharan Africa. The study was grounded on the human capital theory, dependency theory and modernization theory. The study used an explanatory and descriptive research design. Secondary data was employed and analyzed using multiple regression analysis, and the results of the Hausman test guided the choice between fixed effect and the random effect. The study's findings showed that foreign remittances had a positive and significant impact on human capital development (β= 0.0036, ρ<0.05).Conversely, the effect of foreign direct investment (β=-0.0013, ρ<0.05) and official development assistance (β= -0.0026, ρ<0.05) was negative and significant. Therefore, the study concludes that the impact of foreign capital on human capital development in SSA varies depending on the type of external capital. The study recommends that Sub-Saharan African nations formulate necessary policy interventions to leverage foreign capital to improve their level of human capital development. Specifically, there is a need to strengthen the institutions of governance and invest more in human capital formation since they determine the magnitude of external capital inflow and a country's absorptive capacity.

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ABBREVIATIONS

DAC	Development Assistance Committee
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (German: German Agency for Technical Cooperation)
HDI	Human Development Index
MDG	Millennium Development Goals
NGOs	Non-Governmental Organizations
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
SSA	Sub-Saharan Africa
UNAID	United Nations Programme on HIV/AIDS
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund.
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Foreign remittances: unrequited transfers sent by foreign workers to their home countries

Human capital development: is the process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for economic and political development of a country

Official development assistance: as concessional funding given to developing countries and to multilateral institutions primarily for promoting welfare and economic development in the recipient country

Sub-Saharan Africa: this a geographically the area of the Africa continent that lies south of the Sahara and consists of all African countries and territories

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Human capital development is the key to economic growth in both the developed and emerging economies of the world (Matousek & Tzeremes, 2021). Generally, human capital development is an indicator of the proportion of a country's population that has received sufficient education, skills, and training as an investment designed to contribute to increased economic growth (Mincer, 1996). According to Torruam and Abur (2014), human capital development involves developing skills, knowledge, productivity, and inventiveness of human capital formation. Jhinger (2005) suggests that expenditure on human capital development necessitates investment in education, health, and social services. A Human Development Report by the UNDP (2013) highlights the importance of investing in societies' education, nutrition, health, and employment skills if nations are to realize economic growth. In the same vein, Romer (1989) asserts that human capital development refers “to skills acquisition through training of workers and as well as investment in healthcare reforms.” Thus, human capital development is an indicator of a country’s investing strategy in education and training, nutrition, and health care that enhance human productivity.

The United Nations Development Programme (UNDP) conceptualizes a nation's human capital from three dimensions; knowledge measured by school enrolment and literacy, having a good standard of living measured by per capita GDP, and purchasing power parity and quality of life measured by life expectancy. Besides, human capital theories posit that a nation's development process hinges on the continued investment in the education and health of its population (Affandi, Anugrah & Bary, 2019; Mongale

& Masipa, 2019). Therefore, no country can overlook the importance of human capital development in socio-economic development.

Previous studies have also revealed that a country with a highly educated and healthier population produces more output and ultimately improves economic growth (Yao, 2019; Bloom, Canning, Kotschy, Prettner & Schünemann, 2019). Since immemorial educational attainment, nutrition and health have long been hypothesized as key drivers of labour productivity. Petty (1769) mentioned that states stimulate economic development by enhancing the value of their workforce. At the same time, Smith (1776) associated national prosperity with an increased division of labour and advocated for higher wages and enhanced workers' skills. Contemporary economists claim that nations achieve economic growth by investing in human capital development, contrary to the traditional general belief that physical and tangible assets such as factories, capital, machinery, and land.

Although human capital development is viewed as an essential economic development agent, there is a wide disparity of health and education attainment between the rich and poor population, indicating inequality in any country, especially in developing countries. Whereas the rich can afford to invest in human capital, thus increasing their incomes, the poor cannot do the same due to scarcity of means. Further, developing countries are characterized by imperfect credit markets, which have led to a vicious circle of poverty in these countries. Though there has been a tremendous improvement in the quality of human capital in developed countries over the past four decades, the level of human capital development in Sub-Saharan Africa has remained unsatisfactory due to low governments expenditure in education, vocational training, and health care due to budgetary constraints (Shuaibu & Oladayo, 2016; Edeme & Nkalu, 2016; Suliman & Mollick, 2009), thus necessitating external capital flows.

The low investment in human capital development in SSA countries is attributed to budgetary deficits, as reflected by their respective savings-investment and import-export gaps, implying that these countries have insufficient savings to finance their investment needs. Budgetary gaps have made developing countries heavily dependent on external capital flows as a source of developmental finance. Besides, the last four decades have witnessed a massive movement of capital from developed countries to developing countries, attributable to globalization and the liberalization of the capital account. Foreign capital flows have been considered a significant source of developmental finance for emerging and developing economies. Studies indicate that these flows' direction and volume depend primarily on a country's absorptive capacity (Prasad, Rajan, & Subramanian, 2007).

Researchers argue that foreign capital influences economic growth, job creation, poverty alleviation, technological know-how, enhanced efficiency, and competitiveness (Adeleke, 2014). Foreign capital flows are foreign direct investment (FDI), Official Development Assistance (ODA), and migrants' remittances. ODA "consists of disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by nonDAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients," (World Bank, 2018). ODA consists of three types of capital: grants, concessional loans, and contributions to multilateral institutions, including the United Nations, the World Bank, the International Monetary Fund, and regional development banks (Soubbotina & Sheram, 2000). FDI "is the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the

sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments" (World Bank, 2018). Migrant remittances are defined as "current transfers by migrants who are employed or intend to remain employed for more than a year in another economy in which they are considered residents," (World Bank, 2018). Remittances consist of financial (cash), and nonfinancial (goods) transfers to the migrants' families back home. According to the World Bank (2019), foreign capital inflows constitute approximately; 1.9 % (FDI), 2.9% (migrant remittances), and 3.0% (ODA) of the GDP of Sub-Saharan Africa countries.

Empirical literature shows that foreign capital transfers are driven by state of governance, competition, skilled labour, fiscal incentives, free trade agreement and bureaucracy (Lee, 2015), ease of cross border trade, and the rule of law (Corcoran & Gillanders, 2015), trade flow and natural resources in host countries (Tuman & Shirali, 2015), taxes, public order, availability of land, protection of intellectual property, quality of labour, exchange rate, language and distance of export market (Huyen & Hoang, 2015) gravity factors, institutional factors, education, and trade openness (Dauti, 2015), corruption distance (Qian & Sandoval-Hernandez, 2016).

With the United Nation's Sustainable Development Goals (MDGs) focusing on human capital development (socio-economic development), non-governmental organizations (NGOs), development banks, development institutions, and governments are seeking to expand their capital offerings to optimize them for socio-economic development. Previous studies show a positive association between foreign capital flows and various agents of economic development such as entrepreneurship (Munemo, 2018); access to international markets and transfer of technology (Wickramasinghe, 2007); financial liberalization, and regionalism (Brafu-Insaidoo & Biekpe, 2014); economic growth

(Stancheva-Gigov, 2016); total factor productivity (Demir & Su, 2016) and lower treasury and safe assets yields (Bernanke, Bertaut, Demarco, & Kamin, 2011); spillover effects, financial intermediation and domestic investment (Forbes & Warnock, 2012).

Any positive gain from foreign capital on the recipient economy hinges on the recipient country's state of its financial sector (Shahbaz & Rahman, 2010) coupled with its human capital and infrastructural investment. The financial system channels these capital flows to investments subsequently economic growth. Foreign capital inflow by way of direct investments, foreign banks leads to competition consequently efficiency in the domestic banking sector and enhanced welfare of consumers of financial services and products (Claessens, Demirgüç-Kunt, & Huizinga, 2001). The dark sides of foreign capital inflows include; bank insolvency, lending booms, deterioration of banks and firms balance sheets, lower margins, and currency devaluation if the recipient country suffers weak supervision and regulation (Mishkin, 1999)

Studies have established that the main link between foreign capital inflow and economic growth is an efficient and developed financial sector. However, investigating the nexus between foreign capital inflow and financial development amidst financial liberalization and the information revolution is worth exploring. Foreign capital inflow originates from immigrants, investors, and donors who are information disadvantaged instead of the recipient firms and households. Therefore, the amount and volume of capital flows depend on the risk perception of the immigrant or investor (Bettin, Lucchetti & Zazzaro, 2012).

Therefore, it is vital to understand the impact foreign capital inflows have on human capital development in Sub-Saharan Africa, consisting of forty-five (45) countries. Over 412 million people continue to live in extreme poverty. The poor residing in Sub-

Saharan Africa is estimated to be about 87 percent by 2030, despite recent economic advances (World Bank, 2018). Moreover, unlike previous studies that studied the various foreign capital flows separately, the study examines the aggregate effect of foreign direct investment, migrants' remittances, and official development assistance on human capital development.

1.2 Sub-Saharan Africa

Sub-Saharan Africa (SSA) is geographically the area of the Africa continent that lies south of the Sahara and consists of all African countries and territories. As of 2018, SSA had a GDP per capita (Current US$) that stood at $1574.2 compared with $1905 in South Asia, $11,132.2 in developing East Asia and Pacific, $8,057.0 in developing the Middle East and North Africa, $9,023.5 in developing Latin America and the Caribbean, $25,078.0in developing Europe and Central Asia, and 36,546.4 European Union (World Bank, 2019). By 2019, about 41.4.0 % of the Sub-Saharan Africa population lived on less than $1.90 a day, compared to 16.1% South Asia, 4.2% Middle East & North Africa, and 3.9 % for Latin America & the Caribbean. It has the highest annual population growth rate of 2.7% for all regions in the world; 1.7% in South Asia, 0.6% East Asia and Pacific, 1.7% in the Middle East & North Africa, and 0.2% in Europe & Central Asia (World Bank, 2019). Additionally, UNCTAD (2018) classifies 32 SSA countries as least developed. In line with the Human Development Index (HDI) of 2018, the Sub-Saharan African region is ranked the lowest with an HDI of 0.537, compared to 0.733 in East Asia, 0.771 Europe and central Asia, 0.758 in Latin America and the Caribbean, and 0.638 in South Asia (UNDP, 2018). In addition, the region again records the highest prevalence of undernourishment in the world, reaching as high as 23 percent undernourished population (FAO & ECA, 2018). The report further shows

that out of the 821 million malnourished people globally, 236 million are from Sub-Saharan Africa.

