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FOREIGN DIRECT INVESTMENT IN SUB-SAHARAN AFRICA: THE ROLE OF INSTITUTIONAL QUALITY, MACRO ECONOMIC UNCERTAINTY, AND POLITICAL RISK

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DECLARATION

This is to certify that the thesis prepared by Yoseph Biadigilign Ayal entitled: **"Foreign Direct Investment in Sub-Saharan Africa: The Role of Institutional Quality, Macro Economic Uncertainty, and Political Risk''** and submitted in partial fulfillment of the requirements for the Degree of Master of Science in Economics (Economic Policy Analysis) complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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"I will give thanks to you, Lord, with all my heart; I will tell of all your wonderful deeds." - Psalm 9:1

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Acronyms

AGOA - African Growth and Opportunity Act

ARCH -Autoregressive conditional Heteroskedastic

AfCFTA African Continent Free Trade Area

CFTA - Tripartite Free Trade Area

CSA - Country Specific Advantage

FDI - Foreign Direct Investment

FSA - Firm Specific Advantage

GARCH - General Autoregressive Heteroskedastic

GMM - General Method of Moments

ICRG - International Country Risk Guide

MN'S - Multinational Enterprise's

ODA - Official Development Assistance

OECD - Organization for Economic Cooperation and Development

SSA- Sub-Saharan Africa

UNCTAD - United Nations Conference on Trade and Development

VIF- Variance Inflation Factor

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Abstract

A surge of foreign direct investment (FDI) to the developing world has been observed in recent years. However, Sub-Saharan Africa (SSA) has received less investment compared to other regions on par. This study attempts to examine the roles of institutional quality, political risk, and macroeconomic uncertainty in intimidating the inflows of FDI to Sub-Saharan Africa (SSA). The study applied the panel fixed effect and Dynamic GMM (Arellano-Bond) models for 26 sample countries in SSA, over the period from 2002 to 2021. The findings of the study show that regulatory quality, Control of corruption and enforcement of rule of law promotes the inflow of FDI to SSA. Less Political risk as proxied by political stability and absence of violence/terrorism, and government effectiveness reveals a significant positive effect on FDI inflows, while voice and accountability found to have insignificant effect on FDI inflows to the region. Macroeconomic uncertainties as proxied by real effective exchange rate and inflation rates negatively influenced the inflow of FDI to SSA. Other control variables included in the model, such as openness to trade and rate of return on investment also have positive effect on FDI inflows to the region, whereas labor force and infrastructure availability are insignificant in influencing FDI to SSA. Thus, improving institutional quality, mitigating political risks, and managing macroeconomic variables such as inflation and exchange rates are critical policy implications for attracting more FDI inflows to SSA countries.

Key words: FDI, Institutional Quality, Political Risk, Macroeconomic Uncertainties, SSA

Chapter One

1 Introduction

1.1 Background of the Study

Foreign Direct Investment (FDI) has become increasingly important as a driving force for economic growth and development in emerging economies. It changed the old-fashioned economic relations and, turned out to be the most vital element of the global economy, (Khan & Mehboob, 2014).The inflow of capital (FDI) is seen as a means of addressing the pressing problems of developing countries in general, notably in the region Sub-Saharan Africa (SSA). Because of its longevity, it can provide capital stocks, create employment opportunities, impart knowledge, transfer skills and technological advancements, switch off competencies, increase productivity, and enhance exports. Eventually, spillovers of Productivity and managerial competency induce long term economic advancements of the world's developing countries (UNCTAD, 2007).

The impact of FDI inflow on the economy is expected to be twofold; primarily, through capital accumulation; FDI is anticipated to be growth enhancing by encouraging the assimilation of new inputs with incoming foreign technologies in the production function of the host economy. Second thorough knowledge transfer; FDI is expected to augment the existing stock of knowledge to the host country's economy by labor training, and skill acquisition. On the other hand, by virtue of organizational arrangements, managerial skill practices and technological upgrading, FDI can play a significant role in increasing the total factor productivity, (de Mello, 1997; Sinclair; Liu et al., 2002). Moreover, FDI has proven to be resilient during the times of economic crisis as compared to short-term loans and portfolio investments, which are subject to large reversals (Žilinskė, 2010).

The robust nature of FDI over other capital flows has made attracting FDI as an integral constituent of economic agendas and development strategies for emerging economies around the world (Asiedu, 2002; Asiedu, 2006). However, the theoretical work of (Dixit & Pindyck, 1994) revealed that most investments are irreversible, once made it is costy to undo. Given the

irreversible nature of FDI, investors and multinational enterprises (MNE's) could adopt an attitude of wait and see, making investment decisions subject to uncertainty. Despite the contrary, FDI has become the major Catalyst for global economic development and global economic integration, (UNCTAD, 2018). Consequently, Capital is expected to flow from regions with low to high return, inward FDI rate of return in Africa and hence in SSA is high as compared to others regions with on par economic developments e.g. Asian, Latin American and Caribbean regions. Primarily, foreign investors and multinational enterprises (MNEs) want to make the best use of their resources and host countries are beneficial from productivity spillovers, technological advancement and hence diffusion that FDI comes with,(Ayodele, 2018).

Given the established benefits of FDI, there is ardent competition among developing countries towards attracting foreign investment particularly in SSA. Countries with developing nature look capital (FDI) inflow as a solution for various problems they often encounter. Most economies in SSA are characterized by low levels of domestic savings and less access (almost no access) to the international capital markets, declining foreign assistance per capita and loans (Sabir et al., 2019). In addition, there is also a considerable gap between saving and investment. In the light of, FDI can serve as a bridge to narrow the gap between required capital and available domestic savings of a country, (Dupasquier & Osakwe, 2006; Rodríguez-pose & Cols, 2017).

In general, most developing nations including countries in SSA work tirelessly to attract FDI and adopted policies that are encouraging to upsurge of FDI inflow, (World Bank, 2014).This include liberalizing trade regimes by removing trade restrictions and easing FDI related legislative frameworks by establishing investment incentive schemes, (Countries et al., 2019). Furthermore, continental to regional level trade agreements such as Tripartite Free Trade Area (TFTA), Continental Free trade agreement (CFTA), African Growth and Opportunity Act (AGOA, were put in action(Chinn, 2022). Despite efforts made by African countries to create an enabling environment for incoming foreign investors, FDI by region SSA has produced mixed results. While the flow of FDI to the region has increased in absolute terms during the past two decades, it has declined in relative terms. Sub Saharan Africa continues to receive the smallest FDI in the world (Dupasquier & Osakwe, 2006; Chinn, 2022). It's imperative to analyze why FDI has not flowed into sub–Saharan African economies, given its paramount importance to the region.

1.2 Statement of the Problem

The influence of globalization and neoliberal policies has increased the interdependence of all countries. This necessitates cooperation in trade and investment. FDI is one of the routes that firms choose when they expand internationally. Over the recent two decades foreign direct investment inflow across the world, including developing regions has increased tremendously (Rodríguez-Pose & Cols, 2017). However, Africa in contrast, has been isolated from those trends; the continent's share of FDI remains outlying and has not surpassed the 4% score in the last near three decades (Asiedu, 2006). The inflow of FDI in the region SSA witnessed a net increase in absolute terms, since the early 1980s reaching 45 billion in 2015 from a low level at the beginning; nevertheless, the situation appears to be worse in relative terms. Despite the increased inflows of FDI into the region, the share from the global net FDI inflow remains small, outlying and uneven. In the recent decades, it wafted merely between 2% to 3 % and lost its ground compared to other emerging and advanced economies.[1]During the period 2010 to 2017 SSA share of net FDI inflow from the global is merely near to 2% compared to developing regions i.e. 26.5% for Pacific and East Asian Countries, 13.25% for Caribbean and Latin American Countries, 30.34% of European Countries (Ayodele, 2018). Inflows have been decreasing since, but were still equal to a little less than 2% of world GDP on the eve of the Covid-19 pandemic, after the dramatic fall in 2020 and the remarkable recovery in post pandemic periods.

While SSA has the highest rate of return on capital,(Asiedu, 2002, 2006) the trend of generating low level of FDI inflow persisted in the region (Anyanwu & Yaméogo 2015; Ayodele, 2018). Given the less abundance of capital and declining net official development assistance (ODA) to the region, there are less arguments on the importance of capital inflow preferably FDI to the developing regions like SSA. Notwithstanding, many of the usual forces such as the relatively high capital rate of return, cheap labor force, natural resource endowments were supportive to the flow of FDI; the relative low share of FDI in the years leading up to 2019 is somewhat puzzling. The key question, has been what features does SSA exhibit that deters FDI inflows to the region?

[1]*Note*: Author's calculations of empirical evidence are based on FDI data from the World Bank, UNCTAD & World Investment Reports. (www.unctad.org/fdistatistics),

Consistent with the above, various researchers/scholars have directed their emphasis on how to alleviate where the resolution of the puzzle might lie and designate factors that stunt the flow of FDI to developing economies. (Asiedu, 2002; Lemi & Asefa, 2001; Bjurling, Teodor & Ingemarsson, 2019), identified uncertainty in the economies and the risk related to politics to be the strong deterrents of FDI inflow to emerging economies. Apart from these (Dixit, 2011) argued that, FDI is the most vulnerable form of capital flow to institutional uncertainty in host countries. Supporting this argument,(Dixit & Pindyck, 1994), debates, given irreversible features of investment multinational enterprises (MNEs) and investors look their investment long term prospects and, hence investments behavior become more responsive to the degree of uncertainty from macroeconomic and political conditions which have influences on future rate of return. Other scholars (Aizenman & Marion, 2004) argue that high levels of uncertainty caused by macroeconomic instability and political factors pooled with emerging/immature markets grounds the uncertainty of investments to be high. Also (Te Velde & Morrissey, 2002) insists, further than the unsatisfied development stages of SSA economies, inefficient market access and the triumphed economic uncertainties in the region may deter FDI inflow. In developing regions economic uncertainty and political risk plays a prominent role in hindering the Capital flows along with policy uncertainties (Senbet, 1996). According to (Lemi & Asefa, 2001) in emerging economies investors' confidence mainly influenced by political and institutional factors, which in turn these can be affected by market failure that upshots price and exchange rate uncertainties and hence uncertainties may emanate from macro-economic variables (such as uncertainty on exchange rate and inflation rates).

A great deal of attention has been paid to the economic factors determining FDI inflows, however according to (Asiedu, 2006; Board et al., 2016; Rodríguez-pose & Cols, 2017) institutional factors represent a critical omission and have not received as much attention in the literature on determinants of FDI for developing economies worldwide. (Asiedu, 2006) argues that Africa's FDI inflow is not only determined by exogenous factors, but also by institutional quality of host countries since good institutions can override the presence of large markets or natural resources in attracting FDI. In countries with corrupt institutions which encourage nepotism, and red tape, investors are unwilling to invest because these factors increase the cost of doing business (Mengistu, Alemu Aye, 2011).The impact of institutions on investment can be

related to two channels; first thorough incorrect enforcement of contracts that might cause uncertainty about future returns due to weak property rights enforcement, second through weak institutions may act as a tax by increasing the cost of doing business consequently it cause to low level of investment inflow(Stein & Daude, 2007; Buchanan et al., 2012).Moreover According to (Kaufmann et al., 2009), institutional strength of a country is closely associated to the quality of bureaucracy, control of corruption levels, enforcement of laws are the prominent leavens of quality of institutions. In addition to Macroeconomic uncertainty (captured by interest rate and exchange rate), political risk and quality of host country institutions, FDI inflow in developing economies is vulnerable to openness to international market, infrastructure development, literacy rate and capital rate of return (Steve Onyeiwu, 2003; Asiedu, 2006; Anyanwu & Yaméogo, 2015).

Accordingly, different studies have been conducted on the subject under consideration, (Asiedu, 2006) examined whether political instability, institutional quality, government policy, natural resources and market size have an impact on foreign direct investment inflow to Africa. The result of the study asserts that countries with less corruption, quality institutions having efficient legal systems and political stability promote FDI to SSA. The study, however, missed the exchange rate measure of macroeconomic uncertainty and observed little time series, as well as not showing current scenarios.. Other scholars (Hefeker, 2005) studied the link between political risk, institutions and FDI for 83 developing countries over the period between 1984-2003. Despite the excess of indicators used for political risk and institutional factors the study doesn't cover the effect of macroeconomic uncertainty and considers the world economy as a frame for sampling. However, according to (Kaufmann, 2009) factors that drive investment to Africa are different to other regions. Another scholar (Gakpa,2020), analyzed the consequences of interaction between political risk and FDI on economic growth of 31 SSA. Gakpa showed political risk hinders FDI inflow to the region. Nevertheless, the study missed important institutional and macroeconomic variables that affect FDI.

The study conducted by (Lemi & Asefa, 2001) examines the effect of economic and political uncertainty on FDI inflows in African economies. The results of the study showed that the effect of uncertainty of economic variables on FDI inflow to African economies is insignificant. However, the only significant determinants are political instability and commitment to government policies. Even though the study plots pave the way for many on the subject under

consideration, the analysis focuses on sectoral analysis of FDI inflow from a single economy, and it didn't cover the role of host country institutional qualities and its combined effect. Another study by (Das, 2018a) examined the effect of macroeconomic uncertainty on FDI inflows for 28 developing countries in the world. Accordingly, macroeconomic uncertainty affects FDI inflows in a different manner based on the level of income in the host countries. Nevertheless, the study does not cover the effects of political uncertainty and institutional factors on FDI inflows.

While there is an enormous literature examining the firsthand determinants of FDI, the empirical analysis of uncertainties from the economy and political risks is relatively small. Besides, uncertainty measures across countries are partly explained and inconsistent. More importantly, studies who analyze institutional qualities impact on FDI inflow are scant. In the literature, some of the studies are old and didn't cover the effect of institutional factors (eg. Lemi & Asefa, 2001; Bende-Nabende, 2002) and others didn't cover the effects of both Political risk and institutional factors on FDI (Das, 2018; Gakpa, 2020) and also some others didn't cover effects of macroeconomic uncertainty (Anyanwu et al., 2004; Hefeker, 2005; Gakpa, 2020; Awadhi, Mohamed; Moshi James, 2022). This suggests that there is still not a bold claim on the determinants of FDI in respect to Macroeconomic uncertainty, political risk and host country institutional quality.

It's also the huge relative regional FDI inflow difference that placed SSA on the bottom compared to regions with on par, even with less resources or capital rate of return and the method inconsistency in the literature motivates the researcher to conduct the study. This study aims to be an additional insight by analyzing the joint effects of uncertainties that emanates from macroeconomic and political factors along with the roles of institutional qualities of host countries on FDI inflow to SSA. Proxies with time factors for uncertainty variables are incorporated from the International Monetary Fund IFS CD-ROM and World Banks World Governance Indicators are fused in order to the effects of political Risk and Institutional factors. Additionally, the theoretical models of Baniak.et al (2005) and Abotsi 2016) are applied to explain how uncertainties from economic and political as well as institutional factors relate to FDI inflow to SSA. Finally, econometric models are employed and a range of estimation techniques are applied in order to devise topics such as parameter heterogeneity, omitted variables bias, simultaneity or inverse causality, and the country-specific effects.

