

From Independence to Aid-Dependence
—Assessing aid in Fragile States:
Evidence from Guinea-Bissau—

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Abstract

This study aims to examine the effects of foreign aid on the per capita GDP growth. More specifically, its macroeconomic implications in fragile environments. A three-step OLS time series analysis is used to understand how foreign aid and fragility interact in Guinea-Bissau from 1987-2019. The results did not show any statistically significant impact of foreign aid on growth. However, once variables for aid and fragility were introduced to the models, an effect on other macroeconomic indicators became evident. Savings, population growth and the variable for democracy became positive and statistically significant. These results corroborate previous literature that; underscore the role of human capital in the growth equation, suggest that savings contribute to growth via increased investment, and emphasize the role of good policy environments on aid effectiveness. Furthermore, the study indicates that all these effects are diminished in fragile situations and that donor reaction to fragility is typically a reduction in aid. Aid dependence, as the literature indicates, can have negative socioeconomic effects, but the fallout from under-aiding is guaranteeing that Guinea-Bissau is left behind. Foreign interventions should be catered and allocated to address the unique challenges faced by fragile states.

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Chapter 1: Introduction and Background

1.1 Introduction

Economists and scholars alike continue to grapple with the causes of, impediments to, and even definitions of, the phenomena of development. How does a nation-state transition from a traditional, agricultural-based economy to a modernized one? Why do some countries develop faster than others? Who exactly is to say what development or modernity looks like?

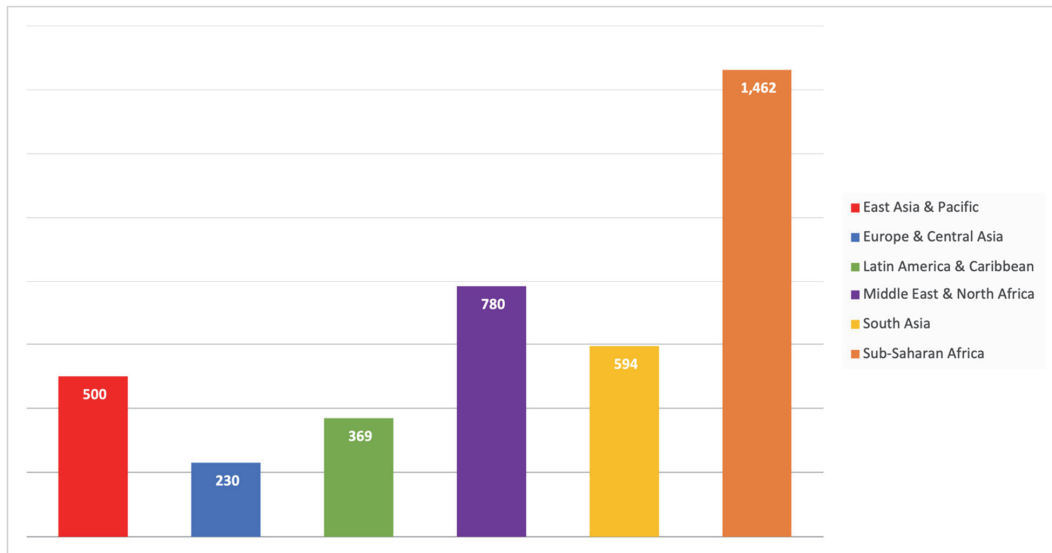
Theories centered on replicating the development path of western nations did not, in practice, become the panacea they were hypothesized to be, this became strikingly evident following the end of colonization. The solution to the developing world's underdevelopment coincided with the end of World War II and the implementation of the Marshall Plan, whose success became the basis for the development strategy that has been pursued by the development community for the better part of a century – growth via foreign aid.

Granted, the initial motives for providing foreign aid to developing countries were anything but developmental, the transition to aid as a central driver of growth was effortless

and welcomed by stakeholders. The evolution of aid's purposes, as well as the machinery used to deliver it, gave birth to extensive research and heated debates on the effects of large injections of foreign resources into an underdeveloped country.

Some nations have fared better than others on the journey towards development, while others have lagged behind, and some have even been left behind. The extent to which aid has contributed to this outcome is a central question in the literature. Does the capital injection allow for an increase in savings and investment leading to increased growth? Or are its side effects more deadly than the disease that is underdevelopment?

Today, Sub-Saharan Africa is simultaneously the world's most underdeveloped region, with an average per capita GDP of US\$1,581, about one tenth of the world average (World Bank, 2022) and the world's main benefactor of foreign aid, receiving over US\$1.4 trillion since the 1960s (World Bank, 2022), see **Figure 1**. However, since then, developmental indicators have seemingly deteriorated. "Africa's real per capita income today is lower than in the 1970s, leaving many African countries at least as poor as they were forty years ago" (Moyo 2009, 5). The theories surrounding the factors that contribute to Africa's underdevelopment, despite its bountiful resources, both natural and financial (in terms of aid), are innumerable. Paul Collier (2006), attributes Africa's failings in the region in part to the fact that most African nations are landlocked. Others attribute the continent's economic misgivings to ethnic fragmentation (Easterly & Levine 1997). Some point to tropical geography and demography (Bloom & Sachs 1998). On aid's ineffectiveness in the region, Burnside and Dollar (2000) blame poor economic policies, while Barro (1996) considers



Source: Constructed using World Bank 2022 data.

Obs: Data excludes high income countries in each region

Figure 1: Net official development assistance received (constant 2018 US\$) in billions, 1960-2019

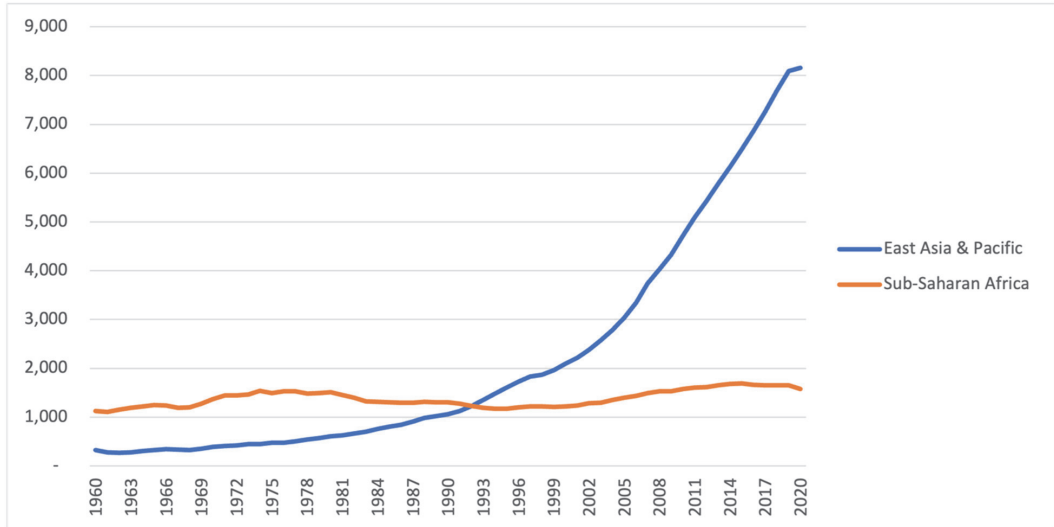
poor governance to be the culprit.

And when juxtaposed with East Asia’s recent miracle, Africa’s apparent curse seems even more confounding. Since 1960, several east Asian countries, now classified as high-performing Asian economies (HPAEs) “grew faster than any other region in the world” (World Bank 1993, 1). The growth rate realized by the HPAEs was five times that of Sub-Saharan Africa (World Bank 1993, 2). An analysis of the trajectory of East Asia and Sub-Saharan Africa’s per capita GDP since 1960 (**Figure 2**) tells a story of two regions, whom for some time experienced similar levels of growth. Per capita GDP was actually higher in Sub-Saharan Africa for some time, but by the early 1990’s the regions took starkly different developmental trajectories.

What then accounted for the divergent developmental paths? The theories and ensuing literature point to a myriad of factors

that attributed to the unparalleled growth experienced by the HPAEs during the three decades post-independence (see World Bank, 1993). However, more curious than the miracle itself, was the trivial role played by foreign aid in the process. **Figure 3** shows the differing levels of ODA dependency for the two regions.

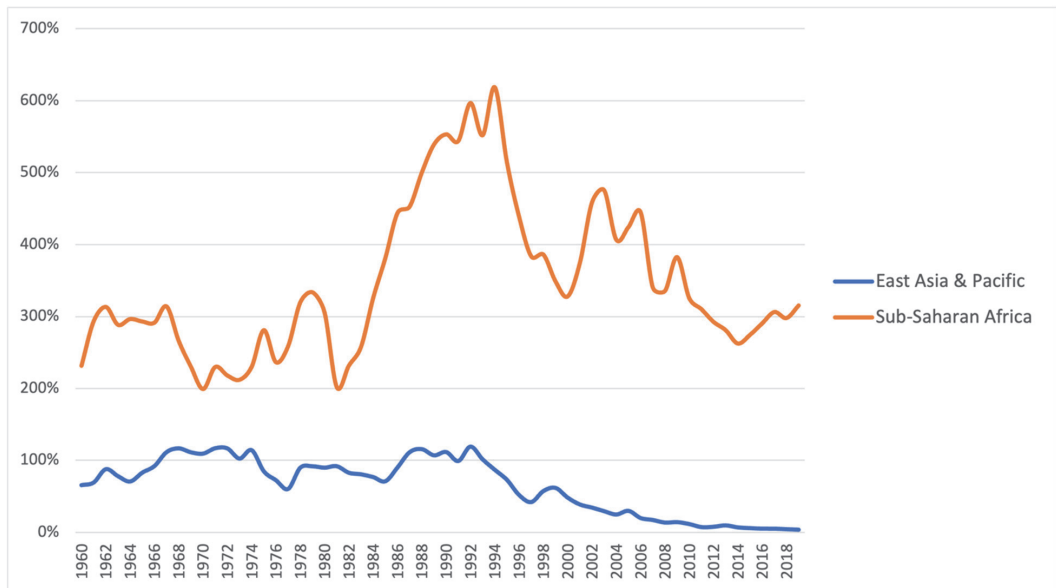
This somewhat paradoxical outcome has further placed the entire aid paradigm under scrutiny, with many critics calling for a drastic reduction in the amount of aid being sent to developing nations (Lancaster 2007, 2). However, this would appear to be more of a punishment than a solution. Foreign aid, like foreign direct investment (FDI) and remittances, is one of the most cost-effective foreign financing options available to developing countries. Constrained access to international credit markets and a weak tax base, make it difficult for African governments to access and pay back commercial loans. Risk averse investors



Source: Constructed using World Bank 2022 data.

Obs: Data excludes high income countries in each region

Figure 2: GDP per capita (constant 2015 US\$) in, 1960-2020



Source: Constructed using World Bank 2022 data.

Obs: Data excludes high income countries in each region

Figure 3: Net ODA received (% of GNI), 1960-2019

are offput by Africa's corrupt and unstable reputation and overall unfavorable business environment (Morisset, 2000) - keeping FDI rates low and volatile, while remittances are said to fund consumption rather than investment (Adams, 2011), thus justifying the need of foreign aid inflows to finance development.

Aid proponents, on the other hand, argue that foreign aid is the solution to the above-mentioned developmental bottlenecks and that “[aid] has been effective, can with reforms be more effective in the future, and therefore, on moral and practical grounds, should be dramatically expanded” (Lancaster 2007, 2). And it would, in fact, be imprudent to deny aid's contribution to Africa's socioeconomic development, particularly in terms of, promoting democracy and good governance, strengthening the health sector, contributing to education, and supporting infrastructure and agricultural development. These sort of success stories are indicative of what Mosely (1986) called the “micro-macro paradox”, where aid's local impact is immeasurable at the macro level.

Former UN Secretary-General Dag Hammarskjöld is famously quoted as saying, “The UN was not created to take mankind to heaven, but to save humanity from hell.” The same could be said for the role of aid in development. What would Sub-Saharan Africa look like today if not for the foreign aid that not only offsets the current account deficits so common to the third world administration, but also subsidizes and provides basic social services that would not be available otherwise?

Although, in general, foreign aid efforts have not translated into the impactful percent changes in per capita GDP of developing countries, it still plays a central role in the developmental path of a specific subset of developing countries, the fragile state. Burnside

and Dollar (2000), brought to the forefront the importance of a good policy environment on aid effectiveness and growth, and in effect the development community accepted the notion that good policy environments, in which good governance is implicit, are essential components to the aid-growth behavioral equation. But if this hypothesis is to be followed, what is to be said for states that are led by government's who have little will or capacity to govern effectively? Ultimately, are these not the countries and more importantly, the people, that are in greater need of external assistance? Are they to be left behind to fend for themselves?

Currently, there are 39 countries listed by the World Bank as “fragile and conflict affected states”, 19 of them are in Africa. On a global level, countries that were classified by the World Bank as fragile in 1979, were still fragile 3 decades later (European Report on Development, 2009). Guinea-Bissau has been on the World Bank's officially published list since its first publication in 2006. This subset of countries, though widely diverse in socioeconomic standing and cultural make-up, share one commonality, lower than average rates of growth owing to their state's fragility. Most of the development that does occur in these environments can be explained by the ‘broken windows fallacy’. Meaning that these countries are trapped in a vicious cycle where limited resources are attributed to returning to the level of development previous to the, usually political, incident, that caused the decrease in growth. Thus, rather than transition from developing to developed, the remain trapped between underdeveloped and developing.

