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Trust and Foreign Direct Investment in Sub-Saharan Africa

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Abstract

Our paper explores the intricate relationship between trust and foreign direct investment (FDI) in Sub-Saharan Africa (SSA). We aim to answer the research question: "Is there a positive relationship between trust and foreign direct investment in Sub-Saharan Africa?" To this end, we employ a comprehensive empirical analysis by investigating statistical significance of coefficients. Our quantitative analysis, which employs data on trust from World Value Survey and World Bank FDI data across SSA from 1989-2021, reveals a positive and statistically significant relationship between trust and FDI inflows.

Our interviews with locals provide corroborative insights, emphasizing the centrality of trust in attracting and maintaining foreign investments. Furthermore, our research establishes a significant negative relationship between crime rate and FDI inflows, supporting our findings on the relationship between trust and FDI. However, the findings are constrained by limitations related to data availability, sample size, and potential biases, which may affect the generalizability of our results.

This paper contributes to the existing literature by substantiating the positive effect of trust on FDI inflows, particularly in the context of SSA. It underscores the role of trust in economic growth, crime reduction, and effective governance. It concludes with recommendations for future research to delve into the dynamics of trust more comprehensively and suggestions for SSA governments to leverage trust to stimulate economic growth. The findings can inform more effective policies to attract foreign investment and foster sustainable economic growth in the African continent.

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List of Abbreviations

FDI	Foreign Direct Investment
GDP	Gross domestic product
OECD	Organization for Economic Cooperation and Development
SSA	Sub-Saharan Africa
WVS	World Value Survey

1. Introduction

The determinants of foreign direct investment (FDI) inflow are well established in previous literature, also the relationship between trust and FDI. Zhao & Kim (2011) show a strong relationship between trust and FDI, highlighting how vital trust is to encourage profitable investments. Their study lays the foundation for subsequent research by demonstrating the importance of GDP and social capital as FDI factors. Asiedu (2002), on the other hand, looks into the unique factors of FDI in Sub-Saharan Africa (SSA) compared to other developing regions. Asiedu discovers that trade openness has a more negligible impact on FDI in SSA than non-SSA countries, revealing a distinct "adverse regional effect." These studies highlight the complex nature of the trust-FDI relationship in the particular sociopolitical and economic setting of SSA, a gap that this paper seeks to fill.

In this paper, we explore if there is a positive relationship between trust and FDI in SSA. Our findings indicate a significant positive relationship between trust levels and FDI inflows in the area, supported by strong statistical evidence. Our paper analyzes the results in the context of current concerns regarding data collection, missing variables, and potential measurement inaccuracies. Our paper contributes to the existing literature by examining the SSA context and providing novel perspectives on the relationship between trust and its effect on FDI in developing economies.

The following section aims to provide readers with essential background information about Africa, FDI, and trust, essential to understanding our thesis.

Africa

In Africa, the economic pulse has finally woken up. GDP growth in the first decade of the 21st century was twice as large as in the 80s and 90s. Africa has a massive potential for growth and development due to the continent's vast amount of natural resources, a young and growing population, and an expanding consumer market (McKinsey Global Institute, 2010). Reports highlight that Africa is home to some of the fastest-growing economies in the world at the moment, and the reason may be that the continent has lately experienced significant improvements in governance

and human development indicators (IMF, 2023). Despite all these positive trends, Africa still faces disturbing challenges such as corruption, extreme poverty, untrustworthy institutions, deadly diseases, uncontrolled inflation, and too high numbers of child- and pregnancy mortality (McKinsey Global Institute, 2010) (IMF, 2023).

Our paper focuses more precisely on SSA (Appendix H). SSA is a vast and diverse region comprising 46 to 48 countries, depending on the organization defining the area. SSA covers over 24 million square kilometers (World Bank, n.d). The region is home to more than 1.1 billion people, representing approximately 14% of the global population, where 50% of the urban population lives in slums (World Bank, n.d). SSA is a vast region with over 2000 spoken languages and cultures and has some of the largest reserves of natural resources, including minerals, gold, diamonds, oil, and gas (IMF, 2023). The continent's resources have fueled the region's economic growth and attracted FDI in various sectors such as mining, agriculture, telecommunications, and infrastructure (UNCTAD, 2021).

FDI

FDI is a long-term investment made by an investor in one economy into an enterprise in another, where the investor maintains significant influence and control over the enterprise's management. FDI includes the initial and subsequent transactions between the investor and the enterprise (Alfaro et al., 2004). FDI can take the form of building factories, purchasing assets such as land or buildings, or establishing joint ventures with local businesses. FDI is critical to the economic development of a country. It brings capital, technology, and management expertise that can drive growth and create jobs (IMF, 2001). E.g., in Uganda, FDI has been a critical driver of economic growth and development, attracting more investment in recent years (Qasim & Heher, 2022), which Shihata (1987) also affirms as an effect of FDI. However, the flow of FDI is affected by economic factors and political and non-commercial hazards associated with the host nation. Furthermore, Shihata (1987) argues that investment climate is essential for FDI inflow. High returns and fewer non-commercial hazards result from an attractive investment opportunity and a favorable investment climate.

FDI in SSA

Many African governments encourage FDI as they depend on FDI inflow to create jobs and economic growth (Mariadoss, 2018). However, some governments introduce restrictions on FDI. These restrictions are a challenge foreign investors may face as it is a risk outside of the investor's control. According to (NEPAD/OECD Investment Initiative, 2005), several African governments are restricting FDI in certain sectors of the economy and, among other things, restricting the percentage of shares, geographical locations, and business sectors, which Mariadoss (2018) notes discourages FDI. He emphasizes that the reason involves fostering local entrepreneurship and safeguarding sectors that may be of strategic interest to the government.

Trust

Trust is an essential factor affecting economic transactions and is positively associated with FDI (Zhao & Kim, 2011). Trust is the belief in the reliability, truth, ability, or strength of someone or something (Merriam-Webster, n.d). Uslaner (2002) characterizes trust as a complex idea primarily understood as a "rational" reaction to trustworthy behavior displayed by others. He contends that moralistic (generalized) trust is a different and more significant type. This kind of trust does not rely on our past experiences and is faith in strangers, but what ties us to other people.

Arrow (1974) defines trust as a fundamental determinant of human behavior, which shapes economic transactions and affects organizational efficiency (as cited in Da Rin, Di Giacomo, & Sembenelli, 2018). Further, Giddens (1990) describes trust as "confidence in the reliability of a person or system regarding a given set of outcomes or events."

Why is trust such an important factor for FDI? Okonjo-Iweala (2014) explains how the first task to reform Nigeria after a long period with a military regime and terrible economy was to gain social trust and more FDI into the country. In the last two decades, the attention around the topic of the relationship between trust and FDI has surged, as trust plays a significant role in coping with corruption and other challenges in foreign markets (Doh et al., 2003).

As Africa has massive potential for growth and the urge for external investment, it is crucial to understand the impact of trust on FDI in Africa. The subject of investments in Africa is a complex and endless challenge. Studying how trust affects FDI inflow in a continent that the Western world views as untrustworthy can provide knowledge on how foreign investors can mitigate the risk of trust and increase their understanding of how to manage trust as a variable.

This research aims to contribute to the existing literature by examining the role of trust in shaping FDI inflows in African countries, considering the unique cultural, social, and political contexts that influence trust in the region.

1.1 Research Question

Empirical research on FDI determinants identifies factors that drive foreign investment decisions, such as market size, labor costs, infrastructure, political stability, and ease of business (Cleeve, 2008; Asiedu, 2006). However, there is an urge for more research on the role of trust in attracting FDI, particularly in the context of SSA. Our paper aims to bridge this gap in the current literature. The general objective of the paper is to explore the relationship between trust and FDI inflow in SSA. Our specific objective is to examine whether an increase in trust in a country in SSA will increase the FDI inflow in the same country. The Research question of this paper is, "*Is there a positive relationship between Trust and Foreign Direct Investment in Sub-Saharan Africa?"*

1.2 Interviews from Uganda

We traveled to Uganda with a local expatriate to experience the culture and speak with businesspeople, politicians, and parliament members to better understand the importance of trust in determining foreign investment into African countries. Our experience verifies our projections; Africa is different when experienced in person in lieu of reading about it in books, articles, or online. The interviews provide valuable insight into how locals perceive FDI and foreign competitors and how challenging Uganda's business environment and politics are.

This section briefly summarizes the interviews performed in Uganda. The interviews bring forth valuable insight into how local business people and

politicians deem the role of trust in local business and FDI. Interview findings will only contribute to supporting the quantitative findings.

African culture is distinct from Western culture, and we witnessed how politicians and government employees can be proud and possibly untruthful. As we discussed Africa and how trust influences FDI, they suggested that Africa is trustworthy and that corruption and mistrust are not a challenge foreign investors have to manage. This compelled us to choose wisely which interviews we considered sufficiently reliable to include in our study.

Business owner

The first interview was with an experienced businessman from Uganda. He has decades of experience with pharmaceutical businesses and offers nursing help, primarily focusing on the Ugandan HIV problem. We focused the interview on how he sees foreign investors in the competitive market.

He describes how competition has increased in the last decade as the attraction of foreign investors is increasing. Further, he expresses how investment policy has loosened up and how the government of Uganda strives to build trust with foreign investors to attract more FDI. He also explains how corruption is a big problem and how foreign investors exploit corruption to gain market shares, significantly eliminating government restrictions on businesses. He says, "Competition is good, but there are bad competitors who are using corruption to make your life difficult, and they will exploit it to kill your business."

We asked the businessman how foreign investors are establishing in Uganda. He explains how the government has placed restrictions on foreign investors, which limit them to be wholesalers, to protect local people in business so they can establish as retailers. He says, "Foreign distributors are thriving, but foreign retailers are uncommon. They thrive as we thrive". He also emphasizes the importance of trust in a business relationship. He describes how friendship and trust are the first things they focus on when cooperating with foreign investors and says, "Without trust in business, there is no business."

Member of the Parliament of Uganda

Our second interviewee was a prominent member of the Ugandan Parliament who provided us with unique insights into the political landscape and its impact on FDI. Given the nature of our project, we approached the interview under the guise of potential investors, a strategy that elicited more candid responses from our interviewee.

The parliament member acknowledged the importance of trust in attracting and maintaining FDI. He noted, "Investors need confidence in the environments they invest their money. Trust, in this case, is paramount. It can be the difference between attracting and repelling foreign investments." He expanded on how a lack of trust can create perceived risks for investors. "A lack of trust can lead to corruption, government instability, or inconsistent policy implementation, all of which make investors cautious. Our job is to make a trustworthy place that makes these worries disappear."

The Parliament member also acknowledged the role of trust in managing transactional costs. He stated, "Without trust, foreign investors may feel obligated to implement additional measures to protect their investments. These additional measures can add to business costs and make investments less attractive." Highlighting the importance of trust for long-term planning, he added, "FDI is a long-term commitment. Investors need assurance that their investments will be safe and that the business environment will remain stable. Trust is crucial in providing this assurance."

In the end, we discussed policy implementation, and he stated, "Trust is not only about having investor-friendly policies in place but also about consistently implementing these policies. Investors need to trust that their rights will be protected and that contracts will be honored. We focus on this key area to build trust and attract more FDI."

2. Literature Review

This section aims to review literature and examine existing theories related to the subject matter. Previous research focuses on location-specific advantages for FDI nationally based on the eclectic paradigm, a framework suggesting a firm's FDI is determined by its ownership, location, and internalization advantages (Gray, 1996). Previous studies also identify various factors that contribute to the advantages of a market, including market size, market attractiveness, tax rates, investment risks, political risks, and government policy (Zhao & Kim, 2011).

Research by Mijiyawa (2015) identifies five variables significantly and positively linked with FDI inflows: lagged FDI inflows, trade openness, political stability, market size, and return on investments. His paper shows three policy stances that African policymakers adopt to enhance the continent's attractiveness to FDI. Mainly, he emphasizes the role of agglomeration effects in FDI activities, meaning that the presence of FDI today will likely attract more FDI.

His finding aligns with Sekkat & Veganzones-Varoudakis's (2007) findings, stating the importance of a favorable investment climate in developing nations in the 1990s. They discover that FDI attractiveness, particularly in the manufacturing sector, is significantly influenced by openness. Additionally, their study emphasizes the importance of a favorable investment climate, such as political stability and the rule of law, in drawing higher FDI inflows. They also show that infrastructure endowment increases the investment climate, making the country more attractive for FDI. According to an analysis of five developing regions, SSA and South Asia can experience substantial increases in FDI if they adopt the same levels of openness and investment climate as East Asia.

In addition, Mijiyawa emphasizes the need to increase the return on investment in Africa, which can be accomplished by investing in infrastructure and enhancing the labor force's skills. He examines the relationship between openness, investment climate, and FDI in developing nations. Consequently, it is highly relevant to our paper.

Further, Asiedu (2002) also acknowledges that trade openness positively influences FDI in SSA and non-SSA countries; however, the marginal benefit from increased openness is less for SSA, suggesting that trade liberalization generates more FDI in non-SSA countries. Her research investigates the determinants of FDI in SSA, comparing the region to other developing countries to understand why SSA has yet to be relatively successful in attracting FDI despite policy reform. Her study finds that factors driving FDI in developing countries impact SSA differently. Specifically, infrastructure development, which promotes FDI in non-SSA countries, has no significant effect on FDI in SSA. Sekkat & Veganzones-Varoudakis (2007) finds infrastructure to contribute to FDI in developing nations, challenging the non-significant effect Asiedu (2002) observes.

Asiedu's findings also indicate an "adverse regional effect" for SSA, meaning that countries in the region receive less FDI simply due to their geographical location. Her paper shows that this effect may be attributed to the perception of SSA as inherently risky and a lack of knowledge about the countries in the region. Her study concludes with several policy implications. Firstly, African countries should liberalize their trade regimes and enhance the credibility of their reform process to attract more FDI. Secondly, it is crucial to only partially replicate policies successful in other regions since these may have a differential impact on Africa. Finally, governments and international organizations should disseminate information about the countries in the area to dispel misconceptions and improve the perception of investment potential in SSA.

Further research by Globerman & Shapiro (1999) emphasizes the critical role a country's governing infrastructure—including its political, institutional, and legal environment—plays in attracting FDI and enabling economic development. Globerman & Shapiro also emphasize that political governance matters, which makes it relevant to our study. They recognize infrastructure as an essential factor, which includes fundamental physical and organizational elements such as transportation systems, communication networks, and public services. They contend that well-developed infrastructure lowers corporate costs and boosts productivity, making economies attractive to investors. These findings are essential to understand, particularly for emerging and developing economies.