1.3 General Objective of the study

The general objective of this study is to analyze how quality of host country institutions, macroeconomic uncertainty and political risk jointly affect the flow of FDI into SSA.

1.3.1 Specific Objectives of the Study

A specific goal of the study is to analyze how inflow of FDI to SSA is affected by:-

- ◊ Quality of host country institutions
- ◊ Macroeconomic uncertainty
- ◊ Political risk

1.4 Research Questions

The following are the main research questions for this study:-

- ◊ What are the effects of macroeconomic uncertainty on FDI inflows to SSA?
- ◊ What role does political risk play in intimidating FDI inflows to SSA?
- ◊ How institutional quality affects FDI inflows to SSA?

1.5 Delimitation and Scope of the study

The nature of FDI inflow is more complex in the least developing countries and there is no solitary econometric technique or theoretical framework that can capture the complexity of FDI flows; rather, multiple theoretical explanations and econometric models are needed to fashion a treasured explanation and make sense of it. In this study, using country level data the researcher investigates the effect of political risk, macroeconomic uncertainty and quality of host country institutions on the inflow of FDI to SSA. Empirical examinations are conducted; using panel data techniques in order to detect country-specific effects or heterogeneities, the fixed effect panel data model is applied. In addition, the Dynamic model of panel Generalized Method of Moments (GMM) at first difference (Arellano-Bond) type is used. Based on a complete set of data availability, only 26 SSA countries are included in the empirical analysis from the period 2002 to 2021 (T = 20). The study is not restricted in terms of its scope from a theoretical perspective; however, considering technical feasibility there is an exclusion of certain important independent variables on the empirical investigation.

1.6 Significance of the Study

There is no dearth of study on the determinants of FDI; however a few attempts have been made on analyzing the joint effects of uncertainties and political factors on FDI inflow to SSA, and remarkable answers have been made a little while back. However, studies that include institutional factors are scant and it suggests that there is a need for further studies on the subject considered. As a result, it's crucial to study the effect of uncertainties (which emanates from macroeconomic and political factors) and quality of host country institutions on FDI inflow to SSA. The study can shed additional insight on the empirical literature and the results of the study may be used by a variety of stakeholders, including governmental organizations, academicians, policymakers, and decision-makers. Moreover, the study also will serve as a basis for further research on the subject under consideration.

1.7 Organization of the study

The study is organized as follows: Chapter two presents the review of theoretical and empirical literature related to the topic. Chapter three presents model specification, data source and type, and the estimation techniques. A discussion of the empirical analysis and study findings is presented in Chapter four. Finally, chapter five presents conclusions and recommendations.

Chapter Two

2 Literature Review

2.1 Theoretical Literature Review

2.1.1 Definition and Concepts

Foreign Direct Investment (FDI) is defined as “an aim of establishing lasting interest by a resident enterprise (direct investor) in one economy by an enterprise (direct investment enterprise) that is a resident in an economy other than that of a direct investor. A "lasting interest" in a foreign company emphasizes how FDI differs from other capital inflows in the way managerial skills and know-how are spread; it also implies the presence of long-term relationship between the investor and the investment enterprise with a significant degree of influence on the management of the latter. In order for a direct investment to exist, at least 10% of the voting shares must be owned by the investor, (OECD, 2008). According to (IMF, 1993) individuals or business entities may undertake FDI. Both initial and all subsequent transactions between the two entities and their foreign affiliates, incorporated or unincorporated, are included in FDI.

2.2 Theories of Foreign Direct Investment (FDI)

In theory, broader approaches have been used to assess the motives and trends of FDI inflows. Majority of FDI theories are based on three integrative theories; the theory of international capital markets, the firm's theory, and the theory of international trade,(Popovici & Călin, 2014; Makoni, 2015). Also FDI theories can be examined from two economic perspectives; macroeconomic FDI theories; explains FDI motives and trends from international trade perspective at country level (e.g. Capital Market Theory of FDI, Institutional FDI Fitness theory of gravity approach) and microeconomic FDI theories relates the motives for investment across international border from investors point of view (e.g. the Eclectic paradigm of dunning) (Shin & Stulz, 1998; Lipsey, 2004; Denisia, 2010). By analyzing the similar mode of FDI from an splined perspective, theories and hypotheses may differ extensively and a number of studies have also provided an overview and hypothesis of foreign direct investment theories (Hymer, 1976; Rugman, 1980; Hosseini, 2005; Nayak & Choudhury, 2014). It is important to account for some theories relating to FDI and uncertainty in order to understand how uncertainty and institutional

qualities moderate FDI inflows. Among those the study used institutional FDI fitness theory and the Eclectic theories of dunning and the FSA-CSA matrix theory.

2.2.1 Institutional FDI Fitness Theory

According to the theory developers (Wilhelms, 1998), the "FDI institutional fitness" implies countries ability to attract, absorb and retain FDI. Getting the upper hand in harnessing FDI inflow is up to the country's ability to adapt or fit to the expectations of investors. The theory rests on four pillars of institutional FDI fitness organized as a pyramid. The Author put socio-cultural factors at the base of the pyramid. According to (Wilhelms, 1998) the pyramid socio-cultural factors are all-encompassing and most complex of institutions due to its time intensiveness to change. Citizen's exposure to foreign cultures and assimilation to the world's economy is subjected to the degree of receptiveness towards different sociocultural and business modes. High degree of receptivity augments the nation's capacity to attract FDI. (Dunning, 2000), asserts that foreign firms may be attracted to certain host country cultural proximity. Second pillar of the theory is educational fitness; authors assert that educated human capital enhances R&D creativity and information processing ability, which makes an environment attractive for FDI.

The third pillar, that of markets, well-functioning physical and financial markets are the prominent features in MNCs investment decision making process. The fourth and final pillar as put forth by (Wilhelms, 1998) is the Government. Adoption of protective regulations helps to manage market effectiveness and enables the environment to do business. Ultimately, it is the requirement for government fitness. (Popovici & Călin, 2014) added that government fitness entails economic openness, low levels of intervention, better trade policy performance, exchange rate intervention and better transparency. According to the authors, if there is hostile investment policy and political instability MNCs will shy away from such countries.

(Wilhelms, 1998) conclude that all pillars of the theory are interrelated and it is institutions; their policy and implementation give a country competitive advantage on the global FDI market. Even small nations with low row material abundances but with fitted institutions can attract large FDI inflows. The empirical test of the theory by the authors based on the developing nation's perspective showed that economic openness, law and order, corruption level and good governance are among the prominent determinants of FDI.

2.2.2 The Eclectic Theory of FDI

The eclectic theory of Dunning is perceived as the most comprehensive and integrated framework for analyzing Multinational enterprises (MNEs) behavior on their decision to invest. The concept was developed in 1977 by Dunning, which extensively bridged and grounded on the micro-macroeconomic approach, (Heshmati, 2018). Emphasizing to the motives than the levels and structures of FDI, a holistic framework was offered to identify and evaluate both the significant factors that influence foreign enterprises' decisions to site initial production and expansion of it a long with the contending host country firms action (Dunning & Lundan, 2008).When investing abroad, transitional companies face some adjustment costs (such as formation costs, currency risk, and the different treatment by the government. The eclectic paradigm hypothesizes the major offsetting criteria for FDI to happen (Eden & Miller, 2004).

According to the eclectic or OLI paradigm; the international flow of FDI is mainly subjected to possessing three sets of advantages (Ownership advantage, Location advantage, and Internationalization factors), on which the MNE's decision to invest is influenced by. The framework added, foreign firms invest abroad if there is the simultaneous existence of three determining factors (advantages), so that MNEs could be able to take some advantages over the costs of setup and operating abroad to achieve better in their oversea investment (FDI). In the OLI paradigm, Dunning combines the industrial organization, location and internalization theories and attempted to explain the FDI phenomena (Dunning & Lundan, 2008).

Ownership Advantage; emphasizes essentially, the MNE must have some ownership specific advantages over other firms serving a particular market, that are exclusive to the firm and can be easily transferred within the firm and between countries(Dunning & Lundan, 2008). These ownership advantages include both tangible and intangibles such as patents, trademarks, firm size, and monopoly power over certain factors of production. Consequently, the firm would be able to compete with firms in foreign countries by reducing production costs. However, weak enforcement of property rights, absence of rule of law, corruption, and low quality of institutions in general are often considered as the strong reins of FDI inflow in emerging economies, more specifically in Africa, (Asiedu, 2002; Denisia, 2010).

Location Advantage; the location specific advantage that MNEs look is related to "where" to site the plant, or should the host country be, (Dunning, 2001). Since investment in abroad (FDI) is a long term activity, investors are curious about country specific socio-political and economic factors (advantages) when choosing the location; such as cultural diversity and integrity, macroeconomic and political stability, institutional quality, availability of natural resources, domestic market or proximity to large markets and low labor cost, including some policy oriented factors such as degree of openness to foreign investment and infrastructural development (Anyanwu et al., 2004; Dunning & Lundan, 2008). In developing regions such as Africa political risk and institutional factors along with macroeconomic uncertainty are the top pick lines for investors (Lemi et al., 2001), and its widely believed stable social and political institutions should be in place (Onyeiwu & Shrestha, 2004).

Internationalization**,** this advantage is related to the transaction cost efficiency aspects of multinational enterprises activity. It's defined as "the extent that firms consider it in their self-interest to internalize markets that generate and/or utilize these assets, adding value by doing so for generation". It Emphasizes the degree to which firms internalize their advantages, including those resulting from multinationalism, in order to avoid market failures associated with licensing or exporting to foreign firms (when it is deemed likely) should outweigh overseas operating costs(Dunning & Lundan, 2008). MNEs must mull over the relative costs and benefits of alternative contractual arrangements when determining how to enter into foreign markets and expand their oversea operations and, hence it could be possible to internalize all value-added activities within the MNEs hierarchy. It's gauged on how firm market transactions can be conducted efficiently without suffering additional costs arising from contract viability, government intervention with price policies and input exchange determinations(Dunning & Lundan, 2008).

FDI by its nature is a forward-looking activity that heavily relies on investors' level of confidence in expectations of future returns. A number of factors affect investors' confidence in developing countries, including political risk, institutional factors, market failures that result in price and exchange rate uncertainty. As a result countries' performance on attracting FDI could be affected by these factors (Asefa & Lemi, 2003).

2.2.3 The FSA-CSA matrix Theory

In a dissemination of the theory of internalization, (A. M. Rugman, 1981) described the firm and country factors relevant for activities of multinational corporations when deciding to expand their activity abroad. It's traced upon the theory of internalization in constructing a matrix which brings together home country specific advantages (CSAs) and firm specific advantages (FSAs). The theory regards the behavior of firm that chooses external markets for taking advantage of its specific advantages (Rugman, 2008). The concept of Rugman's matrix has two axes: the first axis is represented by Firm Specific advantages (FSA) that form the firm's competitive advantages. They consist in marketing capacities, technological advancement, managerial abilities, and international experience. The second is the country specific advantage (CSA), which is characterized by the availability of natural resources, the quality of the labor market, or the features of public policies geared toward fostering an affluent business environment. The multinational enterprises (MNEs) investment decisions are made after deep analyzing of the weak and the strong points of the two dimensions (Alan M. Rugman & Verbeke, 2008).

The matrix analysis compares each country's strengths and weaknesses with those of others, and also analyzes how a firm compares with its competitors. In the beginning, the theory was developed for the home country, considering country-specific advantages (CSA) to be advantages of the country of origin, but the theory also allows for country-specific advantages (CSA) to be advantages of the host country. In addition to classical location advantages such as resource endowment or the demand aspect, the conceptual framework also considers a factor that facilitates the potential growth of a firm as well: the development of clusters or the ability to development inter and intra-firm relationships. The author argues further argues that, institutional qualities are amongst the key factors to take over the contendants through institutional advantages attract foreign direct investment (Rugman & Verbeke, 2008; Rugman, 2010). In general, the theory was overshadowed by the appearance, around the same time, of the OLI paradigm, but its utility can be seen from three perspectives (Rugman & Verbeke, 2001): as a tool used for top management decision making, for public policy purposes in describing a state's comparative advantage and the firm's specific advantage, as well as for analyzing and comparing the location parameters among countries. The theory clearly emphasizes institutional quality and locational parameters are the key factors that influence the inward foreign direct

investment and the decision of multi-national enterprise's (Rugman & Verbeke, 2008; Rugman, 2010).

2.3 Conceptual framework of the study

2.3.1 FDI and Macroeconomic Uncertainty

In general, uncertainty can link to capital flows in different channels. When it comes to investing abroad decisions are made by considering future options. Investors inevitably look to the future before investing and hence most FDI decisions of MNEs are subjected to uncertain factors related to their future activities (Javed, 2011; Gourio et al., 2015). According to (Dixit & Pindyck, 1994), investments are subjected to irreversibility (once made it involve costs that are sunk) implying that in order for firms to invest, the marginal revenue product (MRP) of capital must be above a minimum threshold, an increase in uncertainty increases this threshold, hence the rise in uncertainty lowers investment levels (Javed, 2011). Theoretically, uncertainty increases an investment, if the marginal product of capital (MPK) increases with prices. This increases the expected rate of return on capital and variance of prices (Abel, 1983). Consequently, investors may develop an attitude of wait-and-see or delaying it. (Dixit & Pindyck, 1994) further added that future profitability relates to future benefits and costs, prices, rate of return along with other economic factors make investment decisions to be subjected to uncertainty.

On the basis of the source, uncertainty is broadly classified into macroeconomic uncertainty and political uncertainty, (Javed, 2011). In the extant literature on FDI also elucidates that, FDI decisions such as macroeconomic uncertainty, political instability, institutional quality of host country, corruption level, GDP growth etc., (Sung & Lapan, 2000; Asiedu, 2002; World Bank 2013; Das, 2018). Consequently, they argue, investing somewhere requires stability in the macroeconomic and political environment and investors investigate more often about those variables before investing abroad (Hess, 2000).Macroeconomic uncertainty stems from the volatility in macroeconomic variables such as exchange rate, interest rate, etc.,(Asiedu, 2006; Asefa & Lemi, 2003; Udoh & Egwaikhide, 2008) and, they are country specific that make FDI unique compared to short term portfolio investments (Hauser, 2005).