Foreign aid is typically a significant portion of the financial repertoire of this particular subset of countries. In 2020 the OECD highlights how aid is one of the most vital resources for

fragile states:

“At USD 76 billion, total bilateral ODA to fragile contexts in 2018 amounted to 2.3 times the level of foreign direct investment (FDI) and two-thirds the value of remittances (USD 113.5 billion). In extremely fragile contexts, ODA outweighs both FDI and remittances by 11.5 and 2.5 times, respectively.” (OECD, 2020a)

Chandy *et. al.*, (2016) found that “In 2012, the median fragile state still relied on aid for 50 percent of its foreign capital [while] in other developing economies, aid represented only 10 percent” (p. 2). Given the centrality of ODA resources to fragile states, the practice of aid for development in these contexts requires critical attention as they cannot soon be abandoned. As countries begin to grow and transition from low income to middle income countries, the utility of aid begins to diminish, but for countries caught in the fragility trap, aid continues to be imperative as not only a remedial effort but hopefully a preventative one.

1.2 Rational and Scope

Case studies on aid effectiveness are essential as they go beyond the contemporary analysis method that congeal all developing countries together and draw ‘one-size-fits-all’ conclusions. Country specific characteristics are the underlying drivers that either contribute to or hinder aid effectiveness. Thus, being able to pinpoint these drivers allows for streamlined and pragmatic policymaking. With this in mind, this study uses time series data from 1987-2019 to analyze the case of Guinea-Bissau.

The case study approach is particularly important for analyzing an atypical country such as Guinea-Bissau, whose uncharacteristic characteristics are brilliantly captured below:

“Guinea-Bissau is, in many respects a

peculiar country. It is among the least developed in the world and its per capita incomes, capital stocks, living standards, and levels of education are among the lowest in the world. Industrial development is extremely limited, and the country’s production structure is narrow even in African terms. At the same time, poverty is fairly evenly spread among the population, and hunger is seldom encountered.” (Alvesson, Kokko & Zejan, 1994; p. 2)

Since then, developmental indicators, already on a downward spiral, were further exacerbated by state fragility and on a macro level it seems as if the high aid-dependency ratio has been unable to cushion the fall (**Figure 4**). This outcome calls for investigation into the relationship between aid and development in fragile contexts. This study will add to the very limited literature on the macroeconomic effects of foreign aid in Guinea-Bissau in specific, and aid effectiveness in fragile states, in general.

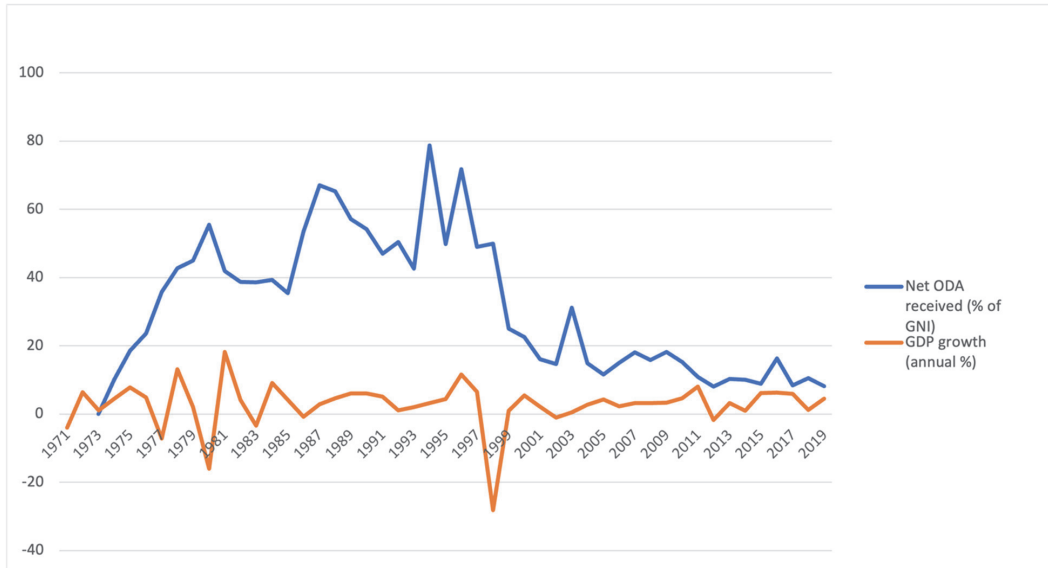
1.2.1 Research Question

This study aims at assessing how foreign aid has contributed to development in Guinea-Bissau, given its fragile context.

1.2.2 Objectives

The central focus of this paper is to understand the effects of foreign aid on development (GDP growth and HDI ranking) in fragile states, using Guinea-Bissau as a case study. Moreover, I hope to assess how the country’s level of aid dependency has contributed to the development of key economic and social indicators, i.e., good governance, savings, trade, investments (foreign & domestic), human capital.

More explicitly, I will be testing the following hypotheses:



Source: Constructed using World Bank 2022 data.

Figure 4: Net ODA received (% of GNI) and GDP growth, 1970-2019

H1: In fragile contexts, ODA always has a positive impact on per capita GDP.

1.2.3 Research Design and Data Collection

This study employs a mixed-method approach and is divided into two main parts. The first section focuses on a qualitative analysis and literature review of the global and country specific history of development aid. The second section uses a time-series Ordinary Least Squares (OLS) analysis to gauge effects of net ODA on the per capita GDP growth. Guinea-Bissau like many other developing countries has severe limitations in terms of data availability and credibility. Available data was collected from the reliable and widely used databases of the World Bank, OECD, PENN World and the IMF.

Chapter 2: Aid and Growth

The developmental challenges that have plagued the majority of the African continent

since the exodus of its colonial overlords has, and continues to, be the proverbial pebble in many a developmental economist shoe. Although scholars and economists alike have developed a milieu of theories as to the main causes, in the late 1960s, a consensus was reached as to the solution – capital accumulation, by way of foreign aid. The logic seemed reasonable, but today, over half a century later, the growth-via-aid model is yet to yield definitive results. The following sections provide a brief overview of the history and phases of foreign aid and an in-depth review of the prevailing pro and anti-aid theories and empirics surrounding modern aid.

2.1 Aid and Growth Theories

The debate on the effectiveness of foreign aid has been active for over half a century, with the opinions as polarized as the results. The following presents a brief overview of the major theories and themes stemming from each of those poles. From an organizational standpoint,

it is inspired by the work of Hansen and Tarp (2000) and thus, is presented accordingly.

2.1.1 First Generation theories – Aid, savings, and growth

Early developmental theories, for lack of better indicators, equated development with economic growth, and were thus centered on the idea that developing countries, in order to modernize, needed large injections of capital (Thorbeck, 2000). Modernization via industrialization was the mantra, and theories such as the ‘big push’ (Rosenstein-Rodan, 1943) and Rostow’s (1956) ‘take off’ theory, were the religion. These theories were rooted in the Harrod-Domar growth model, which suggests a causal link between income, savings, and growth. In other words, an increase in foreign inflows (aid) would lead to an equal increase in savings (Rosenstein-Rodan, 1961), which would in turn spur investments and economic growth (Papanek, 1973). However, this model was criticized for underestimating the fungibility of aid and not taking into consideration that foreign inflows could be used for consumption rather than savings (Hansen & Tarp, 2000). Nonetheless, the recent success of the Marshall Plan gave credence to this model, and at the behest of the World Bank, the majority of development plans during this era were structured accordingly (Arvin, 1999).

The approach however was not without its critics. The counterargument was that aid, in fact, led to lower domestic savings and thus retarded development (Griffin & Enos, 1970). Rahman’s 1968 test of Haavelmo’s hypothesis¹⁾ provided empirical evidence for this, suggesting a negative relationship between capital inflows and savings and postulating that foreign capital inflows could be acting as a substitute for domestic savings²⁾ as opposed to just simply

augmenting investments. Results from Weisskopf (1972) also suggested a negative relationship. However, these results were challenged by Gupta (1970), who, using the original data set that informed Rahman’s study,³⁾ found that “foreign capital inflows have virtually no effect on domestic savings in the less developed countries.” (p. 215). Furthermore, the study suggested that, when classified by per capita GNP, the effect of capital inflows on domestic savings increased as per capita income increased (Gupta, 1970).

Both the above-mentioned studies were based on the groundbreaking work done by Chenery and Strout (1966), who introduced the two-gap model, which expanded upon Harrod-Domar’s overly simplistic assumptions on savings and growth. In addition to the savings constraint, the two-gap model introduced a trade constraint on growth. In essence, “if the two forms of capital are in fixed proportion, then one or the other type of saving will always be binding—the one that is most in deficit.” (de Janvry & Sadoulet, 2016: 219). Furthermore, the model took into consideration a temporal aspect, and highlighted the importance of foreign exchange in reaching self-sustaining growth. The authors concluded that countries with higher export growth rates were found to be more likely to reach a level of sustained growth and adversely, unsatisfactory economic performance was linked to a stagnation in exports, which typically led to an increase in the demand for foreign capital (aid) and a decrease in the savings rate (Chenery and Strout, 1966: 710). The two-gap model was the catalyst for a wide range of empirical work and was hailed for narrowing the level of abstraction and reality (Papanek, 1972).

The core of first-generation studies is that aid will contribute to growth via savings,

however the empirical studies were unable to offer tenable results on the theory. Hansen and Tarp preformed an empirical literature survey consisting of an exhaustive analysis of 131 cross-country regressions preformed from the end of the 1960s to 1998. **Table 1** provides a summary of their findings and as can be seen, over 60 percent of observations show a negative relationship between aid and savings, thus suggesting “that aid cannot be assumed to increase total savings on a one-to-one basis.” (Hansen & Tarp, 2000: 381). Papanek pointed out, in his 1972 rebuttal, that although it may be plausible that high foreign inflows are “associated” with low savings and growth in some countries, the evidence can only prove correlation and not causality. Papanek cited, differing analytical frameworks (choice of savings function), endogenous country-specific factors, and statistical deficiencies as reasons as to why “the negative correlation between

the two [savings and growth] found in many studies sheds little or no light on their causal relationship.” (Papanek, 1972: 950).

The above scholarly interaction is reflective of the dynamics among the polarized views on the aid-savings-growth nexus. Nonetheless, first generation studies, though wildly inconclusive, were able find that aid was in fact able to increase savings, though not on a one-to-one basis, and thus was a mechanism for promoting growth (Hansen & Tarp, 2000).

2.1.2 Second Generation theories – Aid, investment, and growth

The evolution from first to second generation studies was characteristic of a shift away from the growth via savings via aid view, towards the view that aid fosters investments, but not necessarily through savings, and investments, thus, are the economic engine driving growth. Other updates included wider use more complex

Table 1: Impact of foreign aid and resource flows on savings, investment, and growth (131 cross-country regressions).

Dependent variable	Explanatory variable							
	Foreign aid flows (A)				Foreign resource flows (F)			
	(-)	(0)	(+)	Total ^a	(-)	(0)	(+)	Total
Savings $H_0: \alpha_1 = 0$	14	10	0	24	11	5	1	17
Savings $H_0: \alpha_1 = -1^b$	1	13	8	22	0	7	10	17
Investment $H_0: \alpha_1 = 0$	0	1	15	16	0	0	2	2
Growth $H_0: \alpha_1 = 0$	1	25	38	64	0	6	2	8

Notes: The null-hypotheses (H_0) are tested at a 5 per cent significance level against a two-sided alternative.

^aThe total number of regressions in the $\alpha_1 = 0$ and the $\alpha_1 = -1$ savings-rows are not the same (24 and 22) due to missing data on standard errors for two regressions.

^bSince (H_0) in this row is $\alpha_1 = -1$, the cells (-), (0) and (+) represent $\alpha_1 < -1$, $\alpha_1 = -1$, and $\alpha_1 > -1$, respectively.

Source: Adapted from Hansen & Tarp (2000), p. 381

growth models (e.g., Solow model), as opposed to the overly simplistic Harrod-Domar, and a more rigorous disaggregation of “foreign aid” from other types of foreign capital inflows. The main proponent of these changes was Papanek in his 1973 study, where he argued that in order to gauge aid-effectiveness, it was necessary to examine the “effects of aid on the various elements of investment and growth” (Hansen & Tarp, 2000: 381) given that investment, was seen by many “as essentially the only variable explaining growth” (Sommers and Suits 1971, as quoted in Papanek, 1973: 121, footnote 3). His subsequent multivariate regression model disaggregated the different sources of investment capital (savings, aid, foreign private investment, and other foreign inflows) and examined the effects of each independent variable on growth. His multivariate model served to reinforce the role of aid in accelerating growth and guided the design and methodology of subsequent studies.

The strands that emerged from Papanek’s work centered on not only examining the relationship between aid, investment, and growth, but also looked at the direct link between aid and growth. Regarding the former, all but one⁴⁾ of the studies included in the aforementioned survey summarized in **Table 1**, found a significant and positive impact of aid on investments (Hansen & Tarp, 2000). For the studies on the latter, the survey showed that 40 analyses showed a positive direct impact of aid on growth, 31⁵⁾ show no statistical significance and only 1 concluded that aid was harmful to growth (Hansen & Tarp, 2000).

However, both strands of work did not go unchallenged. Some of the most notable studies of the era came in direct contention with these optimistic stances on aid-effectiveness. The positive effect of aid on investment

was quashed by Boone’s 1996 survey of 97 countries, that found that aid had no significant impact on investment, but rather emboldened government consumption and furthermore was of no benefit to the poor. Mosely *et al.* (1987) “found it impossible to establish any statistically significant correlation between aid and the growth rate of GNP in developing countries” (p. 636) and later found “the effect of aid on growth [to be] country-specific” (p. 1) and to be neutral in the long run (Mosely *et al.* 1992).

Much like the previous generation, second generation studies posed mixed results, nonetheless some conclusions can be pulled. Firstly, that the aid-investment link, much like the aid-savings relation, is positive (Hansen & Tarp, 2000). And secondly, though highly contended, that a positive relation exists between aid and growth when “there is a positive link between savings and growth.” (Hansen & Tarp, 2000: 385).