Busse and Hefeker (2007) conduct a comprehensive study on the influence of political risk and institutional factors on FDI inflows in developing countries. In particular, they identify government stability, internal and external conflicts, law and order, ethnic tensions, bureaucratic quality, corruption, and democratic accountability as crucial determinants of FDI inflows. These findings contribute to the literature by illustrating the importance of political and institutional factors in multinational corporations' investment decisions. Furthermore, they emphasize the need for a dynamic approach that accounts for autocorrelation and endogeneity when analyzing the determinants of FDI.

Mijiyawa's (2015) research also shows the significance of political stability in attracting FDI to African countries. He finds that countries with higher political stability tend to attract more FDI since they are perceived as less risky and more conducive to business activities. Political stability in this context encompasses various dimensions, such as the absence of violence, social unrest, and political turmoil. When foreign investors perceive a host country as politically stable, they are more likely to trust the environment and commit resources for investment.

Uslaner (2002) offers valuable insights into the nature of trust, its determinants, and its consequences, providing a foundation for understanding the role of trust in economic development. Uslaner explores the concept of trust, arguing that it is a critical component of social capital and a significant factor in facilitating cooperation and economic transactions. His results reveal the importance of contextual trust, life satisfaction, confidence in institutions, education, and other factors in shaping an individual's trust in others.

Further, he emphasizes the significance of moral foundations of trust, suggesting that people with a strong sense of morality and optimism for the future are likelier to trust others. He argues that higher levels of trust can create an environment conducive to cooperation and collaboration, which is essential for fostering economic growth. Furthermore, he examines the link between trust and inequality, demonstrating a negative association between the two variables. Countries with higher levels of trust may have lower levels of income inequality, which is essential in promoting inclusive economic development.

Borensztein, De Gregorio, and Lee (1998) show the impact of FDI on economic growth in developing countries and find that FDI has a significant positive effect, depending on the level of human capital. The findings of this study have significant implications for developing countries, as they suggest that FDI can contribute to economic growth when the host economy has sufficient human capital.

In another paper, Uslaner (2005) distinguishes between two types of trust: strategic and moralistic. Strategic trust is based on information and experience, while moralistic trust is a moral commandment to treat people as trustworthy. He argues that generalized trust, rooted in moralistic trust, is significant for connecting people from different backgrounds, fostering tolerance, effective governance, and economic growth. This distinction between strategic and moralistic trust provides a valuable framework for analyzing the impact of trust on various aspects of society, including civic engagement, social capital, and economic performance. Consequently, societies with higher levels of generalized trust may have more effective governments, higher growth rates, and less corruption and crime. In addition, Uslaner's work discusses the role of trust in different contexts, such as religious volunteering and giving to charity. He points out that giving time or money to secular causes, where people are more likely to help others different from themselves, is the hallmark of generalized trusters.

In another work on trust, La Porta et al. (1997) show that specifically countries with low trust levels exhibited less efficient judiciaries, higher corruption rates, worse bureaucratic quality, and lower tax compliance. They further examine the sources of trust, suggesting it is not purely exogenous, but influences societal institutions' past performance. In the context of FDI in SSA, the findings of La Porta et al. take on particular importance. Trust, as a component of the broader institutional environment, can significantly impact the attractiveness of a country or region for foreign investors.

In another study, Berg & Johansson (2016) aims to explore the nuanced relationship between generalized trust, institutional trust, and crime-related insecurity in different societal contexts. Their study conducts the urban environment of Orebro, looking at the segregated and disadvantaged neighborhoods in contrast to the city-wide population. They discover a direct connection between institutional and

generalized trust in the broader city population. In segregated and disadvantaged neighborhoods, the link is more indirect, where institutional trust indirectly impacts generalized trust through lower crime-related insecurity. When citizens in segregated and disadvantaged neighborhoods trust the political institutions, their perception of safety regarding crime increases, thus, increasing the generalized trust.

Finally, Zhao & Kim (2011) explores the social capital linkage to FDI in a worldwide cross-country study. They aim to discover social capital levels' impact on the hosting country's effect on FDI inflows. In contrast, social capital is the aggregated social resources of interpersonal trust and associated activities at a national level. Further, the paper explains the relationship between trust and FDI, where FDI involves social exchanges. Hence, a trustworthy relationship is critical for successful investments. The results from this cross-country study show that GDP has the highest correlation with FDI. Trust positively influenced FDI in all models compared with their initial model without variables measuring social capital.

This result is the ground for our research, aiming to establish further knowledge in this field in a smaller area with other economic prerequisites as there might be a regional effect for the effect of social capital on FDI in SSA as seen with other determinants on FDI in Asiedu (2002).

Uslaner (2002) provides valuable insight into the role of trust in economic development in Sub-Saharan Africa (SSA) and how trust can affect the economic climate of SSA nations. Our perception is that future research should build on the findings of Uslaner (2002), examine the specific mechanisms through which trust affects economic development in the region, and investigate potential strategies for enhancing trust to promote inclusive growth. This is within the scope of this paper due to the link between foreign direct investment and economic growth highlighted by Borensztein, De Gregorio, and Lee (1998).

3. Data

In this section, we argue for the chosen variables in the regression models used to test the paper's research question. We explain each variable through secondary data explanation, past literature, and how we build the variables in the regression models.

3.1 Variables

We base our variable selection on past literature on determinants of FDI inflow. We choose our variables and collect data from World Bank in databases for economics and politics and World Value Survey (WVS). Our data is subject to missing values for some variables in the selected sample and time period. This applies especially to Trust, Crime Rate, Political stability, and Infrastructure data. As these variables contain some consistency, we fill in missing data in selected years for each country in the sample based on existing data for the variable for each country.

3.1.1 Dependent Variable

FDI

(World Bank, n.d.-a) describes FDI as the net inflow of funds used to obtain a significant management stake (at least 10% of voting shares) in a business operating in a different economy than the investors. It comprises equity capital, reinvested earnings, and other long-term and short-term capital, as indicated in the balance of payments. This metric reveals net inflows (the difference between new investment inflows and disinvestment) from foreign investors into the reporting economy divided by the host country's GDP to provide context.

FDI represents the dependent variable in our analysis, given its crucial role in promoting economic growth, technology transfer, and job creation in the host country (Alfaro et al., 2004; Borensztein et al., 1998).

We use annual data on FDI net inflows in the percentage of GDP sourced from the World Bank's World Development Indicators database. This data captures the capital provided by foreign investors to the host country and is widely used as the dependent variable in empirical studies on establishing the determinants of FDI (Cleeve, 2008; Asiedu, 2006; Zhao & Kim, 2011).

3.1.2 Independent Variables

Trust

We collect data on trust from WVS. WVS amasses massive studies on different topics and divides them into periods or different "waves." WVS contains data on our variable of interest for 11 of 48 Sub-Saharan African countries.

We use data based on the question, "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Uslaner (2002, 2005) acknowledges that this question is commonly used to measure interpersonal and generalized trust. This question results in the variable "most people can be trusted," with four possible values: "not answered," "not asked," "need to be careful," and "most people can be trusted." We assign a value to each answer. However, "not asked" and "not answered" is assigned as missing values. "Need to be careful" is assigned value 0, and "Most people can be trusted" is assigned value 1.

Further, we create a country mean based on the answers. As most countries have only been asked once during the period of interest in our research, we assign the country mean to each year, assuming that trust is relatively stable. We use a backward filling of values for the few countries asked more than once. According to Lopez (2014), trust is remarkably stable over time, and its changes are typically correlated with economic disparity (Uslaner, 2002).

Crime Rate

Lopez (2014) uses crime rate as a variable in line with Messner et al. (2004), establishing a relationship between a country's level of trust and its crime rates. Our study intends to use the same technique to obtain an additional trust measurement to examine the influence of trust and FDI in SSA.

Crime Rate represents data on the number of intentional homicides per 100,000 population in each country, a good indicator of a country's crime rate. Utilizing this metric, researchers and policymakers can gain insights into the prevalence of crime in various regions, allowing them to identify trends, evaluate the effectiveness of law enforcement and crime prevention measures, and allocate resources more

effectively to address the specific needs of communities (National crime statistics; UNODC).

Higher crime rates can negatively impact community trust between individuals, public institutions, and investments (United Nations Office on Drugs and Crime, 2005). As trust is essential for fostering social cohesion and attracting FDI, it is crucial to explore the role of crime rates in this context.

Moreover, research by La Porta et al. (1997) demonstrates a strong correlation between trust and various measures of economic development, such as the rule of law, corruption, and the quality of government. High crime rates are often associated with higher levels of corruption and lower government quality, which can erode trust in societies.

We extract data from World Bank's World Development Indicators to build the variable. Data on intentional homicides are subject to missing values. We use backward filling, copying the first observed value backward. Further, we find the variable more suitable if we divide it into five groups based on percentiles and assign a value from 1-5 based on the value of intentional homicides. We lag Crime Rate by one year.

3.1.3 Control Variables

Trade

Trade measures the sum of exports and imports of goods and services as a percentage of the gross domestic product (World Bank, n.d.-a). Trade is crucial in analyzing the effect of trust on FDI in SSA as an important determinant of FDI. It has a well-established relationship with FDI in the economic literature. Blonigen (2005) states that a common motivation for FDI is as a substitute for export to the host country. Controlling for this factor helps isolate the effect of Trust on FDI and provides a more robust analysis.

We base the variable on data from the World Bank's World Development indicators Trade in percentage of GDP. We do not assume the effect on FDI to happen in the same year as the export and import for each country. Hence, we lag Trade two years to delay the effect on FDI in percentage of GDP.

GDP per capita and GDP growth

GDP per capita represents the gross domestic product (GDP) divided by the population at midyear (World Bank, n.d.-a). The GDP encompasses the total value of goods and services produced by all the economy's resident producers, with product taxes added and subsidies subtracted that are not already factored into the production values. This calculation does not account for the depreciation of fabricated assets or the depletion and degradation of natural resources.

Including GDP per capita as a control variable is essential to account for the role of economic development in shaping FDI inflows. GDP per capita is a widely recognized measure of economic wealth. Hence, including GDP per capita in the analysis helps control potential disparities in African economic development. The relevance of GDP per capita and GDP growth in the context of FDI and trust is well-established in the literature. Zhao & Kim (2011) find GDP to correlate highly with FDI inflow. Countries with higher GDP per capita often possess superior infrastructure, institutions, and human capital, making them more appealing to foreign investors (Asiedu, 2002).

Moreover, higher levels of economic development are typically associated with more excellent political stability (Mijiyawa, 2015), which can build trust among foreign investors and increase FDI inflows. A higher GDP per capita can also signal a larger domestic market, attracting foreign investors seeking market access (Alfaro et al., 2004).

We source GDP per capita and GDP growth data from World Bank's World Development indicators. GDP per capita measures GDP per capita in current US$. GDP growth is the annual percentage growth in GDP. We lag both variables by two years as we expect a delayed effect on the inflow of FDI. By controlling for GDP per capita and annual growth in GDP in our regression analysis, we can discern the effects of FDI and trust on each other more accurately while accounting for the potential confounding influence of economic development.

Infrastructure

Data on Infrastructure results from the Logistics Performance Index surveys, which the World Bank carries out in collaboration with various academic, international

organizations, and private sector partners involved in global logistics. In our paper, we use the part of the survey concerning trade and transport-related infrastructure. The markets evaluated are determined by each respondent's country's most significant export and import markets, random selection, and for landlocked nations, neighboring countries providing access to international markets. Participants rate trade and transport-related infrastructure quality, such as ports, railroads, roads, and information technology, from 1 (very low) to 5 (very high). The final scores represent the average ratings from all respondents.

We use the World Bank's World development indicators Logistics performance index: Quality of trade and transport-related infrastructure. For countries with data on Infrastructure, we observe that no country have data on logistics performance before 2007. Hence, we fill in missing values from 1989 to 2021 by assigning the following year's value to the year of missing value. We lag Infrastructure by three years.

Zhao & Kim (2011) measures infrastructure by making their variable based on the road network and telephone mainlines. Aseidu (2002) uses the number of phones per 1,000 people in each country. We find the logistics performance index to include the most reliable data and believe that the reason other papers use different measurements of infrastructure might be a result of the availability of the data when the research was conducted.

Previous research identifies infrastructure as an essential determinant of FDI inflow. Findings in Asiedu (2002) demonstrate that the quality of infrastructure has no significant effect on FDI inflows to SSA countries. Sekkat & Veganzones-Varoudakis (2007) find infrastructure to be an essential contributor to the investment climate, making the country more attractive to FDI inflow. Hence, by including infrastructure in our analysis, we can capture the effect of this essential factor on the attractiveness of African countries to foreign investors. Asiedu's (2002) research also points out how, in non-SSA countries, well-developed infrastructure, such as transportation, telecommunications, energy, and water supply systems, can substantially reduce operational costs, enhance production efficiency, and improve market access for businesses. As a result, better infrastructure quality in a host country is likely to attract more FDI.

Political Stability

The Global Economy's Political Stability and Absence of Violence/Terrorism Index assess the perceived likelihood of a government experiencing destabilization or being overthrown by unconstitutional or violent means, including acts of politically-motivated violence and terrorism (The Global Economy, n.d.). It averages various sub-indexes from sources such as the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services as a composite measure. These sub-indexes evaluate the potential for disorderly government power transitions, armed conflicts, violent demonstrations, social unrest, international tensions, terrorism, and ethnic, religious, or regional conflicts (The Global Economy, n.d.).

According to Mijuyawa (2015), political stability is one of the main drivers for more FDI inflows in Africa. Political stability influences FDI inflows by creating a secure and predictable environment for investors, which reduces uncertainty and the risks associated with investments. Stable political systems tend to have more vital institutions, better governance, and more effective policy implementation, all of which contribute to a favorable investment climate (Busse & Hefeker, 2007).

By including Political Stability as a control variable in our regression models, we can capture its impact on FDI inflows to Africa and obtain more precise results.

We extract data on Political Stability from Worldwide Governance Indicators provided by World Bank. The data contain an index showing values in the interval (-2,5 - 2,5), where -2,5 presents a weak political stability value, and 2,5 gives a substantial value of political stability. We observe missing values in the data for Political Stability from 1989 to 1995, 1997, 1999, and 2001. We aim to fill these gaps in 1995, 1997, 1999, and 2001 with the value of political stability the following year. Further, we lag Political Stability by three years.

Accumulated FDI

Accumulated FDI refers to the total FDI equity inflows within a given economy. The variable is similar to "FDI stock" in Zhao & Kim (2011). This encompasses equity capital, reinvestment of earnings, and other capital. Mijiyawa (2015) emphasizes the role of agglomeration effects in FDI activities, meaning that the

presence of FDI today will likely attract more FDI in the future. We base the variable on data from World Bank's World Development indicators and the data series "Foreign direct investment, net inflows (BoP, Current US$)" from 1989-2021. We use each country's FDI inflow in the current USD and make a cumulative variable and lag Accumulated FDI by two years.