Within the same period, 72 percent of the Sub-Saharan Africa population still lacks access to essential sanitation services (WHO &UNICEF, 2006, GIZ, 2019). Besides, the region is home to 53% of the world's people living with HIV and AIDs (UNAIDS, 2018). In 2019, SSA had a life expectancy of fewer than 61 years, compared to 69 years in South Asia, 78 years in Europe & Central Asia, and 76 in East Asia & the Pacific (World Bank, 2019). Sub-Saharan Africa also faces the lowest literacy level (% of people ages 15 and above) of 66% compared with 72% in South Asia, 98% in Europe & Central Asia, and 96% in East Asia & the Pacific. Additionally, the Sub Saharan African region is known for high international migration, facing a brain drain. From the previously mentioned statistics, it is evident that Sub-Saharan Africa has the lowest level of human capital development relative to other world regions.

Amid the challenges mentioned above, the region receives a fair share of foreign capital transfers in foreign direct investment, migrants' remittances, and official development assistance (foreign aid). In 2019, SSA received approximately 88% of the 32.4 % official development assistance apportioned to Africa (OECD, 2019). Further, the region gets about 10.2% of global remittances, translating to 2.18% of the region's GDP (World Bank, 2019). Besides, UNCTD (2018) reported that SSA receives close to 2.9% of the global foreign direct investment (FDI). Nevertheless, the relationship between foreign capital flow and human capital development in Sub-Saharan Africa remains unclear.

1.3 Statement of the Problem

Human capital development is indispensable in the achievement of sustainable economic growth. Human capital development is usually used interchangeably with human capital formations or human resource development. According to Jhingan (2007), "human capital development denotes “the process of acquiring and increasing the number of persons who have the skills, education, and experience which are critical for the economic and political development of a country." Therefore, human capital development focuses on investment in human beings as a productive resource. Previous studies have reported a positive association between human capital development and economic growth in developed and developing countries (Affandi, Anugrah & Bary, 2019; Matousek & Tzeremes, 2021). Empirical literature also reveals that human capital development plays a critical role in poverty reduction (Olopade, Okodua, Oladosun & Asaleye, 2019; Idike *et al.,* 2021).

Because of the vital relationship between human capital development and socio-economic development, there have been numerous research studies on the determinants of human capital development, particularly in developing countries. Although prior studies claim that budgetary constraints explain the low level of human capital development in developing countries (De Haan, Plug & Rosero, 2014; Dinh Su & Phuc Nguyen, 2020), these countries receive a considerable amount of foreign capital inflows; foreign remittances, official development assistance and foreign direct investment (Ahmed, Mughal & Martínez- Zarzoso, 2021; Wang & Li, 2022). Several studies have examined the foreign capital inflows and human development relationship, but findings are inconclusive (Kheng, Sun & Anwar, 2017; Olivié Aldasoro, & Onofa, 2008; Kroeger & Anderson, 2014; Tamer, 2013; Asiama & Quartey, 2009). Besides, none of these studies examined the foreign capital flow and human capital development

relationship in Sub-Saharan Africa, which is considered among regions with the lowest level of human capital development (Matousek & Tzeremes, 2021).

From this background, this study sought to assess whether the three elements of foreign capital inflows: foreign remittances, official development assistance, and foreign direct investment impact human capital development.

1.4 General Objective

To examine the effect of foreign capital inflows on human capital development in Sub-Saharan Africa.

1.5 Specific objectives

1) To investigate the effect of official development assistance on human capital development in Sub-Saharan Africa
2) To examine the impact of foreign direct investment on human capital development in Sub-Saharan Africa
3) To assess the impact of foreign remittances on human capital development in Sub-Saharan Africa

1.6 Research Hypothesis

H_{01} Official development assistance does not significantly affect Human Capital Development in Sub-Saharan Africa.

H_{02} Foreign direct investment does not significantly affect human capital development in Sub-Saharan Africa.

H_{03} Foreign remittances do not significantly affect human capital development in Sub-Saharan Africa.

1.7 Significance of the Study

Considering the importance of human capital development to socio-economic development, the findings of this study will be significant to a variety of stakeholders:

First, the results enable recipient countries' governments to formulate and implement policies that attract foreign capital flows and channel them to investment. The government will be informed of the impact of foreign capital flows on human capital development and decide whether to restrict or promote such external inflows. Optimal investment in human capital development is a strategy that assists poverty reduction and job creation. Second, the study will contribute to the literature by shedding more light on the pecking order theory in external capital flows. Third, the study will enable economists to develop models that augment the impact of foreign capital on the domestic economy.

1.8 Scope of the Study

The main purpose of this study was to examine the effect of foreign capital flows on human capital development in Sub-Saharan Africa. The study used a sample of 41 countries. Data was for the period 2008 to 2018. Secondary annual time series data were obtained from the World Bank Development Indicator (WDI), UNDP and the UNCTAD databases

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the research variables, namely, human capital development and foreign capital inflows. The chapter further examines theories suggesting the relationship between the research variables. Additionally, the section reviews previous empirical studies related to this study and finally presents the study's conceptual framework.

2.1 Concept of Human Capital Development

Jhingan (2007) defines human capital development as "the process of acquiring and increasing the number of persons who have the skills, education, and experience critical for a country's economic and political development." According to Monimah (2010), human capital development is "the totality of efforts aimed at developing and grooming human beings to present them fit and qualified to be productive to themselves, in particular, and the society, in general."

Human capital development is an essential agent of industrialization and Sustainable Development Goals (Babasanya, Oseni & Awode, 2018; Adejumo, Asongu & Adejumo, 2021). This assertion is supported by recent studies that have emphasized the importance of human capital, precisely human capital dimensions such as education and skills, for sustained long-term growth through increased productivity and income of the current and future workforce, attracting additional physical capital, enhancing the capacity absorb and adapt technologies and boosting innovativeness (Bosworth & Collins, 2003; Lucas 1988; Mankiw, Romer, & Weil, 1992). A highly educated population translates to a high level of labor productivity, inferring greater human capabilities to acquire advanced technology from developed countries. Moreover, an

improvement in human capital can create a multiplier effect to support technology adaptation and progress.

According to UNDP (2018), the Human Development Index (HDI) is a composite index focusing on three basic dimensions of human development, life expectancy at birth, schooling, and the ability to achieve a decent standard of living. Consistent with the Human Development Report prepared by United Nations Development Programme, the education index is measured by the mean of years of schooling for adults with estimated age 25years and expected years of education for children of school entering age. The expected years of schooling are capped at 18years. Life expectancy at the birth component of the HDI is calculated using a minimum value of 20 years and a maximum value of 83.57 years. The decent standard of living element is measured by GNI per capita instead of GDP per capita. The HDI uses the logarithm of income to reflect the critical importance of income with increasing GNI. Although human capital development is usually associated with investments in education and training at the micro-level, it is evident that it also emphasizes health and the standard of living, as shown by the HDI.

2.2 Concept of Foreign Capital Inflows and Human Capital Development

Foreign capital inflows denote the transfer of ownership of an asset, capital, and other financial resources from one nation to the other (UNCTAD, 2015). These capital flows are generally transmitted into the recipient economy foreign credits and loans, foreign investment in public or private bonds, foreign investment in equities and foreign direct investment, foreign remittance, and international development aids (Kose, Prasad, Rogoff & Wei, 2006; Obadan, 2004). Papanek (1973) decomposed foreign capital inflows into external assistance, foreign investment, and other foreign capital flow.

However, the main components of foreign capital inflows are foreign direct investment (FDI), foreign remittances, and official development assistance.

2.2.1 Official Development Assistance and human capital development

Official development assistance is intended to promote the delivery of public goods not provided by the market or by the recipient or government without such assistance (Ferroni, 2001). According to OECD (2011), official development assistance is the disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies to promote economic development and welfare in countries and territories on the Development Assistance Committee list of aid recipients, expressed as a percentage of the recipient country's gross national income (GNI). The drivers of official development assistance have changed over time in line with the evolution of development ideas and the prevailing international concerns. Development assistance, mainly when channeled through bilateral agencies, is an instrument of foreign policy for donor countries and is usually aligned with their strategic objectives and interests. The mix of aid motivations differs from one donor country to another and from time to time. At the beginning of the 21st century, there seemed to be three key reasons for official development assistance; international solidarity, narrow and enlightened self-interest, and the provision of global public goods (Sagasti, 2005). Since resources for official development assistance originate from public budgets, donor countries must balance their development assistance efforts with other national objectives, particularly amid fiscal constraints and imbalances in the world economy. Thus, the motives of giving ODA must be compelling and compensate for the weight of other public spending priorities of the donor countries.

There has been considerable theoretical debate about the effect of official development assistance on the recipient country's socio-economic development and, in general, the

quality of life of people, education attainment, and health care, particularly in developing countries. Despite the role of ODA in economic development, some scholars opine that aid only discourages developing country development initiatives. Specifically, foreign support spurs bloated bureaucracies, keeps power corrupt and authoritarian regimes, enriches those in power, is ineffective, wasteful, distorts relative prices, and should be thoroughly reformed or eliminated. Contrary, the supporters argue that, while there have been aid failures and ODA needs reforming, it has helped lift millions of people out of poverty, improve health and education, enhance economic performance in many countries, and succeed in tackling many challenges.

Foreign aid is meant to improve institutional and policy performance positively impact economic development, particularly in the long term in the recipient country. Similarly, the impact of ODA is more significant on those recipient countries that have the higher absorptive capacity and developed institutional frameworks. Besides, donor policies and practices are essential, for tied technical assistance has less impact than untied technical assistance and other forms of aid—different forms of conditionality influence country ownership and development outcomes.