2.1.3 Third Generation theories – Aid, [insert variable here] and growth

The growing sophistication of econometric tools and methods coupled with an increase in data availability had a contrarian effect on the growth cum-aid nexus. Instead of providing clear evidence of the impact of aid on growth, it seemingly muddied the waters by allowing for the use and interplay of an overabundance of intervening variables. The core presumptions from this era, stem from the new growth theory, and argue that aid effectiveness is conditional on endogenous factors, i.e., institutions, policies, human capital, political stability and even location. Non-linearity and endogeneity of aid are also novel concepts that became staples in the majority of growth models in the literature. **Table 2** provides an overview of notable third generation studies, their key findings, and the

novel concepts or variables introduced. For brevity, this paper will provide an overview of some of the most notable concepts and studies.

2.1.3.1 Policy and Aid growth

Hadjimicheal *et al.* (1995) underscores the importance of macroeconomic stability in bolstering growth. Using pooled time-series and cross-section data of 41 Sub-Saharan African countries from 1986-1993, the study investigates not only the impact of macroeconomic policies, but also the effects of the Structural Reforms Programs and other exogenous factors on growth, savings, and investment. The authors also provide a brief assessment of the impact of foreign aid on growth and determines a positive relationship, given that the aid complements private sector activities. However, the most influential and highly contested study from this era, came from Burnside and Dollar (2000), following Boone's (1996) lead on political detriments to aid effectiveness (Easterly, 2003), which explicitly examined the relationship between foreign aid, economic policies, and growth. Using a, then, new World Bank database, with what they deemed to be a "more accurate measure of foreign aid" (p. 853), and panel data from 56 developing countries from 1970-93, the duo concluded that aid allocation conditional on good policy would positively impact growth dividends from aid. These results were echoed by Collier and Dollar (2002) who contest that if aid were allocated more efficiently, i.e., to good policy environments, it could hoist nearly 19 million people above the poverty line.

Burnside and Dollar's conclusions not only ignited a fiery debate but had direct policy implications (see Easterly, 2003). Given the decreasing levels of ODA and increasing levels of donor fatigue that began after 1992, the World Bank welcomed an explanation as to why aid had been, for so long, ineffective, and thus,

began recommending sterner conditionalities on aid disbursements – i.e., countries that were deemed to have "good" policy environments, should be allocated larger amounts of aid and vice versa.

The onslaught of work in critique of Burnside and Dollar (2000), and in some cases the World Bank, was unforgiving. Hansen and Tarp (2001) use the same data set and basic model formulation as Burnside and Dollar (2000), but account for country specific effects and aid and policy endogeneity (Hansen and Tarp 2000). With this, they are able to conclude that "aid has a positive impact on growth even in countries with a "poor policy environment" (p. 389). Delgaard and Hansan (2001) develop a neo-classical growth model which shows the "interplay between good policy and aid is ambiguous" (p. 37). Similarly, Easterly *et al.* (2004) use an expanded data sample and find the "interaction term between aid and policy [to be] insignificant...indicating no support for the conclusion that 'aid works in a good policy environment.'"(Easterly, 2003: pp 27).

Guillaumont and Chauvet (2001) tell a different tale. They find that aid effectiveness is mostly impacted by exogenous (mostly external) forces. In other words, a country's economic vulnerability to terms of trade, export and climate shocks determined their "environment", and the worse the environment the "greater the need for aid and the higher its productivity" (Thorbecke 2000: p. 45).

2.1.3.2 Governance and Aid

Another notable theme to emerge from third generation studies was that of good governance, namely, sound institutions, rule of law, political stability, regime type, and corruption. The logic was intuitive: countries that had strong institutions (financial and otherwise), adherence to rule of law (property

rights), political stability (free of protracted civil conflict), democratic regimes without rent-seeking political elites are more likely to evolve economically. Using panel data of around 100 countries from 1960 to 1990, Barro (1996) postulates that an “improvement by one rank in the Rule-of-Law index is estimated to rise the growth rate on impact by 0.5 percentage points.” (p. 20). Burnside and Dollar (2000) hinted to the importance of these variables by including proxies for political stability and institutional quality in the growth regressions used in their controversial study. They too concluded that institutional quality was highly detrimental to growth (Burnside and Dollar, 2000). These results, coupled with the recent East Asian Miracle,⁶⁾ underscored the role good governance plays in accelerating developmental outcomes.

The role of aid in promoting good governance, again seems intuitive - foreign resources could alleviate constraints to the development of a well-functioning government apparatus by financing technical assistance, augmenting government salaries, and updating IT systems to name a few (Knack, 2001). And many studies came out in support of such an intervention, providing empirical evidence showing a positive relationship between aid and good governance. Goldsmith (2001) uses panel data for African states between 1975-97 and finds a small and positive correlation between aid and democracy. Additionally, Jones and Tarp (2015) construct a “quality of government” indicator and find “a small positive net effect of total aid on political institutions.” (Jones and Tarp, 2015: p. 1). Yet, some scholars, like Coviello and Islam (2006), find that aid has no significant effect on bureaucratic quality, rule of law or corruption.

However, on the other end of the debate, lies an armory of empirics highlighting the collateral effects of aid on governance.⁷⁾ Askarov

and Doucouliagos (2013) conduct a meta-regression analysis of 25 quantitative studies examining the effects of aid on governance. Their results show that, when controlling for endogeneity, only 10%, of their 564 estimated effects, were positive, while 63% were negative and significant (Dijkstra, 2018). Other studies find that instead of promoting good governance, aid weakens state capacity (Acharya *et al.*, 2006) props up dictatorships (Bueno de Mesquita and Smith, 2010) and decreases overall government effectiveness (Asongu and Nwachukwu, 2016). Through an analysis of 108 aid-receptient countries from 1960-1999, Djankov *et al.*, (2008), find that foreign aid acts as a worse ‘resource curse’ than oil on the development of political institutions.

2.1.3.3 Other Notable Themes and Variables

As previously mentioned, this era saw a proliferation of studies introducing novel variables and dimension to the aid via growth model.

Hadjimichael *et al.* (1995), Durbarry *et al.* (1998), Delgaard and Hansen (2001), and Lensink and White (2001), all find that aid can be effective but with diminishing returns. Lensink and White (2001) depict this effect using an aid Laffer Curve that shows how the “benefits from aid increase with initial inflows but after a certain level begin to decline, so that the country would actually be better off with less aid.” (p. 42).

Clemens *et al.* (2011) reiterate these results and find that when the effects of aid are measured with a lag, a positive correlation emerges. They develop a “short impact” aid variable, based on allocating aid to key sectors that can be expected to yield short term results, and are able to gage the timing effects of aid on growth (Roodman, 2007b).

Other noteworthy contributions of the

Table 2: Summary of Major Third Generation Studies on Aid and Growth (1990 - present)

Study Name	Scope	Key concepts	Key Findings
Hadjimicheal et al, 1995	Impact of macroeconomic policies, exogenous factors, and structural reforms on growth, savings, and investment performance, and an assessment of the impact of foreign assistance.	Good policy environment	Appropriate macroeconomic policies and stable economic conditions are necessary for enhancing the growth performance and aid effectiveness
Boone, 1996	Test predictions for aid effectiveness based on an analytical framework that relates aid effectiveness to political regimes.	Fungibility of aid Regime type	Aid increases government consumption Aid does not significantly increase investment, nor benefit the poor
Barro, 1996	Determinants of long-run growth Relationship between growth and political freedom or democracy	governance Democracy Human capital	Growth rate of real per capita GDP is enhanced by better maintenance of the rule of law, smaller government consumption, and lower inflation.
Durbarry et al, 1998	Examine the existence of non-linearity in the aid-growth relationship	Aid allocation Non-linear effects of aid	Evidence strongly suggests that larger aid flows are beneficial for growth.
Burnside and Dollar, 2000	Examine the relationships among foreign aid, economic policies, and growth of per capita GDP.	Economic policy (low inflation, trade openness) Assassinations, ethnic fractionalization, and institutional quality Effective Development Assistance (EDA)	Aid has a positive impact on growth in developing countries with good fiscal, monetary, and trade policies. In the presence of poor policies, aid has no positive effect on growth
Lensink and Morrissey, 2000	Investigate whether aid uncertainty affects the impact of aid on growth.	Aid volatility	Uncertainties regarding the receipt of aid reduce its effectiveness
Hansen and Tarp, 2001	Aid increases growth, regardless of 'good' policy.	Unobserved country-specific effects and endogeneity of aid and policies	Aid has a positive impact on growth even in countries with a 'poor' policy environment.
Delgaard and Hansen, 2001	Develop a neo-classical growth model where aid spurs growth even in economies in which aid does not enter the production function directly as investment	Diminishing returns	Aid spurs growth regardless of the policy environment. Non-linear relation between aid and growth in which there are diminishing returns to aid
Lensink and White, 2001	Examine whether empirical evidence supports the notion of negative effects of high aid inflows.	Diminishing returns aid dependency	The regression results show support for the concept that there are negative returns at high levels of aid.
Guillaumont and Chauvet, 2001	The effects of economic shocks on aid effectiveness.	Economic environment	Aid effectiveness depends on exogenous factors such as the trade, export and climate shocks. The worse the environment, the greater the need for aid and the higher its productivity
Alesina and Weder, 2002	Relationship between foreign assistance and domestic corruption	Corruption	No evidence that bilateral or multilateral aid allocation is affected by level of corruption. Tentative evidence suggests that as aid increases, corruption increases
Collier & Dollar, 2002	Estimate the allocation of aid that would maximize poverty reduction	Aid allocation	Aid allocation is inefficient for poverty reduction. Poverty-efficient allocation would nearly double the productivity of aid
Dalgaard et al., 2004	aid impact on long-run productivity contingent on policies and 'deep' structural characteristics	Geography/Climate	Aid's impact conditional on the country's location and climate - aid seems to have been far less effective in tropical areas
Easterly, Levine, and Roodman; 2004	This paper reassesses the links between aid, policy, and growth using more data	Good policy environment	The extended data set concludes that aid effectiveness is not dependent on good policy environment.
Rajan and Subramanian, 2005	Effects of aid on growth after correcting for the bias that aid typically goes to poorer countries, or to countries after poor performance.	Policy environment Geography Aid modalities	Little solid evidences available of the positive (or negative) relationship between the inflow of aid and economic growth No evidence that aid is more effective in better political or geographical environment, or that some forms of aid are better than others.
Clemens et al, 2011	Temporal impact on effectiveness of different types of aid, particularly budget and BOP support	Diminishing returns	Aid to a certain extent causes growth to recipient countries, but the scale of this relationship is small, varies widely between recipients and decreases with high levels of aid.

Source: Constructed by author

era include; the micro-macro paradox⁸⁾(Arndt *et al.*, 2006; Picciotto, 2009), aid fungibility (Boone, 1996; Feyzioglu *et al.*,1998; McGillivray and Morrissey, 2000), the importance of aid allocation (Durberry *et al.*, 1998), endogeneity of aid (Hansen and Tarp, 2001; Rajan and Subramanian, 2005) and the effects of country location on aid effectiveness (Dalgaard *et al.*, 2004; Bloom and Sachs, 1998).

To sum up

As previously noted, “third-generation studies represent a distinct step forward in empirical cross-country work on aid effectiveness” (Hansen and Tarp, 2000; p. 386). The improvement in scholarship can be attributed to the increase in aid statistics and development indicators coupled with more sophisticated econometric tools and models. Nonetheless, a clear consensus on the effectiveness of aid is yet to be reached. Third generation studies provided new perspective on the aid-growth relationship – mainly that, maybe, previous attempts to connect the two

directly were too ambitious (Roodman, 2007a). But more importantly “third-generation work recognize[d] that development is a complex process with interactions between economic and non-economic variables” (Hansen and Tarp, 2000; p. 394).

2.2 Anti-Aid Arguments

As demonstrated above, the development literature is littered with empirics either proving or disproving aid’s ability to influence developmental outcomes, in particular growth. The debate is so contentious that it has come off the pages and into the limelight. Several, now high-profile economists have come out as either ‘pro’ or ‘anti’ aid. One of the most prolific debates has been raging for over a decade between Jeffery Sachs and William Easterly. Sachs, backed by the pro-aid empirics above and the full power of the World Bank, argues that aid is the only way to save the developing world. Easterly on the other hand, pulls from his 18-year career in the third sector and finds that aid is doing more harm than good in the

Table 3: Contrasting positions in the debate on foreign aid: Sachs, Easterly, Collier, and Moyo

Aspects of aid	Jeffrey Sachs <i>The End of Poverty</i>	William Easterly <i>The White Man’s Burden</i>	Paul Collier <i>The Bottom Billion</i>	Dambisa Moyo <i>Dead Aid</i>
Focus	Aid should be part of a national plan and be guided by the MDG.	Aid projects should be small and piecemeal, not part of a national plan.	Aid should be targeted at the bottom billion for effective use.	Government-to-government aid is detrimental and should be phased out over the next five years.
Scope	Aid should be part of a big-push effort (doubled or tripled) to overcome poverty traps (multiple equilibria).	Large scale aid does not work. Small scale projects are more effective.	Peace and security are key: use aid to reduce conflicts and manage post-conflict situations.	Successful countries did not use aid. Marshall Plan was short and one-time.
Role of government	African governments have the capacity to manage aid and a key role to play for success.	Aid should bypass governments. “Searchers” should be the main agents. Bottom-up solutions preferred.	Good governance (democracy, transparency) is essential to guide development and can be assisted.	Aid undermines governments: perpetuates dysfunctional regimes, postpones reforms, contributes to corruption, civil unrest, Dutch disease, debt, dependency.
Instruments	Technology is a major instrument: Green Revolution, vaccines, bed nets, safe water, etc.	Implementation is the main issue, not budgets.	Use a broad set of instruments. Trade is important but does not work for the bottom billion without aid.	Replace aid by trade, borrowing through capital markets, FDI, MFI.
Approach	Subsidies should be used to promote adoption: bed nets, fertilizers.	Experimentation, impact evaluation, and learning from mistakes are key for success. Scaling up of successes.		Favors Chinese approach to Africa: investments and contracts instead of handouts.
Donors	Donor coordination is essential. MDG are useful guidelines for priorities and achievements.	The aid industry is deeply flawed. Incentives for the aid bureaucracy need to be redesigned for accountability to recipients.	Military intervention may be needed for peace.	Governments, not donors should lead development. End OECD farm subsidies.
Overall message	Aid can be successful. Increase aid. Multiple equilibria. Coordinate donors. Develop national plan. Faith in donors and governments.	Deeply skeptical, except locally. Experiment, evaluate, small local projects, bottom up. Distrusts aid establishment and governments.	Believes in aid, but no details on implementation. Need peace and improved governance. Reliance on markets: trade, investment.	Deeply opposed to public aid. Transit out of aid. Causality problem between aid and development? How to manage the transition out of aid?