We incorporate Accumulated FDI in our analysis to capture the cumulative impact of foreign investments on the host economy over time. This approach provides a more comprehensive understanding of the long-term effects of FDI on the economy, including capital formation, technology transfer, and employment generation, hence, isolating this variance.

We present descriptive statistics and the correlation matrix in Table 1 and observe that trust in SSA is low at 0.137 on average. Also, the maximum value of Trust in the sample is closer to zero than one, meaning that overall, people in SSA do not trust their fellow citizens. The number of observations on Trust is low compared to the other variables in the dataset. FDI inflow in percentage of GDP ranges within a large interval throughout the sample, and we observe a mean of 3.79% of GDP in the same year.

Average political stability is negative, meaning that SSA, on average, is an item to political collapse and rapid changes in governments.

From the correlation matrix, we observe that FDI in percentage of GDP does not correlate with the other variables, except Trade and GDP growth, showing a weak relationship. Trust and Crime Rate have a moderate positive relationship which is significant at a 5%-level. Trust and Political Stability also have a weak negative correlation, but this result is insignificant.

Table 1: Summary statistics and correlation matrix

Variable	Obs	Mean	Std. dev.	Min	Max
FDI in % of GDP	1494.00	3.79	8.74	-18.92	161.82
Trust	363.00	0.14	0.06	0.02	0.29
Crimerate	1089.00	2.97	1.40	1	5
Infrastructure	1452.00	2.16	0.35	1.27	3.79
Accumulated FDI *(in billions)*	1584.00	4.35	11.80	-7.37	138.00
Political stability	1281.00	-0.56	0.95	-3.31	1.28
GDP per capita	1499.00	1673.54	2569.34	99.76	19849.72
Trade	1342.00	66.47	33.83	0.76	225.02
GDP growth	1496.00	3.88	7.21	-50.25	149.97

	FDI in % of GDP	Trust	Crimerate	Infrastructure	FDI accumulated	Political stability	GDP per capita	Trade	GDP growth
FDI in % of GDP	1.000								
Trust	-0.067	1.000							
Crimerate	-0.051	0.460*	1.000						
Infrastructure	-0.030	0.255*	0.214*	1.000					
Accumulated FDI	0.036	0.184*	0.197*	0.366*	1.000				
Political stability	0.074*	-0.167*	-0.061	0.131*	-0.096*	1.000			
GDP per capita	0.069*	0.192*	0.241*	0.287*	0.206*	0.417*	1.000		
Trade	0.377*	-0.136*	0.157*	-0.079*	-0.095*	0.413*	0.536*	1.000	
GDP growth	0.242*	0.017	-0.063*	-0.046	-0.021	0.052	-0.018	0.039	1.000

*This table shows descriptive statistics and the Pearson pairwise correlation coefficients for the variables in the empirical analysis. Significance on a 5%-level is displayed next to the coefficients in the correlation matrix by *.*

3.2 Study population and sampling

3.2.1 Selection of countries

SSA includes 48 out of 54 countries on the continent of Africa. World Bank defines which countries are included in SSA in our study, as World Bank is our primary data source. Other sources, like TWAS (The World Academy of Science), define SSA as including fewer or more countries. The selection of countries in this study is based on the criteria that data is available for all variables. This criterion includes 11 out of 48 countries in Model 1 and Model 2 (Trust) and 26 in Model 3 (Crime rate).

Table 2 lists an overview of available data on Trust and Crime Rates and which countries we include in each regression model.

Table 2: Data availability and mean GDP per capita from 1989-2021 for countries in SSA

All countries in SSA	Mean GDP per capita (USD) 1989-2021 per country	Model 1 & Model 2	All countries with data on crime rate	Model 3
Angola	1933.85	N/A	Angola	Angola
Benin	777.27	N/A	Benin	Benin
Botswana	4683.52	N/A	Botswana	Botswana
Burkina Faso	490.54	Burkina Faso	Burkina Faso	Burkina Faso
Burundi	190.60	N/A	Burundi	Burundi
Cabo Verde	2177.73	N/A	Cabo Verde	N/A
Cameroon	1182.55	N/A	Cameroon	Cameroon
Central African Republic	378.03	N/A	Central African Republic	Central African Republic
Chad	534.66	N/A	N/A	N/A
Comoros	1140.10	N/A	N/A	N/A
Democratic Republic of Congo	305.77	N/A	N/A	N/A
Republic of Congo	1797.87	N/A	N/A	N/A
Djibouti	1442.85	N/A	N/A	N/A
Equatorial Guinea	6978.39	N/A	N/A	N/A
Eritrea	365.86	N/A	N/A	N/A
Eswatini	2651.84	N/A	Eswatini	N/A
Ethiopia	349.67	Ethiopia	Ethiopia	Ethiopia
Gabon	6329.41	N/A	N/A	N/A
Gambia	614.71	N/A	N/A	N/A
Ghana	1011.76	Ghana	Ghana	Ghana
Guinea	600.33	N/A	N/A	N/A
Guinea-Bissau	442.66	N/A	Guinea-Bissau	Guinea-Bissau
Kenya	882.85	Kenya	Kenya	Kenya
Lesotho	761.30	N/A	Lesotho	Lesotho
Liberia	511.53	N/A	Liberia	N/A

Madagascar	386.48	N/A	N/A	N/A
Malawi	320.77	N/A	Malawi	N/A
Mali	520.84	Mali	N/A	N/A
Mauritania	1239.29	N/A	N/A	N/A
Mauritius	6297.86	N/A	Mauritius	Mauritius
Mozambique	414.43	N/A	Mozambique	Mozambique
Namibia	3652.26	N/A	Namibia	Namibia
Niger	383.36	N/A	Niger	Niger
Nigeria	1405.95	Nigeria	Nigeria	Nigeria
Rwanda	454.08	Rwanda	Rwanda	Rwanda
São Tomé and Príncipe	1317.91	N/A	São Tomé and Príncipe	N/A
Senegal	1070.88	N/A	Senegal	Senegal
Seychelles	10381.73	N/A	Seychelles	N/A
Sierra Leone	342.06	N/A	Sierra Leone	Sierra Leone
Somalia	347.37	N/A	N/A	N/A
South Africa	5207.31	South Africa	South Africa	South Africa
South Sudan	1378.48	N/A	South Sudan	N/A
Sudan	1102.08	N/A	Sudan	Sudan
Tanzania	567.17	N/A	Tanzania	Tanzania
Togo	498.41	N/A	N/A	N/A
Uganda	490.61	Uganda	Uganda	Uganda
Zambia	896.75	Zambia	Zambia	Zambia
Zimbabwe	902.33	Zimbabwe	Zimbabwe	Zimbabwe

This table displays available data on Trust and Crime rate for each country in SSA. Column one displays all countries in SSA in the World Bank database. Column 2 displays the calculated mean GDP per capita for each country from 1989-2021 based on data from World Bank. Column 3 displays available data on Trust in SSA in WVS to be used in Models 1 and 2. Column 4 specifies available data on Intentional homicides per 100,000 people per country (Crime rate) in SSA. Column 5 displays countries in column 4 available for use in Model 3 after considering missing data in control variables.

All 48 countries in the SSA are presented in Table 1. When examining the sample selection for each model, we include the mean GDP per capita from 1989 to 2021 in column (2) to establish a ratio to compare the countries. The ratio ranges from 191 USD (Burundi) at the bottom to 10382 USD (Seychelles) at the top. We aim to include various countries in this range in all models to build a strong argument that the sample selection in both models is an excellent reflection of the population (whole SSA).

The 11 countries in the sample for Model 1 range in mean GDP per capita from 350 USD (Ethiopia) to 5207 USD (South Africa). Ethiopia comes out among the bottom five countries in SSA on the ratio, and South Africa is among the countries with the highest SSA ratio. The remaining nine countries in Model 1 lie between 454 and 1406, covering a wide range of the total population of SSA.

Figure 1: GDP per capita development in countries in SSA from 1989-2021

Figure 1.1: GDP per capita development in all countries in SSA from 1989-2021

Series : GDP (current US$)
Source: World Development Indicators
Created on: 06/06/2023
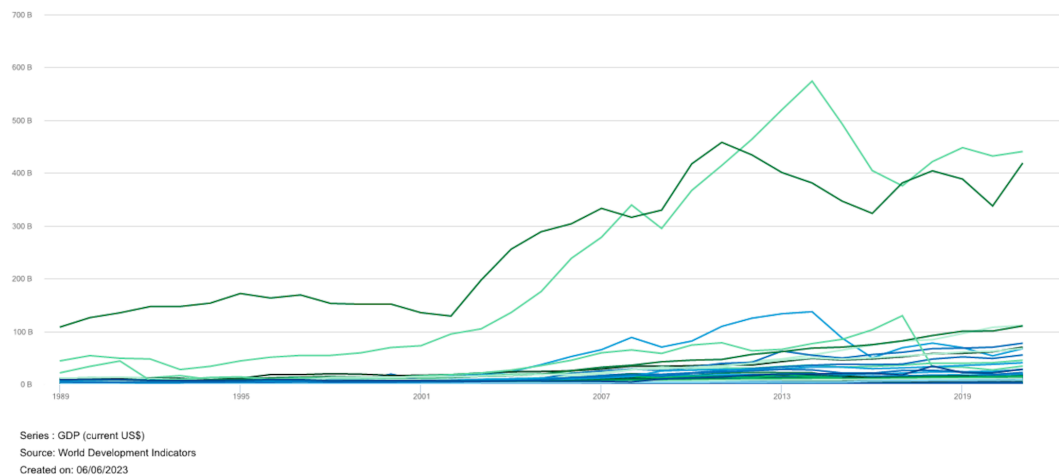
Figure 1.2: GDP per capita development in all countries in SSA included in Model 1 and 2 from 1989-2021

Series : GDP (current US$)
Source: World Development Indicators
Created on: 06/06/2023
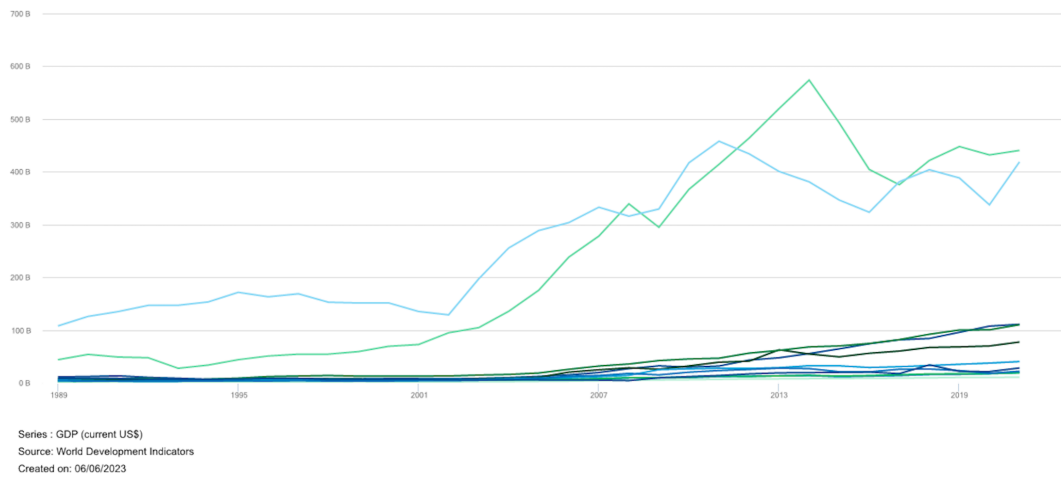
Figure 1.3: GDP per capita development in all countries in SSA included in Model 3 from 1989-2021

Series : GDP (current US$)
Source: World Development Indicators
Created on: 06/06/2023
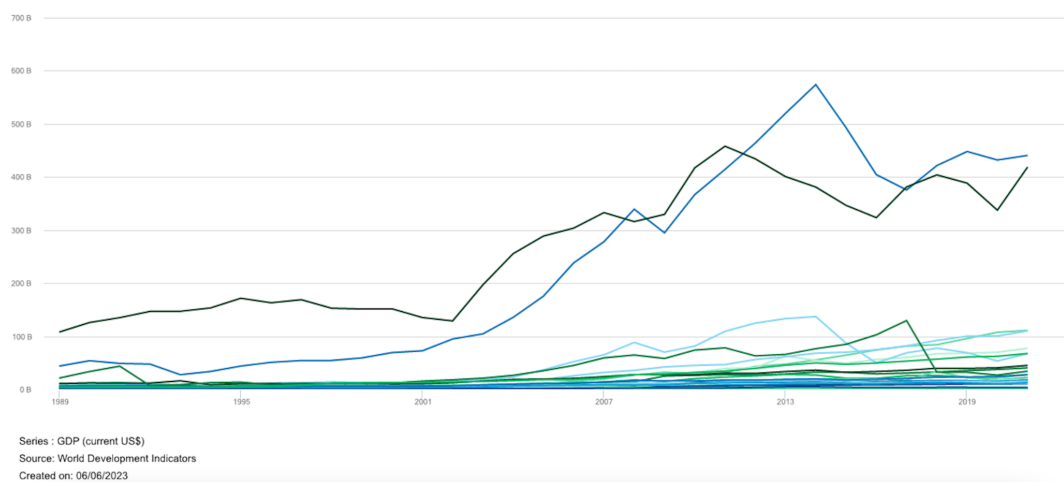
This figure displays the development in GDP per capita in each country in SSA in the World Bank database from 1989-2021. Figure 1.1 displays the development in mean GDP per capita for all 48 countries in SSA included in the World Bank database. Figure 1.2 displays the development in mean GDP per capita for all countries included in Model 1 and Model 2 (countries displayed in column 3 in Table 2). Figure 1.3 displays the development in mean GDP per capita for all countries included in Model 3 (countries displayed in column 5 in Table 2).