A general conclusion may be that ODA can positively impact under the appropriate circumstances. While this begs the question of those circumstances, empirical evidence is building to help sort the various factors that influence foreign aid. Conversely, researchers argue that humanitarian aid and relief lower growth due to increased overreliance on external assistance (Omoruyi, Zhibin, Jun, Sidi & Pianran, 2016; Khan & Ahmed, 2007).

For many decades, the relationships between official development assistance and economic growth have been widely investigated. However, the empirical literature on

official development assistance and human capital is still scanty. Besides, the existing studies show mixed findings.

Tamer (2013) explored the impact of official development assistance on human capital development. The study used panel data for 52 African countries from 1980-2011. The study found that ODA had a negative effect on human capital development.

Lee, Jung, and Sul (2019) sought to investigate the various effects of official development assistance subprograms on human capital development across 15 Asian countries. The study found that ODA had a positive and significant impact on human capital development. The findings further indicated that public service programs, medical care, and welfare significantly affected human capital development.

Azarnert (2008) studies the impact of foreign aid on fertility and human capital accumulation in Sub-Saharan Africa. A sample of 41 Sub-Saharan Africa countries and panel data for 1980–2000 was considered. This study revealed that foreign aid fostered population growth and adversely affected the recipients' incentive to invest in human capital.

Williamson (2008) examined the effect of foreign aid (health aid) on human capital development in developing countries. The study used unbalanced panel data for the years over 1973-2004. The study found that foreign aid was ineffective for human capital development. Asiama and Quartey (2009) explored the effect of foreign aid on human development indicators in Sub-Saharan Africa. The authors found that foreign aid did not significantly impact the human development indicators and other welfare variables.

2.2.2 Foreign direct investment and human capital development

According to UNDP (2018), foreign direct investment is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital expressed as a percentage of GDP. Buckley and Casson (2003) assert that firms internationalize operations to exploit imperfections in the external markets or minimize their operations' costs. From the same perspective, Dunning's eclectic paradigm recommends three primary motivations of FDI. These motives are; foreign market seeking FDI, Efficiency seeking FDI, and resource seeking FDI (Dunning, 1977; Nachum, & Zaheer, 2005). According to Nachum and Zaheer (2005), market-seeking FDI entails investing in a host country market to directly serve that market using local production and distribution instead of exporting. This strategy enables access to distribution networks and supports the exports of the host country's products to other large and fast-growing markets. While efficiency-seeking FDI occurs when external investors seek lower-cost locations for operations, particularly in the search for lower-cost labour; resource-seeking FDI involves investing in a host country market to obtain either too costly or unavailable resources in a host country home market.

The influence of FDIs on human capital development, technology transfer, and ultimately economic growth appears extensively in extant literature. According to economic theory, the effect of FDI on the macro-economic dimension is both direct and indirect. The immediate impact entails financing infrastructural development, creating new businesses, job creation, and portfolio investments. While, the indirect effect is through enhanced technical know-how, transfer of managerial skills, and other technology spillovers that encourage capital accumulation by stimulating domestic demand and consumption of goods and services (Feenstra & Markusen, 1994). Equally, De Mello (1999) postulates that FDI supports job creation, facilitates the transfer of

technology besides boosting the overall economic development of recipient countries. According to Beugelsdijk, Smeets & Zwinkels (2008), the impact of FDI depended on its type, vertical or horizontal, and the country's classification as either being developed or developing. Horizontal FDI has a more significant impact on developed countries with relatively advanced and solid institutional frameworks, in which vertical FDIs had a more powerful influence in developing countries that are characterized by underdeveloped institutional frameworks. This assertion is corroborated by Borensztein, de Gregorio & Lee (1998), in their study of 69 developing countries and data for the period 1970-1989, which found that the benefits of FDI were dependent on the country's capacity to absorb the embodied technologies, which is the quality of human capital.

The transfer of technology from MNC parents to its affiliates and other host country firms is not only embodied in machinery, equipment, patent rights, and expatriate managers and technicians. Still, it is also realized through the training of local employees (Blomström & Kokko, 2002). Yildirim and Tosuner (2013) assessed the effect of FDI on the level of human capital development.

The study used panel data for the 1999-2011 periods drawn from Azerbaijan, Uzbekistan, Kazakhstan, and the Kyrgyz Republic. The results of the study showed no significant relationship between FDI and human capital. These results were attributed to; a low volume of FDI and that these investments were reliant on low-skilled labour and less advanced technologies. Kar (2013) explored the spillover effects, both direct and indirect, of foreign direct investment (FDI) inflow on human capital development in India. The results showed only weak unidirectional causality from FDI to human capital development. However, human capital development, defined as expenditure on higher educational institutes across 16 zones in India, positively correlated with FDI

inflow. Zhuang (2008) examined the reverse causation from FDI towards human capital development in China. The results showed that FDI had various effects on different levels of educational attainment over time. For example, FDI inflows in the 1980s, concentrated in export-processing sectors, were associated with a higher percentage of the population with middle school education. In comparison, the rising share of capital and technology-intensive FDI in the 1990s increased people with college and professional and technical education.

Sun and He (2014) assessed whether FDI influenced human capital accumulation in China. The study found that the direct effect of FDI on human capital accumulation is insignificant. Still, after introducing financial deregulation and the interaction term, the overall impact of FDI on human capital accumulation was significant. Wang (2011) examined the effect of inward FDI on the human capital levels in the manufacturing and information industries of the USA. The study used state-level data over the period between 1997 and 2004. The study found that FDI decreased human capital in manufacturing. In contrast, FDI improved human capital in the information industries.

2.2.3 Foreign Remittances and human capital development

According to UNDP (2018), foreign remittances denote earnings and material resources transferred by international migrants or refugees to recipients in their country of origin or countries where the migrant formerly resided. In addition, remittances characterize certain transactions instigated by individuals living or working outside their countries of birth as transfers for their migration.

This research embraces a definition set by the Africa Development Indicator (World Bank, 2013) "Workers' remittances and compensation of employees comprise current transfers by migrant workers and wages and salaries earned by non-resident workers.

Workers' remittances are classified as current private transfers from migrant workers to recipients in their country of origin. They include only transfers made by workers who have been living in the host country for more than a year, irrespective of their immigration status. The compensation of employees is the income of migrants who have lived in the host country for less than a year.

Remittances can be split into three major components: the migrants' salaries and wages or other benefits earned by the migrant in the host countries. The second component is the current transfers by migrants employed in new economies and are considered residents there. Third, capital transfers that result from the correspondence between the migrants and their households include; the flow of goods (personal effects) accompanying the migrant, his flow of financial assets, and the change in the stock positions due to the change in his residence status. Migrants remit for different purposes, including altruism, investment, loan repayment, and insurance (Lucas & Stark, 1985). The altruism motive claims that individuals send money to their households because they value the welfare of their families. Funkhouser (1995) maintains that the volume of remittances, founded on altruism motive, is influenced by the migrant's factors like the level of income and attachment to the family. Migrants with higher incomes tend to remit more than migrants with lower incomes. The flow of remittances is also hypothesized to increase as the income level of the migrant improves and as the social ties between the migrant and his household strengthens. Secondly, the migrant's family characteristics determine the frequency and the amount of remittances sent. The household's income level and the number of dependent siblings will influence the migrants' decision to send them back home. Third, the number of migrant workers from the same family working in foreign countries argues that as more members of the same household migrate, the migrant will be relieved of the burden of supporting his

home single-handedly since all the migrants will share this responsibility. The bequest motive posits that remittances are the basis sons and daughters are judged when family inheritance decisions are to be made (Hoddinott, 1992; Siegel, 2010). Bequest motive is a self-seeking behavior where the migrants remit to win favor from the head of the household and ensure a large portion of his eventual inheritance upon the death of the family head. The loan financing agreement is a credit agreement between the migrant and the household back home. The migrant will remit back home as loan repayment for the family resources spent on his educations and traveling costs to the host country. This motive is supported by studies done by Poirine (1997), who found that the amount to be remitted is grounded on the migrant earnings and household income levels. The study further asserts that the migrant will start to send back as soon as they settle down in the host country. The insurance motive is grounded on a household covenant where one member relocates to a foreign country, like a household strategy of diversifying risks associated with family income and consumption (Amuedo-Dorantes & Pozo, 2006). Insurance motive presents migration and remittances as two intertwined behaviors emanating from a single decision unit. This risk management strategy is hypothesized on a typical rural household in developing countries whose characteristics are; income is more volatile, overreliance on small scale agriculture, unsophisticated production technology, high cost of information, and land is immobile and gradually getting unproductive. The household condition is further exacerbated by a lack of credit and risk management strategies, making the household income even more volatile. The theory additionally maintains that the orthodox perception among the household is that foreign and urban employments are relatively stable and uncorrelated to perils fronting the rural family, such as crop failure and animal diseases. The model shows that migration can be used to caution the household against geographical risk. Remittances,

therefore, depicts the existence of an intra-familial agreement between the migrant and his household to cushion each other against perils such as the risk of unemployment and economic catastrophe, for example, if the family is undergoing some economic hitches such as deterioration of the household income, the migrant will remit to the household and vice versa (Stark & Lucas, 1985; Rosenzweig & Stark, 1989). The investment model views migration as an opportunity to create wealth, and the migrant is perceived as a rational economic being (Delpierre, & Verheyden, 2009). The theory maintains that self-interest is the central motive for sending remittances to the home. The investment model can be viewed from the household portfolio interests and the migrant's need to diversify his risks by acquiring assets. The household decides to take advantage of wage differential among various geographical regions by facilitating a member's cost of migration in return for regular remittance.

However, the household portfolio management strategy is limited by the technical ability of the household enterprise to finance the migration.

Past studies have shown that by reducing liquidity constraints, migrants' remittances could improve domestic investment on physical capital and human capital development of household members and, ultimately, the receiving country's economic growth (Pradhan et al., 2008, Jongwhanich, 2007). Several studies focusing on developing economies have confirmed that migrants' remittances generally increase the average household investment in health and education and school attendance and attainment (Adams & Cuecuecha, 2010; Vogel & Korinek, 2012; Quisumbing & McNiven 2010; Bredl, 2011). Arguably remittance influences human capital development in the receiving countries.

