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Fragile States and Aid Allocation for Sub-Saharan African Countries: An Empirical Research

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ABSTRACT

State fragility has received increasing attention in recent decades as a result of the nexus between development and international stability. This study investigates the empirical drivers of state fragility in sub-Saharan Africa from 2007 to 2019. We shed light on the explanatory variables of government effectiveness, political stability, per-capita GDP, grow GDP%, International Monetary Fund loans, and official development assistance. Using panel data analysis and a 39-country sample, our study finds that government efficiency and political stability, in contrast to foreign aid, has a significant effect on reducing fragility in sub-Saharan Africa. In light of these findings, the article proposes delivering foreign aid in ways that strengthen state capacity.

Keywords: Fragility, Foreign Aid, International Institutions, Panel Data Econometrics, Robust Standard Errors

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Introduction

Fragile state is an increasingly attractive category in international politics, and it is also a contested concept. The decolonization process after World War II brought many newly independent states into the international system. Many of these recently independent states emerged in Asia and Africa and had insufficient capacity to meet the requirements of the modern state. Due to their limited capacity, the international community has considered these states as requiring not only assistance for development but also as a means of promoting global stability. In 1970, the UN set the goal that each economically developed country would gradually increase its official development aid to developing countries. The United Nations (UN) General Assembly adopted the resolution that states should allocate at least 0.7% of their national income for official development assistance (ODA). This ratio was taken as a reference in international initiatives

on foreign aid and development in the following period (UNGA 1970). At the UN Millennium Summit, one of the Millennium Development Goals planned to be achieved by 2015 was global cooperation for development (UNGA 2000). Despite the international consensus on development cooperation, the targets set in many regions, especially in Sub-Saharan Africa (SSA), could not be achieved (UN 2015). The World Inequality Report claims that global inequalities today are close to early 20th century levels, when Western imperialism peaked. SSA stands out as one of the regions with the greatest global income and wealth inequality (Chancel et al. 2022). It has been demonstrated that millions of people live in extreme poverty in fragile countries that are geographically concentrated in SSA (World Data Lab 2022).

Especially after the Cold War, states that did not have the capacity to deliver basic public services to their people and could not fulfill the requirements of the modern state were labeled as ‘unsuccessful, weak, failing, collapsed, quasi, and fragile’ (Jackson 1993; Rotberg 2003; Helman and Ratner 1992). Intra-state conflicts and disintegration, such as those experienced throughout the 1990s in Sierra Leone, Yugoslavia, Somalia, Rwanda, and Haiti, entered the agenda of the international community as they produced regional and global instability (UN 2004; EU 2003). These states were seen as potential threats to regional and international security because they were linked to terrorism, poverty, conflict, and humanitarian crises. The concept of security was re-conceptualized as both the result of and a requirement for development. ‘Human Security’ was one of the salient conceptions of this stream. The concept of the fragile state emerged within this new research agenda built around security and the development nexus (Nay, Sonja and Lemay-Hébert 2014: 200). This agenda gave direction to academic studies as well. However, there is no precise definition agreed upon between practitioners and scholars. Considering fragility “as a wicked problem set” makes the concept very elusive (Brinkerhoff 2014). Despite the fact that there are numerous definitions in the literature, fragility is addressed primarily through three structural elements: Authority, service delivery, and legitimacy (Stewart and Brown 2009). A fragile state is characterized by its inability to use coercive force over its own territory, to enact binding legislation, and to deliver public services. Fragility is generally associated with the weak capacity of the state to carry out its main functions. Most of such countries have poor governance. These states cannot fulfill basic functions such as ensuring security, justice, and wellbeing of their citizens in their countries, lack territorial control, and have experienced prolonged civil wars, often accompanied by extreme violence. Fragile states may be about to collapse, or they can barely function depending on the degree of their dysfunction (Kaplan 2015). Thus, fragile states exhibit highly complex characteristics (Addison 2012: 363). “Fragility is an umbrella term” that refers to a broad category of states which have very different socio-economic, cultural, and political contexts. However, one thing they share in common is that fragile states either lack the capacity or legitimacy and authority to govern effectively (Giovannetti 2009). Other characteristics that these countries have in common are that they are left behind the Sustainable Development Goals (SDGs) that are planned to be reached by the end of 2030 and that they are considered ‘difficult partners and difficult environments’ by the international community (Levin and Dollar 2005). SSA countries constitute the vast majority of these fragile states and are the largest recipient of aid. Therefore, the concept of state fragility is at the center of the debate on development, and on the governance of SSA. In this context, the starting point of the study is to determine the main factors affecting the fragility of SSA countries.

