

Revisiting the Impact of Foreign Aid and FDI on
Economic Growth in Sub-Saharan Africa

by

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Executive Summary

Economic growth attracts foreign direct investment (FDI) and foreign aid in sub-Saharan Africa. In turn, foreign aid leads to economic growth. FDI, however, fails to significantly influence economic development. Lastly, foreign aid does not predict FDI. These results come from regressions involving 38 sub-Saharan countries and data from 1979 to 2018. The first set of regressions tested the relationship between capital inflows and economic growth over the past three years. Then a regression used FDI and foreign aid during the past three years as predictors for changes in GDP per capita. All regressions employed dummy variables to control for country and time-specific factors.

I Introduction

Historically, sub-Saharan Africa has struggled to attract investments. Figure 1 shows the total capital flows into the region from 1979 to 2018. Until about 2000, foreign aid vastly exceeded FDI. At the turn of the millennia, this changed. FDI in the region increased and peaked in 2014. For the past 20 years, FDI has approximately equaled foreign aid. Moreover, sub-Saharan Africa is one of the fastest-growing regions in the world. The increase in capital inflows and high economic growth pose several questions to policymakers. Do FDI and foreign aid lead to economic development? And do increases in GDP attract investments? Furthermore, donor countries need to know whether their aid fosters economic development.

This thesis examines the impact of financial inflows on economic growth in sub-Saharan Africa. I used regressions to test the relationship between FDI, foreign aid, and economic growth in 38 African nations. My dataset included values from 1979 to 2018. Ideally, increases in capital

and GDP form a positive feedback loop. This means that FDI and foreign aid should cause the economy to grow. In turn, this growth should attract more investments.

In a first step, I ran two regressions to test whether economic growth in sub-Saharan Africa attracts capital inflows. FDI and foreign aid, the dependent variables, were regressed on economic growth. Dummy variables controlled for country-specific and time effects. Moreover, past FDI and foreign aid served as independent variables to avoid reverse causality. Intuitively, increases in GDP per capita will attract investments. Investors want to benefit from the value creation in a booming economy. However, in sub-Saharan Africa, a large proportion of FDI flows into resource-seeking. Put differently, investors do not seek to benefit from the local economy, but to extract commodities. Such investments depend on global factors, like commodity prices, and not on a developing nation's economic situation. Moreover, it appears counterintuitive to think that economic growth attracts foreign aid. On the contrary, countries in bad economic conditions need more aid than those doing well. However, in the case of sub-Saharan Africa, most nations receive foreign aid. Hence, we should not ask whether economic growth predicts foreign aid. The new question is whether the economic performance of countries that need foreign aid predicts donor nations' willingness to give? Consequently, I hypothesize that economic growth attracts foreign aid for countries in need. Wealthy nations are more likely to give aid if they believe that their money will improve the local economy.

In a second step, I used a regression to find out whether capital inflows predict economic growth. This regression employed economic growth as a dependent variable. Foreign aid and FDI over the past three years served as independent variables. Furthermore, dummy variables controlled for country and time-specific factors. It makes sense to assume that investments in a country will lead to increases in GDP. Moreover, Africa lacks efficient capital markets. This

makes the continent highly dependent on foreign funds. However, scholars debate the impact of foreign aid on developing nations. On the one hand, development assistance will increase economic output. However, countries dependent on foreign aid might fail to develop functioning institutions. Since these nations receive “free” cash from donors, they may have no incentive to change their situation. Figure 2 shows foreign aid per capita as a percentage of GDP per capita for selected sub-Saharan countries. For instance, the Central African Republic’s per capita GDP in 2018 was approximately \$500. They received 40%, equaling \$200, in aid per citizen. Other countries included in the graph are sub-Saharan Africa’s top aid receivers. Moreover, the red line shows the average aid all countries in my sample received. This aid ranged between 5-10% of GDP. When a country gets 10% of its GDP worth in aid, economic output increases. However, I aim to test whether this growth lasts.

Lastly, I ran a regression to determine whether foreign aid predicts FDI. In addition, several dummy variables controlled for time and country-specific effects. In countries recovering from economic shocks, investors can see foreign aid as a positive signal. Official development assistance aims to create a financial infrastructure and strengthen institutions. Hence, aid can make a country more attractive to investors. However, as noted earlier, FDI in sub-Saharan Africa often flows into resource-seeking and some countries fail to use foreign aid efficiently. Moreover, in many instances, the public and private sectors do not work in alignment.