Figure 2: FDI net inflow in percentage of GDP development in countries in SSA from 1989-2021

Figure 2.1: FDI net inflow in percentage of GDP development in all countries in SSA from 1989-2021

Series : Foreign direct investment, net inflows (% of GDP)
Source: World Development Indicators
Created on: 06/06/2023
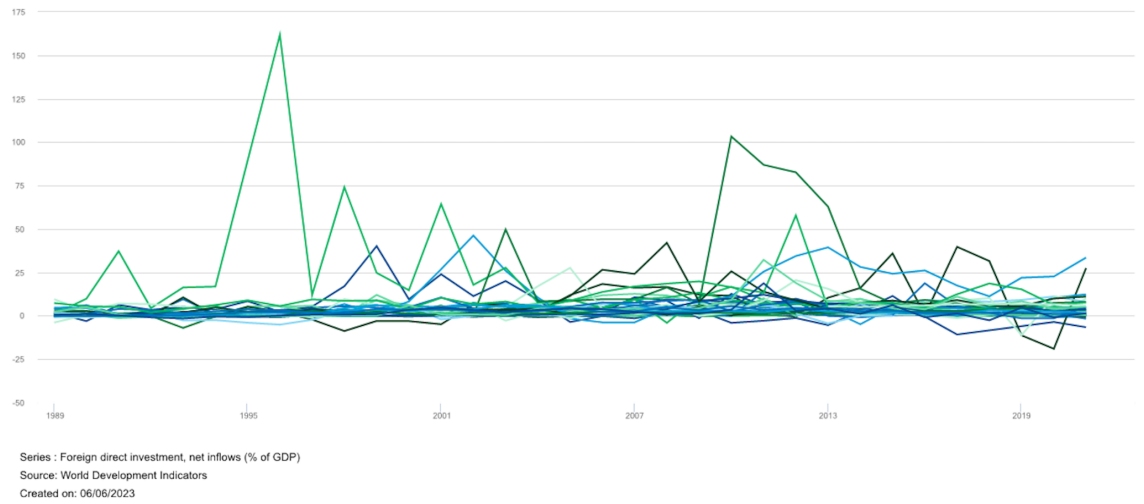
Figure 2.2: FDI net inflow in percentage of GDP development in all countries in SSA included in Model 1 and 2 from 1989-2021

Series : Foreign direct investment, net inflows (% of GDP)
Source: World Development Indicators
Created on: 06/06/2023
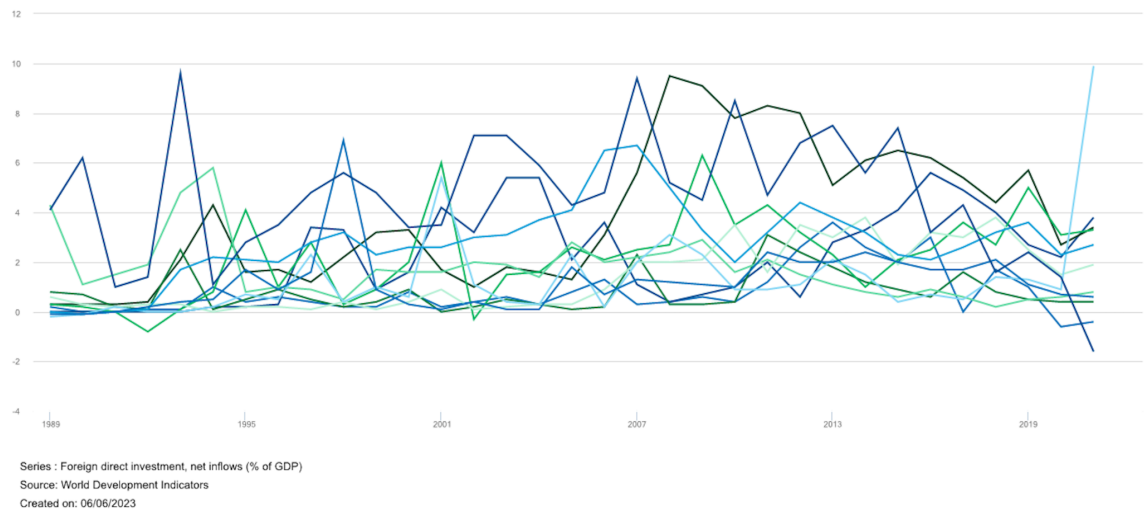
Figure 2.3: FDI net inflow in percentage of GDP development in all countries in SSA included in Model 3 from 1989-2021

Series : Foreign direct investment, net inflows (% of GDP)
Source: World Development Indicators
Created on: 06/06/2023
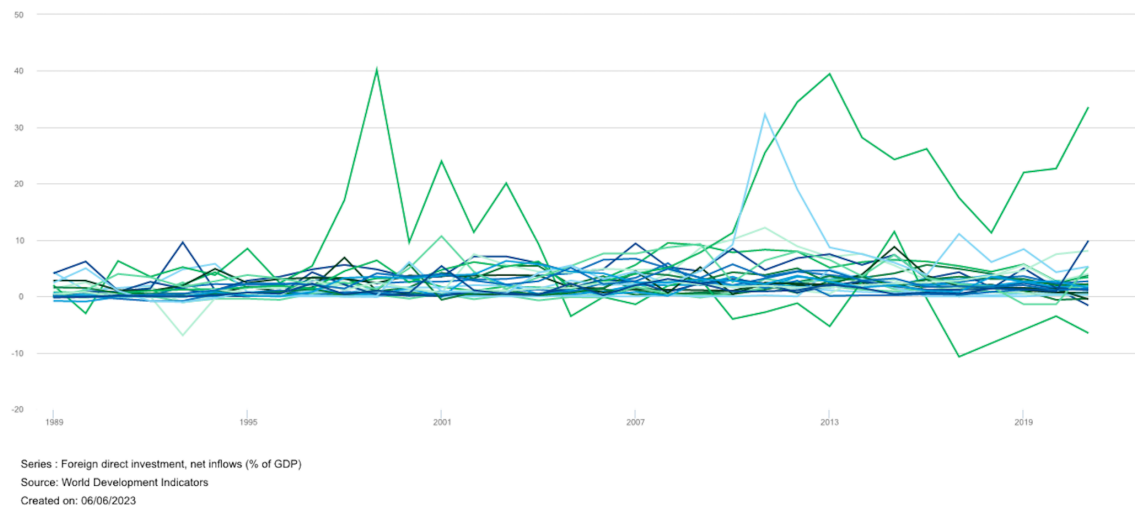
This figure displays the development in FDI net inflow in percentage of GDP in each country in SSA in the World Bank database from 1989-2021. Figure 1.1 displays the development in FDI net inflow in percentage of GDP for all 48 countries in SSA included in the World Bank database. Figure 1.2 displays the development in FDI net inflow in percentage of GDP for all countries included in Model 1 and Model 2 (countries displayed in column 3 in Table 2). Figure 1.3 displays the development in FDI net inflow in percentage of GDP for all countries included in Model 3 (countries displayed in column 5 in Table 2).

Interpretation of Figures 1.1 and 1.2 provide further insight into the country selection for Models 1 and 2, establishing a firm argument that this selection covers a wide range of countries in SSA. We observe that this country selection lacks observations in the upper range of mean GDP per capita in SSA. In Figures 2.1 and 2.2, we observe that the sample selection for Models 1 and 2 includes various countries within a wide range of FDI inflow. The sample selection in Models 1 and 2 excludes some extreme observations of FDI inflow, among them Equatorial Guinea and Liberia.

The Crime rate variable includes data in 33 of 48 countries in SSA, which is the starting point for the sample selection for Model 3. The selection includes Burundi, the country with the lowest mean GDP per capita (191 USD), and Seychelles, the country with the highest mean GDP per capita (10382 USD). The remaining 31 countries range between these two and cover various ranges of GDP per capita in SSA.

Out of the respective 33 countries with data for crime rate, data is limited in some of the control variables, resulting in a sample of 26 out of the 33 countries for Model 3. The limitations exclude, among others, Seychelles, with the highest mean GDP

per capita. It also excludes two countries between 0-1000 on the ratio, two countries between 1000-2000, and, in addition to Seychelles, two countries in the range above 2000.

The sample for Model 3 covers a variety of observations within the range of GDP per capita and FDI inflow. We present the observation graphically by comparing Figures 1.1 and 1.3 and 2.1 and 2.3. We observe that the selection of countries in Model 3 provides a good reflection of the total of countries in SSA.

3.2.2 Time period

The time period we use in our analysis spans from 1989- 2021. The WVS waves do not include all countries in every wave. This limitation forces us to use data from waves 2 - 7 to obtain the most data on Trust. WVS wave 1, conducted between 1981 and 1984, contains no SSA countries and is therefore not included in our sample. Wave 2 - 7 spans over a time period from 1990 til 2022 but contains no data on Trust for any SSA countries in 2022.

Another implication is missing data on Political Stability before 1997. The following lagging of Political Stability further implicates the time period of our study. Hence, all models contain data from 1989-2021, but missing values leads to regression models based on data from 1998 to 2021.

4. Method

This section presents the method we use to examine our research question. This section includes the research design and the development of the regression models used to investigate the relationship between trust and FDI inflow.

4.1 Research design

Our research examines the effect of Trust on FDI net inflow in percentage of GDP in SSA through empirical analysis of significance level. We use secondary data from World Bank's World Development Indicators, World Bank's World Governance Indicators, and WVS with several control variables. We use random effects panel data analysis, allowing both time-invariant and time-variant variables

to be included within each country. This action is critical as trust is assumed to be relatively stable (Lopez, 2014).

Using these methodologies, we investigate the significance of Trust on FDI net inflow in percentage of GDP in SSA while controlling for changes in other determinants of FDI net inflow in percentage of GDP over time. Inspired by Lopez (2014), we substitute Trust for Crime Rate in an additional regression model, allowing us to utilize the relationship between the two variables. Further, we add an interaction term to Model 1 to investigate the marginal effects of GDP per capita and Trust on FDI net inflow in percentage of GDP.

4.2 Regression models

Previous research by Zhao & Kim (2011) and Asiedu (2002) allows us to understand the determinants of FDI. The regression model in Zhao & Kim (2011) fits reasonably well due to overlapping research areas. However, we differentiate from Zhao & Kim´s (2011) methodology by using panel data regression to examine the relationship between Trust and FDI inflow.

The variables we include in the Models are developed from previous research in the field and explained in Chapter 3 of this paper. Our research is similar to the research of Zhao & Kim (2011). Hence we find inspiration for the model specification in their work. Additional control variables in Model 1 are inspired by other research on determinants of FDI in SSA. Models 2 and 3 are in the simplicity varieties of Model 1.

The regression models we use in our empirical analysis are as follows:

Model 1:

$FDI/GDP_{i\,t} = a_0 + a_1 Trust_{i\,t} + a_2 GDP\ per\ capita_{i\ (t-2)} + a_3 Trade_{i\ (t-2)} + a_4 Infrastructure_{i(t-3)} + a_5 Accumulated\ FDI_{i\ (t-2)} + a_6 GDP\_growth_{i\ (t-2)} + a_7 Political\ stability_{i\ (t-3)} + \varepsilon_{i\,t}$

Model 2:

$FDI/GDP_{i\,t} = a_0 + a_1 Trust_{i\,t} + a_2 GDP\ per\ capita_{i\ (t-2)} + a_3 Trade_{i\ (t-2)} + a_4 Infrastructure_{i(t-3)} + a_5 Accumulated\ FDI_{i\ (t-2)} + a_6 GDP\_growth_{i\ (t-2)} + a_7 Political\ stability_{i\ (t-3)} + a_8 (Trust_{i\,t}\ x\ GDP\ per\ capita_{i\,t\,-2}) + \varepsilon_{i\,t}$

Model 3:

$FDI/GDP_{i\,t} = a_0 + a_1 Crime\ rate_{i\,(t-1)} + a_2 GDP\ per\ capita_{i\,(t-2)} + a_3 Trade_{i\,(t-2)} + a_4 Infrastructure_{i(t-3)} + a_5 Accumulated\ FDI_{i\,(t-2)} + a_6 GDP\_growth_{i\,(t-2)} + a_7 Political\ stability_{i\,(t-3)} + \varepsilon_{i\,t}$

The data we apply is usually available for investors to interpret some years later. We lag GDP per capita, GDP growth, and Accumulated FDI by two years to capture the delay in data availability and its effect on FDI inflow in each country.
Data on infrastructure quality in the Logistics performance index is collected every other year. In addition, the effect of trade and transport-related infrastructure changes on FDI inflow is delayed due to data availability. Our regression models lag Infrastructure by three years.

We lag Political Stability to obtain the most fitting effect on FDI net inflow in percentage of GDP. Governments do not change yearly, and even when political institutions and policies change, the following effects are often delayed. Hence, we lag Political Stability by three years, as changes in policies will only affect FDI inflow after some time has passed.

5. Results

In this section, we present and analyze the empirical findings we derive from our regression analysis, explaining the relationship among the variables that are the subject of our research. The findings are of the greatest significance in addressing our research question and enhancing our existing pool of knowledge.

What follows commences with a concise description of the regression model specifications and the variables we include in the analysis. Subsequently, we will delve into the principal results, emphasizing the estimated coefficients' statistical significance and impact and describing their relevance to our research question.

The regression analysis outcomes are the basis for the following discussion and conclusion, incorporating our results with current literature to offer an in-depth understanding of the subject.

5.1 Quantitative findings

Table 3 shows the outcomes of our regression analysis, wherein the independent variables are excluded, to examine the impact of control variables on the inflow of FDI in SSA. Based on the available data, it cannot be confirmed that five out of six control variables significantly impact FDI. However, the effect of the control variables is ascertained in prior research (Zhao & Kim, 2011; Aseidu, 2002; Sekkat & Veganzones-Varoudakis, 2007; Helpman et al., 2004; Blonigen, 2005; Mijuyawa, 2015; Busse & Hefeker, 2007). Hence, Table 3 serves the sole purpose of expressing Models 1, 2, and 3's fit.

Table 3: The effect of control variables on FDI net inflow in percentage of GDP in SSA

FDI in % of GDP	Coefficients
L3 Infrastructure	-0.549 (0.359)
L2 Accumulated FDI	2.46E-11 (0.126)
L3 Political stability	0.066 (0.817)
L2 GDP per capita	0.000 (0.537)
L2 Trade	0.045 (0.000)***
L2 GDP growth	0.017 (0.575)
Intercept	1.498 (0.306)

This table shows the results of regressing the control variables on FDI in percentage of GDP. P-values in parentheses are attached to their respective coefficient. The regression model is panel data regressions grouped by country with random effects. Significance determined by P-value. Significance level: *** 1%-level., ** 5%-level, *10%-level.

5.1.1 Model 1

Model 1 comprises a sample of 249 observations from 11 of the 48 SSA countries. This model focuses on the variable of Trust, and our objective is to determine its impact on the inflows of FDI in the SSA region. The control variables we utilize in Model 1 are identical to the ones in Table 3. The statistical significance of the control variables in our regression findings is not a matter of concern, given that the impact of these variables is established in other research papers (Zhao & Kim, 2011;

Asiedu, 2002). However, it is necessary to mention that the significance level varies among the control variables in Model 1. Column (1) in Table 4 shows a statistically significant impact of three out of seven control variables at a 10% level. The predicted coefficient assigned to Infrastructure is negative, which is inconsistent with the results of Aseidu (2002) and Sekkat & Veganzones-Varoudakis (2007). The observed impact of Accumulated FDI and Trade on FDI net inflow in the percentage of GDP is inconsistent with the findings of Zhao & Kim (2011), indicating a negative effect.