The flow of FDI across countries can be influenced by volatility of exchange rates (Campa, 1993; Goldberg & Kolstad, 1995), according to (Goldberg & Kolstad, 1995), when a currency depreciates it loses its value against other country's currency, implying that the relative wage and production cost of the host country is low. If the change in the exchange rate is associated with the change in relative production costs and consequently the relative wage channel becomes less important. Then it results in a positive effect on FDI inflow. However this happens when all else being the same and the firm is investing to use the location advantage (diversify production) across countries or else, if FDI was primarily for serving other markets (involved in international trade) or bringing production home, the relationship between FDI and exchange rate uncertainty would be negative(Blonigen, 2005). According to (Udoh & Egwaikhide, 2008) this negative relationship exists because exchange rate uncertainty raises the expected profits variance and decreases the net present value of foreign assets. Regarding inflation uncertainty, (Friedman, 1977) argues, high inflation rate at country level leads to more uncertain economic conditions. Moment of inflation rate intimately affects returns on investment. For developing economies specific to Africa, volatile inflation rates reduce the net present value of investments and hence hinder FDI inflow (Asiedu, 2006). Despite the tremendous efforts to investigate the effect of Uncertainty (exchange and interest rate volatility) on FDI inflow there is no clear consensus on the effects and further studies on the topic are needed (Aizenman, 1992), More specifically in developing economies (Das, 2018).

2.3.2 Political Risk and FDI

Political risk is an elusive notion with hazy conceptual boundaries and easily unquantifiable. Various Scholars define it as, the prevalence of political violence and disruption, or the radical government (regime) change in the recipient country, or as the discontinuities in the business environment caused by political changes (Green 1974; Micallef 1982). From a more semantic point of view (Alesina & Perotti, 1996) define it as the bent of a government to collapse as a result of a conflict (internal or external) or due to a lack of good governance that impairs investment climates and discourages FDI inflow. It's more often associated with uncertainty in economic policy and can serve as a signal for the flow of FDI, through speculation in particular, about the level and variability of returns on investment in the host country (Carruth et al.2000; Javed, 2011).

According to (Asiedu, 2013), increased political risk impedes investment flow and hence FDI should be negatively related to political risk, because the latter reduces the efficiency of government and business institutions by distorting the economic and financial environment. (Brada et al., 2006) further argues that FDI is progressive activity highly dependent on expectations of investors on future returns and the level of confidence they put on rate of returns. There are two major negative consequences of political instability for FDI inflows and progress. The first one stems from domestic instability or civil war or conflict with neighboring countries that could damage facilities or infrastructures, disrupt production, weaken the domestic sales or exports and reduce profitability of operating in the recipient country. Secondly, it's quite likely this could affect the value of the host country's currency; this reduces investment profits in the future as well as the value of assets invested in the host country.

Political uncertainty that emanates from unstable governments, lack of property rights protection, and civil conflict can also be a great impediment to FDI inflows as this all closes the door for incoming foreign investors (Javed, 2011). Furthermore, theoretical arguments on the effects expected return on investment and influence of uncertainty on FDI remain ambiguous (Carruth et al., 2000) and the effect of political risks on the developing economies should have to be supported by concrete empirical evidence(Thomas, & Grosse, 2001).

2.3.3 Institutional Quality and FDI

According to (North, 1987), institutions can be defined as the rules of the game in the society that structure human interactions including economic exchange through humanly devised constraints, and created to reduce uncertainty by providing a predictable framework. Since the early 1990s the flow of FDI has increased tremendously and emerging economies have been working tirelessly to increase their share. Institutions have an irreplaceable role in establishing incentives for economic activity in general and for investments in particular. Consequently, institutional quality has become increasingly important to foreign investors when choosing location for investment (Bevan et al., 2004). Investors often attach their productivity prospects to the quality of institutions because high quality institutions may signal higher productivity and promote a better investment climate, whereas poor institutions can bring additional costs(Bénassy et al., 2005). (Acemoglu& Johnson, 2005) added, inefficient institutions may lead

to host country commitment problems, such as reneging on policy promises once key long-term investments have been made and hence impede FDI inflow.

MNEs engaging in FDI have to incur additional fixed costs in emerging economies and these costs broadly related to the uncertainty levels of host countries such as institutional uncertainty (or institutional quality) (Rodríguez-Pose & Cols, 2017; Jung, 2020). Consequently, the institutional quality affects FDI through different channels; primarily poor institutions may act as a tax which increases the cost of doing business or investment. Secondly, improper enforcement of contracts might also increase uncertainty in future returns on investments(Stein & Daude, 2007). According to (Brunetti, & Weder, 1998; Asiedu, 2006; Kaufmann et al., 2009),uncertainty related to institutional environments such as prevalence of corruption, the extent to which the rule of law is enforced, the bureaucratic quality of the government are among the potential variables that affect institutional FDI nexus. Institutions represent an important omission and has not received a commensurate attention in the literature about the determinants of FDI, particularly in some developing economies around the world more weight has been given to exogenous factors that determine FDI, while host country characteristic such as quality of institutions sufficiently important factor in explaining why FDI prefers some regions over the other (Jenkins, & Thomas, 2002; Asiedu, 2006; Rodríguez-pose & Cols, 2017).

In general, the theoretical literature on the determinants for the flow of FDI into host countries are broadly classified as economic, institutional and political factors. It is imperative to quantify uncertainty, since it is unknown and unobservable. The macroeconomic role is explained by the uncertainty on the policy variables. The study used the proxies of real exchange rate and inflation rate indicators for determining the macroeconomic uncertainty. Also due to technical feasibility selected macroeconomic variables are included as a control. This study explores the political and institutional roles of FDI to SSA. However, in the theoretical literature there is a lack of full agreement on determining which will better represent the political and institutional factors. This study will be grounded on the theoretical work of (Kaufmann et al., 2009) on the dimensions of classifying the link between governance and FDI. This study's conceptual framework indicates that FDI as a percentage of GDP is measured by combining the independent variables on the right-hand side. The variables included are macroeconomic concerns, political risk, and indicators of institutional quality.

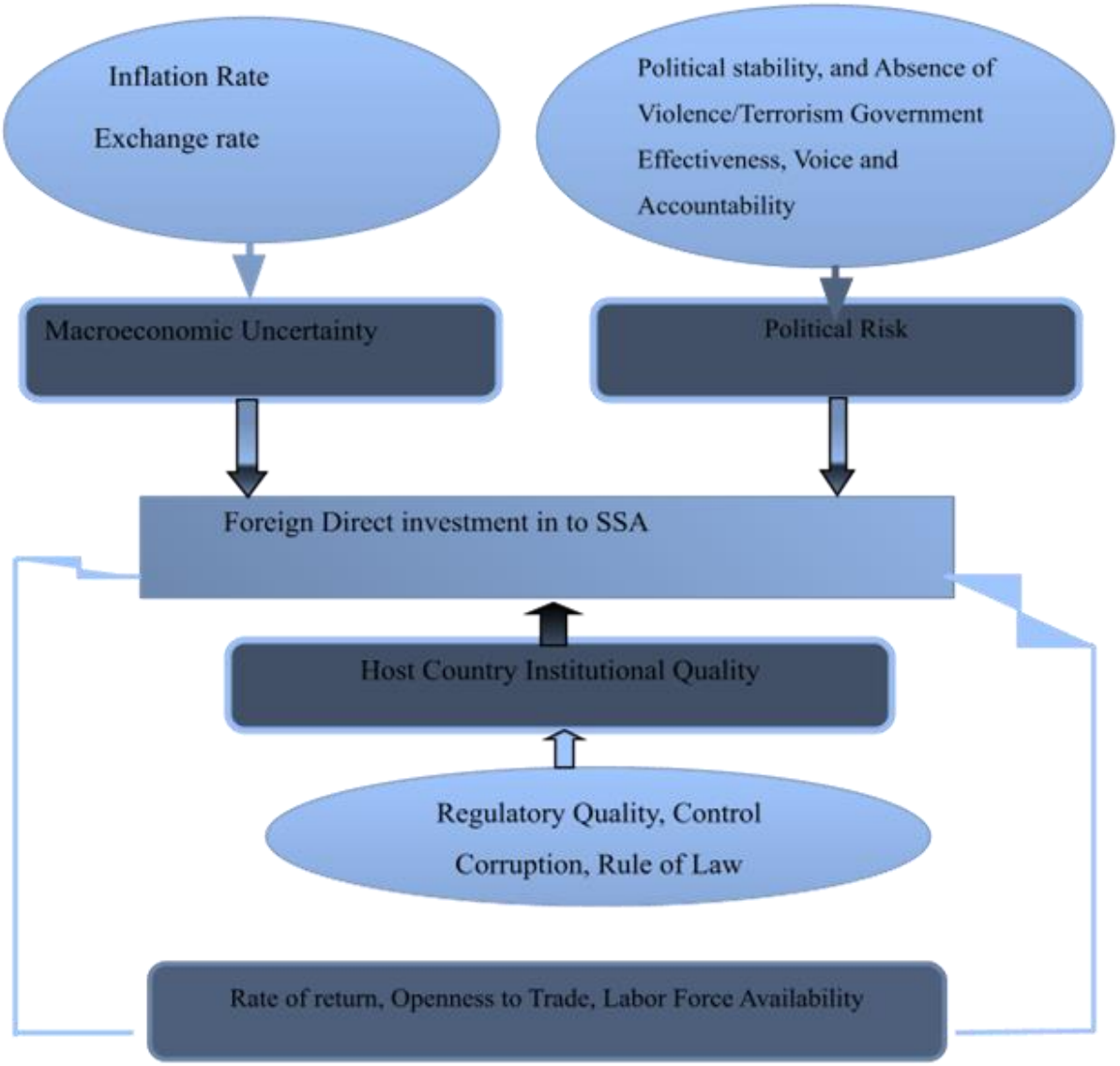

Figure 2. 1 Conceptual framework of the study

2.4 Empirical Literature Review

Numerous empirical studies have been conducted in the pursuit to explore the effect of macroeconomic uncertainty, political risk and institutional quality on FDI inflow, however most of the results are inconclusive and still there is no bold claim on the FDI determinants at large (Rodríguez-Pose & Cols, 2017). Majority of the studies are concentrated on developed economies, more specifically studies to empirically test the effect of institutional quality on FDI inflow for developing economies is scant. In this section of the study, empirical literature related

to the effect of uncertainty that emanates from economic variables and political factors along with institutional quality on FDI are reviewed.

The study conducted by (Asefa & Lemi, 2003) examines the effect of economic and political uncertainty on FDI flows to 29 African economies from the United States manufacturing and non-manufacturing FDIs and all source countries. The study covers the period of analysis from 1987 -1999 for all source countries and from 1989-1998 for US FDI flows. Using the conditional measures of volatility and employing the General Autoregressive heteroscedastic (GARCH) model to capture volatility from macroeconomic variables; interest rate and exchange rate. The study found that the effect of volatility of economic variables from all source countries on FDI inflow to African economies is insignificant. However, political instability and government policy commitment are the only significant factors in determining the US Manufacturing FDI, whereas US non-manufacturing FDI flows to Africa is determined by economic volatility when only coupled with political uncertainty and debt burden of the host countries. Along with other determinants of FDI such as availability of labor force, market size, external debt, trade connection and size of export are assessed and found to be significant in affecting FDI flow to African economies.

(Asiedu, 2002), conducted a study to examine whether the determinants of FDI are equally important for developing countries, specifically for Africa. The study used a sample of 71 developing countries, some from the SSA region over the period 1988-1997. The results of the study indicates that the higher return on investment measured as the inverse of GDP per capita and better infrastructural quality positively influence FDI inflow to non-SSA countries in contrast these factors have no significant effect on FDI to SSA. Openness to trade promotes FDI to both SSA and Non-SSA regions, in SSA; however, the marginal benefit of increasing openness is less. According to the study all else being equal FDI is uniformly lower in SSA, which means FDI is affected by the virtue of countries geographic location. The study intuitively argued that African countries have a wrong connotation about investment climate as a high risk that may partly expose countries to ignorance by investors. The study also argued that, besides dispelling this myth, sound and creditable policy reforms related to liberalizing trade and the like that are not only replicated are needed to cope with investors demand.

Other Scholars (Onyeiwu & Shrestha, 2004)conducted a study to investigate what determines FDI inflow in Africa by taking a panel of 29 countries over the period 197- 1999. The study employed both random and fixed effect panel models and finds that economic growth, inflation, openness of the economy, international reserves, and natural resource availability as a significant determinant of FDI to Africa. Contrary to (Asiedu, 2002) infrastructural development was insignificant in determining FDI to Africa.

(Udoh & Egwaikhide, 2008) examined the effects of volatility of macroeconomic variables; exchange and interest rate on FDI to a single country Nigeria over the period 1970-2005. The result of the study indicates that both inflation rate and exchange rate revealed high volatility and exerted a negative significant effect on FDI flows during the period under analysis. According to them, increased volatility in those variables tips the uncertainty and risk rudiments of FDI to be high and incoming investors are reluctant for uncertainty in host countries. In addition, the size of the government, international competitiveness and infrastructural development have significant positive effects on FDI flows to Nigeria. Also, employing panel data technique, for 43 African countries during the period 1990-2015 (Personal et al., 2017)examined the effect of macroeconomic stability on inward FDI to the sample developing countries. The results of the regression entail that liberalized investment and trade regimes and better infrastructure have a positive significant effect on FDI inflows to African nations. In addition, market size of the host countries and stable macroeconomic indicators of the host countries positively affect FDI flows to Africa.

In light of scrutinizing the impact of quality of institutions on FDI flows, the study by (Sabir et al., 2019) used a panel method to148 lower, lower-middle, upper-middle and high income countries around the world for the time span of 1996-2016. The empirical findings of the study indicate institutional quality has a positive significant effect on FDI flows in all group countries. However according to the study, the magnitudes of coefficients such as Government effectiveness, control of corruption, voice and accountability regulatory quality and enforcement are high in developed countries and in developing countries, value-added as a percentage of GDP per capita, trade openness, agriculture value-added as a percentage of GDP, and infrastructure are associated with significant positive effects on FDI inflows to developing countries. Also categorizing sample countries by stages of development as developed and developing and using

a panel data set of 110 countries (Peres et al., 2018)analyzed the impact of institutional quality on FDI inflows. The study used control of corruption and rule of law indicators as a proxy for measuring institutional quality. The result of the regression provides that institutional quality positively and significantly affects FDI in developed countries while the effect on developing countries is insignificant. They emphasize that this is because developing countries have weak institutional structure. And other things remain constant, market size, governance indicators and Lagged values of FDI significantly affect FDI in both developing and developed countries.

In their research, (Hefeker, 2005) examined whether and to what extent institutional quality and political attributes affect FDI flows to the developing economies. The study accounted for all twelve political risk factors calculated by the political risk service group since 1984 that do not only cover political risk elements but also institutional risk factors. They underline that the close proximity between measures of institutional and political uncertainty measures while case related separate analysis is needed. They used a fixed effect model to analyze the dynamic panel data, and GMM estimators to address the autocorrelation issue for 83 developing countries over the period 1984-2003. The regression results of the study concur that absence of internal conflict and ethnic tensions, government stability, basic democratic rights and ensuring law and order are highly significant determinants of foreign investment inflows to the sample developing countries. They added that the relative magnitudes of law and order and government stability indicators are larger indicating that changes in these aspects of political risk and institutions are highly relevant to investment decisions of multinational enterprises investing abroad. Moreover, they checked if the estimates were robust, but the significance of the variables above remained the same.