Source: Adapted from de Janvry and Sadoulet (2016, p. 447)

developmental process. This section serves to provide a more in-depth summary of some of the cases against aid.

2.2.1 Aid-dependency

For the most part, countries that began receiving aid in the post-war period have till today been unable to wean themselves off the aid tap. Save for the East Asian Tigers and beneficiaries of Marshall Plan funds, so-called ‘aid-graduates’ are few and far between. This is especially the case in Sub-Saharan Africa and even more so for fragile states. Rather than transitioning from aid recipients to self-sustaining governments, several African states have become aid dependent, receiving, on average, over 10% of GDP in aid. Besides the diminishing returns of aid above a certain threshold, many of those opposed to aid have emphasized that there are negative consequences to receiving too much aid. Moyo (2009) argues that aid undermines state sovereignty and retards the development of institutions necessary to uphold not only political order, but also a healthy social contract. Governments become beholden to international donors rather than to their citizens. Aid dependency fosters complacency, as governments become accustomed to the recurring support and do not pursue alternative means of financing that “offer more-diversified and greater prospects for sustainable development” (Moyo, 2009: p. 141).

2.2.2 Aid and Dutch Disease

The Dutch Disease phenomena, which has been likened to the ‘resource curse’, is one of the most common criticisms against aid. The term itself was coined following the contraction of the Dutch export sector in the 1960s following the discovery of large natural gas reserves

(Moyo, 2009). Subsequent windfalls from the sale of the reserves flooded the economy and led to an appreciation of their currency, reduced the competitiveness of other exports and an increase in unemployment. By the same token, the assumption is, that large influxes of foreign resources (in this case aid) have a similar effect on the manufacturing sector of the recipient economy. Rajan and Subramanian (2011) find evidence that suggests that aid inflows lead to real exchange rate appreciation which, in turn, adversely affects competitiveness and lowers the relative growth rate of exportable industries in recipient countries. Jones and Olken (2005) highlight the role played by manufacturing and exports in countries that experienced sustained growth in the post-war era. Thus, as argued by IMF economists, aid’s contribution to exchange rate appreciation may be the cause of stifled exports and growth in developing economies (Moyo, 2009).

2.2.3 Aid and Corruption

The directional correlation between corruption and economic growth is another central question in the development literature, but for the most part, economists who work in the field believe with virtual unanimity, that corruption impedes growth. One of the more notorious studies on the topic finds that a “1% increase in the corruption level reduces the growth rate by about 0.72%” (Mo, 2001; p. 76). Thus, when empirics substantiating a link between aid and corruption came to light it served as another nail in the aid-growth coffin. Alesina and Weder (2002) assess the effects of aid on corruption by conducting a cross-country time series analysis from 1975-1995 of aid recipient countries. Their results indicate that not only is “an increase in aid associated with an increase in corruption” (p. 1135) but also that

there is “no evidence that bilateral or multilateral aid goes disproportionately to less corrupt governments” (p. 1126). In other words, donors, in general, are unconcerned with whether or not the governments they are funding are upholding the rule of law, building transparent institutions, or defending civil liberties – all factors that deteriorate the investment attractiveness of a developing country (Moyo, 2009). Furthermore, corruption is also linked to a 0.5% increase of a country’s average lending and inflation rate (Moyo, 2009).

2.3 Aid as the key to the Fragility Trap

Given the studies that emerged since and including Burnside and Dollar (2000), that have posited, rather unambiguously, that without aid, growth would on average be lower⁹⁾ (McGillivray and Feeny, 2008), it is fair to assume that not providing aid to countries in fragile contexts would be antithetical to the mandate of the development community and the ever-elusive SDGs.

However, despite the centrality of the aid component in the national accounts of many fragile nations, the literature on the topic is surprisingly limited. Perhaps it is indicative of how widely accepted it is in the development community that aid is just less effective in fragile states, or in other words that “a given amount of aid to or interaction between aid and policies in a fragile state yield less growth...than in a non-fragile one” (McGillivray and Feeny, 2008; p. 2). The available literature instead focuses on the root causes of state fragility and mechanisms to help mitigate aids ineffectiveness in such environments.

A number of third-generation studies establish a negative relationship between political instability/conflict and economic development. Alesina and Perotti (1996) use

panel data from 71 countries and find a robust relationship between income inequality, political instability and investment, a central driver of growth. Barro (2000) suggests the same relation, hypothesizing that sociopolitical unrest, fueled by income inequality, reduces economic productivity. Similar conclusions were reached by Alesina, Ozler, Roubini and Swagel (1996); Svensson (1999); Campos and Nugent (2002).

The role of good governance and sound institutions was discussed in the previous section, but becomes particularly important in fragile contexts, as they are more susceptible to deficiencies in these areas. Other prominent studies underscore the centrality of; the provision of public goods (Barro, 1990; Barro *et al.*, 1992; and Benhabib *et al.*, 2001; as quoted in Andrimihaja *et al.*, 2011), legal and financial institutions and corruption (Macit, 2011; Feng, Kugler and Zak, 2000; as quoted in Andrimihaja *et al.*, 2011) in promoting economic growth.

A particularly interesting concept to arise from the literature is that of the “traps” that developing countries in general, and fragile countries in particular, find themselves in. Each of which is inextricably linked to the other – a trap of traps. Sachs (2007) identifies “poverty itself as a cause of economic stagnation” (p. 56) and highlights how those stuck in chronic poverty – a poverty trap – are unable to accumulate capital per person at a rate that can translate into growth dividends.

In turn, countries who find themselves in a poverty trap are also usually ranked in the bottom quintiles of the World Bank’s *Country Policy and Institutional Assessments* (CPIA). The link between low-income and under-developed institutions has been clearly evidenced in the literature above. However, the directional correlation between poor institutions and political conflict is difficult to determine. For

example, the political environment during the colonial era, should surely be classified as political conflict or politically unstable – hoarding of resources by small political elite, non-inclusivity of minorities, constant violations of human rights, little to no provision of social services to constituents, persecution of those opposed to the administration, and even frequent rebellions. Thus, if we assume that poor institutions in developing countries stem from colonialism, as is postulated in the literature (Heilbrunn, 2014; Acemoglu *et. al.*, 2001), it would then be safe to assume that the political instability inherent to the colonial administration was the main impediment to institutional development in the post-independence era, whose repercussions are still felt today. Meanwhile, the perpetuation of those underdeveloped institutions continues to also be a main cause of the chaotic political situations in which many developing countries find themselves in today.

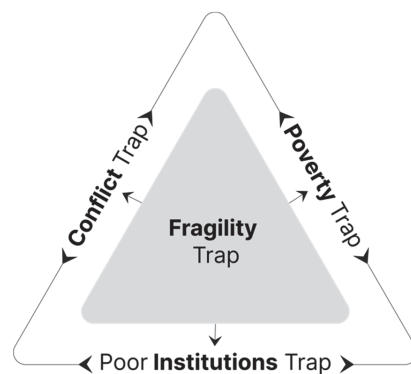
Further compounding the risks to institutional development is the donor response to political conflict. In the face of a negative political incident, let's say a coup for instance, international donors, more often than not, will cut funding as a means of incentivizing the return to political order. However, if the argument holds, that international assistance can help to enhance institutional development, then this sort of shock can push the country into a PIT – a poor institutions trap and getting out of the PIT would require significantly larger amounts of assistance (technical and financial), time, (Center for Global Development, 2013) and more importantly, political will.

Now let's say the country reaches some level of order which is acceptable to the donor community or the white savior complex kicks in again and funds start flowing once more to help

pull the nation out of the PIT. Now we have, occurring in synchronicity - the poverty trap, the poor institutions trap, and the conflict trap. The large injection of aid into a developing country is seen by some as a possible “inducement to rebellion and to coups because capturing the state becomes more valuable.” (Collier, 2007). Through a survey of coups, rebellions and aid allocation, Collier finds that aid has no direct link to civil wars but does seem to encourage coups (p. 105).

Hence, in essence, poverty is both a cause and result of poor institutions, while poor institutions come from and instigate conflict, and persistent conflict is at the root of both poverty and underdeveloped institutions - all of which are, in turn, the proverbial chicken or egg of fragility, see **Figure 5** below.

This trap trifecta all but ensures that the country will also be caught in the fragility trap. As can be seen through history and data of those caught in a fragile context, “once a country falls into the fragility trap, it becomes very hard to climb out again” (European Report on Development, 2009; p. 7), and even more



Source: Constructed by author

Figure 5: Schematic presentation of poverty, institutions, conflict, and fragility traps

so without the support of external partners. Through an analysis of 113 countries between 1977 to 2001, McGillivray and Feeny (2008), concluded that “growth would have been 1.4 percentage points lower in highly fragile states in the absence of aid” (Abstract). Fragile countries find themselves in a much more precarious situation than those already faced by non-fragile developing states and as such, the need and reliance on external assistance is amplified.

2.3.1 Absorption Capacity

In line with the literature on diminishing returns of aid, McGillivray and Feeny (2008), also found that fragile states can only efficiently absorb a third of the aid that non-highly fragile states can. More specifically, they found that aid beyond 13.88% of GDP would reduce its effectiveness and “if aid levels are more than twice this amount, its contribution to per capita income growth and per capita incomes levels is negative” (McGillivray and Feeny, 2008; p. 14) Due to limited state capacity, aid absorption can be a major challenge in developing states and contributes to the allocation of resources to non-developmental sectors.

2.3.2 Aid Volatility

Guillaumont and Chauvet (2001) posit that aid can “compensate for negative shocks” (p. 66), or, in other words, be used as insurance for the economically vulnerable. However, in Chauvet and Guillaumont (2003) the pair highlight that political instability is an endogenous shock, rather than an exogenous economic shock and thus more likely to negatively influence aid effectiveness. Using a constructed index for political instability, they conclude that aid’s “impact on growth is hindered by an unstable and uncertain political environment...” (Chauvet and Guillaumont, 2003: p. 13). They further go

on to suggest that aid could be used efficiently in preventing political instability or in catching up once stability has returned (Chauvet and Guillaumont, 2003: p. 15). As seen in the previous sector, fragile states are more prone to suffer from volatility in aid flows because of donor reactions to conflict. Some of the main causes of fragility (political instability, insecurity, and corruption) are also the causes of donor fatigue and an eventual cut back in aid. This however guarantees that countries remain in the fragility trap. With data from 1990-2010 of 120 countries, Andrimihaja *et. al.*, (2011) construct a model that suggests that the adverse reaction of donors to causes of fragility is contributing to the existence of fragility itself. Their analysis further suggests that additional resources would in fact be beneficial if used to address the fundamental causes of fragility thus helping countries escape from the trap (Andrimihaja *et. al.*, 2011).

Chapter 3: Overview of Guinea-Bissau’s Macroeconomic Environment, Political Economy, and Aid Profile

As highlighted in the literature, macro-economic conditions can simultaneously be the main drivers of aid as well as central detriments to its effectiveness. This section provides a critical assessment of the evolution of Guinea-Bissau’s political and macroeconomy, its accompanying aid portfolio, and the resulting growth performance.

3.1 Political Economy in a Historical Perspective

In September of 1973, following a protracted liberation war against the Portuguese colonial empire, the Republic of Guinea-Bissau was formed, and at the helm was, what is still today, the country’s first (and for a long time, only)

political party – PAIGC (*Partido Africano da Independência de Guiné e Cabo Verde*). At the head of the PAIGC was Amílcar Cabral – “a nationalist and Pan-Africanist revolutionary” (Mendy, 2019), that led, not only, his country’s liberation, but inspired continent wide uprisings. Despite his assassination just 7 months before the Portuguese empire conceded independence, the influence of Cabral’s Marxist-Leninist ideology would continue to guide, though not always positively,¹⁰ the political and economic evolution of his homeland (Kovsted and Tarp, 1999).

The PAIGC largely preserved the administration structure handed down by the Portuguese and used it to maintain control over civil society and, to further their personal wealth and power (Kovsted and Tarp, 1999). Thus, the state apparatus set up by the colonial administration bequeathed not only institutional weaknesses but also established social cleavages and inequalities that are still deeply entrenched in Guineensian society today. “Unlike other Portuguese colonies, little, if any, effort was made to develop infrastructure, human capital, or state institutions...[in Portuguese Guinea]” (World Bank, 2020a). Portuguese colonialism was characterized by severe extractive policies, inhuman labor conditions and stratification of the populous into; Portuguese settlers/administration (mostly made up of expatriated convicts), “civilizados” (mostly comprised of educated mulattos) and plantation workers (rest of the illiterate population) (Heilbrunn, 2014). The dynamic inherited from these conditions was one of grave inequality, high corruption, a large urban/rural divide and a flimsy social contract.