Based on prior research, we assume that Trust positively affects FDI net inflow in percentage of GDP in SSA (Zhao & Kim, 2011). We observe a coefficient of 7.51 for Trust in column (1) of Table 4. The selected level of significance is 5%. The statistical analysis indicates that Trust holds significance at a 5%-level with a p-value of 0.018 (equivalent to 1.8%) in a two-tailed test. We are interested in whether or not there is a positive relationship between trust and the inflow of FDI in SSA. The p-value obtained for a one-tailed test of the coefficient of Trust is 0.009, establishing that the coefficient is significant at a 5% level.

The coefficient for Trust suggests that a unit increase in Trust within a country would result in a 7.51% increase in the FDI net inflow in percentage of GDP.

5.1.2 Model 2

The second model, denoted as Model 2, is an adaptation of Model 1, wherein an interaction term for Trust and GDP per Capita is incorporated, and the results are shown in column (2) in Table 4.

The existing literature, including studies conducted by Lopez (2014), Uslaner (2002), Zhao & Kim (2011), and Borensztein et al. (1998), establishes a correlation between Trust and FDI, as well as FDI and economic growth. Lopez (2014) states that a positive relationship exists between improving a country's economic situation and increasing trust among its citizens. Consequently, suggesting that an interaction term between Trust and GDP per capita, a widely recognized indicator of a country's economic status, may be necessary.

The sample in this instance is identical to that of column (1) in Table 4. The confidence interval at a 95% level of significance for Trust in Model 2 exhibits a

greater width than that of Model 1 (Appendix A & B). However, the p-value of 0.005 for Trust observed in column (2) in Table 4 is comparatively lower than the p-value we observe in column (1), which suggests a superior estimation of Trust in Model 2. The Trust coefficient shows an increase, indicating that a one-unit increase in Trust levels in the SSA region is estimated to result in a 12% increase in the FDI net inflow in percentage of GDP. The observed reduction in the p-value implies that the outcome is statistically significant at a comparatively lower level in comparison to Model 1.

The inclusion of the interaction term in Table 4 column (2) indicates that the impact of Trust on FDI net inflow in percentage of GDP experiences a diminishing marginal effect as the level of GDP per capita increases. Figure 3 shows that for higher values of GDP per capita, the marginal effect of Trust is negative and not significant. However, for lower levels of GDP per capita, the effect of trust is significant.

Figure 3: Marginal effect of Trust on FDI net inflow in percentage of GDP at different levels of GDP per capita
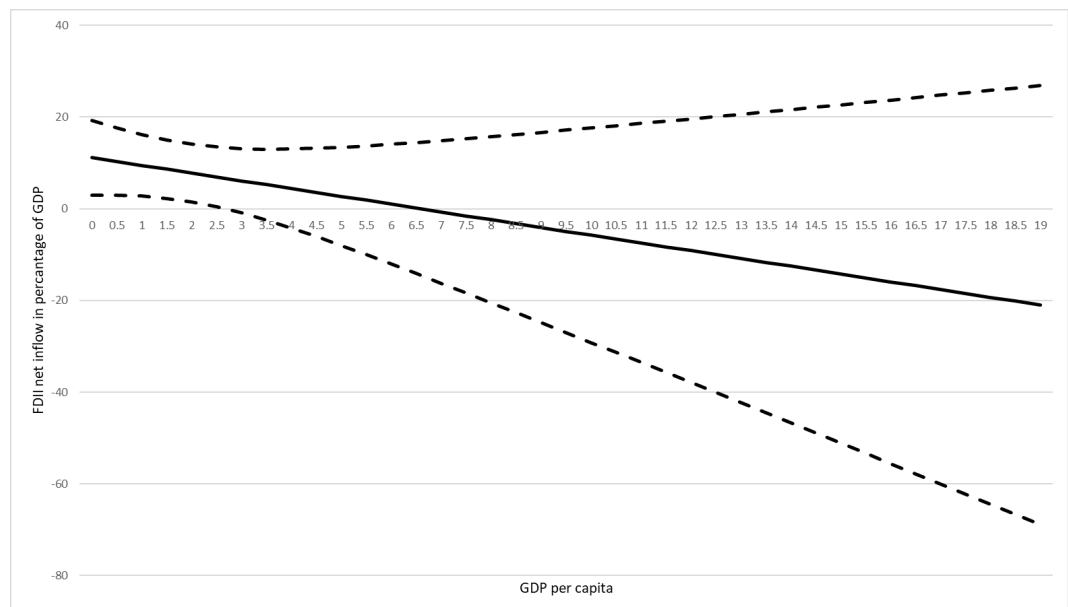
This figure shows the marginal effect of Trust on FDI net inflow in percentage of GDP at different levels of GDP per capita (in 1000). The straight line is the marginal effect. The dashed lines are the 95% confidence interval.

5.1.3 Model 3

The limited size of the sample in Models 1 and 2 necessitates the need for an additional regression analysis to validate the findings. We employ Model 3 as an additional regression to confirm the empirical findings in Models 1 and 2. The results are displayed in column (3) in Table 4. Trust is substituted with Crime Rate to explicate the anticipated influence of Crime Rate on FDI net inflow in percentage of GDP.

Model 3 employs regression analysis to examine the impact of the crime rate in SSA nations on the inflow of FDI. The third model encompasses a greater sample size of 26 of 48 SSA countries. The regression model incorporates the data of all control variables presented in Table 3, which have been previously determined to impact the inflow of FDI. The estimated coefficients are derived from a sample size of 594 observations.

Based on the relationship between Trust and Crimerate established by Berg & Johansson (2016), we assume that Crime Rate has a negative impact on FDI net inflow in percentage of GDP. Table 4 column (3) shows that the sample's predicted coefficient for Crime Rate is -0.6176. The coefficient is interpreted in the following manner: In SSA, we observe that a rise in a country's crime rate, leading to a shift from one percentile to the next in the crime rate index, results in a reduction of the country's FDI net inflow by 0.62% of its GDP.

The statistical significance of the coefficient of Crime Rate in the two-tailed test is indicated by the p-value of 0.028 in Table 4 column (3). The one-tailed test yields a p-value of 0.014. The outcome exhibits statistical significance at a 5%-level, thereby supporting the outcomes we obtain in Models 1 and 2.

Table 4: The effects of Trust and Crime rate on FDI net inflow in percentage of

FDI in % of GDP	(1)	(2)	(3)
Trust	7.512 (0.018) (0.009)***	12.012 (0.010) (0.005)***	
L Crimerate			-0.618 (0.028) (0.014)**
L3 Infrastructure	-0.812 (0.086)*	-0.974 (0.049)**	-0.741 (0.207)
L2 Accumulated FDI	-1.09E-11 (0.300)	-6.61E-12 (0.557)	2.91E-11 (0.051)
L3 Political stability	0.290 (0.194)	0.215 (0.347)	-0.001 (0.998)
L2 GDP per capita	0.000 (0.088)*	0.001	0.000 (0.619)
L2 Trade	-0.011 (0.278)	-0.012 (0.263)	0.068 (0.000)***
L2 GDP growth	0.080 (0.005)***	0.079 (0.005)***	0.048 (0.137)
Trust X L2 GDP per capita		-0.002 (0.231)	
Intercept	3.375 (0.005)***	3.031 (0.016)**	1.939 (0.268)

This table shows the results of regressing Trust and Crime rate on FDI net inflow in percentage of GDP. (1) is a regression of Trust on FDI net inflow in the percentage of GDP with control variables. (2) is a regression of Trust on FDI net inflow in the percentage of GDP with control variables and an interaction term between Trust and GDP per capita. (3) is a regression of the Crime rate (measured by intentional homicides per 100,000 people) on FDI net inflow in the percentage of GDP with control variables. The regression models are panel data regressions grouped by country with random effects. P-values in parentheses are attached to their respective coefficient (two-tailed). For Trust and Crime Rate, the second parenthesis indicates right-tailed P-values. Significance determined by P-value. Significance level: *** 1%-level., ** 5%-level, *10%-level.

5.2 Robustness test

We perform a robustness test due to the notable dissimilarity in sample size among Model 1, Model 2, and Model 3. In the robustness analysis, we replace Trust with Trust Index, a variable based on the relationship between Trust and Crime Rate identified by Berg and Johannson's (2016) research. This substitution allows for developing a regression model with a more extensive trust sample. We display the coefficients and their belonging p-values in Table 5.

By regressing Trust on Crime Rate, we obtain an intercept and a coefficient for the effect of the crime rate on trust in the total sample of 48 countries. The variable Trust Index is constructed based on these regression outcomes, whereby the observed coefficient is multiplied by the corresponding crime rate values of the respective countries, as observed in Model 3. We utilize the crime rate values in the same year as the observed FDI net inflow in percentage of GDP.

The robustness test aims to further establish the relationship between trust and FDI inflow in a larger sample. Trust Index is imperfect as it is based on two processed variables from secondary data. Hence, we only interpret if the coefficient is negative

or positive. The estimated coefficient of 29.52 does not exhibit statistical significance at 1%, 5%, or 10% levels. The results from the robustness test verify the positive relationship between trust and FDI inflow observed in Table 4, columns (1) and (2). The relationship between trust and crime rate provides a valid rationale for utilizing the index.

Table 5: Robustness test

FDI in % of GDP	Coefficients
Trust index	29.517 (0.102)
L3 Infrastructure	-0.739 (0.210)
L2 Accumulated FDI	2.97E-11 (0.046)**
L3 Political stability	0.003 (0.992)
L2 GDP per capita	0.000 (0.570)
L2 Trade	0.069 (0.000)***
L2 GDP growth	0.051 (0.115)
Intercept	-3.920 (0.149)

*This table shows the results of the robustness test. Trust index is an estimation of Trust for each country in Model 3. The index variable is based on the relationship between Trust and Crime rate. The regression model is panel data regressions grouped by country with random effects. P-values in parentheses are attached to their respective coefficient. Significance determined by P-value. Significance level: *** 1%-level., ** 5%-level, *10%-level.*

6. Discussion

In this section, we interpret the findings from the previous chapter through the lens of the theories outlined in the literature review section. We will integrate our quantitative findings focusing on our research question:

Is there a positive relationship between Trust and Foreign Direct Investment in Sub-Saharan Africa?

The empirical results from our regression analysis provide strong evidence supporting our research question. In Model 1 and Model 3, we find a positive and statistically significant relationship between Trust and FDI net inflow in percentage

of GDP, establishing that an increase in trust is associated with an increase in FDI inflow in SSA. This conclusion is consistent with the findings of Zhao & Kim (2011), where they establish a positive relationship between the inflow of FDI to a country and trust in a worldwide sample.

Our interviews from Uganda complement our quantitative analysis by providing real-life insights into the role of trust in attracting and maintaining foreign investment in host countries. The interviews with a local business owner and a member of the Ugandan Parliament emphasize the importance of trust in the investment decision-making process. Both interviewees acknowledged that trust is essential in creating an attractional business environment that draws foreign direct investment.

The sample size for regression models 1 and 2 is small, but based on the mean GDP per capita and FDI net inflow in the percentage of GDP from 1989-2021 discussed in Chapter 3, the sample selection arguably reflects SSA. We observe that Trust in the sample ranges between 0.0214 and 0.2914. The median value in the sample lies right above 0.1, and the box plot in Figure 4 highlights that the observations above the median value have a more extensive range than those below the median value. The interpretation of the box plot establishes that trust in SSA is low and that 50% of the observations in the sample lie within a compact range below the median value close to zero.

Figure 3: Box plot for Trust in counties in SSA (with available data from WVS)
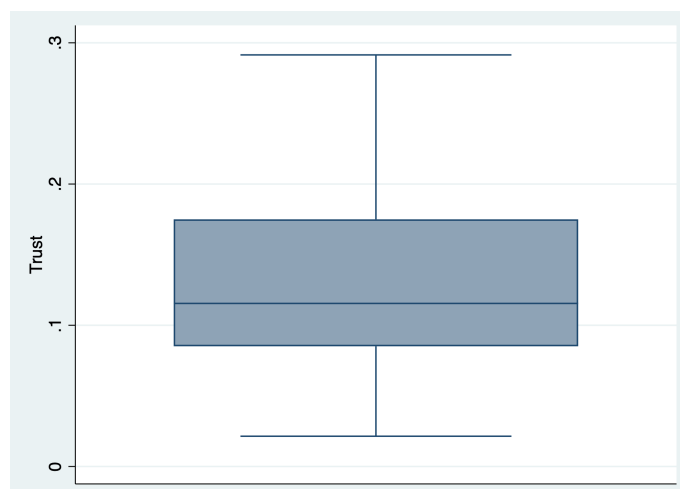
This table displays a box plot for Trust (based on available data from WVS) for countries in SSA in quartiles. The blue box includes the 2. and 3. quartile.

Uslaner (2002) argues that a strong sense of morality and optimism for the future increases generalized trust, creating an environment better suited for cooperation and collaboration, which is essential for economic growth. Uslaner (2005) argues that generalized trust is significant for connecting people from different backgrounds, fostering tolerance, effective governance, and economic growth. As Africa is the fastest-growing continent in the world with the youngest population (Fuje & Yao, 2022), there is a new wave of young people willing to bring positive change to their continent. Earlier studies from Keefer & Knack (1997) point out that trust has a substantial and significant link with economic growth, leading to higher growth in poor countries. Borensztein et al. (1998) also identify a positive relationship between economic growth and FDI, establishing that FDI increases economic growth. The statement from Uslaner is interesting in that there is a young and growing population with a passion for the African future, which may result in higher levels of trust within the continent, potentially leading to economic growth.

The interaction term in Model 2 indicates that the impact of trust on FDI inflows is decreasing with increasing levels of GDP per capita in SSA, significant for low levels of GDP per capita. The observation is interesting in that most SSA countries hold a low GDP per capita level, indicating that Trust is an important contributor to FDI inflows in SSA.

The sample size in regression model 3 is more extensive than in Models 1 and 2. This sample is a good reflection of SSA, as argued in Chapter 3. The results state that the observed negative effect of increased crime rate on FDI net inflow in the percentage of GDP is significant.