Ustubici and Irdam (2012) investigated the effect of remittances on human capital development in the countries where the state perceives migration as an effective labour export strategy. The Human Capital Development index was used to measure human capital development. The index is composed of a long and healthy life, access to knowledge, and a decent standard of living. Ponce, Olivié Aldasoro, and Onofa (2008) studied the impact of remittances on human development in Ecuador. The study found a positive, insignificant relationship between remittances and human capital development variables; education and health. Kroeger and Anderson (2014) investigated the effect of remittances on the education and health of children in Kyrgyzstan. Data was for the period over 2005–2009. The study found that migrants' remittances did not improve the human capital of the migrants' children left behind. The study found an overall improvement in school enrollment among young children but a negative trend in enrollment for older children.

Hassan, Mehmood, and Hassan (2013) examined the impact of foreign remittances on human capital formation in Pakistan and panel dataset for 1981- 2011. The findings of this study indicated that foreign remittances had an adverse impact on human capital formation, which was attributed to the absence of parents and close relatives to check on the children's outside activities.

De and Ratha (2012) studied the impact of remittances on household income, assets, and human capital in Sri Lanka.

The survey was conducted between 1999-2000, and a sample of 7,500 households was used. The findings of this study indicated that remittances had a positive and significant effect on children's health and education but had no noticeable influence on consumption or asset accumulation.

2.3 Theoretical Review

The study of human welfare has elicited research interest since time immemorial. These studies have concentrated on human welfare and macroeconomic dimensions such as economic growth, income per capita, and inequality (Evans & Timberlake, 1980). More recent studies focus on micro-level welfare indicators that better reflect actual development than the macro-level measures. These factors include infant mortality (Kotsadam, Østby, Rustad, Tollefsen & Urdal, 2018), life expectancy (Wilkinson, 2018), food security (Larson, Castellanos & Jensen, 2019), sanitation (Waziri, Nor, Hook & Hassan, 2018) and human capital development (Dauda, 2018). Traditionally, three competing theories—the human capital theory, the dependency theory, and the modernization theory—have been used as the theoretical basis for explaining patterns of change in human welfare (Mihalache-O'Keef &Li, 2011). Additionally, the theories continue to inform current discussions about the socio-economic impact of globalization.

2.3.1 Human Capital Theory

Adam Smith first espoused the theory of Human Capital Theory in his book Wealth of Nations (1776). In his work, Smith views labour, skills and knowledge as drivers of economic growth. Therefore, an investment in human capital is equivalent to capital investment. Later, Alfred Marshall (1961) observed that the motive behind personal investment was the same as any other investment. However, Schultz (1961) is credited for the major theoretical propositions of the Human Capital Theory. The theory's proponents claim that human capital is a set of skills, attributes, and characteristics that increase workers‟ productivity. According to Becker (1964), Barney (1991) and Baruch (2004), education or training enhance the productivity of workers by imparting valuable knowledge and skills that, in return, improve organizational innovativeness and

performance. The field of human capital development and theory is vast and complex. With increasing globalization and saturation of job markets due to world economic recession and financial crisis, the concept of the common economic and business literature has attracted wider attention than ever before. This is because no organization can succeed without an engaged, committed, loyal, satisfied, and motivated workforce.

Schultzs' concept of the human capital theory is further supported by Denison (1962) and Weisbrod (1966). Denison used the idea of human capital to address three main questions connected to the past and future of economic growth in the US. The first question sought to identify the sources of past growth and their contributions to the over all-economic growth rate. The second question focused on the determinants of future growth. He used the solutions to the two questions to answer a third regarding the level of alteration to future growth rates because of various actions and policies. He found out that human capital explained a significant input to the three questions in the form of labor quality. Human capital theory suggests that nations' productivity can be making the most out of the capital of each citizen (Campbell-Barr & Nygård, 2014). This entails investing in education and health care. Based on the theoretical assertions of the human capital theory, developed and developing countries are emphasizing accelerating their economic growth by allocating necessary financial and non-financial resources in human capital development. Specifically, countries and firms now invest essential resources in developing their human capital that significantly impacts performance, creativity, and innovation. Besides, there are numerous interventions by development agencies, international organizations, and developed countries to support human capital development in developing nations (Harris, 2021; Kheng, Sun & Anwar, 2017). Given the previously mentioned, organizations view employees as the most critical

competitive differentiator that ties other factors together and translates ideas and goals into results (Campbell, Coff & Kryscynski, 2012).

2.3.2 Modernization Theory

Modernization theory is as old as that of the sociology of development. Social Darwinism provided the foundation for the inquiry into the laws of evolution of human society as the primary proposition of modernization theory (Bernstein, 1971). However, the current approach to modernization theory is attributed to Max Weber, Émile Durkheim, and Karl Marx (Rafi & Ahmad, 2018). To Weber, modernization was based on scientific knowledge and applying rational standards in life. Because religion and tradition cannot reconcile with this concept, they are bound to disappear with progress in modernization. Marx thought that people observe religion to cope with oppressions and difficulties prevalent in their societies; hence religion was doomed to die as soon as state-based communist principles were established. According to Bernstein (1971), modernization theory has two key suppositions; (1) that it is a social process linked with economic development; explicitly, the preconditions, concomitants, and consequences of the latter; (2) that the process of modernization constitute a universal pattern.

The modernization hypothesis is grounded on economic liberalism, which contends that developing nations are likely to benefit from economic linkages with developed nations. While the theory of modernization centered on underdeveloped economies and traditional societies, the theory was prevalent in addressing the economic development of the western countries after the Second World War. Through foreign direct investments, official development assistance, and migrants' remittances, developing countries gain access to cross-border markets, capital, innovations, and technologies essential for development. Equally, developed countries benefit from the symbiotic

relationship because they can easily access cheap raw materials, investment opportunities, and broader markets for their products. Further, the researcher suggests that global economic engagement and trade openness redirects factors of production to their most efficient use; thus, growth-generating capital flows not only compensate for the savings deficit of developing and emerging economies but also create and accelerate productivity gains and positive spillover effects inside developing host economies (Bruno & Cipollina, 2018). In the long run, economic interdependence can equalize; development, real wages, and input prices globally (Rostow, 1980).

Previous studies have tested the empirical validity of modernization theory either directly or indirectly. Some studies demonstrate that foreign capital flow promotes human capital development (Musibau, Yusuf, & Gold, 2018; Azizi, 2018; Tsaurai, 2018) and, ultimately, economic growth (Acharya & Leon-Gonzalez, 2018; Mohanty & Sethi, 2019; Fashina, Asaleye, Ogunjobi, & Lawal, 2018). Thus, borrowing from the modernization theory, this study conjectures that foreign capital flows can contribute to the host countries' economic development through human capital development

On the other hand, according to the dependency theory, FDIs are considered to distort the economies of host countries because they can destroy local entrepreneurship, stifle technological innovation, crowd out domestic firms, and increase unemployment (Mihalache-O and Li, 2011).

2.2.3 Dependency Theory

The theory of dependency explains the pattern of economic development of developed and developing nations. The theory suggests that the relationship between developed and developing countries is best understood by considering their interdependence. Thus, the dependency theory offers a unique way of analyzing the economic relations

between Western powers and developing nations, which emanates from the extraction of natural resources and the return of the same resources in the form of manufactured goods and foreign capital, even though aid aims to encourage industrial development. This situation remains a challenge to development initiatives in West African countries. The concept of dependency explains the complex Dependency Theory The theory of dependency looks at the pattern of economic development of industrial and developing nations. Dependency theory suggests that the relationships between developed and developing countries can only be understood when their global interdependence is considered. The dependency theory provides a unique way to analyze the economic relations between Western powers and nation-states in the West African sub-region. The relationships between nation-states in the sub-region and Western powers such as Great Britain, France, Germany, and the US originate from the extraction of natural resources and return of resources in manufactured goods and aid, even though foreign aid aims to encourage industrial development. This situation remains a challenge to development initiatives in West African countries.

The concept of dependency explains their complex nature. Andre Gunder Frank, a Marxist influenced by Baran, describes the relationship between the developed and developing nations as one in which Western powers use their "superior position" to administer the affairs of developing countries in ways that are beneficial to themselves. For example, developed nations tend to promote the integration of developing nations into neoliberal practices characterized by aid, foreign direct investment, and trade and commerce. Jorge Larrain observes that the concept of "metropolises and satellites" is an essential criterion in discussing the dependency theory, wherein the metropolises use their superiority to expropriate the economic surplus of the satellites. According to dependency theorists, the relationships between developed and underdeveloped

countries have connections with monopolistic structures that continue to cause the misuse and squandering of resources. A basic form of abuse of resources outlined by Larrain is "the expropriation and appropriation of a large part or even all of and more than the economic surplus or surplus-value of the satellite by its local, regional, national or international metropolis. Larrain further asserts that the theory of dependency is explicitly linked to the inherent duality of capitalism wherein "some countries develop because other underdeveloped, and vice versa.

The dependency theory is vital to aid and Liberia's reliance on aid because it exposes colonial legacies and mindsets associated with the expropriation of resources for development that benefits Western nations to the detriment of Liberia and other West African countries. The dependency framework outlines the correlation between foreign aid to Liberia and the expropriation of natural resources by multinational corporations of the West. Notably, the dependency theory outlines reasons why natural resources have become a curse rather than a blessing and the complexities of aid implementation in Liberia and nation-states in West Africa. Surprisingly, neoliberalism and dependency theory are related because of common ground on neo-Marxist development concepts. The neo-Marxist development concepts focus on finding solutions to social and political problems not sufficiently addressed by traditional Marxist theory.

2.4 Control Variables

The study includes several variables suggested in the empirical literature to control for other effects on human capital development.