II Literature Review

A strand of literature has researched whether economic growth in developing nations attracts capital inflows. The neoclassical model suggests that funds should flow to fast-growing countries. Developed nations have an abundance of capital in comparison to poor nations. Hence,

money should flow from wealthy to poor countries to seek higher returns. However, money often fails to move from the rich to the developing world. Lucas (1990) observed this deviation from the neoclassical model. Following his influential paper, economists coined the absence of significant capital flows to poor nations “Lucas Paradox.” Prasad et al. (2006) show that fast-growing non-industrial countries do not draw in more foreign finances. Prasad reasons that successful developing nations cannot absorb capital inflows, due to underdeveloped financial markets and economies at risk of overvaluations. In such countries, even comparatively small capital in and outflows can drastically impact local financial markets. Gourinchas and Jeanne (2013) find that increases in GDP do not lead to higher capital inflows. In fact, countries with lower productivity growth and lower investments appear to receive more foreign funds. Kalemli-Ozcan et al. (2010), on the other hand, notes that capital flows within the United States follow the neoclassical model. Put differently, money moves from low growth to high growth states. Kalemli-Ozcan assumes that frictions associated with national borders and risk considerations reduce international capital flows to developing nations.

This thesis also relates to literature on the effectiveness of foreign aid. The central question asks whether economic development aid positively influences economic growth in receiver countries. Boon (1996) provides evidence that foreign aid does not cause economic growth and investments but increases the size of the government. The author argues that a shortage of capital does not cause poverty. Moreover, policymakers have less incentive to improve policies when they receive aid without conditions attached. Burnside and Dollar (2000) employ similar instruments and show that the regulatory environment determines the effectiveness of foreign aid. Countries with effective fiscal, monetary, and trade policies can transform foreign aid into economic growth. However, after increasing the dataset, Easterly et al.

(2004) could not find robust evidence to support the findings of Burnside and Dollar. Hansen and Tarp (2001) show that foreign aid enhances economic growth. Moreover, this growth does not depend on the policy index created by Burnside and Dollar. Rajan and Subramanian (2008) use a similar framework and find that aid has no significant effect on economic growth. Their results are consistent for cross-section and panel data and do not vary across geographical regions. Bruckner (2013) shows that foreign aid has a positive impact on economic growth per capita after he controlled for reverse causality effects. Moreover, his paper argues that past research failed to account for the negative consequences higher GDP per capita has on foreign aid. In other words, when a country becomes wealthier it receives less aid. Most recently, Calderon and Ha (2015) find that foreign aid positively influences economic growth of the same year.

A range of academic papers examines the impact of FDI on economic growth in developing nations. Most economists agree that FDI enhances growth in a favorable legal, economic, and political environment. However, the correlation between FDI and economic growth makes it difficult to determine causality. Blomstrom, Lipsey, and Zejan (1994) show that FDI has a significant positive effect on economic growth in poor nations. However, this impact appears to be limited to “higher-income developing countries.” This implies that countries need to achieve a certain level of development to benefit from FDI. Borenstein, de Gregorio, and Lee (1998) find that the receiving country’s human capital determines the impact of FDI. Put differently, for FDI to generate spillover effects, developing nations need to have the ability to absorb sophisticated technologies. Alfaro et al. (2003) find that FDI’s effect on growth differs from sector to sector. Investments in the primary sector show a negative impact on growth. FDI in the manufacturing sector leads to higher growth. The impact of FDI in the service sector is ambiguous. Carkovic and Levine (2005) find that FDI does not independently lead to higher

GDP. The paper controls for country-specific and endogeneity factors, which explain most of a country's economic growth. More recently, Calderon and Ha (2015) find that FDI significantly impacts changes in GDP per capita of the same year.

This paper also relates to literature on the effects of foreign aid on FDI. The central question is whether aid paves the way for FDI or limits investment opportunities. Karakaplan et al. (2005) show that aid can predict FDI, given good governance and functioning financial markets. Harms and Lutz (2006) find that the effect of foreign aid on private FDI is close to zero. The authors employ panel data from a large sample of developing nations and control for regulatory environments. Selaya and Sunesen (2008) show that FDI and aid have an indeterminate relationship. In other words, aid may lead to more or less FDI. The relationship is positive if foreign aid increases the marginal productivity of capital. For instance, infrastructure projects and increases in human capital raise the productivity of capital. Naturally, the resulting higher returns attract more investments. On the other hand, foreign aid in the form of capital transfers can reduce opportunities for FDI. Hence, investors stay away due to a lack of promising high-return projects. Kimura and Todo (2010) find that aid has no notable effect on FDI. The authors use a large database of "source-recipient" country pairs to allow for significant country-specific findings. The paper shows that Japanese aid leads to higher Japanese FDI. However, Japanese aid does not affect FDI from other countries. Most recently, Addison and Balamoune-Lutz (2016) find that foreign aid does not lead to more FDI in sub-Saharan Africa.