Berg & Johansson (2016) explores the relationship between generalized trust, institutional trust, and crime and discover that if the trust in the government increases, the trust between people will also increase. However, this link is more indirect in segregated and disadvantaged neighborhoods through reducing crime. Hence, the relationship between generalized trust and crime rate depends on the neighborhood. We assume that there is transferability between disadvantaged neighborhoods and SSA. Since the measurement of Trust in our study is based on generalized trust, this leads to a difficulty in the argument that our model, including

Crime Rate, can help interpret the models exploring the relationship between trust and inflow of FDI in SSA. However, most countries in Model 1 can arguably be in the lower tier of trust and economics, strengthening the argument that the relationship between generalized trust and institutional trust is indirectly linked with the crime rate in the countries, as found in Berg & Johannson (2016). Even if the measurement of trust in Model 2, through Crime Rate, might be institutional trust, there is evidence of an indirect link between institutional trust and generalized trust through the crime rates. Hence, Model 2 can be said to include fractions of negative trust.

The established results in this paper highlight the importance of trust in attracting more FDI into Sub-Saharan African countries. Borensztein, De Gregorio, and Lee (1998) identify that an increase in FDI leads to economic growth, and Uslaner (2002) argues that optimism for the future contributes to the increases in generalized trust.

The results we provide have constraints and potential dependability issues. Variations in data collection, reporting, and verification procedures may make these challenges, which we will now explore, worse because the data come from Africa.

Difficulties and limitations

Previous research highlights the challenges associated with data availability, quality, and comparability in African countries (Devarajan & Fengler, 2013; Jerven, 2013). Limited resources, insufficient infrastructure, and weak institutional capacity can hinder data collection efforts, leading to a lack of comprehensive and up-to-date data.

In the following paragraphs, we will discuss identified limitations in previous research regarding data availability and collection in SSA.

Asiedu (2002) highlights the presence of difficulties and limitations regarding data when performing empirical research on FDI in SSA. Limitations stem from a lack of comprehensive observations and data availability, which can affect the robustness and applicability of the finding to current policy debates. Due to the nature of data collection in SSA, missing data is a significant threat to our results, which may lead to a potential bias and limit our findings' generalizability.

Data on trust in SSA is limited. This limitation may constrain the generalizability of the findings and reduce the ability to capture the full range of trust-related dynamics in the region. Trust is a complex and multidimensional concept, and the choice of indicators used to represent trust might partially capture its various dimensions, potentially affecting the results (Zhao & Kim, 2011).

Data on crime rates in SSA we obtain from the World Bank may face challenges in accuracy and consistency due to differences in data collection methodologies or reporting practices among countries. Additionally, political factors may influence the data, resulting in biased or incomplete information. Accurate and reliable data on crime rates is essential for understanding the security situation in African countries and its implications for economic development and social stability (World Bank, n.d.).

In addition to limitations and difficulties in data availability and collection, we identify several other challenges regarding the results in our paper which we will discuss further.

We select the sample based on the data availability criteria, which makes the model only include a few countries in the count, potentially leading to a sample selection bias and questionable generalizability of results. The selection of countries may lead to a selection bias, as countries with more comprehensive data collection processes might have other underlying characteristics that affect the inflow of FDI to the country. However, as we discuss in Chapter 3 on sample selection, the countries included in the models are a generalizable sample for SSA.

Omitted variables are also worth mentioning, as the models have omitted variables influencing FDI in various degrees. Factors such as corruption levels, business environment, and human capital quality are not included in the models but may affect FDI inflow. This bias may lead to an incorrect estimation of the effect of Trust on FDI net inflow in percentage of GDP. Corruption is always a risk when investing in emerging markets. Houston (2007) discusses how corruption may also affect the economy positively as a substitute for bad governance. However, Houston's findings make it clear that corruption negatively affects FDI inflows:

higher corruption leads to fewer FDI inflows in receiving countries. There are several reasons why we exclude corruption in our empirical analysis. Firstly, we assume that the variation in corruption is captured in our Crime Rate variable. We also suggest that corruption correlates with Political Stability. When discussing corruption as a possible omitted variable, it is also essential to emphasize that the effects of corruption are incorporated with the crime rate and trust. For that reason, it may be subject to multicollinearity.

Measurement error is also a threat to our results. Trust is a complex and multidimensional concept. Hence, there is a strong possibility that WVS does not capture all dimensions of trust. Crime rate data might suffer from measurement errors due to possible under-reporting or abnormal acts during reporting periods in some countries. Errors like these may lead to a bias in our results and an over(under)estimation of the effect of trust and crime rate on FDI inflow.

Further, our model specification assumes that the relationship between trust (crime rate) and FDI inflow is linear. In reality, the relationship could be non-linear, hindering an accurate interpretation.

Regarding temporal dynamics, our panel data covers a considerable period (1989-2021) during which significant changes might have occurred in the SSA context. Shifts in global economic conditions, changes in national policies, technological advancements, or significant events (e.g., financial crises, pandemics) might have influenced the FDI dynamics. While panel data allows for controlling for time-variate and invariant effects to some extent, it might only partially capture these temporal dynamics.

Possible endogeneity might also lead to a bias in our results. There is a potential endogeneity issue arising from reverse causality. Higher FDI might lead to improvements in trust or reductions in crime rate rather than vice versa. Given the data and methodological constraints, this issue is challenging to address in a study. The challenge of endogeneity is shrunk by controlling for the delay of the effect of the variables on FDI net inflow in percentage of GDP. The risk of biased estimates as a result of endogeneity is reduced by identifying the delayed effect of each determinant of FDI inflow and lagging them in the regression models.

7. Conclusion

Our paper offers an analytical perspective on the manner in which trust has a positive impact on FDI inflow in SSA. As our research question state, "*Is there a positive relationship between Trust and Foreign Direct Investment in Sub-Saharan Africa?"* we focus on the significance of trust in facilitating FDI arrangements in SSA. The results of our study support the assertion proposed in our research question. They are consistent with the existing literature on the subject.

Through a rigorous statistical analysis utilizing regression models, we demonstrate a positive relationship between heightened levels of trust and increasing levels of FDI net inflow in percentage of GDP in SSA. This conclusion is based on significant results from regression models with a wide sample from the population of interest. Our results from empirical testing of our research question explicitly posit a direct relationship between trust and the inflow of FDI in nations situated in SSA. This assertion supports the negative relationship between the crime rate and the inflow of FDI, which we observe in Model 3. Berg & Johansson (2016), who identify an indirect relationship between crime and generalized trust mediated by institutional trust, strengthens our conclusion. From Model 2, we find evidence that the effect of trust on FDI inflow is more significant in countries with low GDP per capita. We argue that the sample is a good reflection of SSA. This strengthens our argument that there is a significant effect on the inflow of FDI if Trust increases among the country's population.

Our paper's results are consistent with previous research in the area of Trust's impact on FDI and studies conducted on SSA. Zhao & Kim (2011) establishes a positive impact of trust on FDI inflow in a larger sample with countries in various economic situations and trust. The findings we derive from our empirical analysis provide substantial evidence to support the idea that this holds in SSA, a region encompassing nations characterized by higher levels of criminal activity, poverty, and generally lower economic wealth.

Further research

It is essential to clarify that our study has limitations. The sample size in Models 1 and 2 is limited, and the possibility of biases in the case study findings may impact

the applicability of our outcomes to a broader population. Our suggestions for future research suggest addressing these limitations by conducting larger samples and additional case studies from countries in the region. Furthermore, we recommend that future studies investigate the precise underlying cause for the influence of trust on FDI inflow. This may involve exploring the effects of trust on various categories of foreign investment or developing the definition of trust to incorporate various types, such as "institutional trust," "financial trust," and "interpersonal trust," in order to examine their respective impacts. Such an approach can facilitate a greater understanding of the impact of trust on FDI inflow in SSA.

Our findings in the paper indicate that trust has a significant impact on the inflow of FDI. As per other academic research, this can potentially result in the growth of the nation's economy. Our research suggests that governments in SSA utilize trust as an opportunity to enhance their economic growth. Berg and Johansson's (2016) research shows a relationship between trust and crime rate. Specifically, their findings suggest that a decrease in crime rate leads to increased trust, promoting economic growth. Further research should focus on what affects the crime rate and how to obtain a reduction of crime in SSA.

By identifying the factors that promote or hinder trust and, consequently, FDI, the findings in our paper can inform more effective policies to attract foreign investment and foster sustainable economic growth across the African continent.

8. References

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9. Appendix

Appendix A: Model 1 regression outputs

Random-effects GLS regression

Group varaiable: **Country**

Number of obs = **249**

Number of groups = **11**

R-squared:

			Obs per group:		
Within	**0.1090**		min =	**9**	
Between	**0.0012**		avg =	**22.6**	
Overall	**0.0160**		max =	**24**	

Wald chi2 (6) = .

corr(u_i, X) = **0** (assumed)   Prob > chi2 = .

FDI_gdp	Coefficient	Std. err.	z	P> |z|	[95% conf. interval]	
Trust	7.512247	3.163257	2.37	0.018	1.312378	13.71212
L3_Infrastructure	-0.811971	0.04727847	-1.72	0.086	-1.738612	0.1146699
L2_FDI_acc	-1.09e-11	1.05e-11	-1.04	0.300	-3.14e-11	9.96e-12
L3_polsta	0.2903163	0.2236012	1.30	0.194	-0.147934	0.7285666
L2_GDP_percap	0.0003479	0.0002037	1.71	0.088	-0.0000513	0.0007471
L2_Trade	-0.011286	0.0104003	-1.09	0.278	-0.0316703	0.0090983
L2_GDP_growth	0.0801817	0.0283146	2.83	0.005	0.024686	0.1356774
_cons	3.375237	1.208793	2.79	0.005	1.006046	5.744429

sigma_u	**1.3432414**	
sigma_e	**1.6023152**	
rho	**0.41272107**	

Appendix B: Model 2 regression outputs

Random-effects GLS regression

Group varaiable: **Country**

Number of obs = **249**

Number of groups = **11**

R-squared:

			Obs per group:		
Within	**0.1191**		min =	**9**	
Between	**0.0046**		avg =	**22.6**	
Overall	**0.0071**		max =	**24**	

Wald chi2 (6) = .

corr(u_i, X) = **0** (assumed)   Prob > chi2 = .

FDI_gdp	Coefficient	Std. err.	z	P> |z|	[95% conf. interval]	
Trust	12.01225	4.637894	2.59	0.010	2.922142	21.10235
L3_Infrastructure	-0.9738973	0.4939963	-1.97	0.049	-1.942112	-0.0056824
L2_FDI_acc	-6.61e-12	1.13e-11	-0.59	0.557	-2.87e-11	1.55e-11
L3_polsta	0.2145538	0.2282942	0.94	0.347	-0.2328945	0.6620022
L2_GDP_percap	0.0006307	0.0003043	2.07	0.038	0.0000344	0.001227
L2_Trade	-0.011822	0.0105525	-1.12	0.263	-0.0325046	0.0088605
L2_GDP_growth	0.0785243	0.0282404	2.78	0.005	0.0231741	0.1338745
c.Trust#c.L2_GDP_percap	-0.0016927	0.001413	-1.20	0.231	-0.0044633	0.0010778
_cons	3.030756	1.260415	2.40	0.016	0.5603875	5.501124

sigma_u	**1.504112**	
sigma_e	**1.5969397**	
rho	**0.47009255**	

Appendix C: Model 3 regression outputs

Random-effects GLS regression

Group varaiable: **Country**

Number of obs = **594**

Number of groups = **26**

R-squared:

		Obs per group:		
Within	0.1124	min =	9
Between	0.0534	avg =	22.8
Overall	0.0742	max =	24

Wald chi2 (6) = .

corr(u_i, X) = **0** (assumed)

Prob > chi2 = .

FDI_gdp	Coefficient	Std. err.	z	P> |z |	[95% conf. interval]	
L_Crimerate_pros	-0.6176384	0.2808754	-2.20	0.028	-1.168144	-0.0671328
L3_Infrastructure	-0.7412123	0.5877412	-1.26	0.207	-1.893164	0.4107392
L2_FDI_acc	2.91e-11	1.49e-11	1.95	0.051	9.89e-14	5.82e-11
L3_polsta	-0.0009709	0.3401126	-0.00	0.998	-0.6675794	0.6656376
L2_GDP_percap	-0.0000824	0.0001658	-0.50	0.619	-0.0004073	0.0002425
L2_Trade	0.068472	0.0100945	6.78	0.000	0.0486872	0.0882568
L2_GDP_growth	0.0476429	0.0320318	1.49	0.137	-0.0151383	0.1104241
_cons	1.938559	1.749969	1.11	0.268	-1.491317	5.368436

sigma_u	2.7177927
sigma_e	3.35153
rho	0.39670968

Appendix D: Robustness test regression output

Random-effects GLS regression

Group varaiable: **Country**

Number of obs = **594**

Number of groups = **26**

R-squared:

		Obs per group:		
Within	0.1075	min =	9
Between	0.0564	avg =	22.8
Overall	0.0768	max =	24

Wald chi2 (6) = .

corr(u_i, X) = **0** (assumed)

Prob > chi2 = .