2.4.1 Effect of corruption on human capital development.

The state of a country's governance institution can affect its human capital development and, ultimately, economic development. Among other dimensions of governance,

corruption has received much attention among scholars since it is gradually turning a fact of life globally (Berdiev, Kim, & Chang, 2013). Akçay (2006) explored the relationship between corruption and human capital development in a sample of 63 countries and found a statistically significant negative relationship between corruption indexes and human development. The findings suggested that countries with low quality of governance are likely to have a low level of human capital development. Similarly, Akhter (2004) assessed the effect of economic freedom and corruption on human capital development among 75 countries and found that corruption negatively affected human capital development. Absalyamova, Absalyamov, Khusnullova, and Mukhametgalieva (2016) examined the impact of corruption on the sustainable development of human capital in Russia. The authors found that a 1% increase in corruption caused a proportionate decline in sustainable development in human capital. Hysa (2011) studied the relationship between corruption and human development using panel data from 2002-2010 drawn from; the Former Yugoslav Republic of Macedonia, Serbia, Montenegro, Albania, and Croatia. The study found that corruption indexes had a statistically significant negative relationship with human development.

Similarly, a study by Awopegba (2001) that examined corruption and human capital development causality and data from 1996–2014 in Nigeria reported a negative relationship. This study thus hypothesizes that corruption will negatively affect human capital development.

2.4.2 Effect of Population Growth on Human capital development

The high population growth rate can also explain the low level of human capital development in developing and emerging economies. Bucci and La Torre (2009) used the two-sector endogenous growth model to examine the relationship between population growth, human capital accumulation, and real per capita income growth

found that population change had an effect on human capital accumulation at the individual level, thus affecting per capita income in the long-run. Rosenzweig and Zhang (2009) assessed whether population control policies induced more human capital investment in China. The study found that an extra child at parity one or parity two, net of birthweight effects, significantly decreases the schooling progress, the expected college enrollment, grades in school, and the assessed health of all children in the family. A study by Jha and Bawa (2006) that studied the relationships between population growth, human capital development, and deforestation, and a sample of 30 countries, found that countries with high population growth had low levels of HCD and high deforestation, while those with low population growth had high levels of HCD and intense deforestation. Dufera (2017) studied the impact of population growth on the realization of universal primary education in Ethiopia and concluded that a high birth rate impeded the early attainment of universal primary education. Based on the findings of earlier studies, this study hypothesizes that the population growth rate will negatively affect human capital development.

2.4.3 Effect of Government Education Expenditure on Human Capital Development

Shuaibu and Oladayo (2016) investigated the determinants of human capital development in Africa, using a sample of 33 African countries and data for the period from 2000 -2013 and singled out public expenditure on health, the state of infrastructure, and the quality of institutions as the potential drivers of human capital development in Africa. According to Gundlach (1997), the key drivers of human capital include the quality of education, workforce experience, health status, and the nutritional status of the country's population.

Fagbemi and Adeoyen (2019) studied human capital and public finance management in Africa. The authors considered a sample of 21 African countries and a panel dataset for 1984 - 2016.

This study revealed that public spending that focused on education improved human capital in the long- run. Edeme and Nkalu (2016) assessed the crowding-in and crowding-out effects of recurrent and capital expenditure on human capital development in Nigeria using time series data from 1977-2013. The findings indicated that recurrent expenditure on education and healthcare crowded-in and crowded-out human capital development. This study hypothesizes that government expenditure on health and education has a significant positive effect on human capital development. Dissou, Didic, and Yakautsava (2016) studied the relationship between government spending on education, human capital accumulation, and growth. The study found that increasing government spending on education had a positive long-run effect on human capital accumulation, ultimately improving economic growth. Patel and Annapoorna (2019) assessed the impact of public education expenditure on human resource development in India over the period 1990–2014. The study found that public spending on education had a positive and significant effect on human capital development. However, those who investigated the impact of inflation on human capital, using panel data drawn from 93 countries and the years 1975-1995, found mixed results. With rising inflation, human capital improved; however, a 15% effect was insignificant. Conversely, the impact was negative with extreme inflation levels, with a representative threshold of 100%. The findings can be explained by an inefficient allocation of factors of production, a rise in the actual cost of physical capital owing to shortcomings in the tax system, and uncertainty about real future expenses and revenues in goods production.

2.4.4 Effect of Inflation on Human Capital Development

Inflation is one of the most critical macroeconomic dimensions since it can cause an adverse effect on production costs and the general welfare of the population. The inflation and human capital development nexus has been examined in previous studies. He (2018) assessed inflation and innovation factors with a cash-in-advance constraint on human capital accumulation. The study found that an increase in the nominal interest rate leads to decreased human capital investment, reducing long-run growth and welfare. Ayllón and Nollenberger (2016) examined recessions on human capital accumulation in 28 European countries. The study found that youths from economically disadvantaged backgrounds were less likely to enroll in university studies.

Further, the austerity measures, such as cutbacks on budgetary allocations on education imposed during the recession, changed the pattern of educational decisions among young Europeans and made the opportunity of skill acquisition more unequal. Egungwu (2018) studied the impact of external debt on human capital development in Nigeria. This study revealed that external debt stock and external debt servicing had a significant adverse effect on human capital development. Also, the study found that an increase in the rate of inflation led to a decrease in human capital development in Nigeria.

2.5 Conceptual Framework

The diagrammatical relationship between the research variables is shown in figure 1 below. Human capital development is the dependent variable. The explanatory variables are official development assistance, foreign direct investment and foreign remittances.

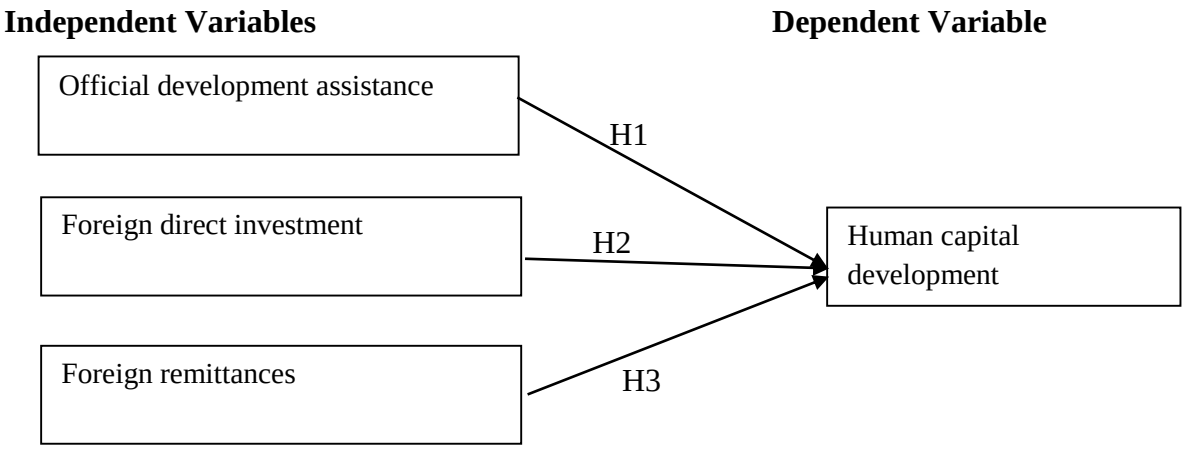

Figure 1: Conceptual Framework. Source (researcher, 2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design, the target population, data collection method, reliability and validity, the research model, data analysis techniques, and ethical consideration.

3.2 Research Paradigm

A research paradigm is a set of shared beliefs about research and is a central feature of any research study (Brown & Dueñas, 2020). Guba (1990) suggests that a research paradigm is a philosophical framework or set of beliefs that guide action on research. Hence, a research paradigm is a general theory that informs most scholarships on the operation and outcomes of any particular system of thoughts and action. Research paradigms are classified into; positivism, postpositivism (or realism), interpretivism (or constructivism), and pragmatism (Yvonne Feilzer, 2010).

Positivists argue that the external world is ordered and regular and with an objective reality with a specific pattern that can be predicted and explained with theories and laws (Gorski, 2018). Proponents of positivists further argue that knowledge is value-free and independent of researchers. Therefore, theory-based research uses deductive reasoning and a scientific method to identify a theory, formulate hypotheses, and collect data to draw generalizations.

Postpositivism is grounded on an imperfect reality, though it recognizes the inherent biases common in social interactions and research processes. Therefore, postpositivists suggest that research is partly value-laden, implying that researchers are part of what is being studied and may influence the study (Young & Ryan, 2020).

Interpretivism refutes the propositions of positivism by claiming that many subjective realities can be constructed through individual interpretations. Thus.

Interpretivism seeks to understand the researched phenomena from the people's point of view by accepting the existence of multiple interpretations (Elshafie, 2013). For interpretivists, research is value-bound, and in that, they are directly involved in the study with their own interpretations (Klenke, 2016).

Pragmatism is premised on multiple realities and aims at providing pragmatic solutions or outcomes. Pragmatists argue that truth is valuable, though being affected by the researchers; hence, both inductive and deductive approaches generate practical knowledge, usually from data collection, pattern formation, and theory creation (Kaushik & Walsh, 2019). Besides, research hypotheses can be formulated grounded on a theory and then tested. Based on pragmatism, research should use whatever research approach or method works best to solve the research questions (Wei & Lin, 2017).

The positivism paradigm guided this study since it is anchored on several theories, and the hypotheses are tested using quantitative data collection and analysis through the scientific method.

3.3 Research Design

A research design refers to the overall strategy that the researcher chooses to integrate the different components of the study coherently and logically, thereby ensuring they effectively address the research problem. It constitutes the blueprint for measuring, collecting, analyzing, and interpreting data. The choice of the research design will be informed by the research problem and the nature of the data. This study will adopt three research designs; descriptive, explanatory, and longitudinal. According to Blumberg,

Cooper, and Schindler (2005), descriptive research aims to provide a picture of a situation, person, or event or show how things are related to each other and naturally occur. Saunders, Lewis and Thornhill (2009) argues that exploratory research design is conducted "when enough is not known about a phenomenon and a problem that has not been clearly defined." Therefore, explanatory research is used to answer cause-effect relationships so as provide evidence to support or refute an explanation or prediction. A longitudinal design is primarily defined by the element of time as the emphasis is on data collected at different time points, generally from the same participants (Cockcroft, Goldschagg, & Seabi, 2019). The applicability of this design is informed by the nature of the data to be used to test hypotheses. Specifically, data will be for the period 2008 to 2018.