III Data

I used data from 38 sub-Saharan African countries¹ between 1970 and 2018, to analyze the relationship of foreign aid, FDI, and economic growth. This approach follows the work of Calderon and Ha (2015).

Output:

- Economic growth: Real GDP per capita in current USD from 1979 to 2018, sourced from the World Development Indicators.

Capital inflows:

- FDI: Net inflows of FDI from 1979 to 2018 in current USD, sourced from the World Development Indicators. Net inflows are total new foreign direct investments reduced by disinvestments for a country in any given year.
- Foreign Aid: Net official development assistance (ODA) from 1979 to 2018 in current USD, sourced from the World Development Indicators. Net ODA includes concessional loans and grants by the Development Assistance Committee (DAC), multilateral institutions, and non-DAC members.
- I sourced population data from the World Development Indicators and divided both types of capital inflows by population. This yields FDI and foreign aid per capita, which controls for a county's size.

¹ Countries include Angola, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Chad, Republic Congo, Democratic Republic Congo, Cote d'Ivoire Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Eswatini, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

III.A Rainfall Method

In sub-Saharan Africa, rainfall can predict a country's economic growth. Many of the region's nations have big agricultural sectors compared to GDP. Hence, changes in agricultural output can determine how well a county does. To control for this effect, I used annual average rainfall for every country as an independent variable in my regressions. The data came from NASA's Global Precipitation Climatology Project (GPCP), which relies on satellite measurements and information from local weather stations. This rainfall method has been used in academic literature before. Examples include Miguel (2004), Bruckner and Ciccone (2010), and Calderon and Ha (2015). GPCP gave the monthly average precipitation for any point on earth in any year. Miguel's work provided longitude and latitude for nodes in sub-Saharan countries. I used the following formula to calculate the annual rainfall for a nation.

$$R_y^c = 31 * \sum_{k=1}^n \frac{r_{y,m}^k}{n} + 28 * \sum_{k=1}^n \frac{r_{y,m}^k}{n} + \dots + 30 * \sum_{k=1}^n \frac{r_{y,m}^k}{n} + 31 * \sum_{k=1}^n \frac{r_{y,m}^k}{n}$$

where

R_y^c ... average annual rainfall in country c in year y

n ... number of nodes in country c

$r_{y,m}^k$... average daily rainfall at node n in month m of year y

The equation summed the average daily rainfall of a country's nodes in each month. Then I multiplied the daily average by the number of days in the given month. An algorithm repeated this process for every month and added the resulting values together.

III.B Rainfall Results

I ran a regression to verify rainfall's influence on economic growth. Table 1 shows the results in the "All Observations" section. Moreover, Figure 3 plots the residuals of the regression. Then I removed observations with residuals higher than 0.4 or smaller than -0.4. All regressions in this paper used the adjusted rainfall dataset. Extreme weather observations might skew the results. Too much rainfall should not lead to higher economic growth. Moreover, floods and droughts tend to increase foreign aid. However, this paper aims to determine the causality between capital flows and economic growth but not how aid responds to natural disasters. Capital inflows do not affect average annual precipitation. Thus, rainfall serves as an exogenous variable that explains growth and improves my models' reliability. Table 1's "Without Outliers" part shows the impact rainfall has on economic growth after removing extreme weather observations. Rainfall predicts increases in GDP at the 5% significance level. Furthermore, Figure 4 graphs the residuals of the second regression. The plot shows no outliers above the 0.4 threshold and appears more concise. These regressions used the logarithm of economic growth per capita on the left-hand side. The logarithm of GDP per capita and rainfall served as independent variables. Dummy variables included country, timeseries, and country-specific timeseries.

$$\Delta \log (y_{c,t}) = \log (y_{c,t}) + \log (R_t^c) + a_c + b_t + \text{timetrend}_{c,t}$$

where

$y_{c,t}$... GDP per capita in country c at time t

R_t^c ... average annual rainfall in country c in year t

a_i ... dummy for country fixed effects, which control for time invariant factors

in country c

b_t ... dummy for time fixed effects to control for common global factors in year t

timetrend_{c,t} = dummy to control for country specific timetrends

IV Discussion of Results

IV.A The Influence of Economic Growth on Capital Inflows

Economic growth attracts FDI and foreign aid in sub-Saharan Africa. My first regression used FDI as an independent variable. The key explanatory variable was economic growth over the past three years. I assumed that growth over the past years should attract foreign investments. Moreover, several control and dummy variables increased the regression's reliability. Current GDP controlled whether FDI flows to wealthier sub-Saharan countries. To check for reverse causality, the regression used FDI over the past three years as a control variable. Lastly, I added dummies for country, timeseries, and country timeseries. I used a similar framework to test whether economic growth predicts foreign aid. The new regression simply replaced FDI with aid parameters. The equation below shows these regressions.