FDI_gdp	Coefficient	Std. err.	z	P> |z |	[95% conf. interval]	
Trust_index	29.51685	18.06931	1.63	0.102	-5.898355	64.93205
L3_Infrastructure	-0.7393973	0.5901143	-1.25	0.210	-1.896	0.4172054
L2_FDI_acc	2.97e-11	1.49e-11	1.99	0.046	5.10e-13	5.89e-11
L3_polsta	0.0033403	0.3408619	0.01	0.992	-0.6647368	0.6714174
L2_GDP_percap	-0.0000945	0.0001664	-0.57	0.570	-0.000407	0.0002316
L2_Trade	0.0691031	0.0101063	6.84	0.000	0.049295	0.0889112
L2_GDP_growth	0.050517	0.0320377	1.58	0.115	-0.0122757	0.1133097
_cons	-3.919985	2.718964	-1.44	0.149	-9.249056	1.409086

sigma_u	2.7178869
sigma_e	3.36118281
rho	0.39525867

Appendix E: Correlation matrix (* = significance on 5%-level)

	FDI_gdp	Trust	Crimerate_pros	Infrastructure	FDI_acc	polsta	GDP_per_ capita	Trade	GDP_growth
FDI_gdp	1.0000								
Trust	-0.0674	1.0000							
Crimerate_pros	-0.0512	0.4595*	1.0000						
Infrastructure	-0.0303	0.2554*	0.2138*	1.0000					
FDI_acc	0.0360	0.1838*	0.1970*	0.3662*	1.0000				
polsta	0.0740*	-0.1672*	-0.0610	0.1309*	-0.0964*	1.0000			
GDP_per_ capita	0.0688*	0.1917*	0.2410*	0.2874*	0.2055*	0.4165*	1.0000		
Trade	0.3768*	-0.1357*	0.1573*	-0.0787*	-0.0950*	0.4125*	0.5355*	1.0000	
GDP_growth	0.2415*	0.0166	-0.0632*	-0.0457	-0.0208	0.0515	-0.0177	0.0387	1.0000

Appendix F: Summary of variables

Variable	Obs	Mean	Std. dev.	Min	Max
FDI_gdp	1494	3.793837	8.740611	-18.91777	161.8237
Trust	363	0.1368201	0.064046	0.0214168	0.2914418
Crimerate_pros	1089	2.968779	1.398837	1	5
Infrastructure	1452	2.158477	0.3465161	1.27	3.79
FDI_acc	1584	4.35e+09	1.18e+10	-7.37e+09	1.38e+11
polsta	1281	-0.5640962	0.9522587	-3.312951	1.283142
GDP_per_capita	1499	1673.538	2569.341	99.75725	19849.72
Trade	1342	66.46554	33.82787	0.7568755	225.0231
GDP_growth	1496	3.876293	7.207858	-50.24807	149.973

Appendix G: Variables description

Proxy	Variables (Short Definition)	Source
Trust	Degree to which people have confidence in their social, political, and economic institutions	World Bank, World Values Survey
FDI	Foreign direct investment: net inflows (in percentage of GDP)	World Bank, UNCTAD
FDI accumulated	Cumulative foreign direct investment inflows	World Bank, UNCTAD
GDP per capita	Gross Domestic Product (GDP) per capita in current US$	World Bank, IMF
GDP growth	Annual percentage growth rate of GDP	World Bank, IMF
Infrastructure	Access to electricity, paved roads, and transportation infrastructure, among others	World Bank, World Development Indicators
Trade	Total trade (exports and imports) as a percentage of GDP	World Bank, World Trade Organization
Political Stability	A measure of the likelihood of political instability or politically motivated violence, including terrorism	World Bank, World Governance Indicators
Crime rate	Number of intentional homocides per 100,000 population (excluding people killed in war)	National crime statistics, UNODC

Appendix H: List of countries in SSA (defined by World Bank)

Angola	Liberia
Benin	Madagascar
Botswana	Malawi
Burkina Faso	Mali
Burundi	Mauritania
Cabo Verde	Mauritius
Cameroon	Mozambique
Central African	Namibia
Republic	Niger
Chad	Nigeria
Comoros	Rwanda
Democratic Republic of Congo	São Tomé and Príncipe
Republic of Congo	Senegal
Equatorial Guinea	Seychelles
Eritrea	Sierra Leone
Eswatini	Somalia
Ethiopia	South Africa
Gabon	South Sudan
Gambia	Sudan
Ghana	Tanzania
Guinea	Togo
Guinea-Bissau	Uganda
Kenya	Zambia
Lesotho	Zimbabwe

Appendix I: Do-file from Stata17

```
1   *script for use in Appendix
2
3   *Script for data on political stability to be merged later
4
5   import delimited "/Users/hermanhvale/Library/Mobile
    Documents/com~apple~CloudDocs/skole/Master/Master/data/politicalst
    ability.csv"
6   gen countrynum =.
7
8   replace countrynum = 1 if countrycode == "AGO"
9   replace countrynum = 2 if countrycode == "BEN"
10  replace countrynum = 3 if countrycode == "BWA"
11  replace countrynum = 4 if countrycode == "BFA"
12  replace countrynum = 5 if countrycode == "BDI"
13  replace countrynum = 6 if countrycode == "CPV"
14  replace countrynum = 7 if countrycode == "CMR"
15  replace countrynum = 8 if countrycode == "CAF"
16  replace countrynum = 9 if countrycode == "TCD"
17  replace countrynum = 10 if countrycode == "COM"
18  replace countrynum = 11 if countrycode == "COD"
19  replace countrynum = 12 if countrycode == "COG"
20  replace countrynum = 13 if countrycode == "CIV"
21  replace countrynum = 14 if countrycode == "GNQ"
22  replace countrynum = 15 if countrycode == "ERI"
23  replace countrynum = 16 if countrycode == "SWZ"
24  replace countrynum = 17 if countrycode == "ETH"
25  replace countrynum = 18 if countrycode == "GAB"
26  replace countrynum = 19 if countrycode == "GMB"
27  replace countrynum = 20 if countrycode == "GHA"
28  replace countrynum = 21 if countrycode == "GIN"
29  replace countrynum = 22 if countrycode == "GNB"
30  replace countrynum = 23 if countrycode == "KEN"
31  replace countrynum = 24 if countrycode == "LSO"
32  replace countrynum = 25 if countrycode == "LBR"
33  replace countrynum = 50 if countrycode == "LBY"
34  replace countrynum = 26 if countrycode == "MDG"
35  replace countrynum = 27 if countrycode == "MWI"
36  replace countrynum = 28 if countrycode == "MLI"
37  replace countrynum = 29 if countrycode == "MRT"
38  replace countrynum = 30 if countrycode == "MUS"
39  replace countrynum = 31 if countrycode == "MOZ"
40  replace countrynum = 32 if countrycode == "NAM"
41  replace countrynum = 33 if countrycode == "NER"
42  replace countrynum = 34 if countrycode == "NGA"
43  replace countrynum = 49 if countrycode == "REU"
44  replace countrynum = 35 if countrycode == "RWA"
45  replace countrynum = 36 if countrycode == "STP"
46  replace countrynum = 37 if countrycode == "SEN"
47  replace countrynum = 38 if countrycode == "SYC"
48  replace countrynum = 39 if countrycode == "SLE"
49  replace countrynum = 40 if countrycode == "SOM"
50  replace countrynum = 41 if countrycode == "ZAF"
```

```
51   replace countrynum = 42 if countrycode == "SSD"
52   replace countrynum = 43 if countrycode == "SDN"
53   replace countrynum = 44 if countrycode == "TZA"
54   replace countrynum = 45 if countrycode == "TGO"
55   replace countrynum = 46 if countrycode == "UGA"
56   replace countrynum = 47 if countrycode == "ZMB"
57   replace countrynum = 48 if countrycode == "ZWE"
58
59   gen yearnum =.
60   replace yearnum = 8 if time == 1996
61   replace yearnum = 10 if time == 1998
62   replace yearnum = 12 if time == 2000
63   replace yearnum = 14 if time == 2002
64   replace yearnum = 15 if time == 2003
65   replace yearnum = 16 if time == 2004
66   replace yearnum = 17 if time == 2005
67   replace yearnum = 18 if time == 2006
68   replace yearnum = 19 if time == 2007
69   replace yearnum = 20 if time == 2008
70   replace yearnum = 21 if time == 2009
71   replace yearnum = 22 if time == 2010
72   replace yearnum = 23 if time == 2011
73   replace yearnum = 24 if time == 2012
74   replace yearnum = 25 if time == 2013
75   replace yearnum = 26 if time == 2014
76   replace yearnum = 27 if time == 2015
77   replace yearnum = 28 if time == 2016
78   replace yearnum = 29 if time == 2017
79   replace yearnum = 30 if time == 2018
80   replace yearnum = 31 if time == 2019
81   replace yearnum = 32 if time == 2020
82   replace yearnum = 33 if time == 2021
83
84   save "/Users/hermanhvale/Library/Mobile
     Documents/com~apple~CloudDocs/skole/Master/Master/data/politicalst
     ability2.dta
85
86   clear all
87
88   *Script for data on trust to be merged later
89
90   use "/Users/hermanhvale/Library/Mobile
     Documents/com~apple~CloudDocs/skole/Master/Master/data/WVS_TimeSer
     ies_dta.dta"
91
92   keep COW_NUM COW_ALPHA A165 S020
93
94   rename A165 trust
95   rename COW_NUM land
96   rename COW_ALPHA land_id
97   rename S020 year
98
```

```
99    gen sub_saharan_africa1 = inlist(land_id, "BFO", "ZAM", "ZIM",
      "UGA")
100   gen sub_saharan_africa2 = inlist(land_id, "TZA", "GHA", "ETH",
      "KEN")
101   gen sub_saharan_africa3 = inlist(land_id, "NIG", "MLI", "RWA",
      "SAF")
102
103   drop if sub_saharan_africa1 == 0 & sub_saharan_africa2 == 0 &
      sub_saharan_africa3 == 0
104
105   gen trust_n = .
106   replace trust_n = . if trust == −2
107   replace trust_n = . if trust == −1
108   replace trust_n = 0 if trust == 2
109   replace trust_n = 1 if trust == 1
110
111   sort land_id year
112
113   by land_id year: egen mean_trust = mean(trust_n)
114
115   collapse (mean) mean_trust = mean_trust, by(land_id year)
116
117   gen country_id = .
118
119   replace country_id = 4 if land_id == "BFO"
120   replace country_id = 17 if land_id == "ETH"
121   replace country_id = 20 if land_id == "GHA"
122   replace country_id = 23 if land_id == "KEN"
123   replace country_id = 28 if land_id == "MLI"
124   replace country_id = 34 if land_id == "NIG"
125   replace country_id = 35 if land_id == "RWA"
126   replace country_id = 41 if land_id == "SAF"
127   replace country_id = 46 if land_id == "UGA"
128   replace country_id = 47 if land_id == "ZAM"
129   replace country_id = 48 if land_id == "ZIM"
130   replace land_id = "BFA" in 1
131   replace land_id = "NGA" in 8
132   replace land_id = "NGA" in 9
133   replace land_id = "NGA" in 10
134   replace land_id = "NGA" in 11
135   replace land_id = "NGA" in 12
136   replace land_id = "ZAF" in 15
137   replace land_id = "ZAF" in 16
138   replace land_id = "ZAF" in 17
139   replace land_id = "ZAF" in 18
140   replace land_id = "ZAF" in 19
141   replace land_id = "ZAF" in 20
142   replace land_id = "ZMB" in 22
143   replace land_id = "ZWE" in 23
144   replace land_id = "ZWE" in 24
145   replace land_id = "ZWE" in 25
146
```

```
147   save "/Users/hermanhvale/Library/Mobile
      Documents/com~apple~CloudDocs/skole/Master/Master/data/24:3/trust3
      .dta
148
149   clear all
150
151   import delimited "/Users/hermanhvale/Library/Mobile
      Documents/com~apple~CloudDocs/skole/Master/Master/data/alle
      vaiabler ny 2403.csv", numericcols(7 8 9 10 11 12 13)
152   merge m:m countrynum yearnum using
      "/Users/hermanhvale/Library/Mobile
      Documents/com~apple~CloudDocs/skole/Master/Master/data/politicalst
      ability2.dta"
153   destring politicalstabilityandabsenceofvi, generate(
      politicalstability2) force float
154
155   rename countryname land
156   rename countrycode land_id
157   rename countrynum country_id
158   rename time year
159   rename timecode yearcode
160   rename yearnum year_id
161   rename gdpgrowthannualnygdpmktpkdzg GDP_growth
162   rename foreigndirectinvestmentnetinflow FDI_gdp
163   rename tradeofgdpnetrdgnfszs Trade
164   rename intentionalhomicidesper100000peo Crime
165   rename gdppercapitacurrentusnygdppcapcd GDP_pr_cap
166   rename logisticsperformanceindexquality Infrastruc
167   rename v13 FDI_USD
168   rename politicalstability2 pol_sta
169
170   xtset country_id year_id, yearly
171   sort country_id year_id
172
173   by country_id: gen FDI_acc = sum(FDI_USD)
174
175   drop _merge
176   merge m:m land_id year using "/Users/hermanhvale/Library/Mobile
      Documents/com~apple~CloudDocs/skole/Master/Master/data/24:3/trust3
      .dta"
177   drop _merge
178   drop if year_id == .
179
180   sort country_id year_id
181   by country_id: carryforward Infrastruc, gen(Infrastructure)
182   by country_id: carryforward Crime, gen(Crimerate)
183   by country_id: carryforward mean_trust, gen(Trust)
184
185   sort country_id year
186
187   by country_id: replace pol_sta= pol_sta[_n+1] if missing(pol_sta)
188
```

```
189   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
190   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
191   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
192   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
193   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
194   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
195   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
196   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
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      missing(Infrastructure)
208   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
209   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
210   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
211   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
212   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
213   by country_id: replace Infrastructure= Infrastructure[_n+1] if
      missing(Infrastructure)
214
215   by country_id: replace Crimerate= Crimerate[_n+1] if missing(
```

56

```
               Crimerate)
216  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
217  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
218  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
219  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
220  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
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               Crimerate)
222  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
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               Crimerate)
239  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
240  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
               Crimerate)
241  by country_id: replace Crimerate= Crimerate[_n+1] if missing(
```

```
           Crimerate)
242    by country_id: replace Crimerate= Crimerate[_n+1] if missing(
           Crimerate)
243
244    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
245    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
246    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
247    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
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271    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
272    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
273    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
274    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
275    by country_id: replace Trust= Trust[_n+1] if missing(Trust)
276
277    xtset country_id year_id, yearly
278    sort country_id year_id
279
280    by country_id: gen L2_GDP_growth = L2.GDP_growth
281    by country_id: gen L2_Trade = L2.Trade
282    by country_id: gen L2_GDP_percap = L2.GDP_pr_cap
283    by country_id: gen L3_polsta = L3.pol_sta
284    by country_id: gen L2_FDI_acc = L2.FDI_acc
285    by country_id: gen L3_Infrastructure = L3.Infrastructure
286
287    drop if country_id==49
288    drop if country_id==50
289
290    xtset country_id year, yearly
291
```

```
292    xtile Crimerate_pros = Crimerate, nq(5)
293    gen L_Crimerate_pros = L.Crimerate_pros
294
295    replace L2_FDI_acc =. if L2_FDI_acc==0
296
297    xtreg Trust Crimerate_pros, re
298    **observed B0= .1810028 og B1= -.0154382
299    by country_id: gen Trust_index = 0.1810028 + (-0.0154382*
       Crimerate_pros)
300
301
302    xtreg FDI_gdp L3_Infrastructure L2_FDI_acc L3_polsta
       L2_GDP_percap L2_Trade L2_GDP_growth, re
303    xtreg FDI_gdp Trust L3_Infrastructure L2_FDI_acc L3_polsta
       L2_GDP_percap L2_Trade L2_GDP_growth, re
304    xtreg FDI_gdp L_Crimerate_pros L3_Infrastructure L2_FDI_acc
       L3_polsta L2_GDP_percap L2_Trade L2_GDP_growth, re
305    xtreg FDI_gdp c.Trust L3_Infrastructure L2_FDI_acc L3_polsta c.
       L2_GDP_percap L2_Trade L2_GDP_growth c.Trust#c.L2_GDP_percap, re
306
307    margins, dydx(Trust) at(L2_GDP_percap=(0 500 1000 1500 2000 2500
       3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000 8500 9000
       9500 10000 10500 11000 11500 12000 12500 13000 13500 14000 14500
       15000 15500 16000 16500 17000 17500 18000 18500 19000 19500))
308    marginsplot
309
310    xtreg FDI_gdp Trust_index L3_Infrastructure L2_FDI_acc L3_polsta
       L2_GDP_percap L2_Trade L2_GDP_growth, re
311
312    pwcorr FDI_gdp Trust Crimerate_pros Infrastructure FDI_acc
       pol_sta GDP_pr_cap Trade GDP_growth, star(.05)
313    sum FDI_gdp Trust Crimerate_pros Infrastructure FDI_acc pol_sta
       GDP_pr_cap Trade GDP_growth
314
```

Appendix J: Preliminary thesis report

BI Norwegian Business School - Preliminary Thesis Report

▬ Trust and Foreign Direct Investment in Sub-Saharan Africa▬

GRA 19702 – Master Thesis

Hand-in date:
16.01.2023

Program:
Master of Science in Business

Major:
Accounting and Business Control

Campus:
BI Oslo

Supervisor:
Ignacio Garcia de Olalla Lopez

Students:
Herman Hvale & Marcus Skadberg

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Part 1: Introduction to the Research Topic

Introduction:

In our master thesis we will examine the relationship between *Trust* and *Foreign Direct Investments (FDI)* in Sub-Saharan Africa. Foreign direct investment refers to a company or individual's investment to establish a lasting interest in the company or assets in a country (SSB, 2022). This can take the form of building factories, purchasing assets such as land or buildings, or establishing joint ventures with local businesses. FDI is critical to the economic development of a country. It brings capital, technology, and management expertise that can drive growth and create jobs (IMF, 2001). E.i. in Uganda, FDI has been a critical driver of economic growth, attracting increased investment in recent years (Qasim & Heher, 2022).