3.3 Target Population

The study targets Sub-Saharan Africa (SSA) countries between 2008 and 2018. The extensive coverage of SSA countries will allow the researcher to; (1) identify inter-country trends; (2) reveal homogeneity or heterogeneity among these countries. Furthermore, the choice of the research period is supported by the fact that the past one decade has shown an incredible outburst of foreign capital inflow; accounting for these capital flows has improved; it has also been a period of relative economic and political stability that are prerequisites for investment-linked undertakings; economic liberalization and integration.

3.4 Sampling frame and sampling technique

A sampling frame is a complete list of all the cases in the population from which a sample is drawn (Saunders, Lewis, & Thornhill, 2016). Therefore, the sampling frame is a collection of objects, subjects, elements to be studied. In this case, the sampling

frame comprised the 52 countries that constitute Sub-Saharan Africa. A sampling technique selects part of the population to represent the entire population for data collection and generalizing (Babbie, 2004). This study employed a census technique to study the whole population (Mugenda & Mugenda, 2003). The inclusion and exclusion criteria was based on whether the selected country had complete data for the period under study; 2008-2018. After data collection, the final sample consisted of 41 countries.

3.5 Data Collection

The study relied on secondary data collection methods. Secondary data is defined as collecting data collected by someone else for another primary purpose. Time-series data were extracted from the World Bank's African Development Indicators, the Human Development Report of the UNDP, and the United Nations Conference on Trade and Development (UNCTAD) database. The dependent variable employed in this study is human capital development, operationalized by the UNDP's Human Development Index (HDI). The predictor variable is foreign capital inflow, which is disintegrated to foreign direct investment, foreign remittances, and official development assistance. Data on the predictor variables are available on the World Bank database, while the definition and source of data for the control variables are shown in *Table I* Appendix. Additionally, a data collection schedule will be used to ensure that only relevant data is collected.

3.6 Model Specification

The study's dependent variable is human capital development (HCD), while the exogenous variables are; foreign direct investment (FDI), foreign remittances (FR), and official development assistance (ODA). Macroeconomic factors that influence foreign capital flows are controlled for:- corruption, population growth, inflation, and

government expenditure on education and health care. The regression equation below depicts the relationship between human capital development and foreign capital inflows.

$$HCD_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 FR_{it} + \beta_3 ODA_{it} + \beta_4 PG_{it} + \beta_5 INF_{it} + \beta_6 CR_{it} + +\beta_4 PEE_{it} \ \varepsilon_{it}$$

Where;

HCD_{it} is the human capital development in period "t" for the cross-sectional unit "i"

FDI_{it} is the foreign direct investment in period "t" for the cross-sectional unit "i"

FR_{it} is the foreign remittances in period "t" for the cross-sectional unit "i"

PG_{it} is the population growth rate in period "t" for the cross-sectional unit "i"

INF_{it} is the inflation rate in period "t" for the cross-sectional unit "i"

CR_{it} is level of corruption in period "t" for the cross-sectional unit "i"

PEE_{it} is the public expenditure on education in period "t" for the cross-sectional unit "i"

ε_{it} is the error term

β_0 is the intercept.

$\beta_1 \ldots, \beta_n$ are the beta-coefficients

"i" is the cross-section units (52 countries)

"t" is the period (1980 to 2018)

3.7 Diagnostic Tests

Regression diagnostic tests are techniques for exploring problems inherent to regression analysis and determining whether certain assumptions appear reasonable. Regression models have several assumptions that must hold before data analysis. These assumptions include linearity, multivariate normality, multicollinearity, and homoscedasticity.

3.7.1 Linearity Test

Regression models assume a linear relationship between the dependent variable and the independent variable. If the assumptions of linearity are violated, the interpretation of the regression coefficient will be rendered futile. The premise of linearity was tested through augmented component-plus-residual plots. Since the relationship was not linear all the variables were log-transformed.

3.7.2 Normality Test

Regression models assume multivariate normality implying that residuals are normally distributed. Non-normality can influence sampling variance. The normality assumption assures that the ρ-values for the t-tests and F-test will be valid. The study used the Shapiro Wilk tests. The null hypothesis for the test is normality, implying that the ρ-value is lower than the Prob> Chi (2) for normality.

3.7.3 Multicollinearity Test

Multicollinearity means that independent variables are strongly correlated with each other. Multicollinearity affects accuracy in estimating the standard error of regression coefficients. Variance Inflation Factor (VIF) was used to test multicollinearity. According to VIF, multicollinearity is present if the values are greater than 10. The

remedies for severe multicollinearity include first differencing, dropping one variable, increasing the sample size, or pooling the data (Gujarati, 2009).

3.7.4 Homoscedasticity Test

Homoscedasticity assumes that the variance of error terms is similar across the values of the independent variable. The variance of the error term should be constant. Heteroscedasticity affects the validity of inference, the statistical power of hypothesis tests, and the accuracy of confidence intervals of regression coefficients. The study conducted several heteroscedasticity tests that comprised the Breusch-Pagan/Cook. The null hypothesis of this tests is homoscedasticity, whereas the alternative hypothesis is heteroscedasticity.

3.7.5 Autocorrelation Test

According to Gujarati (2009), autocorrelation is the "correlation between members of series of observations ordered in time." The presence of autocorrelation renders the estimated values of t, F, and $\chi 2$ incorrect. Tests for autocorrelation in panel data include the Baltagi-Wu test, the Durbin Watson test, and the Breusch-Godfrey test.

Drukker (2003) contends that these tests have numerous specification assumptions such as individual effects, need for non-stochastic regressors, and inability to work in the presence of heteroscedasticity. The study used the Wooldridge test that is not affected by the said limitations; besides, it can deal with unbalanced panel data and with and without gaps in the observations (Drukker, 2003).

3.7.6 Stationarity Test

A fundamental assumption of regression analysis is that the time series data is stationary. Stationarity is the probability that time series variables do not change over time. Nonstationary leads to spurious regression relationships and the validity of t-test

and F-tests. Stationary infers that the mean, variance, and auto-covariance are time-invariant. The study conducted several unit root tests that included the Levin- Lin Chu, the Im-Pesaran-Shin, and ADF Fisher tests. If the data is not stationary, the conventional cure de-trends the time series using first differences.

3.7.7 Hausman Test

The fixed effect and random effect models are usually used as panel data estimation models. Fixed effect regression allows one to control for time-invariant unobserved individual effects correlated with the observed independent variables. The fixed-effect model assumes that any time-invariant characteristics are unique to an individual hence not associated with attributes of other individuals. The random-effect assumes that the variation across entities is random and uncorrelated with the predictor or the independent variables (Greene, 2003). The choice between the two models depends on the results of the Hausman test. Hausman's test has two hypotheses; the null hypothesis supports the random-effect, while the alternative hypothesis favours the fixed-effect. This means that if the ρ-value of the Chi2 is less than 0.05, the null hypothesis is rejected and the fixed-effect model should be used; otherwise, the random-effect model.

3.8 Data analysis

The principal objective of this study was to assess the relationship between foreign capital flows and human development in Sub-Saharan Africa. Data were analyzed through descriptive and inferential statistics. The statistical relationship between the variables was estimated using multiple regression analysis. Since the data was panel, the fixed effect ad random effect regression analysis was performed using STATA version 13. The Hausman test informed the choice between the fixed and random effects for hypotheses testing.

3.9 Ethical Consideration

Ethical considerations focus on the voluntariness of participation and the privacy of the respondents and data collected. This study posed no ethical concerns for two reasons. First, the research uses secondary data inferring no questionnaires or respondents are required. Second, the publicly available data in the World Bank and IMF database at no cost or ceiling, suggesting no infringement of intellectual rights.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

The last chapter highlighted the rationalization and justification for adopting the various statistical techniques and data analysis procedures. This chapter presents the results from all those procedures and analyses. The findings are presented in four key sections; descriptive statistics, diagnostic tests, correlation analysis, and hypotheses testing

4.1 Descriptive Statistics

The study extracted data from the World Bank's World Development Indicator (WDI), the United Nations Development Indicator, OECD, and Transparency International for 2008 to 2018. Only 23 countries qualified for further analysis since some countries did not have all the data for the period. The descriptive statistics for the untransformed data are presented in Table 4.1. Based in Table 4.1 the mean human development index (HDI) was 0.523 (minimum= 0.304 and maximum =0.796; standard deviation =0.106). The official development assistance (ODA) had a mean of value of 6.292 (minimum= 0.072 and maximum = 21.142; standard deviation = 5.127). The mean foreign direct investment (FDI) in SSA was 3.988 (minimum= 0.238 and maximum = 19.456; standard deviation = 3.421), while foreign remittances had a mean value of 3.320 (minimum= 0.073 and maximum =16.195; standard deviation =3.137). Further, the mean CPIA (institutional quality) was 3.214 (minimum= 1.100 and maximum = 6.500; standard deviation = 1.023) while the average public expenditure on education and health care was 5.618 (minimum= 2.762 and maximum =10.929; standard deviation 1.357). The average population growth rate for the region was 2.382 (minimum= 0.069 and maximum = 3.924; standard deviation = 0.730).