The highly fragmented PAIGC held a monopoly on power up until 1999, under the control of ex-army chief, Joao Bernardo “Nino”

Viera, who overthrew Cabral’s successor and brother, Luis, in 1980 (Levitt, 2012). Viera’s coup was the manifestation of the growing anti-mulatto sentiment that had been simmering since the takeover of the state by the “burmedjus”¹¹ (Cape-Verdeans) at the helm of the PAIGC (US State Department).

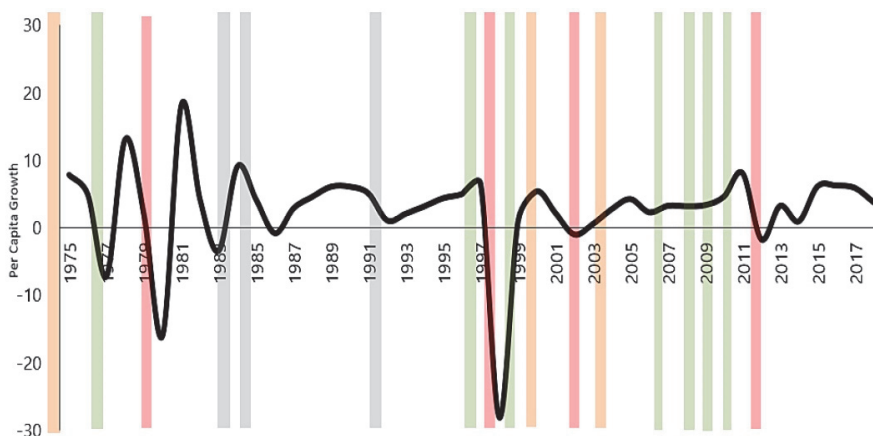
Vieira would be ousted in ’99 following an 11-month civil war, roughly 5 years after he allowed the country to host its first democratic elections. The only thing more unforgiving than Viera’s authoritarian reign, was his gruesome assassination in March of 2009, following his return from exile and subsequent reelection in 2005.

The tumultuous birth of this west African nation would be a precursor of the decades of political instability that were to come. Political parties remain divided along ethnic and religious lines each vying for the highly coveted government position and its unending amenities. The civil war and the incessant battle for control of the state since then, set the miniscule nation on a political trajectory that has had far reaching implications on the developmental outcomes of its people. Since its independence, the country has fallen victim to 4 successful coup d’états with an additional 16 attempted or alleged coups (World Bank, 2020a). **Figure 6** shows the impact that chronic instability has had on per capita income.

Nevertheless, whether it be because of or in spite of the country’s political and economic shortcomings, “significant international assistance has been forthcoming from Western governments and multilateral organizations since independence...” (Galli, 1990; p. 54).

3.2 Macroeconomic Management – Setting the stage for Aid-dependency

The repercussions of over 500 years of



Source: World Development Indicators.

Note: **Orange** stands for thwarted coups; **Grey** for alleged coups; **Green** for unsuccessful coups; and **Red** for coup d'états. The **black line** traces income per capita.

Source: Adapted from World Bank (2020), p. 22

Figure 6: A Graphical Profile of How Political Instability Affects GDP Growth Per Capita

Portuguese underdevelopment (intentional or otherwise), followed by the socialist program implemented by the PAIGC, placed a considerable handicap on the development of an already fragile nation.

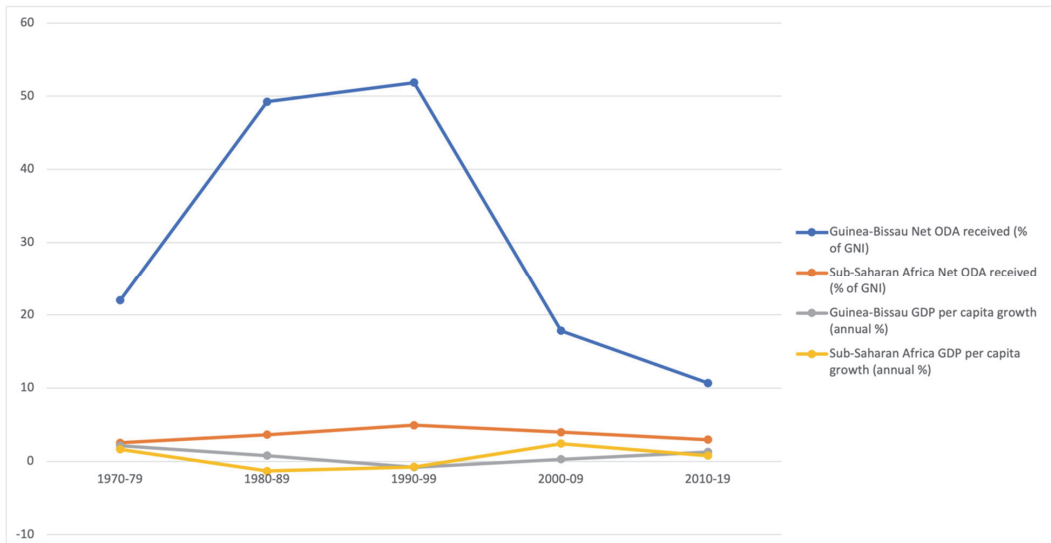
Post-independence development strategies had a heavy urban bias, cementing the divide between people from the villages and people from the city (Bordonaro, 2009). The development model was based on extracting resources from the regions, to finance and satisfy the consumption and export needs of the metropole (Alvesson, Kokko, and Zejan, 1994), mimicking the model used by their colonial predecessors.

Weak state capacity proved to be a serious impediment to sound macroeconomic management and the identification and attainment of development priorities (Kovsted and Tarp, 1999). This proved especially disadvantageous given the central planning framework within which the government operated. Large macroeconomic imbalances and a deteriorated balance of payments forced the country to

become heavily dependent on foreign aid shortly after independence (Alvesson, Kokko, and Zejan, 1994).

However, between 1982-1985, there was drastic decline in foreign aid due donor frustration with the government's inadequacy (or unwillingness) to appropriately manage resources (Galli, 1990). Between 1986-1993, much like the rest of the third world, the country underwent the Structural Adjustment Programs (SAPs). The SAPs were successful in implementing a flexible exchange rate, liberalizing prices and trade and reducing export taxes, but overall, the impact was either small or ambiguous (Alvesson, Kokko, and Zejan, 1994).

The drastic but brief decline in aid transfers, mentioned above, was offset when donor sentiment was swayed by the government's willingness to undergo the SAPs, see **Figure 7**. However, the majority of funds during this period were earmarked for structural adjustment rather than development, and the growing inability of the government to provide basic public services also diverted funds away from this objective,



Source: Constructed using World Bank 2022 data.
Obs: Data excludes high income countries in the region

Figure 7: Aid and Growth: Guinea-Bissau versus Sub-Saharan Africa

which could explain the stagnate per capita growth rate since independence seen in **Figure 7**. Nonetheless, it is important to note that the focus on social sector development by the donor community has helped to close the gap between Guinea-Bissau and neighboring countries, in terms of health and education indicators, see **Table 4** and **Table 5**.

The country's reliance on donors and ODA to uphold the social contract (Santos, 2016) only grew throughout the years, see **Figure 8**. Indeed, as is postulated in the literature “foreign aid makes governments less responsive to the needs of the poor” (Deaton, 2013; p. 224) and has a way of “undermining accountability and responsiveness to national citizens, and delivery of services by government.” (Action Aid, 2011, p. 17).

Donors like Portugal, Guinea-Bissau's largest bilateral partner (**Figure 9**), have stepped in to fill the void left by the government. Along with UNICEF and the World Bank, Portugal

has prioritized education and health in their investment portfolio and is in large part responsible for the progress attained in these sectors. It also bears mention, that Portugal's large investments in its ex-colony substantiate Alesina and Dollar's (2000) claim, that colonial legacy is a determinant of current aid allocations.

However, as seen in **Figure 7**, by the 1990s the ODA well began to dry up. Several factors contributed to the sharp decline in ODA during the 1990s. First, donors began to get frustrated once more with national authorities, as mission reports criticizing the ways in which funds were managed began to surface (Monteiro, 2005). The drop in donations reflects the irritation and disappointment of [international] partners, as well as their unwillingness to perpetuate a visibly vicious and perverse system” (Monteiro, 2005; 129). By the mid 1990s the altruistic nature of the North turned to fatigue and the tap was all but turned off. This was further aggravated by the 1998/99 civil war that resulted in the

Table 4: Health indicators for some West African Countries

	Guinea-Bissau	Senegal	Guinea	Gambia
Life Expectancy at birth (1990)	47	58	50	52
Life Expectancy at birth (2019)	58	68	62	62
Infant Mortality per 1,000 live births (1990)	131	71	137	81
Infant Mortality per 1,000 live births (2019)	53	30	63	36
Incidence of malaria, per 1,000 population at risk (2000)	399.4	306.2	445	373.2
Incidence of malaria, per 1,000 population at risk (2019)	63.5	41.2	327.8	46.8

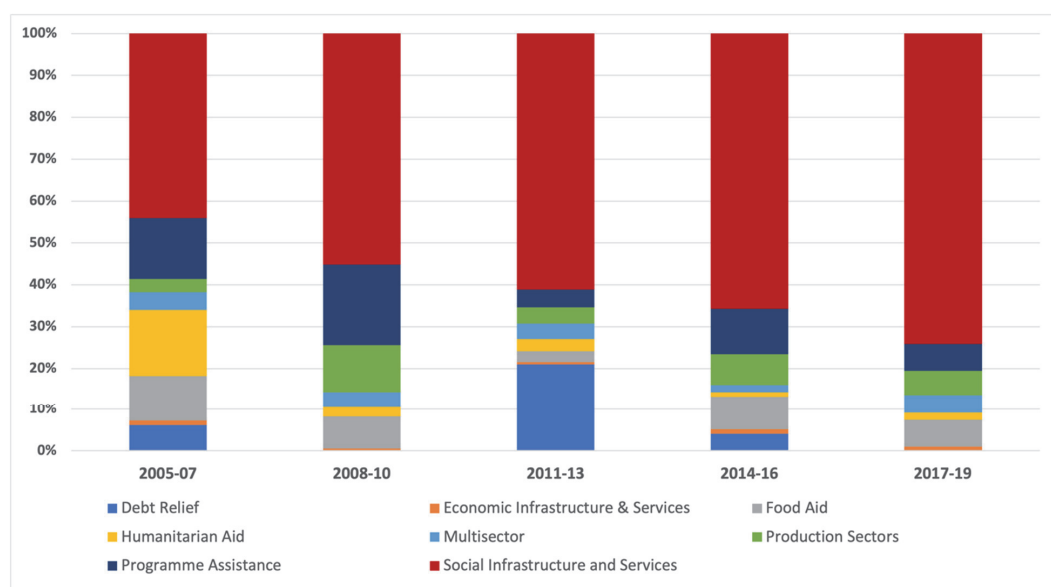
Source: World Bank (2022)

Table 5: Educational indicators for some West African Countries

	Guinea-Bissau	Senegal	Guinea	Gambia
Literacy rate, adult male, % of males ages 15 and above (most recent year)	62	65	54	62
Literacy rate, adult female, % of females ages 15 and above (most recent year)	31	40	28	42
Primary School enrollment, % net (1990)	41*	45	24	49
Primary School enrollment, % net (most recent year)	71	75	76	77
Secondary School enrollment, % gross (most recent year)	34	47	39	50

Source: World Bank (2022)

Note: *1988

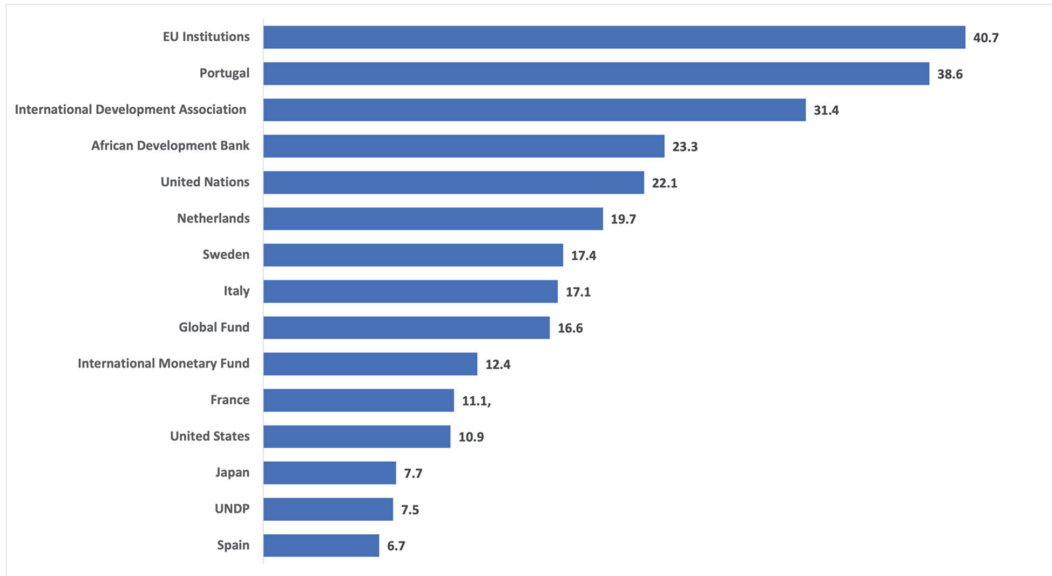


Source: Constructed using OECD 2022 data

Figure 8: Aid by Sector in Guinea-Bissau (2005-2019)