$$\begin{aligned} \log(FDI_{c,t} \text{ or } AID_{c,t}) &= \log(y_{c,t}) + \log(R_t^c) + \Delta \log(y_{c,t}) + 3y \Delta \log(y_{c,t}) \\ &+ 3y \log(FDI_{c,t} \text{ or } AID_{c,t}) + a_c + b_t + \text{timetrend}_{c,t} \end{aligned}$$

FDI_{c,t} ... total net inflows in country c in year t

AID_{c,t} ... total foreign aid received by country c in year t

y_{c,t} ... GDP per capita in country c at time t

R_t^c ... average annual rainfall in country c in year t

Δ log(y_{c,t}) ... economic growth per capita in the current year

$3y\Delta \log(y_{c,t})$... *the logarithm of economic growth over the past three years*

$3y \log(FDI_{c,t} \text{ or } AID_{c,t})$... *the logarithm of the sum of FDI over the past three years*

Table 2 presents the results of the above regressions. Economic growth predicts FDI and foreign aid. This supports my earlier hypothesis that in a group of countries that need aid, higher growth predicts donor nations' willingness to give in the future. Moreover, the regression controlled for a country's wealth via the $\log(y_{c,t})$ variable. The coefficient for GDP per capita is negative and indicates that wealthier nations receive less aid. My findings with respect to FDI contradict the Lucas Paradox, which describes the absence of significant capital flows from rich to poor nations. Since the Lucas Paradox was discovered in the 1990s, I hypothesized that the nature of capital flows has changed over time. To test this, I ran two regressions on subsets of the data. The first regression used data from 1982 until 1999 to estimate the influence of economic growth on FDI. The second regression tested the same connection but with more recent data from 2000 to 2018. Table 3 depicts the results of both calculations. Due to the smaller sample size, economic growth became a less significant predictor in either case. Nevertheless, the coefficient of economic growth increased and became more significant in the regression with the more recent dataset. This indicates that economic growth has become a more important predictor for FDI.

IV.B Do Capital Inflows Predict Economic Growth?

Foreign aid predicts economic growth. FDI has an insignificant influence on changes in GDP per capita. The regression used FDI and foreign aid over the past three years as main explanatory variables. Rainfall and current GDP observations and served as control variables since they explain part of a country's growth. Moreover, this year's FDI and AID controlled for

the positive but temporary impact of capital inflows. Figure 2 shows that the average country receives 5-10% of its GDP in aid per year. Donor nations often pay out aid over several years. This means that last year's capital inflows predict this year's aid. Hence, capital inflows over the past three years might predict this year's growth via this year's inflows. To control for this effect, I included current aid and FDI in the regression. Lastly, I added dummies for country, timeseries, and country timeseries. The equation below describes the regression.

$$\Delta \log(y_{c,t}) = \log(y_{c,t}) + \log(R_t^c) + \log(FDI_{c,t}) + 3y \log(FDI_{c,t}) + \log(AID_{c,t}) + 3y \log(AID_{c,t}) + a_c + b_t + \text{timetrend}_{c,t}$$

$\Delta \log(y_{c,t})$... *economic growth per capita in the current year*

$y_{c,t}$... *GDP per capita in country c at time t*

R_t^c ... *average annual rainfall in country c in year t*

$FDI_{c,t}$... *FDI in country c in the current year t*

$3y \log(FDI_{c,t})$... *logarithm of total FDI over the past three years*

$AID_{c,t}$... *foreign aid in country c at time t*

$3y \log(AID_{c,t})$... *logarithm of total foreign aid over the past three years*

Table 4 shows the results of the above model. FDI over the past three years does not predict economic growth. The variable's p-value is 0.975. This means 97.5% of FDI's impact could be coincidental. Moreover, the coefficient for FDI is one hundred times lower than the coefficient for foreign aid. Table 4 also shows that aid inflows have a significant p-value at the 10% level. I ran a second regression and used capital inflows over the past five years as explanatory variables. This tested the robustness of my initial calculations. Table 4 also represents these findings. Notably, the coefficient and p-value of aid remain approximately the

same. This shows the strength of the finding that aid predicts economic growth. FDI over the past five years has a more significant p-value but the coefficient remains small and turned negative. Hence, the impact of FDI on economic growth appears inconclusive.