Table 4.1. Summary statistics for the research variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Human development index (HDI)	451	0.523	0.106	0.304	0.796
Foreign remittances(%GDP)	451	3.320	3.137	0.073	16.195
Foreign direct investment(%GDP)	451	3.988	3.421	0.238	19.456
Official development assistance(%GDP)	451	6.292	5.127	0.072	21.142
CPIA(country policy and institutional assessments)	451	3.214	1.023	1.100	6.500
Public expenditure on education and Health(%GDP)	451	5.618	1.357	2.762	10.930
Population growth rate (% annual)	451	2.383	0.730	0.069	3.924

Source: Author 2020

4.2 Robustness Checks

Before selecting which panel regression model to use and to eliminate spurious regression problems, some robustness tests were carried out, such as normality tests, multicollinearity, unit root test, test for heteroscedasticity, autocorrelation test, and specification error test

4.2.1 Shapiro-Wilk W test for normality

The null hypothesis for the Shapiro-Wilk W test for normality assumes that the distribution is normal. Table 4.2 shows that the p-value is very large (.51), indicating that we cannot reject the hypothesis that residual is normally distributed

Table 4.2 Skewness/Kurtosis tests for normality

Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	Z	Prob>z
Residual	410	0.99641	0.989	-0.025	0.51006

Source: Author 2020

4.2.2 Multicollinearity

Multicollinearity means that two or more of the independent variables are highly correlated. Multicollinearity can have damaging effects on the results of multiple regressions. Statistically, multicollinearity is present when correlation coefficients are above 0.9 (Hair *et al.,* 2006; Saunders *et al.,* 2009), 0.8(Garson, 2013; Gujarati, 2012), and 0.7 (Sekaran & Bougie, 2010). Variance inflation factor (VIF) is an additional method of testing multicollinearity. Multicollinearity is present if the VIF value is higher than 10 (Gujarati, 2012). The results of the VIF test, as shown in Table 4.3, ranged between 1.09 and 1.67 and less than ten; thus, our variables do not suffer from multicollinearity.

Table 4.3 Multicollinearity test

Variable	VIF	1/VIF
Hdi	1.67	0.600257
Fdi	1.60	0.626257
Pg	1.54	0.648477
Frem	1.29	0.773450
Cpia	1.28	0.781240
Peeh	1.09	0.916883
Mean VIF	1.41	

Source: Author 2020

4.2.3 Unit root test

Econometric models produce non-sensible or spurious regression results relating to dependent and independent variables if non-stationary data is used (Gujarati, 2012. Non-stationary data refers to a data series that does not have a constant mean, variance, and auto-covariance at various lags over time (Hossain & Hossain, 2015). It is increasingly becoming essential to check stationarity in panel data (Maddala & Wu, 1999). Testing for stationarity means that the mean and variance of variables are time-

invariant. In economics and finance, time-related or seasonal shocks of one period may strongly influence subsequent periods. This study applied Levin- Lin Chu, Im-Pesaran-Shin, and ADF Fisher tests. The following hypotheses were considered in conducting the unit root test.

Null hypothesis (Ho): Panel data contains unit root [non-stationary].

Alternative hypothesis (Ha): Panel data is stationary.

Looking at the p- values in Table 4.5, the null hypothesis can be rejected at all conventional significance levels for all the study variables, which means that there is no unit root in our data; implying that the means and variances in our data are not time-dependent; hence, the application of random effect regression can produce meaningful results (Gujarati, 2012).

Table 4.4: Unit root test

	Levin-Lin-Chu	**Im-Pesaran-Shin**	**ADF-Fisher chi square**
Human development index	-6.78	-1.54	6.70
	(0.00)	(0.04)	(0.01)
Foreign remittances	-40.60	-1.81	8.34
	(0.00)	(0.02)	(0.01)
Official development assistance	-5.05	-1.51	-1.56
	(0.00)	(0.04)	(0.01)
Foreign direct investment	-3.32	-1.51	9.46
	(0.00)	(0.04)	(0.01)
Public expenditure on health and education	-4.74	1.65	14.09
	(0.00)	(0.04)	(0.01)
Cpia (institutional quality)	-6.55	9.01	3.39
	(0.00)	(0.04)	(0.01)
Population growth	-24.49	-1.74	14.09
	(0.00)	(0.04)	(0.01)

Source: Author 2019

4.2.4 Test for Heteroskedasticity

The study uses the Breusch-Pagan/ Cook-Weisberg to test heteroskedasticity, and the results are presented in Table 4.5. The results required using the cluster-robust standard

error estimator to control heteroskedasticity. Using this robust standard error estimator (cluster), the study assumes that observations should be independent across clusters (Gould & Rogers, 1994). The findings show Chi2 (1) of 153.910 and ρ-value of 0.060, implying that the null hypothesis can not be rejected. Hence, the assumption of constant variance is not violated.

Table 4.5 Breusch-Pagan / Cook-Weisberg Test for Heteroscedasticity

Ho: **Homoskedasticity**

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance Variables: myyresidual chi2(1) = 4.61 Prob > chi2 = 0.0317

Source: Author 2020

4.2.5 Autocorrelation Test

Some tests of autocorrelation include Wooldridge, Durbin Watson, and Breusch-Godfrey. However, Drukker (2003) argues that the results of most of these tests are only valid if the underlying specification assumptions, for instance, individual affects types and need for non-stochastic regressors, hold besides their inability to work where heteroscedasticity is present. As a result, Drukker (2003) recommends Wooldridge (2002), which he says is immune from such limitations. In addition, the test can deal with unbalanced panel data with and without gaps in the observations. The ρ-values in Table 4.6 indicate that the null hypothesis can not be rejected at a 5% significance level. Therefore, there is no autocorrelation in the data.

Table 4.6: Wooldridge test for autocorrelation in panel data

Ho:	No	first-order autocorrelation
	F(	1, 30) = 0.910
		Prob > F = 0.3478

Source: Author 2019

4.2.6 Specification Error Test

Table 4.7 highlights the results of the Ramsey RESET test. From the findings in the table, the probability values of the computed statistics in the Ramsey RESET test are more than the threshold value of 0.05, implying the model does not seem to be misspecified (Studenmund, 2000).

Table 4.7 Ramsey RESET (test using powers of the fitted values of FP)

Ho:	model has no omitted	Variables
	F(3, 441) =	11.97
	Prob > F =	0.08

Source: Author 2019

4.3 Correlation Analysis

Correlation analysis is a method of assessing the relationship between variables/factors. The results of the correlation analysis are summarized and presented in Table 4.8. Pearson correlation results in the table show that foreign remittances ($r= 0.209$, $\rho<0.05$), foreign direct investment ($r= 0.318$, $\rho<0.05$), institutional quality ($r= 0.495$, $\rho<0.05$) and public expenditure on education and health ($r= 0.197$, $\rho<0.05$) are positively and significantly correlated with human capital development. Additionally, the correlation matrix shows that official development assistance ($r= -0.649$, $\rho<0.05$) and population growth ($r= -0.685$, $\rho<0.05$) have a strong negative association with human capital development

Table 4.8: Pairwise correlation matrix

	Hdi	Frem	Fdi	oda	cpia	peeh	pg
Hdi	1.000						
Frem	0.209*	1.000					
Fdi	-0.335 *	-0.119 *	1.000				
Oda	-0.649*	-0.307*	-0.426*	1.000			
Cpia	0.495*	-0.045	0.029	-0.112*	1.000		
Peh	0.197*	-0.191*	-0.049	0.123*	0.274*	1.000	
Pg	-0.685*	-0.211*	-0.262*	0.572*	-0.398*	-0.091	1.000

Notes. hdi, human development index; frem, foreign remittances; fdi, foreign direct investment; oda, official development assistance; cpia, institutional quality (world bank's country policy and institutional assessments); peeh, public expenditure on education and health; pg, population growth rate; *$\rho<0.05$

Source: Researcher, 2020

4.4 Regression Analysis

Both the fixed effect and the random effect regression analysis were performed. The results of the Hausman guided the choice between the two estimation models. The null hypothesis of the Hausman test favour the random-effects model. If the null hypothesis is rejected, the alternative hypothesis is selected (fixed-effect model). Based on the Hausman test results in Appendix III, the null hypothesis could not be rejected (the difference in coefficients is not systematic) since the ρ- value= 0.000 of the chi-square was less than 0.05. The results for the random effect regression are shown in Appendix II.

The findings indicate that foreign capital flow explains 58.34 % variation in the human capital development in Sub-Saharan Africa. From the table, foreign remittances positively affected human capital development ($\beta= 0.013$, $\rho<0.05$). Specifically, if human capital increases by 1%, human capital development improves by 1.3%. Similarly, the results show that foreign direct investment positively and significantly affects human capital development. On the contrary, foreign direct investment ($\beta= -0.001$, $\rho<0.05$) and official development assistant have a negative and significant effect

on human capital development. (β= -0.003, ρ<0.05). Additionally, two control variables, public expenditure on education and health care (β= 0.003, ρ<0.05) and CPIA -institutional quality (β= 0.019, ρ<0.05), have a positive and significant effect on human capital development. High-quality institutions with a country ensure equality among the citizens by reducing the gaps between the rich and the poor and ensuring the credibility of the government's commitment to such policies, which are vital in human capital development. However, population growth had a negative and significant effect on human capital development (β= -0.013, ρ>0.05).

Table 4.9 Results of regression analysis- Fixed Effect

Fixed-effects (within) regression				Number of obs		= 410
Group variable: PanelID				Number of groups		= 41
R-sq: within = 0.3354				Obs per group: min		= 10
between = 0.6173				Avg		= 10.0
overall = 0.5834				Max		= 10
				F(6,363)		= 30.54
corr(u_i, Xb) = 0.5648				Prob > F		= 0.0000
lag_hdi	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
Frem	.0036358	.0008834	4.12	0.000	.0018986	.005373
Fdi	-.0012731	.0004924	-2.59	0.010	-.0022413	-.0003049
Oda	-.0025874	.0005068	-5.10	0.000	-.0035841	-.0015907
Cpia	.0193685	.0026522	7.30	0.000	.0141529	.0245841
Peeh	.0027854	.0012716	2.19	0.029	.0002848	.0052859
Ppg	-.013232	.0043124	-3.07	0.002	-.0217125	-.0047515
_cons	.4822624	.0168148	28.68	0.000	.4491956	.5153291
sigma_u	.08092033					
sigma_e	.01776422					
Rho	.95402351	(fraction of variance due to u_i)				
F test that all u_i=0:		F(40, 363) =	59.43		Prob > F = 0.0000	

Source: Researcher (2020)

4.5 Testing Hypothesis

Table 4.9 shows that official development assistance significantly negatively affects human capital development in Sub-Saharan Africa (β= -0.003, ρ<0.05); thus,

hypotheses **H_{01}** is rejected. The results indicate that a one-unit increase in official development assistance causes a 0.003 unit reduction in human capital development. These findings are supported by previous studies (Lee et al., 2019; though, conflict with Azarnert (2008) and Tamer (2013), who found that official development assistance had a negative effect on human capital development.