The study of (Buchanan et al., 2012) used a panel data method for examining the impact of institutional quality on FDI levels and volatility to 164 countries for the period 1996-2006. The impact of institutional quality on FDI levels appeared to have positive and significant effect, and all being constant, FDI volatility is negatively associated with institutional quality. The authors emphasize that if there are institutional determinants of FDI volatility and such volatility is associated with lower economic growth, equal emphasis should be given to institutional measures along with other macroeconomic policy advice.

Also, (Cleeve, 2012) studied the roles of institutional factors and political stability in FDI flows to SSA. The study covers the period of spam from 1998 to 2008 and relied on data sources of

World Development Indicators (WDI) for policy variables and on the International Country Risk Guide (ICRG) of the Political Risk Services Group for institutional and political risk variables. After controlling the effects of policy variables i.e., macroeconomic instability, human capital development, openness of the economy and other traditional variables empirical test of the study indicates that internal and external conflict, law and order, investment profile, bureaucratic quality and government effectiveness variables showed positive and significant effect on FDI inflow to SSA. Contrary to the studies by (Sabir et al., 2019), and (Peres et al., 2018) the study found that the level of corruption in host countries is insignificant in explaining the level of FDI inflow. According to the authors this is because the resource seeking nature of FDI outweighs corruption if it can be associated with the period of cover on the study. Additionally, the author emphasizes that the majority of variability in FDI can be explained by institutional and political Variables.

The research conducted by (Nondo & Kahsai, 2016) investigated whether institutional quality matters in foreign direct investment to the SSA region. After employing the panel data set for 45 SSA the results of the analysis are contrary to the previous results. They found that institutional quality indexed by government effectiveness, regulatory quality, political instability and violence, rule of law and control of corruption is statistically insignificant in explaining FDI to SSA. And the study by (Asamoah et al. 2016) examined the effects of institutional quality on moderating the relationship between macroeconomic uncertainty and FDI to SSA countries. Empirical findings of the study reveal that macroeconomic uncertainty adversely affects FDI flows to SSA. While using the same indexes with the study by (Nondo & Kahsai, 2016) this study found that institutional quality has a positive and significant effect on FDI to SSA countries. Also, the interaction term between macroeconomic uncertainty and institutional quality after controlling the effects of other variables have a significant effect in explaining FDI to SSA.

The study of (Solomon & Ruiz 2012) examined the effects of macroeconomic and political uncertainty on the patterns of FDI to countries of Latin America, Africa & Asia over the period 1998 -2004. Regression results from the panel data technique indicate that political risk and exchange rate uncertainty adversely affects FDI to all regions. While the effect of political risk is severed to African economies compared to that of Latin America and Asian economies.

(Azam et al., 2012), investigated the potential effects of political risk and macroeconomic uncertainty on FDI to South Asia for the period of 1990-2008. Establishing a theoretical foundation based on oligopolistic and imperfect competition environments and employing autoregressive distributed lags (ARDL) method the regression results indicate that the impact of political risk indexed by internal and external conflict, democratic accountability government stability and corruption are all have negative significant effect on FDI to selected South Asia both in the short and long run. Also, macroeconomic uncertainty captured by interest rate and exchange rate uncertainty negatively affects FDI flows to the selected region and the sensitivity is high in the short run as compared to the long run. Also (Bo & Studi, 2009)examined the relationship between exchange rate risks, political instability, and FDI outflows from the United States to 53 countries between 1982 and 2005. FDI was found to be influenced by an interaction term between political risk and exchange rate

The literature on uncertainty cites macroeconomic variables and political factors as the main sources of uncertainty in economies. In general, there are two main types of uncertainty measures employed in the literature. Firstly, by surveying economic agents directly, secondly there is uncertainty based on historical data. The measures for macroeconomic uncertainties are unambiguous (Asefa & Lemi, 2003, Sajid Amin Javed, 2011, Solomon & Ruiz, 2012). However measuring institutional quality may take different forms and may require different data sources. (Kaufmann et al., 1999) confirms that assessing ‘’ good governance’’ through indicators from the World Bank's data Methods could better catch the effect of institutional quality.

Chapter Three

3 Research Methodology

Research methodology provides a blueprint for directing research. In this section of the study, we discuss the general methodology: data source, model variables, estimation methods, theoretical foundations, and then outline our econometric model specifications described hereunder.

3.1 Data Source

To achieve the objective of exploring the roles of macroeconomic uncertainty, political risk and host country institutional quality on the inflow of FDI to SSA, the study used credible international organizations databases as a secondary data source. Our analysis covered 26 countries from SSA, for the period 2002 to 2021. Sample countries are selected based on data availability of a complete set of data. The data source for our macroeconomic instability measure variables is retrieved from International Financial Statistics (IFS, CD-ROM) of the IMF database. Also, the data for our political risk and institutional quality measure variables is retrieved from the World Bank's World Governance Indicators. Furthermore, the data for proxies of control variables are from World Bank, World Development Indicators.

3.2 Method of Analysis

To understand the basic features of the data the study used descriptive statistics. The data is panel type and the dynamics of change in country level allows us to analyze the causal effects. Aiming to account for the country-specific heterogeneity across each country, panel data techniques are employed. Also, after employing the Housman's (1978) specification test result of guaranteeing the panel fixed effect model, to the nature of the data used the author employed it. The method mainly helps to minimize the bias arising from individual heterogeneity. And relying on distributional assumptions and moment conditions the study applied the dynamic panel data model more specifically the Arelano-Bond General method of moments (GMM) estimator.

3.3 Theoretical Foundation

There have been some theoretical models developed in the literature to analyze the effects of uncertainties on FDI**.** They are mostly used to explain FDI inflows into developed economies; even though uncertainty that arises from macroeconomic policies coupled with political and institutional factors appear to persist in most emerging economies, chiefly in Africa. However, recently some theoretical explanations have focused on developing economies,(Goldberg & Kolstad, 1995; Sung & Lapan, 2000; Baniak et al., 2005; Abotsi, 2016). Among them Baniak's work is built on a theoretical model that scrutinizes how economic uncertainty coupled with political and institutional factors affect investors' decision to invest and the FDI into transitional economies. Also, (Abotsi, 2016), adopts the theoretical framework to analyze how the quality of institutions affect the return from investing and hence investment decisions. And we adopt these two models to show how exchange rate uncertainty, political and institutional instability affect the investment decisions of MNEs.

Rendering to the work of (Baniak et al., 2005), we assume that MNCs chooses the location for production on only two possible alternatives; the commodity can either be produced in a host country to FDI(home country for the foreign firm) or MNCs can build a plant in their own country (host country). The basic assumption by the author is that firms are managed by a group of typical risk averse owners or managers and exhibit decreasing average cost, hence in a deterministic setting only one plant will be built. Also, for technical feasibility, we only focus on a single commodity market in the host country, assuming that particular commodity is not produced in the domestic country, but the demand is fully satisfied by imports.

In addition, regardless of where the MNC's built the plant, it will incur the cost associated with operation of the plant. More concretely; there are fixed costs connected with running each plant and the marginal production costs in each plant. Functionally, the cost function for home and foreignplant can respectively be outlined as,

$$C(Q) = cQ + F \qquad \textit{Equation 3.1}$$

$$Cf(Q) = CfQ + Ff \qquad \textit{Equation 3.2}$$

Where, c, c_f denotes the marginal costs, F, F_f denotes the fixed costs and Q output produced. Meanwhile, the firm is exposed to uncertainty about marginal cost of production in the country of destination (uncertainties' arising in consequence of macroeconomic, institutional and political instabilities). In other respects, every plant faces a perfectly elastic demand, that is to say, the firm can sell any volume produced, and the commodity can be sold at the world price (P_{world})and. Additionally, another momentous assumption is that cost of the plant is expressed in the currency of the host country and is not affected by exchange rate (which is, production is based solely on local resources), in the same vein, the cost of the plant built in the home country is expressed in that country's currency.

Now suppose that, given all the above, there abide a particular MNEs that wishes to produce the commodity in the host country. In fully decisive case, based on the local currency of the host country, the profit generated by the host country's plant can be expressed as;

$$\boldsymbol{\Pi} host(Q) = \left(\frac{1}{e}\right) * Pworld * Q - Chost * Q \qquad Equation\ 3.3$$

Where; e represents the exchange rate of foreign currency in the destination country (can be defined as the number of units of foreign currency per one unit of host country's currency), in the same way profits of foreign plant denominated in foreign currency is;

$$\boldsymbol{\Pi} home(Q) = \text{Pworld} * \text{Q} - \text{Chome} * \text{Q} - \text{Fhome} \qquad \text{Equation 3.4}$$

The profits of the plant built in the home country are unaffected by exchange rates. On the other hand, the above two equations entail that, given the technical possibilities of not producing above the constrained capital K, world price of the commodity and the demand curve, the profit estimations are highly dependent on the valuations of macroeconomic indexes (which are usually the official forecast of national institutions based on subjective analysis and decisions) and production costs which in general are influenced by institutional factors and political risk. The MNE decision regarding investment is subject to uncertain environments. In particular, the firm faces exchange rate uncertainty resulting from unstable macroeconomic environments. Principally it's critical to remember that the exchange rate and inflation rates are influenced by macroeconomic situations that are unpredictable in advance. Also the firm faces uncertainty

about the cost of production descending from unstable political and institutional factors since both are incorporated in the computation of production costs.

In accordance with (Baniak et al., 2005), we assume exchange rate and production cost are two random variables with known probability distribution at the moment of decision-making and independent of each other. Having said that MNE is a risk averse; consequently, the utility function is concave. Risk-averse MNEs do not increase output or production plants to maximize profits. Instead, it maximizes the utility from profits. The MNE, when aspiring to establish the plant in the host economy, analyzes the utility of profit from the host plant expressed in the home currency which can be specified as $U_e(\pi_{host}(Q))$. And Profits are fully deterministic when the firm considers opening the plant in its own country the utility function can be specified as $U(\pi_{home}(Q))$. denoting the optimal value of output by Q* the firm's target value is $U(\pi_{home}(Q^*))$. A decision needs to be made regarding where the plant should be built by comparing the maximum expected utility from investing in the host country with home target value.

It is important to note that when the expected cost and/or exchange rate decrease, the expected utility from profit increases in the host country. The MNEs follow the following order when deciding on the possibility of establishing the new plant; primary the MNE follows and learns about the exchange rate and cost of production probability distributions in the host country, secondly it finds the optimal value of output(Q*) for the host plant which maximizes the expected utility $U_e(\pi_{host}(Q))$, and finally the firm decides whether to build the new plant in the host country or not by comparing the expected utility ($U_e(\pi_{host}(Q))$, with target value ($U(\pi_{home}(Q^*))$. The values of exchange rate and cost of production are realized. Their variability also affects the expected utility, which in turn influences the MNEs decision to invest. To measure exchange rate uncertainty from exchange rates and inflation rates as well as the derivative influence of political risks and institutional inefficiency, the study will employ panel data techniques. Detailed information can be found in (Sandmo, 1971)) and (Baniak et al., 2005).

Also, for further explanation on the theoretical link between institutions and FDI this study took the work of (Abotsi, 2016). Consider a multinational enterprise seeking to invest in a foreign country. In addition, using its own technology, the enterprise chooses the country where it will invest. Also, assuming that the technology owned is not subjected to individual specific shocks, but faces aggregate uncertainty due to the state of host country institutions. In choosing a host economy or country, considerations such as the level of corruption and countries ability to enforce property rights and law and order play a significant role. Further assuming the products produced by the enterprise have the same price in all economies and market access and the enterprise is managed by risk averse individuals with the same preference. In production functions of the firm, at all levels of capital stock, greater technology would lead to greater economic output. Consequently, increasing technology from A_0 to A_1 would shift the production function higher, increasing capital's marginal product. However, host country institutional arrangements/quality in the host economy may affect technology and productivity.

Under low quality institutions, if it declines below a certain level (T) will shift the entire production function downward from (1) to (2). This downward decline in the production will lead to the reduction in output from Y_1 to Y_2 and the subsequent fall in the enterprise profit measured in units of output from $\pi_1(T)/p$ to $\pi_2(T)/p$ (represented in the vertical intercept of the figure) and this ultimately translates into a decrease in the return to the capital invested.

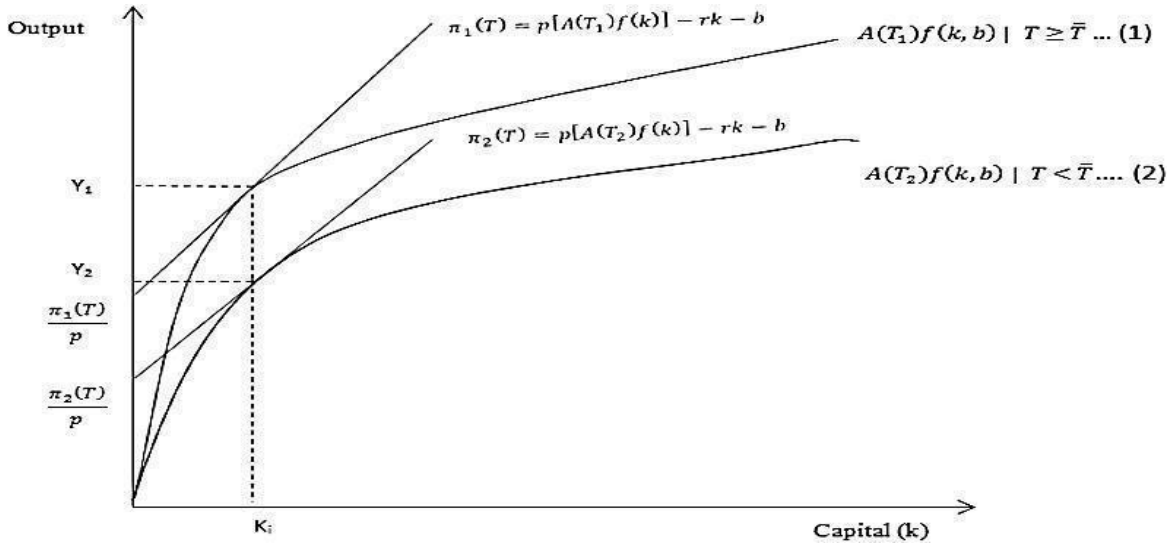

Figure 2. 2 The capital production function with capital on the horizontal axis

The figure above depicts that below a certain level of quality of institutions in the host countries, the return on capital will decrease and beyond this level the return will increase. The level of corruption, enforcement of property rights and the level to which law and orders are enforced and bureaucratic quality in the host economy will determine the quality of institutions, (Kirifa-Schneider et al., 2010; Ezeoha & Cattaneo, 2012 & ,Abotsi, 2016). To functionally further explain Abotsi adopts a similar assumption to (Cagetti and De.Nardi, 2006; Covas and Fujita, 2011) about the amount of labor imputed which is fixed and normalized at a value of one. $y_i = A(T_i)f(K_i)$, where, y_i represents firms' level of output, K_i, depicts the physical capital used in the production, and $A(T_i)$ represents the level of productivity which depends on the institutional quality of country i. Also, assuming the production function is strictly increasing and concave and the risk averse owners are not allowed to have risk free assets while the risk that erodes the return in capital due to institutional factors are uninsurable. Investors tolerate a certain level of corruption or low enforcement of law and orders; however, beyond a certain level investors no longer invest in that country.