IV.C Influence of Aid on FDI

Foreign aid does not predict FDI and neither does FDI predict foreign aid. I ran two regressions with identical predictors but different dependent variables. The main questions were whether aid over the past three years predicts FDI and if past FDI impacts current aid. Moreover, the regression controlled for a country's GDP and economic growth. Lastly, included dummies to account for country-specific, timeseries, and country timeseries effects. The resulting equation is posted below.

$$\begin{aligned} \log(FDI_{c,t} \text{ or } AID_{c,t}) = & \log(y_{c,t}) + \log(R_t^c) + \Delta \log(y_{c,t}) + 3y\Delta \log(y_{c,t}) \\ & + 3y \log(FDI_{c,t}) + 3y \log(AID_{c,t}) + a_c + b_t + \text{timetrend}_{c,t} \end{aligned}$$

$FDI_{c,t}$... total net inflows in country c in year t

$AID_{c,t}$... total foreign aid received by country c in year t

$y_{c,t}$... GDP per capita in country c at time t

R_t^c ... average annual rainfall in country c in year t

$\Delta \log(y_{c,t})$... economic growth per capita in the current year

$3y\Delta \log(y_{c,t})$... the logarithm of economic growth over the past three years

$3y \log(FDI_{c,t} \text{ or } AID_{c,t})$... the logarithm of the sum of FDI or foreign aid
over the past three years

Table 5 lays out the results of the above regressions. The “LN FDI” section shows that aid over the past three years has no impact on this year’s investments. The aid variable’s p-value is close to 1, which indicates no significance. Similarly, the table’s “LN Aid” part reveals no impact of FDI on aid at any significance level.

V Conclusion

Economic growth attracts capital inflows. Foreign aid predicts increases in GDP per capita. FDI, on the other hand, has an insignificant impact on a country’s economic growth. Lastly, aid and FDI have no causal relationship. These findings indicate that policymakers in sub-Saharan Africa should focus on receiving foreign aid over FDI. Ideally, these donations will lead to higher economic growth, which in turn, should attract more aid. However, this might make sub-Saharan countries strongly dependent on aid. On the other hand, the resulting positive feedback loop could allow developing nations to build more human capital. According to Borenstein, de Gregorio, and Lee (1998) human capital allows countries to positively benefit from FDI. A natural future research question would be whether countries can transition from aid to FDI receivers. Put differently, can foreign aid develop the human capital necessary to efficiently absorb FDI?

My first set of regressions shows that economic growth attracts capital inflows. This is at odds with prior findings and does not confirm the “Lucas Paradox.” Further investigation showed that economic growth has become more important during the past two decades. These findings seem encouraging for sub-Saharan countries. Policymakers that implement successful growth strategies will receive more capital inflows as a reward. However, further research needs

to determine what has changed. It is paramount for policymakers to understand why economic growth has become a strong predictor for capital inflows.

Secondly, I tested whether capital inflows influence economic growth in sub-Saharan Africa. Scholars still debate whether foreign aid leads to lasting economic growth. Table 4 shows that aid over the past three and five years predicts economic growth. In fact, this is my most robust finding. No matter how I specified my regressions the coefficient for aid stayed positive. Furthermore, in most cases, foreign aid had a significant p-value. FDI behaved entirely differently. Its coefficient remained small and flipped the sign repeatedly. Hence, aid predicts economic growth better than FDI.

Appendix

Figure 1:

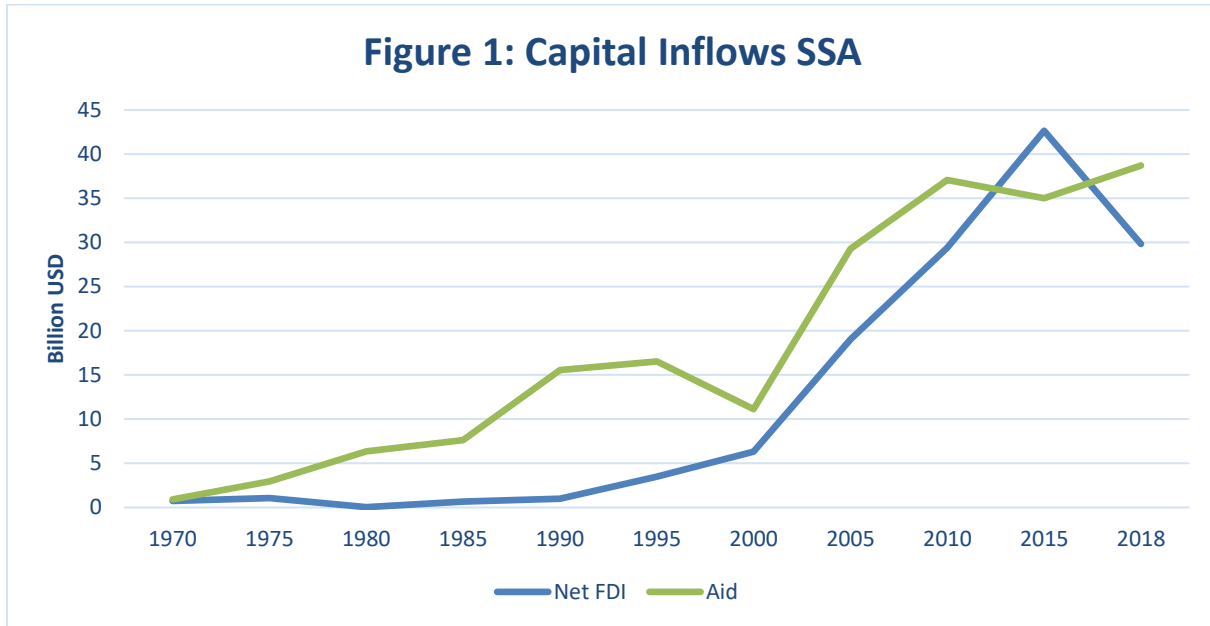


Figure 2:

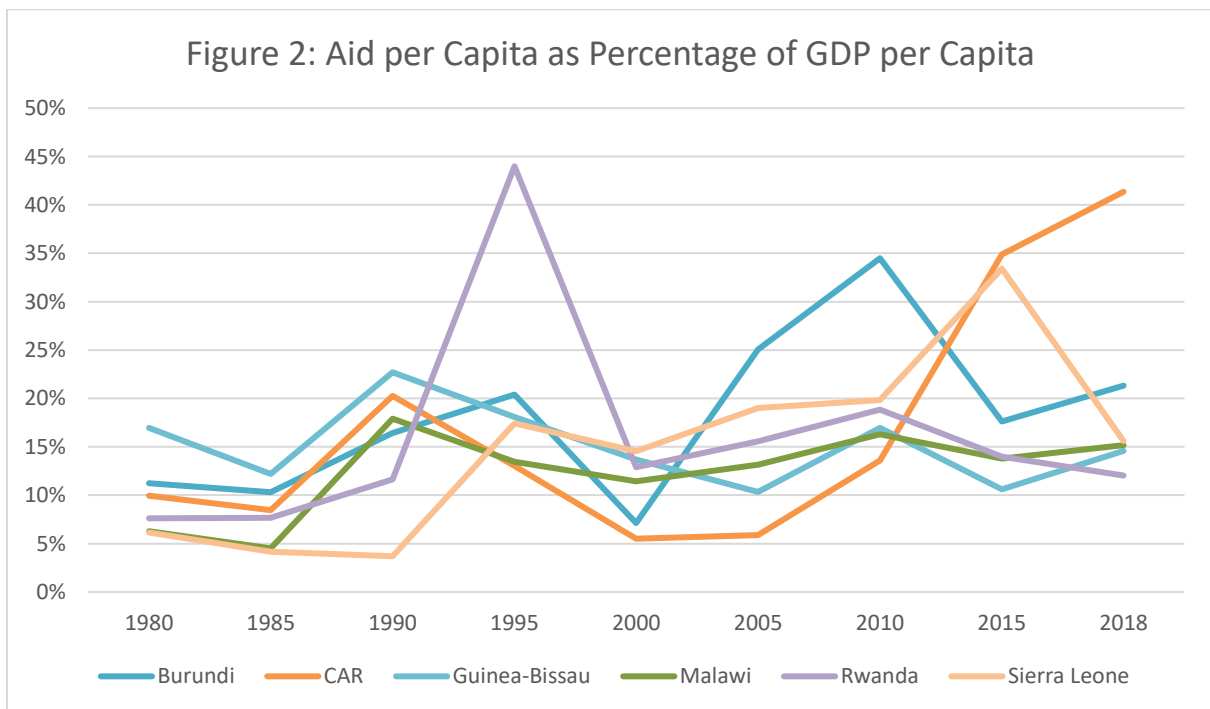
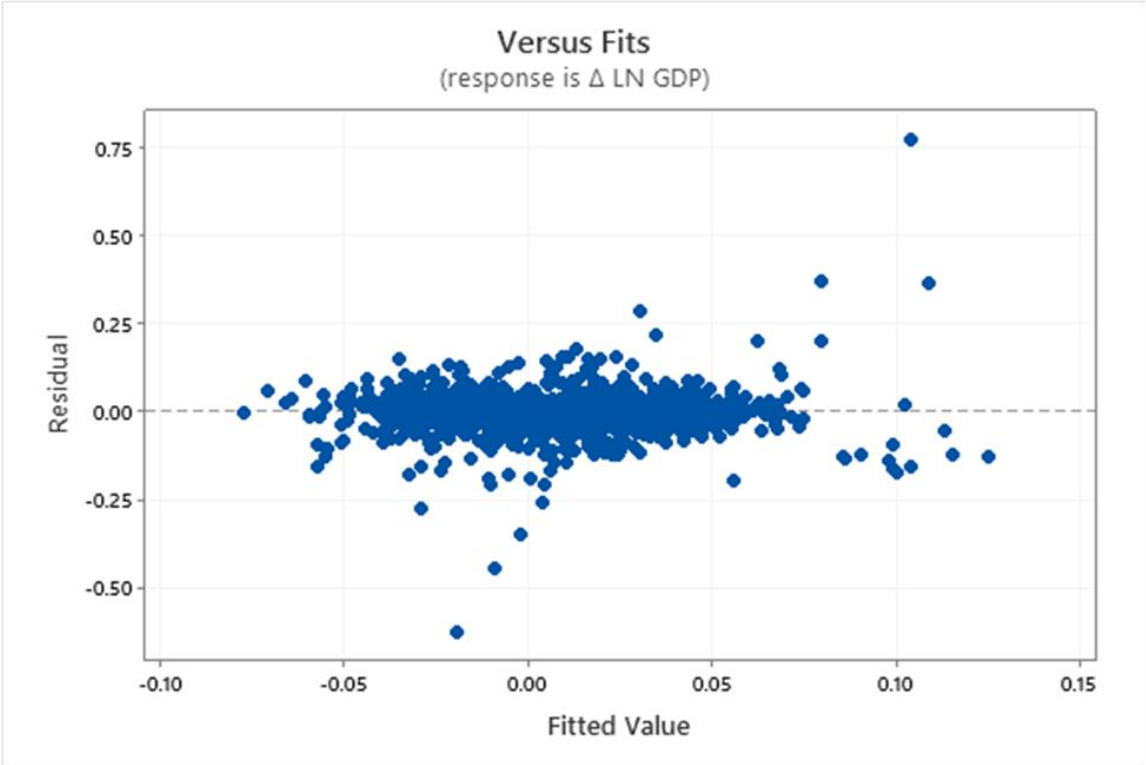