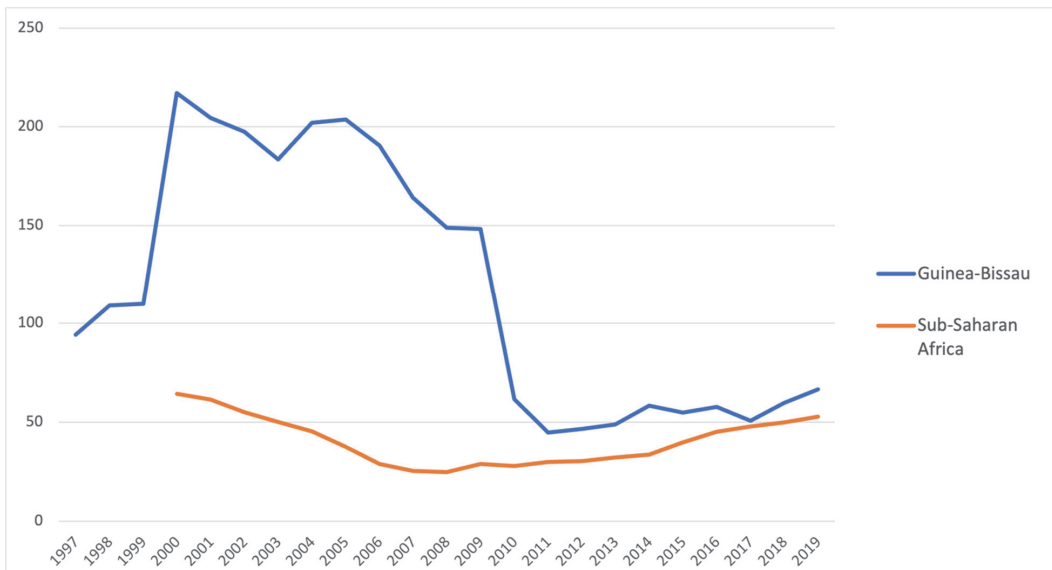
exodus of international partners (Monteiro, 2005). In response to the sharp decline in ODA, the government began to take out commercial loans to finance its operations (Monteiro, 2005).

With arrears accumulated since the early 1980s, Guinea-Bissau became one of the most highly indebted countries in the world (IMF, 1998). **Figure 10** shows the progression of the external



Source: Constructed using OECD 2022 data

Figure 9: Top Fifteen Donors of Gross ODA for Guinea-Bissau, 1975-2019 average, USD million



Source: Constructed using IMF 2022 data

Figure 10: Guinea-Bissau vs Sub-Saharan Africa: General government gross debt (Percent of GDP), 1997-2019

debt to GDP ratio since the mid '97. The debt to GDP ratio was roughly 3 times the average of Sub-Saharan Africa until 2010 when 87% of the country's debt was pardoned under the Heavily Indebted Poor Countries Initiative (HIPEC) (IMF & Drummond, 2011, 00:25).

However, despite the elimination of over US\$1 billion (IMF & Drummond, 2011, 00:29), and an average ODA/GDP rate over 4 times the Sub-Saharan average, the per capita GDP rate remained stagnant, averaging a mere 0.78% between 2010 and 2019. The following section takes a closer look at the macroeconomic implications of aid in Guinea-Bissau.

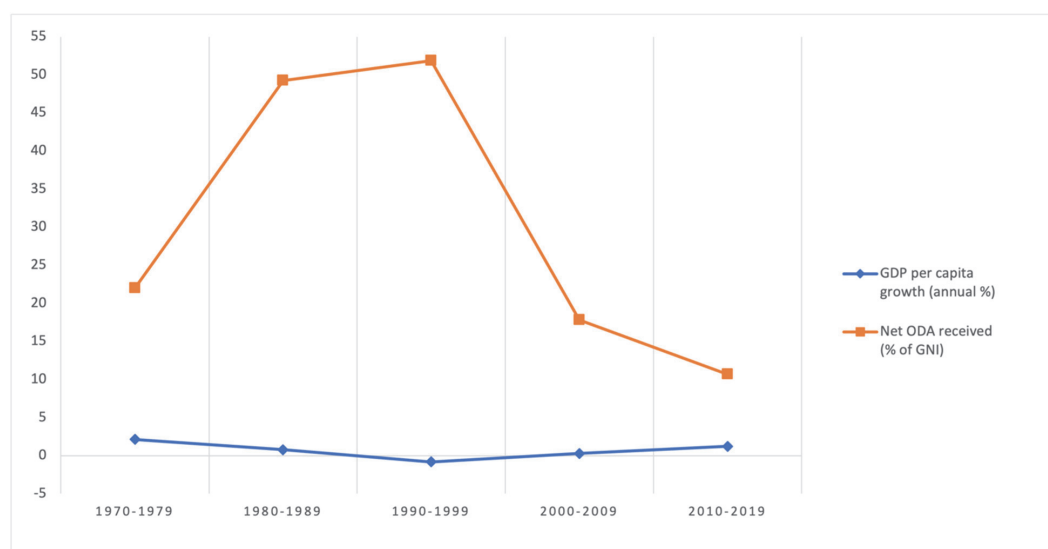
3.3 Macroeconomic Environment and Aid

As has been exemplified above, macroeconomic developments have been few and far between, and in most cases, lag behind the rest of the region. Aid, on a micro level has played a major role in these developments, but as has been seen in the literature, there has been little to no effect on the macro level. In fact, a closer

look at the relationship between ODA inflows and per capita GDP growth, would substantiate the inverse relationship between aid and growth that has been argued by many. **Figure 11** shows that during the years that Guinea-Bissau benefited from large amounts of aid (1970-1999), the per capita GDP rate retracted by -2.9%. Conversely, when aid transfers began to fall, the per capita GDP rate slightly increased by .4%. This subsection will exam the relationship between foreign and different components of Guinea-Bissau's economy.

3.3.1 Aid and Trade

Guinea-Bissau's main economic activity is agriculture, which accounts for more than 40 percent of GDP (**Figure 12**) and employs around 80 percent of the labor force (World Bank, 2019). However, despite its natural resource endowments, the country is highly dependent on the export of one product - cashew nuts, which for over 95 percent of export revenues (World Bank, 2020a). The dependence on cashew has



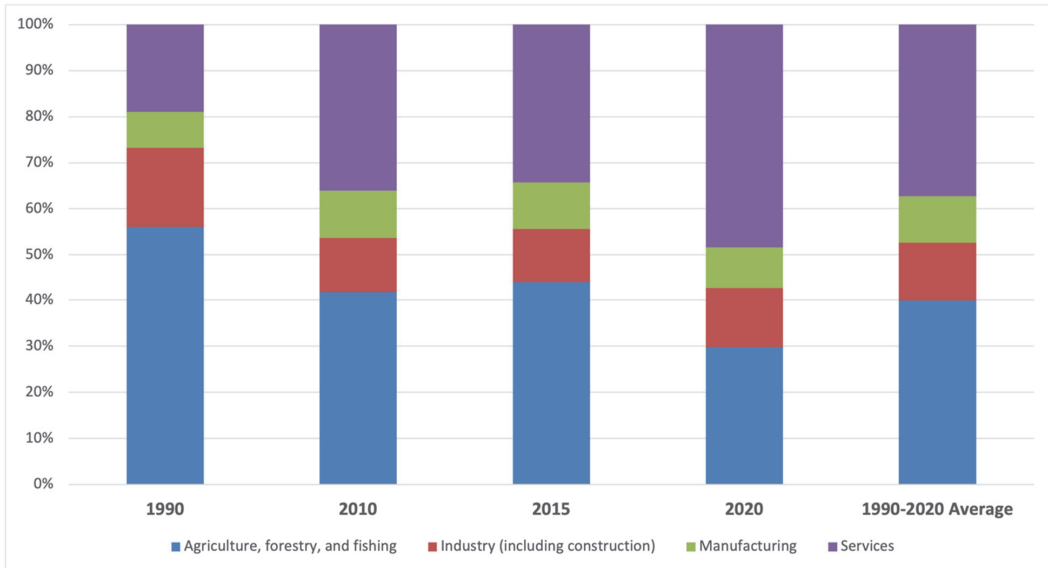
Source: Constructed using World Bank 2022 data.

Figure 11: per capita GDP vs Net ODA received (Percent of GDP), 1975-2019

only grown since independence leaving the country highly susceptible to terms-of-trade and climate shocks. The success of the yearly cashew campaign is also contingent on the current political environment, with both buyers

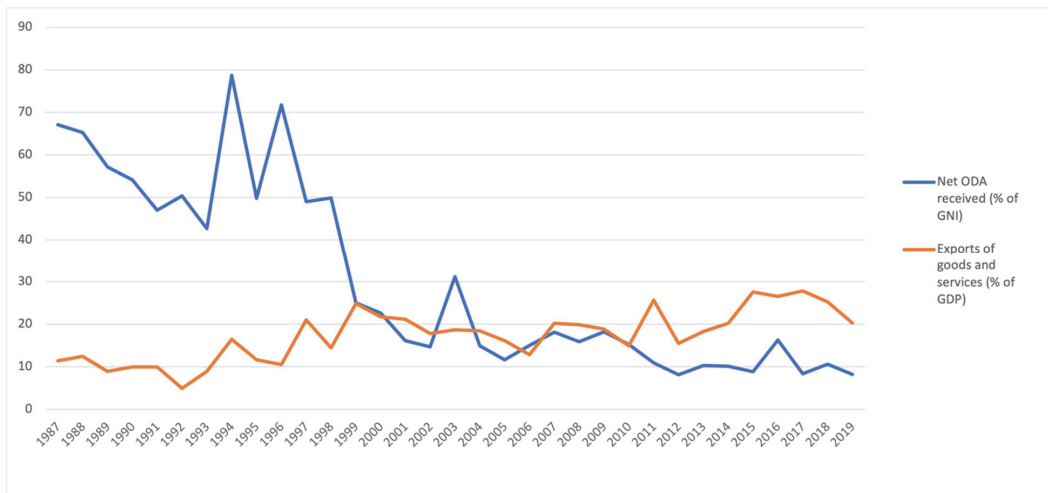
and financiers fleeing in the event of an incident.

Figure 13 plots the relationship between aid and exports. As can be seen, aid and exports seem to have developed in opposite directions since 1987, alluding to an inverse relationship



Source: Constructed using World Bank 2022 data.

Figure 12: Guinea-Bissau: Gross Domestic Product by Sector, value added (% of GDP), 1990-2020



Source: Constructed using World Bank 2022 data.

Figure 13: Guinea-Bissau: Trend in ODA and Exports, 1987-2019

between the two. Exchange rate theory would attribute the negative relationship between aid and exports to exchange rate appreciation as a result of excessive amounts of foreign currency flooding the local market. In essence, the decreasing level of aid inflows into the country during this period resulted in a depreciation of the RER making exports from Guinea-Bissau relatively more attractive. However, closer analysis of the RER during this period would be necessary in order to come to any definitive conclusions.

3.3.2 Aid, Investments, and Savings

Figure 14 shows the development of aid, capital formation (domestic investment) and domestic savings. As can be seen, there appears to be a positive relationship between the three. As was mentioned previously, over 90% of the country's public investment is externally financed, thus the positive correlation is expected. The positive relationship also serves to corroborate first generation theories that indicate an increase in aid would increase savings (Rosenstein-Rodan, 1961), which would

in turn spur investments and economic growth (Papanek, 1973). Unfortunately, however, the trend here is negative and thus the decrease in foreign aid would appear to be linked to the decrease in savings and investment, and thus could be a significant contributor to the stagnant GDP growth rates in the country.

Table 6 shows some of the effects the negative trend in aid, savings and investments have had at the micro level. Although advancements have been made in the last 2 decades, the rate and intensity has been insufficient to help the country catch up to its counterparts. This is further exacerbated by the fact that less than 1% of ODA inflows are allocated to economic infrastructure (**Figure 7**). Today only 10% of the country's 4,400 km of roadways are paved (World Factbook, 2022) and only 31% of the population have access to electricity (World Bank, 2022), some of the lowest rates in the region.