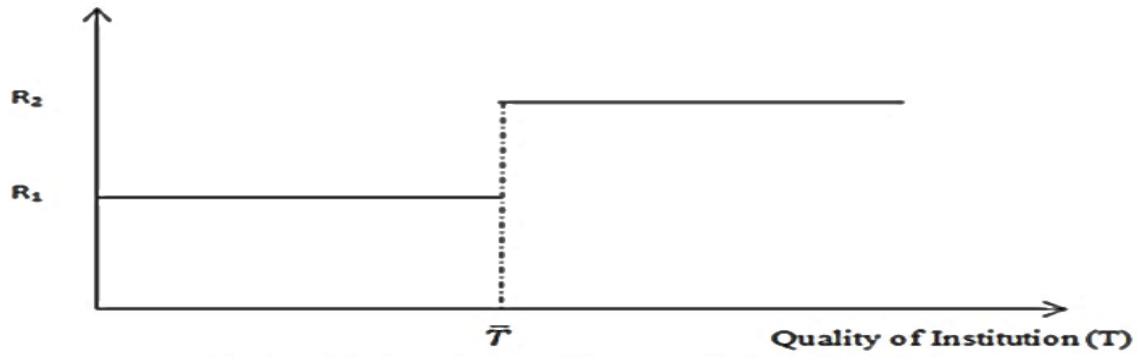

Figure 2. 3 Return on investment with respect to the level of institution

Figure 2.3 shows how return on investment changes with level of institution. Returns are high at high quality institutions and low at low quality institutions. However, beyond the hypothecation, empirically quantifying how these variables along with economic and political variables intimidate the flow of FDI to SSA is the empirical work of this study.

3.4 Empirical Model Specification

Theoretically, a model specification is a mathematical representation of the relationship between variables. As part of this section, the study presents a simple mathematical model intended to capture the role of macroeconomic uncertainty, political risk, and institutional quality in determining FDI inflows to SSA. Referring to the literature review and our theoretical foundation, the equation to be estimated with response variable the ratio of FDI scaled by each country's GDP, incorporating macroeconomic, political and institutional variables as predictors along with control variables can be stated as,

FDI/GDP = f (REXR, INFR, RR, LFA, INFRA, OPEN, INST, POLIR……) Equation 3. 5

In a more statistically meaningful way, the above equation can be expressed as,

$(FDI/GDP)_{it} = \alpha_0 + \alpha_1 SDREXR_{it} + \alpha_2 SDINFR_{it} + \alpha_3 RR_{it} + \alpha_4 LFA_{it} + \alpha 5\ INFRA_{it} + \alpha 6\ OPEN_{it} + \alpha_7 INST_{it} + \alpha_8 POLIR + \varepsilon_{it}$……Equation 3. 6

Where; α_0, represents the constant term and $\alpha_1 \ldots \alpha_{14}$ are the coefficients for the variables of interest that needs to be estimated, i from 1 to n represents the sample countries and the variables $(FDI/GDP)_{it}$ – denotes FDI inflows as a percentage of GDP, $SDREXR_{it}$ -Standard deviation of real effective exchange rate , $SDINFR_{it}$ -Standard deviation of inflation rate, RR_{it} - Rate of return on capital, LFA_{it}-Labor force availability, OPN_{it} - openness to Trade, $INFRA_{it}$ - Availability of infrastructure in host countries, $INST_{it}$ - Institutional quality measures, and $POLIR_{it}$ - Political risk measure(s) all in host country i at time t .

3.4.1 Panel Data Models

In this study, the author analyzed net FDI inflow from all source countries to selected SSA countries, and hence we employed panel data techniques to better account for country-specific effects.

3.4.2 Fixed Effects and Random Effects Model

Panel data models with fixed or random effects are able to take into account the unit-specific heterogeneities of samples. Numerous disciplines employ Fixed effects (FE) estimation because of its conciseness and persuasive rationale. Basically, the fixed effects model is simply a linear regression model in which the intercept terms are allowed to vary over the individual units i, and the country-specific effects are incorporated into the model as a regressor's rather than including them in the error term, hence the bias due to omitted variables will be reduced. Also, in FE we estimate within effects, consequently they cannot suffer from heterogeneity bias. Whereas in the random effect model, the intercept term is presented by a random error term, not as regressors, (Verbeek, 2004).

Functionally both the fixed and random effects model can be specified as,

$y_{it} = \alpha_i + x'_{it}\beta_{it} + \varepsilon_{it}$……...*Equation 3. 7*

$yit = \alpha + x'_{it}\beta_{it} + \alpha_i + \varepsilon_{it}$…….*Equation 3. 8*

Where i, denotes individual observation's from 1 to n, t, represents the time, the X_{it} denotes a K-Dimensional vector of predictor variables, α_i, α the intercept that capture the effects of those variables that are specific to the i^{th} individual, where βit measures the partial effects of X_{it} in period t for unit i, ε_{it} represents the disturbance term, and Y_{it} represents the response variable. If we treat the α_i as n fixed unknown parameters, the model in (3.7) is referred to as the standard fixed effects model, α_i assumed to be a group-specific constant term.

Alternatively, if we treat α_i, a random drowning from a distribution with constant mean and variance, independent of predictor variables the above model becomes the Random effect model (3.8). The individual heterogeneity assumed to be uncorrelated with other variables in the model. The error term in this model consists of two parts: a time-invariant component α_i and a remainder component ε_{it} that is uncorrelated over time.

3.4.3 Arellano-Bond Dynamic Panel GMM Estimator

The static panel data models are based on the assumption of strict exogeneity on predictor variables and uncorrelated residuals. And hence they are constrained to a certain functional form which may not provide flexible and robust ways to model the complex relationship between variables. Besides this, our study needs incorporation of most policy variables and according (Ariana, 2016) most often policy variables fail to satisfy strict exogeneity assumption. Also Inference methods using least squares could root bias and inconsistent estimates due to the possible endogeneity problems. Moreover, Foreign Direct Investment is a dynamic process, MNEs may be attracted to host countries that already have considerable degrees of FDI success from the previous period, and hence FDI decisions in the current period may be influenced by the FDI in the previous period,(Asiedu, 2006). Some Studies have found lagged FDI variables to be highly significant in their regressions (Hefeker, 2005). Besides the fixed effect estimator, this study applied panel regressions based on generalized methods of moments (GMM), specifically the Arellano-Bond GMM dynamic model. On one hand the Arellano-Bond dynamic panel GMM estimator is more advantageous to better account for the problem of autocorrelation in residuals as the lagged value of the response variable is included as a predictor in the model. On the other hand, the method is robust to the problem of potential endogeneity on explanatory variables or on control variables and bias due to omitted variables or measurement errors,(Roodman, 2009). Additionally (Arellano & Bond, 1991) assert that the Arellano-Bond GMM dynamic model better be employed in the condition when we need to follow small time periods (T) usually less than 20 and large panels N.

In most well-defined econometrics books i.e (Gujarati, 2003; Baltagi, 2005) and (Verbeek, 2004) the Arellano-Bond GMM dynamic model is specified as,

$\mathbf{y_{it} = \gamma y_{it-1} + x'_{it}\beta + v_{it}}$.....*Equation 3. 9* by assumption, $E(\mu_i) = E(\varepsilon_{it}) = E(\mu_i \varepsilon_{it}) = 0$

Where $v_{it} = \mu_i + \varepsilon_{it}$ and i denotes the number of panels (1, 2,..N), t represents the time period (1,2,….T), $\mathbf{y_{it-1}}$ is the first lagged values of FDI, $\mathbf{x'_{it}}$ denotes vector of explanatory variables, γ and β represents coefficients for the lagged values and the explanatory variables respectively and v_{it}

the error component which is composed of the fixed effect error component and the idiosyncratic error ε_{it}.

And in difference form the above equation can be stated as.

$\Delta y_{it} = \gamma \Delta y_{it-1} + \Delta x'_{it}\beta + \Delta v_{it}$……. *Equation 3. 10*

Where, **Δ** is the differencing operator sign.

Equation 3.4 in level form, which incorporates all the predictor variables, can be expressed as first difference

$\Delta(FDI/GDP)_{it} = \alpha_0 + \alpha_1 \Delta(FDI/GDP)_{it-1} + \alpha_2 \Delta SDREXR_{it} + \alpha_3 \Delta SDINFR_{it} + \alpha_4 \Delta RR_{it} + \alpha_5 \Delta LFA_{it} + \alpha 6 \Delta INFRA_{it} + \alpha_7 \Delta OPEN_{it} + \alpha_8 INST_{it} + \alpha_9 \Delta POLIR_{it} + \Delta vit$……*Equation 3. 11*

Besides the differenced value of all the variables, the lagged value of FDI inflow scaled by GDP of each country is included in the model. In general, the Arellano-Bond dynamic panel GMM estimator is developed for the following situations: First, it is formulated and believed to suite for short time periods (T) and a large number of N-panels, secondly, it extends through linear functional dependencies third, a variable on the left evolves dynamically based on its previous realizations; Fourth, it covers non-exogenous explanatory variables; fifth, it encompasses singular fixed effects; and lastly, it addresses problems of intra-individual heteroscedasticity and autocorrelation (Roodman, 2009).

3.5 Definition of Model Variables and their Measures

It is preferable to use FDI inflows than stock inflows as they provide a snapshot of the current situation without taking into account the historical events that have influenced FDI stocks across countries, (Rodríguez-Pose & Cols, 2017). Following similar works done regarding the subject under consideration, the dependent variable, which is FDI inflow to SSA, is scaled by the GDP of each host country (FDI/GDP) with complete sets of data are available. The independent variables can be grouped based on variables of insert into Macroeconomic uncertainty measures, political risk variables and institutional quality indicator variables along with other economic

indicator control variables, such as the market size, trade connection/openness, natural resource availability and others discussed beneath.

3.5.1 Response Variable

FDI_{it} a vector of dependent variables, that measures the scaled FDI inflow by GDP of the host country i at time t. Using the standard procedure described in the literature we used the FDI to GDP ratio, the explanation to this is from two perspectives, first it helps to account to the size of host economies and secondly it controls for the effects of growth of countries (Asefa Lemi 2001 & Asiedu, 2002).

3.5.1.1 Explanatory Variables

The explanatory variables of this study is classified into three components as discussed above

3.5.1.2 Macroeconomic Uncertainty Variables and Measures

A real exchange rate (REXR)- The real exchange rate is expressed as the ratio of the price level in the home country to the price level in the foreign country, based on the nominal exchange rate assuming the bilateral case, (Bose, 2014). In order to evaluate foreign direct investments which are long term in nature and since both price levels and exchange rates are uncertain, we use the real exchange rate instead of the nominal exchange rate. Following the literature, real effective exchange rate variability (the unconditional standard deviation) is used to measure macroeconomic uncertainty (David, 1981, Ellis,2001). In order to gather and capture most information about the variable the author standardized the exchange rate by taking monthly data while many of our model variables are aggregated annually.

Inflation rate (INFR) -Inflation can be defined as a general increase in prices and a fall in the purchasing value of money, (World Bank, 2014). And similarly, it is defined as a sustained and continuous rise in the general price level or, on the other hand, as a sustained and continuous fall in the value of money. It generally refers to the movement in the general level of price, (Makinen, 2015). This is one of the measures of macroeconomic uncertainty measured taking the

variation (or standard deviation) of monthly inflation data of host countries by standardizing it annually; (Lemi & Asefa, 2001; Lemi, 2003; Makinen, 2015).(Makinen, 2015).

3.5.1.3 Other Macroeconomic Variables

Rate of return (RR) – Rate of return measures the level of gain or loss from investment. In the context of FDI, it helps to determine an enterprise's profitability. In addition, MNEs must make sure that they maximize their global profits when investing, producing, and realizing their income. Thus, the global strategy of the investing enterprises may influence the country-by-country returns (UNCTAD, 1999; UNCTAD, 2003; OECD, 2020). A high rate of return on investment has resulted from foreign direct investment in developing countries (Razafimahefa& Hamori, 2005). Most studies use the log inverse of real GDP per capita to proxy the rate of return on investment i.e.(Razafimahefa & Hamori,2005; Asiedu, 2006; Solomon, 2007). The explanation behind using the inverse is that, the rate of return from investing tends to be high for capital scarce countries, while these countries have the lower per capita GDP. This implies that the per capita GDP is inversely related to the rate of return and the increase in real GDP per capita will decrease the FDI/GDP inflow.

Trade openness; more often in literature openness to trade is measured by the volume of import plus export in GDP (which is, (IM+EX)/GDP),(Asiedu, 2006). During the course of investing abroad there is an import and export of raw materials, semi-finished and processed goods and hence this is influenced by trade policies of countries, consequently investors decision to invest is subjected to trade policies of host countries related to tax, and tariff rates. Also not without an argument, according (Razafimahefa & Hamori, 2005), the standard hypothesis is that a high tariff increases the cost of doing business and discourages foreign direct investment inflow, implying that a high value of this variable provides an incentive to attract foreign firms.

Infrastructure availability; Investors prefer economies that have a reliable network of roads, airports, water supply, uninterrupted power supply, telephones, and Internet access. Poor infrastructure increases the cost of doing business and reduces the rate of return on investment (Asiedu, 2002b).With other factors constant, countries with well-developed infrastructures typically have lower production costs. And hence sound infrastructure is therefore expected to

attract more FDI (Morisset, 2000; Lemi, 2003). Well cited studies use Telephone lines per 100 people as a measure for a country's infrastructure availability. This proxy is based upon the fact that countries with large telephone networks tend to have better roads, modern airports/seaports, Internet access, and reliable water and electricity supply, (Asiedu, 2002b).

Labor force availability. An indicator of labor force availability is the ratio of economically active labor force members to total population members (between 15 and 64 years old).(Hefeker, 2005; Lemi & Asefa, 2001).

3.5.2 Institutional Variables and Measures

Regulatory quality

The institutional strength and regulatory quality are other shock absorbers that help minimize policy revisions after a change of government. The World Governance Indicators (WGI) method explains Regulatory Quality (RQ) as the government's capacity to establish and uphold solid policies and regulations that allow and support private sector development. FDI inflows can be influenced by the quality of the regulations in a country related to the ability of a country's elite to formulate market-friendly policies, such as price controls or incentives, government intervention, and free capital flow (Fazio and Talamo 2008).