Figure 3: Rainfall Regression Residuals



Figure

4: Adjusted Rainfall Regression Residuals

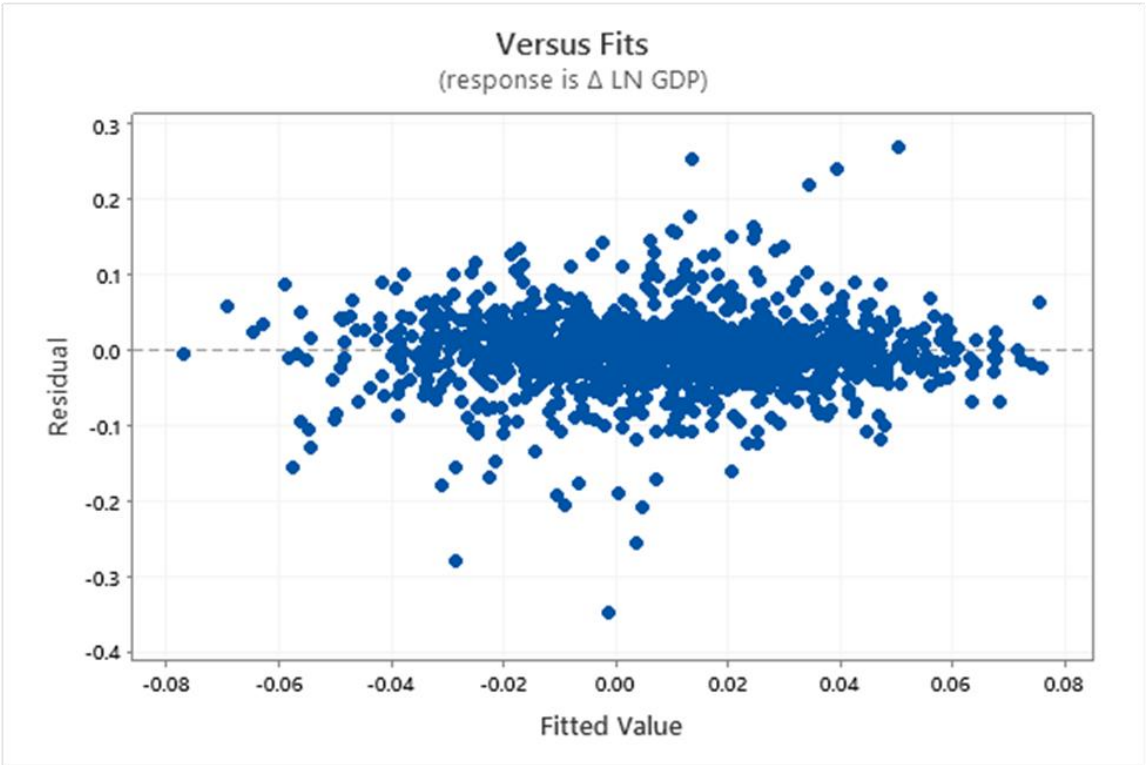


Table 1:

1979 - 2019	Variable	Coef	SE Coef	T-Value	P-Value
All Observations					
	LN Rainfall	0.0259	0.0123	2.11	0.035
Without Outliers					
	LN Rainfall	0.0293	0.0101	2.9	0.004

Table 2:

1982 - 2018	Variable	Coef	SE Coef	T-Value	P-Value
LN Aid					
	LN GDP	-0.2245	0.0814	-2.76	0.006
	LN Rainfall	-0.034	0.0784	-0.43	0.665
	Δ LN GDP	0.942	0.216	4.35	0.000
	3y Δ LN GDP	0.298	0.123	2.43	0.015
	3y LN Aid	0.20062	0.00959	20.92	0.000
LN FDI					
	LN GDP	0.431	0.284	1.52	0.129
	LN Rainfall	-0.557	0.245	-2.28	0.023
	Δ LN GDP	1.434	0.725	1.98	0.048
	3y Δ LN GDP	1.263	0.393	3.22	0.001
	3y LN FDI	0.0984	0.014	7.02	0.000

Table 3:

1982 - 1999	Variable	Coef	SE Coef	T-Value	P-Value
LN FDI					
	LN GDP	0.59	0.778	0.76	0.449
	LN Rainfall	-0.74	0.475	-1.56	0.12
	Δ LN GDP	-1.61	1.27	-1.27	0.205
	3y Δ LN GDP	0.338	0.822	0.41	0.682
	3y LN FDI	-0.0856	0.029	-2.95	0.003
2000 - 2018					
LN FDI					
	LN GDP	0.991	0.579	1.71	0.088
	LN Rainfall	-0.412	0.271	-1.52	0.129
	Δ LN GDP	0.91	1.04	0.87	0.384
	3y Δ LN GDP	0.797	0.637	1.25	0.211
	3y LN FDI	0.0276	0.0231	1.2	0.232

Table 4:

1982 - 2018	Variable	Coef	SE Coef	T-Value	P-Value
3 Years					
	LN GDP	0.0802	0.0113	7.08	0.000
	LN Rainfall	0.0252	0.0112	2.26	0.024
	LN FDI	0.0029	0.00152	1.92	0.056
	3y LN FDI	0.000021	0.000663	0.03	0.975
	LN Aid	0.01806	0.00409	4.42	0.000
	3y LN Aid	0.00298	0.00163	1.83	0.068
5 Years					
	LN GDP	0.0954	0.0123	7.78	0.000
	LN Rainfall	0.0249	0.0118	2.1	0.036
	LN FDI	0.00131	0.00169	0.77	0.439
	5y LN FDI	-0.00081	0.000531	-1.52	0.130
	LN Aid	0.01521	0.00421	3.62	0.000
	5y LN Aid	0.00226	0.0012	1.89	0.059

Table 5:

1982-2018	Variable	Coef	SE Coef	T-Value	P-Value
LN FDI					
	LN GDP	0.42	0.286	1.47	0.142
	LN Rainfall	-0.561	0.246	-2.28	0.023
	Δ LN GDP	1.458	0.734	1.99	0.047
	3y Δ LN GDP	1.263	0.399	3.17	0.002
	3y LN FDI	0.1012	0.0143	7.09	0.000
	3y LN Aid	-0.0079	0.033	-0.24	0.811
LN Aid					
	LN GDP	-0.2288	0.0998	-2.29	0.022
	LN Rainfall	-0.0329	0.0891	-0.37	0.712
	Δ LN GDP	1.207	0.262	4.61	0.000
	3y Δ LN GDP	0.21	0.142	1.48	0.140
	3y LN FDI	0.00059	0.0051	0.12	0.908
	3y LN Aid	0.171	0.0119	14.35	0.000

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