3.3.3 Aid and other Macroeconomic indicators

In **Figure 16** we see a strong and positive relationship between aid and inflation. This appears to be in line with the literature that

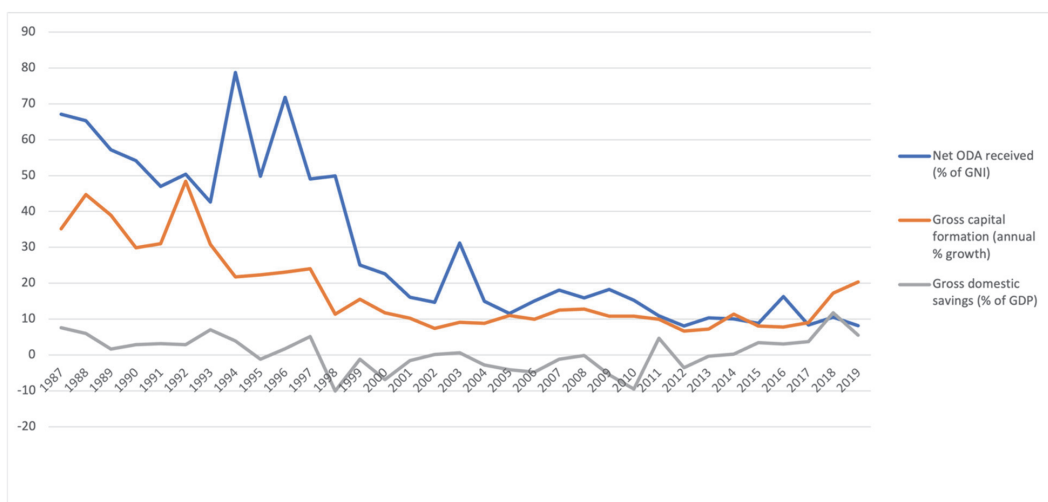


Figure 14: Guinea-Bissau: Trend in ODA, Capital Formation and Domestic Savings, 1987-2019

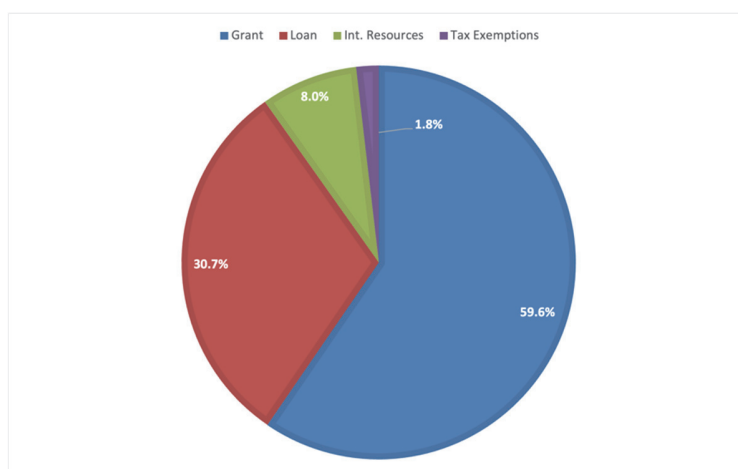
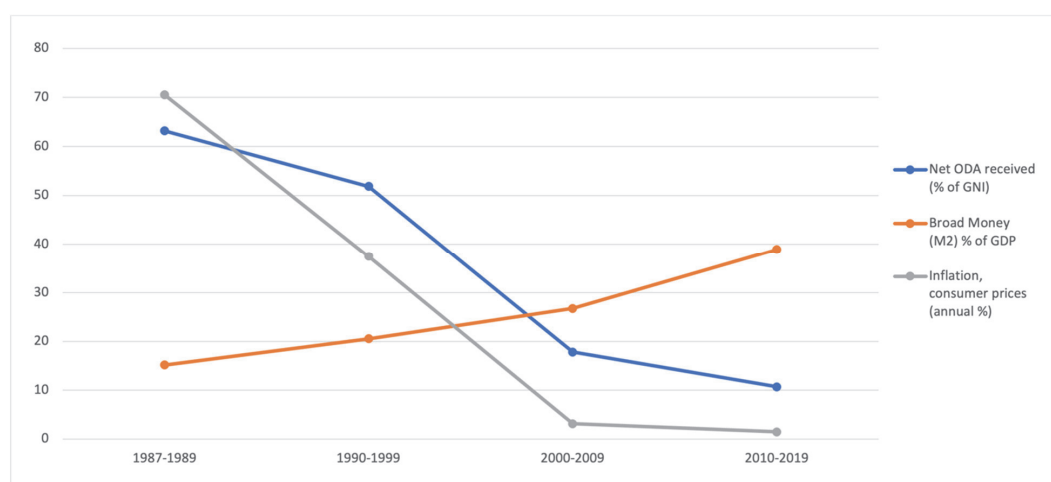


Figure 15: Guinea-Bissau – Public Investment Program (PIP) composition (2013-2021)

Table 6: Infrastructure indicators for some West African Countries

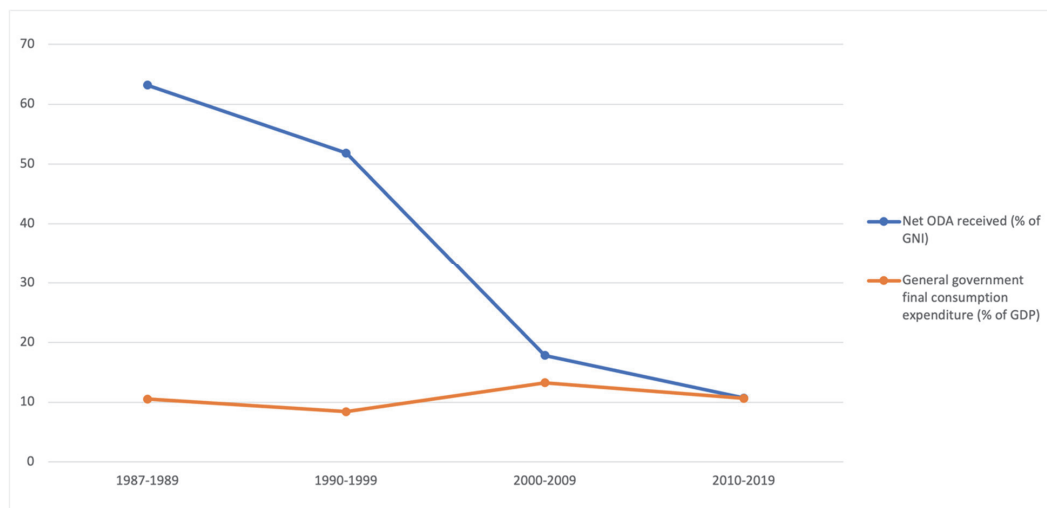
	Guinea-Bissau	Senegal	Guinea	Gambia
Access to electricity, % of population (2002)	1.3	36.8	17.7	31.5
Access to electricity, % of population (2019)	31	70.4	42.2	62.1
Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high)(2018)	1.78	2.22	1.56	1.82
Roadways, Km (most recent year)	4,400	16,665	44,301	2,977
Paved, km (most recent year)	453	6,126	3,346	518

Source: World Bank (2022) and World Fact Book 2022



Source: Constructed using World Bank (2022) and IMF (2022) data

Figure 16: Guinea-Bissau: Trend in ODA, Money Supply, and Inflation; 1987-2019



Source: Constructed using World Bank (2022) data

Figure 17: Guinea-Bissau: Trend in ODA and Government Consumption; 1987-2019

postulates that an increase in foreign currency causes inflation to increase. However, again the opposite trend is true, decreasing foreign aid has seemingly caused a decrease in inflation. Confoundingly, both the money supply (Figure 16) and government consumption (Figure 17) seem to be inversely related to foreign aid flows. It would appear that Guinea-Bissau is an anomaly as both these trends go against economic theory in general, and development theory in specific.

Chapter 4: Empirical Analysis

The literature survey above, was unable to definitively establish causality between aid and growth and to some extent even correlation was left rather ambiguous. However, it did make clear that country specific characteristics play a central role in determining the directionality of whatever level of correlation does exist. The following section serves to test my hypothesis of whether or not foreign aid has had a positive impact on growth in Guinea-Bissau, given its

classification as a fragile state. Furthermore, we will also assess the interaction between foreign aid and key development sectors.

4.1 Methodological Framework

As is seen in the literature, empirical testing on the effects of aid on economic growth has undergone a series of innovations. In my analysis I will attempt to incorporate variables for policy environment absorption capacity and the delayed impact of aid on growth. I adapt single-equation growth regressions, as was common in the literature, based on the Harrod-Domar model. The underlying behavioral equation being that growth depends on savings and/or reducing the capital output ratio. Here foreign aid acts as the boost in investment needed to increase the productive capacity of developing countries. My methodology is more or less in line with the literature inspired by Burnside and Dollar (2000), with the augment of a fragility variable.

Firstly, to proxy for quality of governance and political institutions as suggested by Burnside and Dollar (2000), I include a variable

for democracy, as proposed by Djankov (2008). The democracy variable is pulled from the Polity IV project. I believe it is an appropriate measure for good governance and political institutions as it is a composite measure of the “competitiveness of political participation, the openness and competitiveness of executive recruitment and constraints on the chief executive” (Polity5, 2020; pp. 14-15). The index ranges from 0 to 10, with a value of 0 corresponding to zero democracy in that year. It is important to note, that the indicator does not include an indicator for civil liberties, which in this case is moot, given that I am more interested in political environment.

Secondly, as pointed out by Chenery and Strout (1966, 1979), a recipient’s absorption capacity will affect aid’s impact on economic growth and receiving aid above this level can be detrimental to growth. Therefore, in order to account for diminishing returns at high levels of aid, I have included an aid squared term. Additionally, I capture the impact of aid on future per capita GDP growth by introducing a lagged aid variable as suggested by Clemens *et al.* (2012).

Lastly, in order to incorporate the impact of fragility into my model, I construct an index using the World Bank data presented in **Figure 9**. The constructed index is a 5-point scale, ranging from 0 to -4. The index captures both the existence and severity of political conflict, in this case the presence and success of a coup d’état. In other words, fragility is measured as follows: 0 = no coup; -1 = alleged coup, -2 = thwarted coup, -3 = unsuccessful coup, and -4 = successful coup.

4.1.1 A note on data

Successfully implementing the methodological framework described above requires

comprehensive, consistent, and credible data. Guinea-Bissau, much like other developing countries, has large deficiencies in data and data collection.

Scientific research is only as good as the underlying data and in order to ensure the highest level of validity, data was sourced from only the most reliable and internationally accredited databases, i.e., the World Bank, IMF, PENN World Tables and the Polity5 Database.

Furthermore, some of the concepts considered in this study are relatively new. For example, the Fund for Peace’s Fragile State Index only has data available beginning in 2006. The World Bank’s Country Policy and Institutional Assessment (CPIA) rating was also a common proxy for institutional quality seen in the literature, however the dataset was only available as of 2005. Time series analysis typically requires a minimum of 20 observations in order to be robust (McCleary *et al.*, 1980, p. 20). Thus, compiling both comprehensive and consistent data was a major challenge. As such, the variables included in this study are those that were simultaneously available for the period 1987-2019. **Table 7** provides a summary of these and other country-specific variables and their sources.

4.2 Methodology

With an aim at establishing the relationship between foreign aid and economic growth, I employ the Engle Granger cointegration technique, using the Ordinary Least Squares (OLS) procedure to estimate the growth equations. I use time-series data on the variables listed in **Table 7**, with a sample period ranging from 1987-2019. All variables, except the democracy and fragility indexes, are converted to the natural log for the analysis.

Table 7: Description of variables and sources

Variable Name	Description	Source
Per capita GDP	Growth rate of real per capita GDP	World Bank
Domestic savings	Gross domestic savings (% of GDP)	World Bank
Foreign Aid	Net official development assistance (% of GDP)	World Bank
Lagged Aid	Lagged Aid - time lag in aid effect	Constructed
Aid squared	aid * aid - non-linear effects of aid	Constructed
Population growth	Population growth rate	World Bank
Openness	Trade (% of GDP)	World Bank
Government Spending	General government final consumption expenditure (% of GDP)	World Bank
Financial Depth	M2 (% of GDP)	IMF
Education rate	Completion rate, upper secondary education, both sexes (%)	PENN World
Domestic investment	Gross capital formation (% of GDP)	World Bank
Foreign direct investment	FDI, net inflows (% of GDP)	World Bank
Fragility	Fragility Index – presence and severity of a coup in a given year; 0=no coup, -1=alleged coup, -2=thwarted coup, -3=unsuccessful coup, -4=successful coup	World Bank/Constructed
Democracy	The Democracy index is an additive eleven-point scale (0-10, with 0 being no democracy). Captures the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive	Polity5 database

4.2.1 Model Specification

I use a 3-step process in order to analyze how per capita GDP growth is affected by both aid and fragility. To establish a baseline of how my variables interact with per capita GDP growth in the absence of aid and fragility:

$$pcGDP_t = \alpha_t + \beta_1 IX_t + \beta_2 DEMOC_t + \epsilon_t. \quad (1)$$

To understand how an inject of foreign aid impacts the relationships between my variables and per capita GDP growth in the absence of fragility:

$$pcGDP_t = \alpha_t + \beta_1 IX_t + \beta_2 DEMOC_t + \beta_3 IODA_{t-1} + \beta_4 OIDA^2 + \epsilon_t. \quad (2)$$

To assess if fragility impacts aid effectiveness and/or my other variables:

$$pcGDP_t = \alpha_t + \beta_1 IX_t + \beta_2 DEMOC_t + \beta_3 OIDA_{t-1} + \beta_4 IODA^2 + \beta_5 FRAGILITY_t + \epsilon_t. \quad (3)$$

Where t indexes time, $pcGDP_t$ is per capita GDP growth rate, X_t is a vector for country specific characteristics (domestic savings, population growth, trade, government spending, financial depth, education, domestic investment, and foreign direct investment), $DEMOC_t$ indexes policy environment, ODA_{t-1} captures aid's lagged effect on growth, ODA^2 captures diminishing returns from aid, $FRAGILITY_t$ indicates the presence of political instability and ϵ_t is my

error term.

4.2.2 Econometric Analytical Techniques

The Engle Granger cointegration technique will establish if long-run relationships exist between my variables. This technique ensures that parameter estimates are best linear and unbiased. Furthermore, running the OLS procedure estimates an error term which captures other factors not specified in my model. An error correction model is used to understand short-run behavior and the adjustment speed needed to return to long-run equilibrium.

A prerequisite of the Engle Granger approach is that variables must be stationary at most at first differences. Once the level of stationarity is determined, the residuals of the OLS regression are saved and the tested for unit root and cointegration. Cointegration will establish if a long-run relationship exists between our variables despite the drift or trend, while the ECM establishes the short-run relationship.

It is important to reiterate that the data availability challenges have limited the study's

scope to only 33 observation points.

4.3 Findings and Discussion

The logged values of my variables were tested for stationarity using the Augmented Dicky Fuller test (ADF). The majority of variables were found to be non-stationary in levels at a 5% significance level (**Table 8**). This required a second ADF test to be run on each variable at first differences. Once differenced all variables were integrated at order I (1) as they were found to be stationary at a 5% significance level (**Table 9**).