Control of Corruption

In emerging countries, there is a high perception of corruption as a threat to investment notably to foreign investment and it's reported in such economies more often compared to developed countries. It disrupts the economic and financial environment and reduces the efficiency of government and business performances (Shleifer, 1993).There is strong evidence that, at the country level, these factors are reducing the growth of incoming capital and investment. The most common type of bribe that MNE, s are directly exposed to is financial extortion in the form of demands extra payments and kickbacks related to import and export licenses, exchange controls, value taxes, police protection making the environment of doing abroad business difficult, in some cases force the withdrawal or suspension of an investment. The greatest risk of such corruption is that at some point it becomes so arrogant or suddenly a major scandal erupts

that it could arouse popular opposition, leading to the overthrow or overthrow of the government, reorganization or a major restructuring of the country's political institutions leads or, at worst, the collapse of public order, rendering the country ungovernable (Wei, 1997). In general the WGI explains, the proxy Control of Corruption (CC) as measures perceptions of the amount to which public power is used for private benefit, encompassing both petty and grand types of corruption, as well as state 'capture' by elites and private interests.

Rule of Law

The RL index measures perceptions of confidence in society's rules, such as whether contracts are enforced, property rights are protected and the strength of the impartiality in the legal system. It encompasses aspects of investment risk not covered by financial or economic risks, such as contract viability (expropriation), profits repatriation, and payment delays due to weak enforcement of property rights.as a whole the variable is intended to assess the likelihood that contracts, laws, or rules be enforced collectively and accountable, rather than privately (Langbein, Laura; Knack, Stephen, 2010).

3.5.3 Political Risk Variables

To measure the effects of political risk on the inflows of FDI to SSA we account for the WGI's explicit and widely used three measures of political risk. Of them the indexes are fused from the indicators of the political stability and absence of violence/terrorism Government effectiveness and voice and accountability.

Political stability and absence of violence

according to the WGI methodology it is defined as a measure to acuities of the likelihood of unconstitutional and violent means being used to overthrow the government, including politically motivated conflicts, violence and war. (Elbadawi, 1999) explains how violence and conflicts and in general absence of stability in politics intimidates capital flow particularly the effect inward direct investment flows. The author asserts that conflicts may play a paramount role in reducing investment and hence this may not only hurt current output but also have dire implications for future output as a result of reduced capital accumulation. Also, Collier (2001) argues that civil

wars are generally more damaging because they are fought entirely over the landscape of the country, furthermore any form of external pressures, wars, and hostilities that affect the government's power restrict the environment of being enabled. Therefore, they are more likely to undermine government organization and lead to an immediate deterioration in the capital stock of the nation. A country embroiled in violence or war receives the lowest rating.

Government effectiveness; In this case, we are assessing both the government's ability to carry out its declared program(s) and its continued existence. According to the WGI methodology, it measures perceptions of the quality of public services, the civil service and its independence from political pressures, the quality of policy formulation and implementation, and the credibility of government commitments. And the proxy is the score of the average of these four components. Ineffectiveness due to lack of governance or low quality of bureaucracy may cause the internal eruption of conflicts and hence it may increase chances for countries falling to external pressures.

Voice and accountability; An analysis of Voice and Accountability (VA) measures perceptions about a nation's citizens' ability to choose their government, their freedom of expression, their freedom of association, and their freedom of the media. This is a general proxy's to ability of citizens' freedom of expression until protest and the responsibility of governments in the decision-making process.

3.6 Expected results of variables

Based on the existing literature on determinants of FDI to Africa and particularly in SSA the study hypothesizes the expected results of the variables however earlier works based on all some variables is unavailable and the study uses works similar on pare regions to SSA.

Variables	Expected sign	Variables	Expected sign
100*(FDI/GDP)	Positive	Exchange rate	Negative
Inflation rate	Negative	Rate of return	Negative
Openness to Trade	Positive	Infrastructural Availability	Positive

Labor force availability	Positive	Regulatory Quality	Positive
Control of Corruption	Positive	Rule of law	Positive
Political stability & absence of violence	Positive	Voice and accountability	Positive
Government Effectiveness	Positive		

Table 3. 1 Expected Signs of variables

Chapter Four

4 Results and Discussions

In order to measure the roles of Macroeconomic uncertainty, political risk and institutional quality on FDI to SSA, 26 sample countries with a complete set of data are selected. However before employing the model discussed on the methodology above preliminary data analysis, model stability cheeks and diagnostic tests are employed. This section of the study is classified as follows, first, part involves the descriptive analysis of the data, Secondly model suitability and diagnostic tests are conducted to make sure the models selected are parsimonious both theoretically and empirically and to ultimately make robust estimations. And finally, the estimation results of the within fixed effect model and the panel dynamic GMM (Arellano Bond) model estimation results and overall discussions are presented.

4.1 Descriptive Analysis

Prior to the main estimation method employed, the study uses descriptive analysis as preliminary data analysis. Using summary regression analysis and graphs the basic features of the data and behaviors of model variables and the overall properties of the data are explained beneath. According to summary statistics results in Table 3 the average value (Mean), Standard deviation with the maximum and minimum values for the Macroeconomic uncertainty, political risk and institutional quality measure variables along with the controlled macroeconomic variables are presented. The number of observations (N) is the same 520 across the variables, which implies that the data used in the study is balanced; in fact, the sample selection across countries is based on complete availability of data sets. During the study period (2002 -2021) the percentage of in flowed Foreign Direct Investment scald by countries GDP for our sample countries in Sub Saharan Africa averaged 4.25%, with the standard deviation from the mean by 6.242 %, it is then fair to be said as there is high variability in the response variable %(FDI/GDP) with maximum value of 46.28 % registered by chad in 2002 and minimum value of negative 18.92% for Congo Rep, in 2020. Also, the macroeconomic uncertainty proxy variables real effective exchange rate and inflation rate averaged the mean value of 16.36 % and average of 18.43 respectively. The two economic uncertainty indicator variables are the highest in terms of showing high variability

with standardized variation of 28.97 % and average of 286.2 respectively. The maximum inflation is 6,319% registered in 2021 for Sudan and the minimum is 0.207 percent in 2013 for Côte d'Ivoire. Also, the lowest exchange rate is shown in 2017 for Sudan and the highest is 285.7% in 2015 for Uganda. The highest the variability in the percentage of FDI inflow scaled by GDP is influenced by the highest leverage in macroeconomic uncertainty indicator values. This can be described as; uncertainty from these macroeconomic variables may have nontrivial influence on the inflow of FDI.

Table4.1 Summary statistics for model variables during the study period (2002-2021)

VARIABLES	(1) mean	(2) sd	(3) min	(4) max
100*FDI/GDP	4.252	6.242	-18.92	46.28
Real Exchange Rate	16.36	28.97	0.001	285.7
Inflation Rate	18.43	286.2	0.207	6,319
Rate of Return	-3.126	0.398	-4.066	-2.349
Labor Force Availability	67.80	11.20	46.42	90.34
Infrastructure Availability	3.047	6.189	0.0321	36.88
Openness to Trade = (Imports + Exports)	177.3	410.9	16.35	3,189
Control of Corruption	-0.518	0.197	-0.629	-0.501
Government Effectiveness	-0.613	0.249	-0.682	-0.547
Political Stability & Absence of violence	-0.467	0.360	-0.675	-0.301
Regulatory Quality	-0.537	0.209	-0.653	-0.419
Rule of Law	-0.544	0.279	-0.623	-0.424
Voice and Accountability	-0.413	0.130	-0.471	0.367

Source; Own analysis results based on the IMF, IFS CD_ROM, World Bank and World governance and world development indicator data.

Furthermore, the rate of return variable on showed a negative average value of 3.13 with the standardized deviation from the average value of 0.398 and minimum value for Mauritius in 2018 and maximum value of -2.349 for Niger in 2002 respectively. The other standard controlled variable oneness to trade measured by import plus export described as a value of 177.3 and standard deviation of 410.9 the maximum trade exchange is observed at 3,189 3 share of the country's GDP in 2017 for Sudan and the minimum value in 2002 for Nigeria 16.35. These highest variations in the exchange rate inflation rate and openness to trade variables across countries may induce the presence of cross-sectional heterogeneity or variation across samples for the considered period. Also, the distribution in the measure of infrastructural availability as measured by the fixed telephone subscription per 100 people displayed an average mean value of 3.047 is observed with the standardized variation from the mean value by 6.189. The minimum value 0.0321 was observed in 2002 for Angola and the maximum value of 36.88 in 2021 for Zambia. And the Variable Labor force availability displayed amen value of 67.80%t with standard deviation value of 11.20% and maximum value observed is 90.34 % of the population in 2010 for Madagascar was available for work while the minimum work force 46.42 % registered for Mauritania in 2017.

Moreover, the institutional and political risk indicator variables distributional characteristics based on the weights assigned using the unobserved component method by WGI method displayed in Table 4.1 above, shows that the control of corruption averaged -0.518 with the standard deviation of 0.197 and the maximum value of -0.501 showed in 2021 for Cabo Verde and minimum value of -0.629 in 2016 for Sudan. The measure for government effectiveness displays the mean value of -0.613 and Standard deviation of 0.249 with the maximum value of -0.547 for Mauritius in 2015 and minimum value of -0.682. Also, Madagascar in 2008 and Mozambique in 2010 recorded the minimum values for political stability and absence of violence/terrorism and regulatory quality measure variables while The Gambia in 2006 and Mauritius in 2014 scored the maximum of -0.547 and -0.512 respectively and the mean averages are -0.60 and -0.603 with respective standard deviation values of -1.665 and -1.653. The voice and accountability variable showed the maximum value 0.367 in 2016 for Cabo Verde and the minimum value is -0.471 for Sudan in 2018 while the mean average is -0.413 with standard deviation of 0.130. Our institutional variable Rule of Law shows the mean average value of -0.544 and standard deviation value of 0.279. The maximum value was displayed in 2012 for

Mauritius and the minimum value of -0.623 for Sudan in 2005. And more imperatively the trends of the main variable of interest in the model can be depicted as below.

Figure 6 constructed based on the annual average of net Foreign Direct Investment inflow as a percentage of GDP in SSA over the period 2002 to 2021. Accordingly, the net FDI inflow normalized by GDP shows no growth during the early beginning of the millennium from 2002 to 2003 that stayed at 2.5 percent. However, after showing the average 1% increase and decrease in 2004 to 2005, the decade's lowest inflow was registered in 2006 reaching 1.7%. And the maximum in the same decade was registered in 2006 reaching 3.1%. After the continuing to waft between 2 to 3 percent from 2009 to 2016 the record lowest during the last two decades was recorded in 2020 which is 1.39% in SSA and the record highest was also recorded reaching 3.9% during the same year the highest growth was seen in the Gambia, Congo.Rep & Mozambique registering 12.4 %, 27.6% & 33.6% respectively. Also Figure 7 displays the trends of real effective exchange rate in SSA constructed by IMF taking 2010 as base year; the margin on the variability is up to 16% on average with diverged trend over the years.

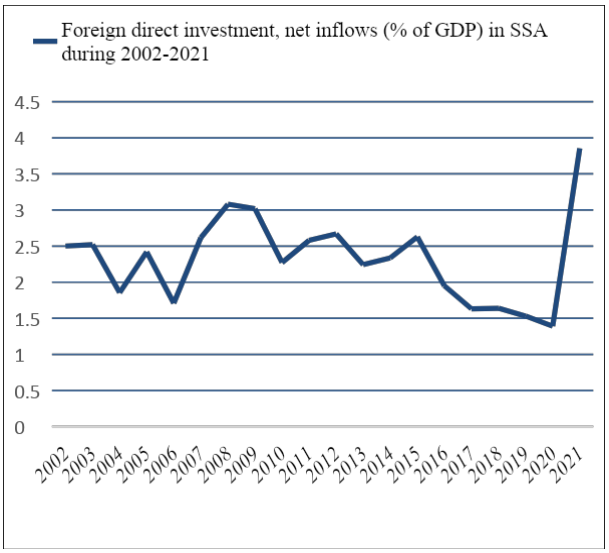

Figure 4. 1 Trends of net FDI- inflows (%GDP) in SSA, over the period 2002 to 2021

Source, Own computation using the IMF annual average real effective exchange rate

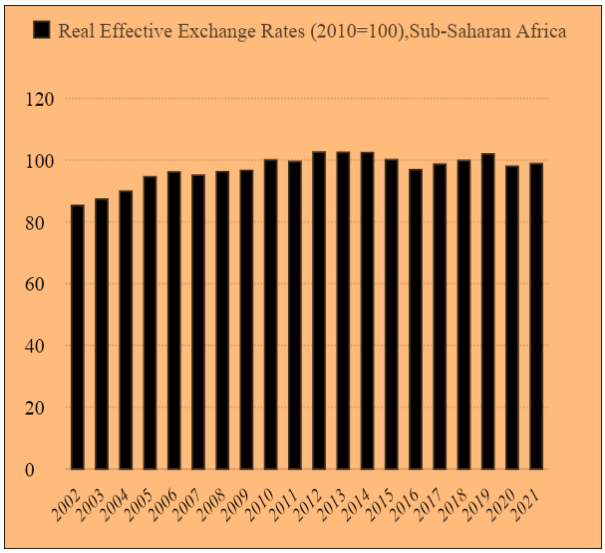

Figure 4.2 Trends of Real exchange rate in SSA, over the period 2002 to 2021

Source; Own computation using World Banks FDI data, on world development indexes'

Also based on the WGI data the methodology uses the Unobserved Component Model (UCM) to assign weight and scale the data from -2.5 to 2.5. The scaling assumes a continuous value with the highest value to the better performance in a specific Governance variable and the reverse is true. Accordingly, no variable shows a consistent increase or decrease during the study period, the highest variability is displayed in the political risk indicator proxy of political stability and absence of violence/terrorism variable and all else shows a diverging value wafted between -0.29 and -0.67. Moreover, what is surprising is no variable score appositive average value over the considered study period.