The findings in Table 4.9 indicate that foreign direct investment has a negative and significant effect on human capital development in Sub-Saharan Africa ($\beta 2 = -0.001$, $\rho < 0.05$); hence **H_{02}** is rejected, and it is concluded that foreign direct investment has a significant influence on human capital development. Empirically, a unit increase in process capital led to a 0.001-unit decrease in human capital development. The findings are supported by Checchi, De Simone, and Faini (2007). However, the results are contrary to those of Yildirim and Tosuner (2013), Sun and He (2014), who found no relationship, and that of Zhuang (2017) reported a positive relationship. While human capital development and foreign direct investment individually affect economic growth, they reinforce each other through complementary effects. Generally, enhanced human capital development improves inward FDI by making the local investment environment attractive for foreign investors. The host country's level of human capital determines the amount of FDI the country can attract and whether local firms will be able to absorb the potential spillover benefits; implying that host economies with relatively high levels of human capital are likely to attract many technology-intensive foreign MNCs that could contribute significantly to the further development of local labour skills. (World Bank, 2003; UNESCO and OECD, 2003).

On the other hand, FDI contributes to human capital development through a direct effect of the upgraded skill level of the workforce and indirect effects such as improved socio-political stability and health. In addition, multinational corporations are potential

providers of education and training, bringing new skills, information, and technology to host countries. Also, FDI inflows create a potential for knowledge spillovers to the local labour force.

Additionally, Table 4.9 confirms that foreign remittances have a beta of $\beta = 0.003$ and ρ-value<0.05; thus, **H_{03}** is rejected. The study concludes that foreign remittances significantly and positively influence human capital development in Sub-Saharan Africa. The findings are supported by Azam and Raza (2016), who studied 17 countries and data from 1996 to 2013. However, they contradict those of Mehmood and Hassan (2013). The findings of this study suggest that foreign remittances play a vital role in improving the recipient country's human capital. Migrants' remittances are a reliable source of income for the migrants' families, which improves the households' living standards. Therefore, these cash transfers can be linked with better schooling for the children and a healthy environment. Besides, the families back home can channel part of the money for entrepreneurial activities that promote the household's general welfare.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this chapter, a summary of findings, conclusions, and recommendations are represented. The first section of the chapter provides an overview of the research objectives and results. The following section presents the findings. The final section offers recommendations, limitations, and suggestions for further research guided by the research objectives.

5.1 Summary of Findings

This study sought to examine the effect of foreign capital flow on human capital development in Sub-Saharan Africa. The first specific objective was to determine whether official development assistance influenced human capital development. The findings indicate a significantly negative relationship between official development assistance on HDI. The second research objective sought to assess the impact of foreign direct investment on human capital development, and the results indicate a negative and significant relationship. Finally, the third research objective was to investigate the impact of foreign remittances on human capital development. The results presented in the previous chapter show a negative and significant relationship between foreign remittances and HDI. Consequently, the study concludes that foreign capital flow significantly impacts HDI in SSA, though the effect varies based on the components.

5.2 Conclusion

This study aimed to assess the impact of foreign capital inflows on human capital development in Sub-Saharan Africa. The study's findings show that three components had different effects on human capital development. While foreign remittances

improved human capital development, foreign direct investment and official development assistance (ODA) did not. Therefore, it is reasonable to argue that foreign remittances are a powerful tool in promoting human capital development in developing countries. Foreign remittances enable the migrants' families to spend more on education, health, and general consumption. In addition, remittances cushion the households against economic shocks, thus smoothening their consumption and welfare. In addition, remittances are a source of foreign exchange for the recipient nations. Therefore, developing countries should make a favorable policy to reduce the cost of remittance inflows and to encourage formal channeling of remittances to stimulate human capital development. This may be achieved by setting solid financial institutions and banking systems to reduce the informal inflow of remittances.

On the other hand, the FDI and ODA impede human capital development in SSA. The developmental impact of FDI and official development assistance (ODA) on the recipient country's human development index (HDI) depends on the nature of the country's institutions and absorptive capability. Therefore, the negative relationship between FDI, ODA, and HDI can be attributed to the weak institutions and low human capital formation within the sub-Saharan Africa region. For the control variables, the study found that quality of governance institutions and public expenditure on education and health are positive drivers of human capital development of governance institutions, and public expenditure on education and health are positive drivers of human capital development. Conversely, population growth has a negative effect on HD effect on HDI. Population growth has a significant negative impact on HDI. Population growth hinders the public provision of services such as education and health. Therefore, the SSA region should control population growth to enhance the provision of social services, ultimately improving the level of HDI. Institutional quality (CPIA)

has a significant positive impact on human capital development. Similarly, more policy intervention is required to strengthen governance institutions' quality and capacity to leverage ODA.

5.3 Recommendations of the Study

The flow and the impact of foreign capital on human capital development largely depends on the recipient's country's absorptive capacity and the quality of its institutions of governance. Therefore, this study recommends improving the institutional capabilities in SSA to enhance the human development index. However, considering that Sub-Saharan Africa lacks technical capabilities to enhance the institutions (CPIA), both aid recipients and donors should collaborate in developing institutions of governance (CPIA) to positively impact HDI. Specifically, donors should provide incentives to the recipient countries, which would enable them to fight corruption and ensure adherence to the rule of law. Similarly, Sub-Saharan African countries should work hard to ensure remittances are channeled through the financial system and encourage the recipient households to spend the money on education, health, and entrepreneurial undertakings. Also, human capital development should be a significant priority for Sub-Saharan Countries through policy interventions that significantly impact human capital development. Besides, Sub-Saharan African Countries should endeavor to educate their citizens and provide essential social services and public goods that boost the country's capacity to absorb foreign capital.

5.4 Limitations of the Study and Suggestions for Future Research

This study has several limitations. First, HDI (a measure of human capital development), though a widely used indicator of income, knowledge, and health, does not necessarily capture income disparity. Finally, the types of FDI or ODA are not

disaggregated by sector. A sectorial analysis could provide further recommendations for multilateral organizations and policy-makers on making or stimulating investments. In addition to compensating for the above limitations, there are many paths for future research. First, future research should explore the implications of institutional quality on human capital development, mainly because the study showed that institutional quality significantly affects development.

Further, future researchers should explore why SSA is unable to reap the benefits of ODA. The preliminary results in this study indicate that ODA adversely affects human capital development. Still, a deeper exploration would provide insight into how to take advantage of ODA for development purposes appropriately.

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APPENDICES

APPENDIX I

Table A: Description of Variables and Measurement

Variable	Definition	Source
Human Capital Development	Average of Education Index, Health Index and GDP Index (UNDP, 2000)	UNDP and World Bank
Foreign Direct Investment (FDI)	"Foreign direct investment refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship. This series shows net outflows of investment from the reporting economy to the rest of the world. Data are in current U.S. dollar" (World Bank 2001).	World Bank
Foreign Remittances	"Personal remittances comprise personal transfers and compensation of employees. Personal transfers consist of all current transfers in cash or in kind made or received by resident households to or from nonresident households. Personal transfers thus include all current transfers between resident and nonresident individuals. Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by nonresident entities. Data are the sum of two items defined in the sixth edition of the IMF's Balance of Payments Manual: personal transfers and compensation of employees" (World Bank 2001).	World Bank
ODA Official Development	"Net official development assistance (ODA) consists of disbursements of loans made on	OECD and World Bank

Assistance	concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients. It includes loans with a grant element of at least 25 percent (calculated at a rate of discount of 10 percent). Data are in current U.S. dollars" (OECD 2011).	
Corruption	"Transparency, accountability, and corruption in the public sector assess the extent to which the executive can be held accountable for its use of funds and for the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for administrative decisions, use of resources, and results obtained. The three main dimensions assessed here are the accountability of the executive to oversight institutions and of public employees for their performance, access of civil society to information on public affairs, and state capture by narrow vested interests" (World Bank 2001).	Transparency International
Population Growth	"Annual population growth rate for year t is the exponential rate of growth of midyear population from year t-1 to t, expressed as a percentage. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship" (world Bank 2001).	World Banks

Appendix II: Random Effect Regression

Random-effects GLS regression				Number of obs	=	410
Group variable: PanelID				Number of groups	=	41
R-sq: within = 0.3187				Obs per group: min	=	10
between = 0.7575				Avg	=	10.0
overall = 0.7162				Max	=	10
				Wald chi2(6)	=	252.54
corr(u_i, X) = 0 (assumed)				Prob > chi2	=	0.0000
lag_hdi	Coef.	Std. Err.	Z	P>z	[95% Conf.	Interval]
Frem	.002499	.000905	2.76	0.006	.0007252	.0042728
Fdi	-.0015044	.0005347	-2.81	0.005	-.0025523	-.0004565
Oda	-.0033729	.000533	-6.33	0.000	-.0044175	-.0023282
Cpia	.0204273	.0027387	7.46	0.000	.0150595	.0257952
Peeh	.0033035	.0013697	2.41	0.016	.0006189	.0059882
Ppg	-.0270684	.0044485	-6.08	0.000	-.0357873	-.0183496
_cons	.5183951	.0186898	27.74	0.000	.4817637	.5550264
sigma_u	.04077893					
sigma_e	.01776422					
Rho	.84050076	(fraction of variance due to u_i)				

Source author 2020

APPENDIX III: HAUSMAN TEST

	---- Coefficients ----			
	(b) Fe	(B) Re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
rem3	.0036358	.002499	.0011368	.
fdi3	-.0012731	-.0015044	.0002313	.
Oda	-.0025874	-.0033729	.0007855	.
Cpia	.0193685	.0204273	-.0010588	.
Health	.0027854	.0033035	-.0005181	.
Ppg	-.013232	-.0270684	.0138365	

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg
Test: Ho: difference in coefficients not systematic
chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1250.16
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)