Trust is an essential factor affecting economic transactions and is positively associated with FDI. Trust is the belief in the reliability, truth, ability, or strength of someone or something (Merriam-Webster, n.d). It can be e.i., interpersonal trust, trust to the government, and trust to financial situations. Trust can play a crucial role in FDI, as investors are more likely to invest in a country where they trust the institutions and the people. Why is trust such an important factor for FDI? Okonjo-Iweala (2014) explains how the first task of order when trying to reform Nigeria after a long period with a military regime and terrible economy was to gain social trust. Not only within the country but, more importantly, to gain more foreign direct investment into the country.

Motivation:

The first thing that inspired us to write this master thesis was the idea of doing something uncommon. After reading an article in "The Economist" about how Congo, as Tesla's primary cobalt provider, had lower GDP than Tesla's annual revenues, the topic of Africa and how some countries poorly manage their resources caught our attention.

Further inspiration for writing about this research question came from a World Bank blog post (Qasim & Heher, 2022) describing the untapped opportunity for

FDI in Uganda. The blog post's authors are concerned about the FDI inflow into Uganda compared to the average in Sub-Saharan Africa. Uganda suffered a dramatic decrease in FDI inflow during COVID-19, but their performance on FDI in percent of GDP before 2019 was below average for the Sub-Saharan region. Further, the post concerns the importance of foreign investment inflows for the domestic economy and their knock-on impacts on job creation. With thousands of job seekers joining the market each year, Uganda is a young nation. The opportunity to link domestic enterprises with foreign firms and increase knowledge spillovers across sectors arises with the arrival of foreign investors into the economy. According to research, when a foreign investment goes into industries with successful and productive local businesses, productivity spillovers are often favorable. The primary employers in the economy are these nearby businesses.

We wish to do a master's thesis that captures our interest in world development and bias distribution of world wealth. We also hope this master's thesis might enlighten the potential for economic growth through FDI and trust in Sub-Saharan Africa.

Literature review:

Mijuyawa (2015) found that political stability and better economic performance have been the main drivers for more FDI inflows in African countries since the mid-1990s. He discovered that East African countries had attracted the least FDI through all periods considered in the study. The results in Mijoyawa (2015) discover that five variables are positively and significantly linked to FDI inflows in Africa. The first finding is that inflows of FDI depend on earlier inflows of FDI. Secondly, the paper finds that large countries that are more open and with more political stability are more attractive to FDI. The author suggests that regional integrations in Africa should be strengthened. Thirdly, the paper finds a need to improve the ROI in Africa by improving labor force skills and investing in infrastructure to maintain the ROI levels.

In another paper, Zhao & Kim (2011) explores the Social capital linkage to FDI in a cross-country study. Previous research has focused on location-specific advantages for FDI on a national level based on the eclectic paradigm. These

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advantages have previously been found in market size, market attractiveness, tax rates, investment risks, political risks, and government policy (Aizenman & Spiegel, 2002; Olibe & Crumbley, 1997; Sethi, Guisinger, Phelan, & Berg, 2003; Loree & Guisinger, 1995; Shah & Slemrod, 1990; Bajo-Rubio & Sosvilla-Rivero, 1994; Bhagwati, Dinopoulos, & Wong, 1992; Cheng & Kwan, 2000; Click, 2005; Grosse & Trevino, 1996; Loree & Guisinger, 1995; Makino, Isobe, & Chan, 2005; Mariotti & Piscitello, 1995; Sethi et al., 2003; Thomas & Grosse, 2001; Zhao, 2003, referred to in Zhao & Kim 2011). The authors aim to discover the impact of social capital levels in the hosting country´s effect on FDI inflows. In contrast, the social capital is the aggregated social resources of interpersonal trust and associated activities at a national level. Further, the paper explains the relationship between trust and FDI, where FDI involves social exchanges, and hence a trustworthy relationship is critical for successful investments. The paper uses data for trust from Wold Value Survey and data for FDI from World Bank. We intend to do the same. The results from this cross-country study show that GDP has the highest correlation with FDI. Trust was found to positively influence FDI in all models compared with model 1 without the variables measuring social capital. This result is the ground for our hypothesis.

Borensztein, De Gregorio, and Lee (1998) examine the relationship between foreign direct investment (FDI) and economic growth in 69 developing countries over the last two decades. The study utilizes a cross-country regression framework and data on FDI flows from industrial countries. The study's results suggest that FDI significantly contributes to economic growth, as it is a crucial vehicle for transferring technology. The study finds that FDI contributes more to growth than domestic investment. However, the study also finds that the higher productivity of FDI is only realized in countries with a minimum threshold of human capital. These findings suggests that FDI can only contribute to economic growth if the host country has the necessary absorptive capability to adopt and utilize the advanced technologies brought in by foreign investors. Overall, the study highlights the importance of FDI as a driver of economic growth in developing countries but also emphasizes the need for a sufficient level of human capital to fully realize the benefits of FDI to be fully realized.

Asiedu (2002) examines how the factors influencing foreign direct investment in developing countries may differ in Sub-Saharan Africa compared to other regions. Her findings suggest that while factors such as higher returns on investment and improved infrastructure tend to attract FDI to non-Sub-Saharan African countries, they do not significantly impact FDI in Sub-Saharan Africa. Additionally, while trade openness promotes FDI in countries inside and outside the area, the benefits of increased openness are less pronounced in Sub-Saharan Africa. These results indicate that Africa has unique characteristics that must be considered when formulating policies to attract FDI and that strategies successful in other regions may not be effective in Africa.

A paper by Beamish, Dietz and Bhardwaj (2007) examines the impact of a host country's cultural values on foreign direct investment (FDI) decisions made by foreign firms. The study argues that strong preferences for a particular national culture are manifested in the total FDI a host country receives. Specifically, it suggests that countries with low levels of uncertainty avoidance and high levels of trust are more attractive destinations for foreign firms. It also focuses on the interactive effects of uncertainty avoidance and trust on FDI. The study aims to understand the influence of national culture on the overall patterns of FDI by considering the total sum of FDI a country receives rather than FDI inflows into a host country from firms located in one specific or a limited group of countries. The study finds that host country culture plays a significant role in shaping FDI and that trust and uncertainty avoidance are essential factors. The study also finds that trust is more effective in promoting FDI when uncertainty avoidance is low. The study also contributes to research on cultural values by being the first to test the idea that certain values can take precedence over others depending on the situation.

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Research question:

What is the relationship between Trust and Foreign Direct Investment (FDI) inflow in Sub-Saharan Africa?

Hypothesis:

H0: "Higher levels of trust in Sub-Saharan Africa are not positively associated with increased foreign direct investment (FDI) inflow."

H1: "Higher levels of trust in Sub-Saharan Africa are positively associated with increased foreign direct investment (FDI) inflow."

The alternative hypothesis suggests that as the trust levels in institutions and between people in Sub-Saharan Africa increase, FDI inflow into the countries will also increase. This hypothesis is based on the idea that trust plays a critical role in investment decision-making and that investors are more likely to invest in a country where trust to institutions and between people is higher than in a country where it is lower. We already know from the results in Zhao & Kim (2011) that this holds for a larger population, but we want to examine if this holds for Sub-Saharan Africa.

Objectives of the thesis:

Why?

For several reasons, studying the relationship between trust and foreign direct investment (FDI) in Sub-Saharan Africa is crucial. Firstly, FDI plays a vital role in a country's economic growth and development (IMF, 2001); thus, understanding the factors that influence FDI inflow, including trust levels, can aid policymakers in creating a more favorable investment environment and attracting more FDI (OECD, 2002). Secondly, trust is a crucial factor that affects economic transactions, and research has demonstrated that it is positively associated with FDI (Zhao & Kim, 2011). By understanding how trust levels in Sub-Saharan Africa impact the investment climate, policymakers and investors can identify areas that require improvement to attract more FDI. Furthermore, the relationship

between trust and FDI in Sub-Saharan Africa is not well studied. Thus, studying this relationship can contribute to the existing literature to understand the effect trust has in the context of FDI inflow.

Knowledge gap

There is a knowledge gap when it comes to an understanding of the relationship between trust and foreign direct investment (FDI) in the context of Sub-Saharan Africa. One possible reason is that trust is a complex and subjective concept that can be difficult to measure. Additionally, research on FDI in Sub-Saharan Africa has traditionally focused on other factors such as political stability, economic growth, infrastructure, and business environment (Mijuyawa, 2015).

Another knowledge gap is the need for more data on trust levels in Sub-Saharan Africa, making it challenging to research the topic. Furthermore, the economic and political environment in Sub-Saharan Africa can be complex and dynamic, making it challenging to conduct research on trust and FDI in the region.

In conclusion, understanding the relationship between trust and FDI in Sub-Saharan Africa can be challenging due to the complexity of trust as a concept and the region's dynamic economic and political environment.

Part 3: Plan of Data Collection and Thesis Progression

Methodology:

To examine our research question, we will mainly use regression analysis. We will also be using descriptive statistics. The regression will be conducted in STATA, a statistical data program. However, if obstacles occur while working with data in STATA, and this is a result of shortcomings with the data program, we have the opportunity to use the data program R.

Regression analysis:

The research in our master thesis will look for the effect of trust, as a part of social capital, on Foreign Direct Investment inflow in Sub-Saharan Africa to test our hypothetis. We will gather data on both the dependent variable (*FDI/GDP*) and

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the independent variables (*GDP, Trade, Infrastructure, FDI stock, and Trust*) for all countries in Sub-Saharan Africa which are represented with observtations for all variables. We will then conduct the test by running the regression model both including and excluding the trust-variable and observe how R-squared change. We will also be able to analyse the effect through a correlation matrix.

Regression model:

We will use a multiple regression model with FDI/GDP as our dependent variable. Since our research are at large based on the same methodology as Zhao & Kim (2011), our best guess is that the regression model will be similar. However, Zhao & Kim (2011) tested for multiple research variables; *Trust, Associative Activity, and Regulative Quality,* while we are only interested in *Trust*. A temporary regression model we will work from is:

$$FDI/GDP_i = a_0 + a_1 GDP_i + a_2 Trade_i + a_3 Infrastructure_i + a_4 FDI\_stock_i + a_5 Trust_i$$

where *i* is the country and a_0 is constant. FDI/GDP is the net inflow of FDI in percentage of GDP in country *i*. GDP is Gross Domestic Product per capita in current US\$, and Trade is the sum of exports and imports of goods and services in % of GDP, and both will be collected from Worldbank data. Zhao & Kim (2011) measured Infrastructure by making their own variable based on road network and telephone mainlines. We have not yet decided what measurement of infrastructure is most relevant for Sub-Saharan Africa. FDI_Stock is the accumulated FDI for each country, obtained from World Bank data. Trust represents the data on trust from WVS.

This regression model is the momentary model and will be further developed.

Additional variables

We might also need additional variables to avoid omitted variable bias in our regression model, depending on the levels of R-squared in our regression analysis. Currently, we are not sure which variables might be added to the regression model to explain the potentially unexplained variance. However, we assume that some of these variables could be, e.i. *Corruption rate*, *Associative activity*, and *Government Quality*. Jaiblai and Shenai (2019) provide several determinants that

affect FDI in Sub-Saharan countries, which we might include to avoid variable bias. The main determinants of concern are inflation, income levels, and the size of the markets (Jaiblai, P. & Shenai, V., 2019).

Data Collection:

Data on Trust

In our study, we collect data on trust and foreign direct investment (FDI) in Sub-Saharan Africa from several sources. To measure trust, we do as Zhao & Kim (2011) and use data from the World Values Survey (WVS). We assume that the data on trust is stable and use WVS waves 1-7 for data on trust for all Sub-Saharan African countries. We will also potentially use data from "World Economic Forum's Global Competitiveness Index" and "World Bank's Governance Indicators" as data from these sources might be helpful if we observe an omitted variable bias.

Data on FDI

We use data from the World Bank and the United Nations Conference on Trade and Development (UNCTAD) to measure FDI. Both sources provide data on net inflow FDI in Uganda from 1970 until 2021, measured in both percentages of GDP and current US dollars. We will do as Zhao and Kim (2011) and use FDI in percentage of GDP.

Literature suggests that the primary determinant of FDI inflow is the respective country's Gross Domestic Product (GDP) (Zhao & Kim, 2011, p.637).

We will also consider other determinants of FDI in our research, such as infrastructure, exports, and imports of goods and services. The data on these control variables will be further discussed in the final thesis.

Thesis Progression:

By the end of February, we will have gathered all data and aim to have processed all data in mid-March and do a test regression. In February, one of us will travel to Uganda and meet important persons from the government, parliament, and business leaders to gain more knowledge for our research. In March, we will start writing the full-out literature review and aim to have a clear plan for which variables to include in the regression before April. At this stage, we will provide

our supervisor with the data and regression to verify it before further writing. We aim to submit a draft of the entire thesis to our supervisor at the beginning of May. We will do all writing parallel to and after the regression, and we aim to write the final results and conclusion in early June after feedback from our supervisor. Our plans state that we will have our thesis done and delivered early/mid-June.

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