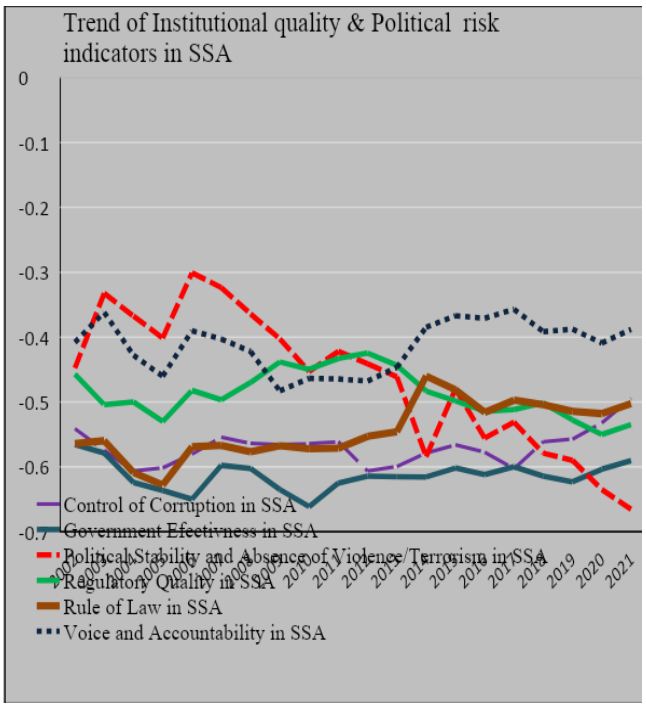

Figure 4.3 Trends of Institutional & Political variables using the WGI's unobserved component model scaling's

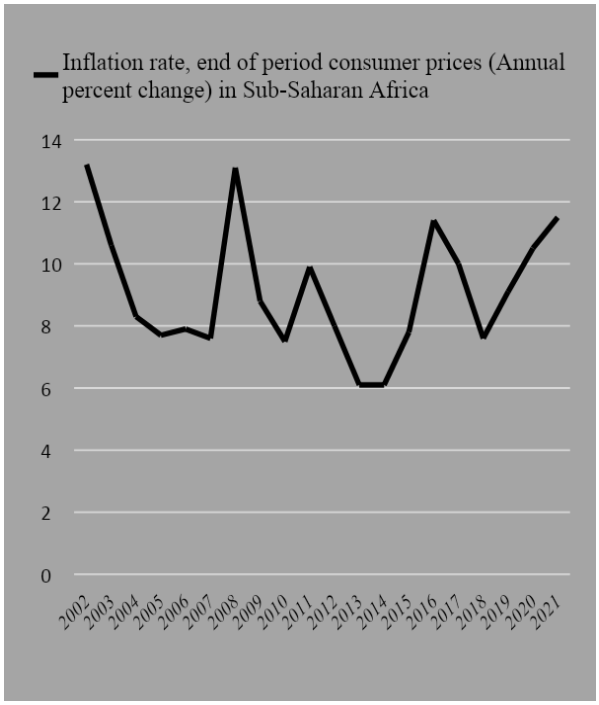

Figure 4.4 Trends of inflation rate in SSA, over the period 2002 to2021

Source; Own plot using the WGI data on World Bank's database and the IMF data on annual average inflation rate data in SSA

Also figure 8, depicts the trend of annual average inflation rate in SSA the highest annual average inflation rate was registered in 2013 reaching 13.1 and the minimum average was 6.1 for the region in 2013 and 2014. And inflation rate in SSA showed non consistent trend throughout the study period.

4.2 Model Stability test results

4.2.1 Panel Unit root test

In order to prevent spurious regression results due to the inclusion of non-stationary variables, the author performed a test for stationarity. According to (Maddala & Wu, 1999) econometric estimation with non-stationary variables leads to unrealistic estimates. The panel unit root tests are close to, but not similar to, the stationarity test of time series analysis. Following the popular work of Levin and Lin (1992) the panel unit root test showed advancement[2]. Among many methods the Levin, Lin and Chu (LLC) test is the well known test for its powerfulness in checking the stationarity of model variables and most often recommended for panel type data sets. The test allow the assumption of inclusions of large panels, the existence different types of non-stochastic and stochastic components and more importantly the time series spans for the groups are assumed to be all different examination, while other methods are less resistant to overall fluctuations or deviations from equipoise,(Hlouskova & Wagner, 2006). Moreover, the LLC unit root test is a modification of a Dickey-Fuller test that is designed to manage certain data patterns, such as structural breaks and non-linearities.

The sample Levin, Lin and Chu (LLC) test model in our case can be stated as

$$\Delta y_{it} = \alpha_i + \beta i\, y_{it-1} + \gamma_{i1}\, \Delta y_{it-1} + \ldots + \gamma_{ip}\, \Delta y_{it-p} + \varepsilon_{it}$$

where Δy_{it} is the first difference of yit, α_i is an individual-specific intercept, β_i is an individual-specific coefficient on y_{it-1}, γ_{ij} are coefficients on lagged differences of Δy_{it}, and ε_{it} is an error and the term and the test hypothesis is stated as,

H_0: $\gamma = 0$, the series is non-stationary i.e. (the variable has unit root)

H_1: $\gamma \neq 0$, the series is stationary i.e. (the variable has no unit root)

[2] Since Levin and Lin's seminal work of 1992, two directions have been taken for panel unit root tests, leading to two generations. The first covers heterogeneous modeling and was contributed by Im, Pesaran and Shin (2003), Maddala and Wu (1999), Choi (2001), and Hadri (2000). In a second and more recent area of research, cross-sectional dependence is being taken into account.

4.2.1.1 Estimation results of the unit root test

According to Levin, Lin and Chu test for the presence of unit root, rejecting the null hypothesis for the test statistic larger than the critical value implies the absence of unit root (stationary case) and the reverse indicates the presence of unit root (Gujarati, 2003, Baltagi, 2005). The results as shown up down in table 3.2 depicts that the response variable, percentage of FDI inflow normalized by GDP, inflation rate, real exchange rate, rate of return, openness to trade, infrastructural availability, Voice and accountability control of corruption, Government effectiveness and Regulatory quality variables are stationary at one percent significance level both with and without incorporating the trend component. Also, Variables Rule of law with time trend and political stability and absence of violence without the trend component are stationary at one percent level of significance. The series for labor force availability without time trend is stationary only at ten percent level of significance.

Table 4.2, Empirical results of the LLC unit root test

LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)		
Variables	Statistic and P-Value for the within individual effect without time trend	Statistic and P-Value for the within individual effect with time trend
100*(FDI/GDP)	(-2.7605) *******	(-3.4726) ***
100*(FDI/GDP)	(-2.7605) *******	(-3.4726) ***
Real exchange rate	(-7.4942) ***	(-8.3878) ***
Inflation rate	(-1.4364) ***	(-18.6048) ***
Rate of return	(-7.4731) ***	(-5.8469) ***
Labor force availability	(-1.4855)*	(5.2266)
Infrastructural availability	(-14.9039)***	(-11.2811) ***
Openness to trade	(-3.5830) ***	(-4.1859) ***
Control of Corruption	(-2.5937) ***	(-2.5715) ***
Government effectiveness	(-4.3044) ***	(-4.1415) ***

Political stability & absence of violence/ T	(-1.9359 **)	(-2.9845) ***
Regulatory Quality	(-12.8612) ***	(-9.4126) ***
Rule of Law	(-2.8748) ***	(-1.7966) **
Voice and accountability	(-9.8170)***	(-6.7189) ***

Note: adjusted t* Statistic value in parentheses and ∗∗∗, ∗∗, and ∗ denote significance at 0.01, 0.05, and 0.10 levels, respectively. This is based on the Dickey Fullers Distribution Statistical table.

4.2.2 Houseman Model Specification test

Aiming to better account for country-specific effects such as unobserved heterogeneity across units and its level of correlation with observed variables the study needs to use the Fixed or Random effects model. However, there is a slight difference among these models regarding the treatment of intercept roles in the model. In the fixed effects model, the intercept terms are allowed to vary over the individual units i, and the country-specific effects are incorporated into the model as a regressor, while in the random effect model, the intercept term is represented by a random error term, not as regressors. Consequently, to identify which model is more appropriate and be employed the author used the (Hausman, 1978) specification test. This test is often used by researchers to determine whether to use a random effect or fixed effects model (e.g. Wooldridge & NetLibrary, 2002; Greene 2008(Page 208-210); Clark & Linzer, 2015). The test is based on examining the correlation between the independent variables and the intercept. The test hypothesis is stated as H_0; Individual specific effects are random (there is no correlation between the predictor variables and the intercept. Rejection of the null hypothesis entails that the appropriate model is the random effect modelTable .3, Results of Housman specification test

4.3 Results of Housman specification test

Variables	Coefficients		(b-B)	sqrt (diag (V_b
	(b) FE	(B) RE	Difference	V_B)) S.E.
Real exchange Rate	-.0056107	-.0023262	-.0032845	.0024563
Inflation Rate	-.0000269	-.0003193	.0002924	.0000721
Rate of Return = log (1/GDP per capita)	-1.555543	-.0090705	-1.546472	.4334269
Labor Force Availability	.2506165	.2732737	-.0226573	.0048997
Infrastructural Availability	-.1996264	-.2143424	.014716	.0215508
Openness to Trade = (imports + exports)	.04346	.0337063	.0097538	.0074732
Control of Corruption	2.014732	1.868147	.1465847	.4385084
Government Effectiveness	.6337956	-.3576995	.9914951	.4549399
Voice and Accountability	-1.962732	-2.060645	.0979131	.2330687
Rule of Law	-2.038389	-1.096917	-.9414721	.3527232
Regulatory Quality	.1897756	.5948066	-.405031	.1970144
Political Stability & Absence of violence	.2812607	.2033958	.0778649	.0265017

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(11) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)

= 31.15

Prob>chi2 = 0.0001

(V_b-V_B is not positive definite)

A p< 0.05 finding indicates that, at conventional levels of significance, the two models are sufficiently different to reject the null hypothesis, and therefore it's in favor of the fixed effects model. The Houseman specification test result in the above table shows the P value 0.0001 which is less than 5% level of significance. Consequently, the fixed effect model is warranted for the nature of the data used in the study.

4.2.3 Multicollinearity test and results

Multicollinearity is the event of great inter-correlations among the factors. In regression models it may not be merely between the explanatory variables with the dependent variable but also with each other. In econometric methods the Variance Inflation Factor (VIF) is considered as the preeminent method to detect it (Gujarati, 2003 Verbeek, 2009).

Table 4.4 Empirical results of Multicollinearity test (VIF)

Variable	(1) VIF	(2) SQRT VIF	(3) Tolerance	(4) R-Squared
100*(FDI/GDP)	1.07	1.03	0.9342	0.0658
Real exchange rate	1.21	1.10	0.8289	0.1711
Inflation Rate	1.06	1.03	0.9438	0.0562
Rate of Return = log (1/GDP per capita)	2.07	1.44	0.4839	0.5161
Labor Force Availability	1.92	1.39	0.5201	0.4799
Infrastructural Availability	2.36	1.54	0.4236	0.5764
Openness to Trade = (imports + exports)	1.63	1.28	0.6150	0.3850
Control of Corruption	3.78	1.95	0.2642	0.7358
Government Effectiveness	1.15	1.07	0.8725	0.1275
Political Stability & Absence of violence	2.25	1.50	0.4447	0.5553
Regulatory Quality	4.20	2.05	0.2383	0.7617
Rule of Law	1.14	1.07	0.8779	0.1221
Voice and Accountability	3.05	1.75	0.3277	0.6723

Mean VIF	**2.07**

A VIF value of 1 signifies no correlation between the independent variables, while a value greater than 10 or the tolerance values (I/VIF) falling below 0.1, indicates a severe degree of correlation. Generally, VIF values higher than 10 indicate significant Multicollinearity. The VIF value below 10 is acceptable. Based on the above table, all VIF values are less than 10 with tolerable values all exceeding 0.1. Therefore, the model variables do not exhibit Multicollinearity problems.

4.3 Estimation results

4.3.1 Estimation results of the fixed effects model

Following the Houseman's (1978) test guarantee of the fixed effects model to the nature of the data used, estimation results with robust standard errors are shown in Table 4.5 below. The analysis report on macroeconomic uncertainty proxied by the unconditional standard deviation of real exchange rate adversely affects the inflow of FDI to Sub-Saharan Africa. It is statistically significant at one percent level of significance. It simply amplifies the higher rate of variability in real exchange rate and can signal macroeconomic uncertainty thereby decreasing the inflow of FDI. The negative association result between net FDI inflow and real exchange rate variability is consistent with the findings of (Udoh & Egwaikhide, 2010; Azam et al., 2012; Solomon, B., & Ruiz, I. (2012,). Most countries in SSA use unmanaged floating exchange rate systems and the negative result with FDI inflow can be associated with it. Theoretical work of (David O. Cushman 1985, 1988) asserts that the variability in the exchange rate in the FDI destination causes the expectation and risk effects. The higher or lower variability in the country's exchange rate could result in incorrect cost and price estimation. Moreover, associated with this given irreversible features of direct investment and possibility of countries poor profit repatriation records, the increase in variability of exchange rate could be significantly associated with negative value in these inflows of FDI (Darby et al. 1999). Also, the data supports the uncertainty due to the variability in inflation rates negatively and significantly affects FDI inflow to SSA although it's at 10% level of significance. The negative association fortifies the argument that inflation variability creates uncertainty in the economy. Asiedu and Lien (2011) emphasizes high inflation variability reduces the purchasing power of individuals. Moreover they added the

variability could make it difficult to predict future returns and costs. Overall, inflation variability can create a risky and uncertain environment for foreign investors, making them less likely to invest in a country.

Table 4.5 Estimation Results of the Fixed Effects Model (FDI/GDP Is the Dependent Variable)

VARIABLES	(1) Fixed effect estimation result
Real exchange rate	-0.00614***
	(0.00177)
Inflation Rate	-0.000144*
	(8.13e-05)
Rate of Return = log (1/GDP per capita)	0.558
	(1.526)
Labor Force Availability	0.00126
	(0.0516)
Infrastructural Availability	0.103
	(0.255)
Openness to Trade = (imports + exports % of GDP)	0.0419***
	(0.0136)
Control of Corruption	2.006**
	(0.937)
Government Effectiveness	1.803
	(1.209)
Political Stability & Absence of violence	0.788
	(0.507)
Regulatory Quality	0.797
	(1.453)
Rule of Law	0.372
	(1.343)
Voice and Accountability	0.313
	(1.092)
Constant	0.566
	(5.178)
Observations	520
Number of CID	26
R-squared	0.090

Note: Standard errors in parentheses *** p<0.01, p<0.05, * p<0.1, ***, , * denotes Statistical significance level of at 1%, 5% and 10% respectively. In the table 4.5 above, on the last row, reported values are p-values.

Besides the uncertainty measures, the Institutional quality proxy variable which is control of corruption shows a significant and positive sign at 5% level of significance. The result is supportive of the findings of (Wei 2000; Hefeker 2005; Rodríguez-Pose & Cols, 2017) and the hypothesized positive sign that control of corruption has a positive impact on FDI inflows. The intuitive explanation for the positive association may be that better control of corruption creates transactional trust and confidence which every foreign investor is curious about before making any irreversible financial commitment to emerging economies like FDI. A country with better institutional systems for controlling corruption can attract a significant share of FDI in comparison to its GDP (Mengistu, Alemu Aye, 2011). In addition, the degree of openness to trade shows the expected positive trend and is significant at 1% level of significance. A country's openness might positively affect the investment decisions of an MNE if it imports raw materials and semi-manufactured goods and exports processed commodities. A positive relationship has also been established between measures of openness to FDI inflows (Edwards 1990; Asiedu 2002, Onyeiwu & Shrestha, 2004, Solomon & Ruiz, 2012). Moreover, rule of law and bureaucratic quality proxies for institutional quality, Political risk indicators as well as other control variables like labor force availability and infrastructure developments are insignificant effects with its own expected positive sign.