Cointegration tests were executed by running separate OLS regressions for each equation (**Table 10**). All variables in the non-stationary series were included in the regressions, given that they were all found to be integrated at order 1. However, it's important to note that no conclusions can be made from the results of the initial regression, because as mentioned, the variables used are non-stationary and thus follow an unknown distribution.

Residuals for each regression were saved

Table 8: Augmented Dickey Fuller (ADF) Test Results in Levels

Variable	t-ADF Statistic	Critical 5%	Conclusion
LGDPpc	-4.25	-2.983	<i>Stationary</i>
LSAV	-2.802	-2.983	<i>Non-Stationary</i>
LAID	-0.984	-2.983	<i>Non-Stationary</i>
LAIDSQ	-0.984	-2.983	<i>Non-Stationary</i>
LAID_L1	-1.036	-2.986	<i>Non-Stationary</i>
LPOP	-3.191	-2.983	<i>Stationary</i>
LTRADE	-2.922	-2.983	<i>Stationary</i>
LGOVTCONSP	-1.72	-2.983	<i>Non-Stationary</i>
LM2	-2.225	-2.983	<i>Non-Stationary</i>
LEDUC	-0.158	-2.983	<i>Non-Stationary</i>
LDOMINVEST	-2.004	-2.983	<i>Non-Stationary</i>
LFDI	-3.837	-2.983	<i>Stationary</i>
FRAGILITY	-2.789	-2.983	<i>Non-Stationary</i>
DEMOC1	-2.12	-2.983	<i>Non-Stationary</i>

Table 9: Augmented Dickey Fuller (ADF) Test Results after 1st Differencing

Variable	t-ADF Statistic	Critical 5%	Conclusion
Δ LGDPPc	-6.528	-2.986	<i>Stationary</i>
Δ LSAV	-6.23	-2.986	<i>Stationary</i>
Δ LAID	-4.755	-2.986	<i>Stationary</i>
Δ LAIDSQ	-4.755	-2.986	<i>Stationary</i>
Δ LAID_L1	-4.654	-2.989	<i>Stationary</i>
Δ LPOP	-4.792	-2.986	<i>Stationary</i>
Δ LTRADE	-4.892	-2.986	<i>Stationary</i>
Δ LGOVTCONSP	-3.35	-2.986	<i>Stationary</i>
Δ LM2	-5.289	-2.986	<i>Stationary</i>
Δ LEDUC	-6.048	-2.986	<i>Stationary</i>
Δ LDOMINVEST	-4.442	-2.986	<i>Stationary</i>
Δ LFDI	-5.703	-2.986	<i>Stationary</i>
Δ FRAGILITY	-6.636	-2.986	<i>Stationary</i>
Δ DEMOC	-6.066	-2.986	<i>Stationary</i>

and ADF tests were then run for each. The ADF test results for each regression are given in **Table 11** below.

Since the ADF t-statistic is greater, in absolute terms, than the 5% critical value, the residuals are determined to be stationary thus rejecting the null hypothesis of no cointegration (long-run relationship) among my dependent and independent variables. Having determined the existence of cointegration, an Error Correction model was formulated in order to assess the relationship among the variables in the long and short run and also to determine the speed of adjustment from short to long run equilibrium. Executing the ECM model requires regressing the first differences of my dependent and independent variables as well as the lagged value of the error correction term, i.e., the residuals from the cointegration equation. Results are presented below.

Results from the ECM show that the only statistically significant variables in my models are savings, population, and democracy (policy environment). Although neither foreign aid

nor fragility seem to impact per capita GDP in Guinea-Bissau, the 3-step process employed underscores the collateral effects of these two factors on economic growth.

Savings remained positive and significant at 1% under all three conditions. This was expected and is in line with traditional economic theory as has been exemplified in the literature survey above. There is also a slight decrease in the savings coefficient when fragility is added to the model, alluding to the constraints this sort of environment can have on growth.

The coefficients for population growth are positive and significant at 10% when aid and fragility are added to the models, i.e., in regressions 1 and 2. This might seem surprising as some scholars consider rapid population growth to be a constraint on growth, particularly in developing countries (Kelley and Schmidt, 1999). However, given that the majority of aid received in Guinea-Bissau is allocated to the education and health sector, contributing thus to not only quantity but also quality of human capital, a positive correlation may be explained.

Table 10: Initial regression results

Dependent variable	Log of per capita GDP growth		
Period	1987-2019		
Regression	[1]	[2]	[3]
Constant	0.460 (2.607438)	0.759 (1.870806)	0.929 (0.580653)
LSAV	0.000 (0.7092122)	0.001 (0.7234313)	0.002 (0.7832604)
LPOP	0.114 (2.223975)	0.239 (2.859797)	0.204 (3.237603)
LTRADE	0.784 (-0.2208849)	0.678 (-0.3755604)	0.768 (-0.2749686)
LDOMINVEST	0.786 (-0.0845677)	0.879 (-0.0628829)	0.926 (-0.0389314)
LGOVTCONSP	0.473 (0.276321)	0.497 (0.3612543)	0.448 (0.4163575)
LM2	0.140 (-0.4139241)	0.177 (-0.4024615)	0.17 (-0.4184503)
LEDUC	0.316 (-0.8531805)	0.500 (-0.7865006)	0.537 (-0.7317308)
LFDI	0.304 (-0.093752)	0.292 (-0.1105553)	0.28 (-0.115796)
DEMOC	0.059 (0.118031)	0.081 (0.1200138)	0.086 (0.11994)
LAIDSQ		0.75 (-0.066547)	0.752 (-0.0671205)
L Aid		0.665 (0.2489773)	0.616 (0.2951605)
FRAGILITY			0.528 (0.0569199)
Number of observations	33	32	32
R-squared	0.6110	0.6382	0.6459
F-statistic	4.01	3.21	2.89
Prob > F Statistic	0.0034	0.0115	0.0190

Notes: a) The p-value for the tests.
b) Coefficients are shown in parenthesis.
c) L denotes Natural Logs operator.

Table 11: Unit Root test for residuals/cointegration test

Regression	[1]	[2]	[3]
t-ADF Statistic	-6.465	-7.361	-7.86
Critical values 5%	-2.983	-2.986	-2.986
Decision	<i>Stationary</i>	<i>Stationary</i>	<i>Stationary</i>

Table 12: Error Correction Model Results

Dependent variable	Log of per capita GDP growth		
Period	1987-2019		
Regression	[1]	[2]	[3]
Constant	0.789 (-0.02453)	0.856 (-0.0175788)	0.735 (-0.0297799)
LSAV	0.000*** (0.7679412)	0.000*** (0.7737425)	0.000*** (0.7680107)
LPOP	0.105 (6.849124)	0.052* (9.018854)	0.075* (7.508449)
LTRADE	0.786 (-0.1829486)	0.725 (-0.2719211)	0.336 (-0.7239432)
LDOMINVEST	0.786 (-0.0073667)	0.677 (-0.2082601)	0.568 (-0.259747)
LGOVTCONSP	0.454 (0.346789)	0.185 (0.714482)	0.106 (0.8072385)
LM2	0.192 (-0.4128215)	0.202 (-0.42146)	0.236 (-0.3559232)
LEDOC	0.863 (-0.176106)	0.843 (-0.2069645)	0.802 (0.243363)
LFDI	0.925 (0.0070441)	0.542 (0.0531014)	0.546 (0.0473508)
DEMOC	0.100 (0.0989516)	0.086* (0.1095023)	0.044** (0.118993)
LAIDSQ		0.773 (0.0000295)	0.583 (0.0000514)
LAID_L1		0.153 (0.0203478)	0.123 (0.0201137)
FRAGILITY			0.232 (0.0678341)
ECM_(t-1)	0.000 (-1.224575)	0.000 (-1.266574)	0.000 (-1.394461)
Number of observations	33	32	32
R-squared	0.8583	0.8757	0.9038
F-statistic	12.73	10.57	12.29
Prob > F Statistic	0.0000	0.0000	0.0000

a) *, ** and *** indicate that the estimated parameter is statistically significant at the 10%, 5% and 1% level, respectively.

b) The p-value for the tests.

c) Coefficients are shown in parenthesis.

d) L denotes Natural Logs operator.

As is intrinsic to the Lewis model, an increase in human capital can indirectly impact productivity and capital formation by shifting surplus labor

from the traditional to manufacturing sector. Furthermore, the results also reflect a decrease in the population coefficient from 9.01 to 7.50

alluding to how fragility limits the contribution of population growth to per capita GDP growth. However, since fragility in Guinea-Bissau is typically limited to a small group of political elites, shifting the source of the country's productivity from the public to the private sector could serve to hedge per capita GDP growth against constant political conflict.

My indicator for policy environment (DEMOC) was both positive and statistically significant at 5% in regression 2 (incorporating foreign aid) and increased in significance (to 1%) when fragility was factored into regression 3. In other words, when ODA is received, political environment becomes a main contributor to growth. Moreover, the more fragile the environment, the more important it is to have a policy environment that is conducive to the management of resources. This supports the results found by Burnside and Dollar (2000), that aid effectiveness is contingent on good policies. However, fragility and policy environment would be considered by many to be an oxymoron, as the two do not often coexist.

4.3.1 Limitations of Study

As previously mentioned, data availability placed an extreme limitation on my analysis. As such constructing a stable model presented immense challenges as problematic variables were not easily replaced. Furthermore, I did not employ any causality tests as doing so could produce spurious results due to the endogeneity and fungibility of aid as postulated in the literature (Clemens *et al.*, 2013). Consequently, the results presented above are illustrate correlation rather than causation. Nonetheless, when coupled with the literature, the results of this study can provide insight into the effects of aid in Guinea-Bissau given its fragile context.

Chapter 5: Conclusion

The main objective of this study was to assess the effects of aid on per capita growth in fragile environments. To do so a quantitative analysis of the macroeconomic reactions to aid inflows was done and results suggested that the behavior of key macroeconomic indicators in Guinea-Bissau were not always in line with development theory. In order to empirically test the hypothesis, the study employed OLS time-series regressions for Guinea-Bissau. Although not significant, results suggest a very weak but positive correlation between aid and per capita growth. However, through our 3-step process, I was able to assess the changes that occur on my explanatory variables when aid and fragility are incorporated into the regression.

Positive and significant effects came from savings, population growth and our indicator for democracy, i.e., policy environment. The coefficient for savings increases when aid is added to the model in regression 2, alluding to a positive correlation between aid and savings as is common to the literature (Papnek, 1973). However, the intensity of the savings contribution to growth decreases once fragility is added to the model, suggesting that fragile environments place a constraint on saving intensity, this result substantiates the notion that growth is *a priori* impacted by fragility (McGillivray and Feeny, 2008). Fragility also had a negative and significant impact on how much population growth contributes to per capita GDP growth reducing the value of the coefficient once added to the model. The regressions also indicate that the role of a good policy environment (democracy) is amplified in a fragile environment.

Overall, the results of the study serve

to highlight how fragile states require special attention. Reducing aid to these environments as is the common reaction to donors is counterproductive as it contributes to backsliding of growth and development indicators. The reduction of ODA/GDP ratio in the past decade to just under 10% is a reaction to the country's fragility. Guinea-Bissau finds itself caught in 3 traps simultaneously, which also contribute to its life sentence in the fragility trap. The catch-22 is that, reducing

funding because of country fragility ensures that Guinea-Bissau continues in the poverty, poor institutions, and conflict trap, which in turn leads to further fragility. Too much aid, as the literature indicates can have negative socioeconomic effects, but the fallout from under-aiding is guaranteeing that the country gets left behind. Foreign interventions should be catered and allocated to address the unique challenges faced by fragile states.

Notes

- 1) “Haavelmo, in a question to Professor Leontief (2, p. 1062) has suggested the following interesting hypothesis about a developing country's savings function: $I(t) = a[Y(t) + H(t)]$, where I stands for gross investment, Y for GNP and H for capital inflows.” “‘That is to say,’ in Haavelmo's words, ‘that investment ... is a function of ... income including what they get from abroad.’ ‘I think,’ Haavelmo adds, ‘we see the implications. It means, for example, that domestic savings could be negative if H is very large.’” (as quoted in Rahman, 1968).
- 2) See also Griffin *et al.* (1970)
- 3) Chenery-Strout cross-country data set included data for 50 countries. However, Rahman's test only used data for the 31 countries whose data was considered more reliable by the authors.
- 4) (Massell *et al.*, 1972) as quoted in Hansen and Tarp, 2000.
- 5) “A review of the 31 insignificant results reveals, however, that no less than 12 of these are based on regressions, which do not fulfill the minimum requirement for concluding that aid has no impact on growth” (Hansen and Tarp, 2000: 384)
- 6) World Bank (1993) report “East Asian Miracle” assesses the factors that contributed to the success of high performing Asian economies, which include, among others, “(i) sound macroeconomic foundations and stable institutions..., (ii) technocratic regimes and political stability...” (Thorbecke 2000: pp 42). Furthermore, the report suggests that these could be transferred to the rest of the developing world (Thorbecke 2000).
- 7) See Dijkstra (2018) for a comprehensive review of empirical studies from 1995 to 2016 on the effects of aid on good governance.
- 8) First introduced by Mosley (1986)
- 9) (Hansen and Tarp 2000; Morrissey 2001; Beynon 2002; McGillivray 2003; Clemens, Radelet and Bhavnani 2004; Addison, Mavrotas and McGillivray 2005; McGillivray *et al.* 2006) as quoted in McGillivray and Simon Feeny (2008)
- 10) See Fistein, 2011
- 11) Burmedjus is a Creole word meaning “reds” or in this context “redskins”, referring to people of mixed race, i.e., those that are mixed with Portuguese

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