4.3.2 Estimation Results of Arellano-Bond GMM Dynamic Panel Estimator

The Arellano-Bond dynamic panel GMM estimator is very crucial for estimating the panel data model parameters even with unobserved heterogeneity, where the individual effects are correlated with the explanatory variables. It allows estimation with both time-invariant and time-varying individual effects, and can handle missing data and unbalanced panels. Furthermore, it addresses the problems of intra-individual heteroskedasticity and autocorrelation (Roodman, 2009). As mentioned in the methodology part of this study, the Arellano-Bond dynamic panel GMM estimator is basically developed for the following conditions: Primarily, it is formulated and believed to suit for short time periods in most (T) and a large number of N-panels. Secondly,

it extends through linear functional dependencies, Thirdly, a variable on the left evolves dynamically based on its previous realizations and FDI by its nature is a long lasting form of capital flow that current decisions are based on past realizations in terms of performance in the destination countries. Moreover, it covers non-exogenous explanatory variables and encompasses singular fixed effects (Alan M. Rugman & Verbeke, 2008; Roodman, 2009). In general, the Arellano-Bond dynamic panel GMM estimator is widely used in empirical research in economics, finance, and other social sciences, and has been shown to produce consistent and efficient estimates in a variety of settings (Arellano - Bond, 1991; Alan M. Rugman & Verbeke, 2008; Roodman, 2009). The data meet the assumptions of no second order autocorrelation and the identification criteria's tests by Sargan test as described on the bottom of Table 6. Consequently, the GMM estimation technique is guaranteed

Table 4.6 Estimation Results of Arellano-Bond GMM Dynamic Panel Estimator (FDI/GDP Is the Dependent Variable)

Dependent variable	100*FDI/GDP	
	(1)	(1)
Variables	Fixed effect estimation	Arellano-Bond GMM Estimation
Lag of 100*FDI/GDP		0.334***
		(0.0188)
Real Exchange Rate	-0.00614***	-0.0568***
	(0.00177)	(0.0164)
Inflation Rate	-0.000144*	-0.363***
	(8.13e-05)	(0.139)
Rate of return=log (1/GDP per capita)	0.558	6.635***
	(1.526)	(1.661)
Labor Force Availability	0.00126	0.0897
	(0.0516)	(0.0825)
Infrastructure Availability	0.103	1.233

	(0.255)	(0.872)
Openness to Trade = (Imports + Exports)	0.0419***	0.00503***
	(0.0136)	(0.00166)
Control of Corruption	2.006**	21.44***
	(0.937)	(5.800)
Government Effectiveness	1.803	12.26***
	(1.209)	(4.409)
Political Stability & Absence of violence	0.788	3.107***
	(0.507)	(1.084)
Regulatory Quality	0.797	8.032***
	(1.453)	(1.555)
Rule of law	0.372	7.022*
	(1.343)	(3.832)
Voice and Accountability	0.313	3.292
	(1.092)	(5.720)
Constant	0.566	18.25***
	(5.178)	(6.377)
Observations	520	494
Number of CID	26	26
R-squared	0.090	
Overall significance Prob > F	0.0000	0.0000
Serial correlation test AR (1)		0.0934
Serial correlation test AR (2)		0.2333
Sargan test		1.0000

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, ***, **, * denotes Statistical significance level of at 1%, 5% and 10% respectively. In the table 4.5 above, on the last row, reported values are p-values and the test of the null hypothesis (H_0: no second-order autocorrelation) is valid meaning that the errors don't reveal a second order serial correlation. In

addition, the null hypothesis for the Sargan test is that over-identifying restrictions are valid and intuitively the model employed is well-specified.

According to the Arellano-Bond dynamic panel GMM estimation result on the table 4.5 above, macroeconomic uncertainty which is proxied by the standard deviation of the real effective exchange rate variability is statistically significant at a 1 percent significance level. Its coefficient carries the theoretically expected negative signs and is consistent with fixed effect results. This connotes the concept that exchange-rate uncertainties are mostly unpredictable and in such cases multinational corporations (MNCs) found it unclear on the returns to investment decisions and present asset valuations. Consequently, it may affect decisions made by the multinational corporations (MNCs). Moreover, in the event of high exchange rate variability, an MNE will ignore better business opportunities in the host country. Thus, the stabilization of domestic currency is a key factor that should be attained as a measure to attract FDI inflows in the region. The result is supportive of previous similar findings (e.g Udoh & Egwaikhide, 2008; Brzozowski, 2011; Anyanwu, 2011; Solomon & Ruiz, 2012; Eregha, 2019). Furthermore, the coefficient of inflation rate has also carried an expected negative sign and is significant at a 1 percent significance level while it was 10% at the fixed effects estimation report but with a consistent sign. It suggests that inflation rate variability leads to an uncertain macroeconomic environment and deters FDI inflows to SSA. Meanwhile, the rate of inflation can increase the cost of production and reduce profit margins, making it less attractive for multinational corporations (MNCs) to set up operations in the country. It can also reduce the purchasing power of a country's currency, making it more expensive for multinational corporations (MNCs) to invest in the country. Thus, a high rate of inflation can signal economic instability or host government's inability to maintain an appropriate monetary policy and it could lead to a potential risk for Multinational corporations (MNCs). It may also signal weakness in a country's economic conditions and monetary management. In addition, foreign direct investment might not be made in countries with high inflation, because it creates additional uncertainty about the net present value of investments in the long run. This finding is consistent with similar researchers on the area (e.g Onyeiwu & Shrestha, 2004, Udoh & Egwaikhide, 2008; Solomon & Ruiz, 2012; Asiedu, 2015; Siddica & Nur Angkur, 2017; Ray, 2017). Another important finding is that the lagged value of dependent variable (FDIt−1) is found to be statistically significant and positive at

1% significance level. The implication behind the result is that host countries that already have a considerable record of FDI inflows in the past could help to increase the current inflow (Gastanaga 1998; Jensen 2003; Busse and Hefeker 2005; Solomon & Ruiz, 2012).

The control variable Rate of Return on investment is significant at a 1 percent level of significance supporting the theoretical hypothesis that a positive return on capital attracts more FDI inflows to SSA. The rate of return on investment is a key factor that affects foreign direct investment inflows to the region. Since countries that offer higher rates of return on investment are more likely to attract Multinational corporations (MNCs) or foreign investors, while those with lower rates of return on investment may struggle to attract foreign direct investment to the country. This result is supportive to previous findings by (Asiedu, 2002; Solomon & Ruiz, 2012). Trade openness (import + export) is also significant at a 1 percent significance level with its expected positive signs. When a country is open to trade, it creates a more competitive environment, which can attract foreign investors or multinational corporations (MNCs) looking to tap into new markets and take advantage of lower production costs. Large markets with high consumer demand can be attractive to multinational corporations (MNCs) looking to advance their customer base and expand sales. This can boost investors' confidence and encourage them to invest in the country with a relatively high degree of openness to trade. The finding is supportive of previous studies (Asiedu, 2002; Solomon, 2006; Anyanwu, 2011; Effah et al., 2016; Siddica & Nur Angkur, 2017). However, contrary to the theoretical explanation, labor force availability and infrastructure development proxied by the number of telephone lines per 100 populations have surprisingly statistically insignificant effects on FDI inflows.

Estimation results for political risk proxy which is political stability and absence of violence/terrorism reveal a significant positive sign at 1% level of significance. The data supports the argument that the absence of violence and political stability in a host country are crucial factors for attracting FDI. This may be due to foreign firms' reluctance to invest in high-risk areas. Therefore, host economies should maintain a stable political atmosphere that fosters confidence among foreign firms to invest their capital. It also discovered that Government Effectiveness, which refers to the state's ability to put good policies into effect, is a statistically significant variable in explaining FDI inflow to host countries. This has been amply supported by the fact that successful Sub Saharan African countries have generally strengthened government

regulatory efficacy and governance practices in order to draw significant FDI inflows to their respective nations (Mengistu & Adhikary, 2011; Rodríguez-pose & Cols, 2017). However, this study has found no evidence that Voice and Accountability significantly affect FDI inflows to SSA. This suggests that, despite compensating shortcomings in other areas of decreasing political risks, a country that can increase political stability, provide competent governance, and reduce conflicts are likely to attract more foreign investors.

The results of GMM estimation for institutional quality variable Control of corruption shows a consistent positive sign with the fixed effects result and significant p value at 1%. The rationale is that a high level of corruption usually raises investment transaction costs and is likely to contribute to the information asymmetry issue severely. Consequently, countries that increase the performance in controlling corruption could increase their share of FDI in SSA. In line with this, the empirical findings indicate that the rule of law variable is also an important component of good institutional quality, which plays a positive role in facilitating FDI inflows to the host economies in SSA. The coefficient is positive and statistically significant at 10 % of significance value. The implication is that an effective, efficient, impartial and transparent legal system that protects property with individual rights and stable public institutions will encourage not only foreign investors to undertake long-term investment but also increase investment in general sustainably. Moreover, the institutionalization of an effective rule of law is also essential for the protection of intellectual property rights and thus the promotion of innovations and inventions. Also, the study finding displays the regulatory quality of institutions to positively influence the inflow of FDI in SSA. This signifies that adequacy in regulation of finance and trade, none excessive controls in the areas to price could increase the percentage of inward FDI in SSA region.

Chapter Five

5 Conclusion and Recommendation

5.1 Conclusion

The primary objective of this study was to investigate the roles of macroeconomic uncertainty, political and institutional factors on the inflow of FDI to Sub-Saharan Africa using the panel data over the period 2002-2021. To fulfill the objective, the author used theories, theoretical models, and empirical reviews regarding foreign direct investment. The study used secondary data from the World Bank database; World development indicators, World governance indicators and the International Monetary Fund, IFS CD-ROM. Following the natures and distributional assumptions about the data and after employing the Housman, a test for model identification the fixed effect estimation method is applied. Also, for incorporating the past values of the dependent variable in the model and better efficiency the study employed the Arellano-Bond dynamic panel GMM estimators. The author performed the panel unit root and Multicollinearity tests along with tests for pre-requests to use GMM estimator of no second order autocorrelation and Sargent test to valid identification criteria are applied. This is to ensure the estimation methods employed are guaranteed to the features of the data used and the empirical results are robust.

After using the panel fixed effect and the dynamic panel GMM estimation technique's the results of the study revealed that macroeconomic uncertainties proxied by exchange rate and inflation rate uncertainties have statistically significant and negative effect on both estimations. Consequently, macroeconomic uncertainty has a deterrent role on FDI inflows to SSA. The variability in exchange rate proxy displayed a consistent significant and negative result at 1% level of significance in both estimation methods. Political risk as proxied by political stability and absence of violence/terrorism, and government effectiveness reveals a significant positive effect on FDI inflows to SSA economies. However, the study doesn't find that voice and accountability have a significant role on FDI inflows to SSA. This perhaps is may be the countries in SSA can reduce the risk due to politics by ensuring the absence of any form of internal and external conflicts or terror attempts and warranting the quality regulation that can support the easing of doing business despite the deficiencies in other aspects of political factor in

relation to freedom expression and accountability. The results reflect that some semi-democrat nations in SSA attract enormous amount of FDI inflows because of their capacity in at list ensuring better quality regulation, control of corruption and effective implementation of governance. Our econometric estimation result also leads us to conclude that institutional quality in general exerts a positive significant influence on FDI inflows in SSA. The measure variables as proxied by Control of corruption, regulatory quality and enforcement of rule of law in SSA have statistically significant positive sign, more specifically the control of corruption variable displayed consistent estimates in both estimation techniques. The implication behind this is that the improvement of institutional quality over time in SSA countries by ensuring the better control of corruption, quality regulations and enforcement of rule of law, can increase FDI inflows. It may be more attractive for investors to invest in countries that are improving their institutions. In tune with this, the empirical results of the study reveal that past performance in attracting FDI (captured by the lagged value of FDI) is found to positively influence the amount of FDI inflows to SSA countries. The result is in support of the argument that MNCs look at the performance of countries in attracting direct investment before engaging in long-term capital investment like FDI.

Additionally, Openness to international trade and the return from investing in SSA is found to be statistically significant in playing a positive role to promote FDI in SSA countries. However, contrary to the conventional thinking the study found that, labor force availability and availability of infrastructure have insignificant roles in influencing the inflow of FDI to SSA. This is in support of the arguments that MNCs are more curious about the skill and quality over the quantity of labor force available in host nation markets. Other concepts in line with skill acquisition are that technology and automation of work could help investors to be less curious about what the host country has to offer in terms of the workforce. Moreover, the insignificance of infrastructure availability to attract direct investment to SSA economies is surprising. The result is in the support to the findings of (Dpasquier, C., & Osakwe, P. N. 2006) that; investors are less curious about infrastructure in countries where effective governance and active government's promotion of investment in creating favorable business environments. This is because investors are more likely to be attracted by the overall business climate and profitability than the availability of infrastructure.

5.2 Recommendation

The study finding asserts that institutional quality, political risks and macroeconomic uncertainty deter the inflow of FDI to SSA economies. Consequently, to tackle down such effects and ensure favorable investment climates applications of sound economic policies are required from countries. Most developing nations have exercised poor economic policy implementation; consequently nations in SSA are not the one to skip from this. In this context, to tackle down macroeconomic uncertainty, SSA countries should strive to maintain stable exchange rates as well as to maintain stable macroeconomic policies that keep inflation rates low and predictable to attract FDI inflows. This stability provides a predictable environment for investors, reducing the risk of currency fluctuations that could negatively impact their investments. Furthermore, Governments should manage their exchange rates effectively to avoid sudden fluctuations that could discourage FDI inflows. This can be achieved through policies such as currency pegs or implementing managed floating exchange rates. Therefore, governments in SSA should focus on improving macroeconomic stability by implementing policies that promote fiscal discipline, and monetary stability. Moreover, governments in SSA should promote regional integration by removing trade barriers (creating regional economic blocs that promote trade liberalization and investment facilitation), harmonizing regulations, providing investment incentives, developing local capacity and facilitating cross-border investments. This will help to create a larger market for foreign investors and increase their incentives to invest in the region. On the other hand, political instability and institutional quality are significant risk factors that affect FDI inflows to SSA countries.

Therefore, governments need to create a stable political environment and focus on enhancing institutional quality that encourages foreign investors to invest in the region. This can be achieved by implementing policies that develop political stability, ensuring government effectiveness, and promoting investor-friendly policies and focus on enhancing institutional quality by controlling corruption, implementing a better bureaucracy, and strengthening enforcement of rule of law. This will help to create a more conducive environment for foreign investors and increase their confidence in the region. Therefore, improving institutional quality, mitigating political risks, reducing macroeconomic uncertainty, and promoting regional integrations are critical policy implications and recommendations for attracting more FDI inflows to SSA countries.

Appendix

List of sample countries

Angola
Benin
Burkina Faso
Cabo Verde
Cameroon
Chad
Congo, Rep.
Côte d'Ivoire
Gabon
Gambia, The
Ghana
Kenya
Madagascar
Mali
Mauritius
Mauritania
Mozambique
Namibia
Niger
Nigeria
Rwanda
Senegal
South Africa
Sudan
Uganda
Zambia

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