Using the State Fragility Index (SFI) developed by Fund for Peace, this study presents an empirical analysis of state fragility in SSA between 2007–2019. The study focuses on this period by taking into account the availability of the data set. The study builds on the framework suggested by Carment et al. (2008), who indicate three structural elements of fragility: authority, legitimacy, and capacity (ALC). In the study, authority and legitimacy are related to political stability, and capacity is related to government effectiveness, in line with the World Governance Indicators (WGI) of the World Bank (World Bank 2022). The study includes the World Bank’s indicators of government effectiveness and political stability in the analysis since weaknesses in these elements are expected to have an impact on fragility.¹

We adopt fragility as a weak state capacity. Our definition of state capacity is based on neo-Weberian insight and suggests that states need to have two main properties: coercive capability and administrative capability, which represent the ALC framework. In this context political stability (ps) is included in the model as an indicator of coercive capability, which refers to authority and legitimacy (A, L) in the ALC framework, and government effectiveness (ge) is included in the model as an indicator of administrative capability, which refers to capacity (C) in the ALC framework. Real GDP per-capita, and real growth GDP% International Monetary Fund (IMF, USD) loans and Official Development Assistance (ODA, USD) are included in the model as economic factors. The main research question of the study is to evaluate the effects of aforementioned factors that determine fragility in SSA between 2007 and 2019. Our expectation is that foreign aid to SSA countries will not significantly reduce their fragility unless their state capacity is strengthened.

The rest of the study is structured as follows: Section two provides a brief overview of perspectives on state fragility. Section three discusses the literature on the possible determinants of fragility in SSA and foreign aid policy. Section four describes the methodology. Section five presents the dataset, model, and empirical findings. In the sixth and final section, we reach a conclusion and suggest directions for future studies.

Literature Review: State Fragility

Many institutions conducted indicator-based conceptualizations on fragility, and many indices were created within this framework.² Fragility is generally conceptualized in terms of development and/or stability oriented perspectives. Western institutions like the World Bank and The Organization for Economic Cooperation and Development (OECD) mostly dominate the debate on fragility. The fragility analysis was first introduced by the World Bank on a development-based basis and many institutions, organizations, and governments addressed the concept with a similar perspective. Fragility is eventually used to refer to states that lack the capacity to serve their citizens with “adequate public goods” (Torres and Anderson 2004). The World Bank defined fragile states as “characterized by weak policies, institutions,

1 See for studies using similar variables, Takeuchi et al. (2011), Carment and Samy (2017).

2 See CIPF Fragility Index, Country Policy and Institutional Assessment (CPIA), Fragile States Index (FSI), Index of State Weakness in the Developing World (ISW), State Fragility Index (SFI).

and governance” (World Bank 2006; World Bank 1989).³ OECD released its first ‘State of Fragility’ report in 2007 and pointed out that states are fragile if their institutions lack the capacity to provide the fundamental functions necessary for development and security (OECD 2007). Department for International Development (DFID) similarly defines fragile states as follows: “Where public institutions are extremely weak or even non-existent” and cannot deliver basic services to the majority of its people (DFID 2005: 14). The European Union (EU) also followed the conceptualization of the OECD and the World Bank and identified fragility as the inability of state structures to perform their basic functions (EU 2007: 1).

Stability-based conceptualizations came to the fore during the 1990s, when intra-state conflicts were intense, and began to take place in the fragility analysis more and more with the declaration of the ‘War on Terror’ after the September 11 attacks. Fragile states were defined as a threat first to their own people, their neighbours, and the international system, as they create an environment suitable for transnational criminal organizations, especially terrorist acts, and cannot cope with humanitarian and economic crises. The merging of security and development agendas has resulted in the securitization of these states (Rotberg 2002). In 2004, Center for Global Development (CGD) pointed to the states that it listed as insufficient in the fields of capacity, legitimacy, and security as threats to the national security of the United States (US) (Weinstein et al. 2004). United States Agency for International Development (USAID) defined fragile states as crisis states in which the government does not exercise significant control over its own territory and where conflict is either a reality or a substantial risk (USAID 2006: 4). A stability-based ‘State Fragility Index’ was presented by George Mason University. The Index focused on the performance of states’ effectiveness and legitimacy (Monty and Elzinga-Marshall 2017:51). African Development Bank (AfDB) focused on risks and defined fragility as a condition with a higher possibility of institutional and social breakdown (AfDB 2015:4). Canada’s Country Indicators for Foreign Policy (CIFP) made a definition based on authority, capacity, and legitimacy (CIFP 2006).

The concept of fragility as a threat to international stability has brought the state back on the agenda. Due to the concern about the spillover of the threat, the neo-Weberian emphasis on territorial sovereignty and authority has taken on new significance (Fukuyama 2005). On the other side, the failures associated with the neo-liberal reforms between 1980 and the early 1990s have strengthened calls for ‘bringing the state back in’ (Skocpol 1985). In this stream, the concept of state capacity has emerged as a measure of stateness by linking development to security. It is asserted that a state must effectively perform a number of essential functions in order to be considered successful. However, for Rotberg (2004: 2-4), some functions, such as security, are more essential than others. Zartman (1995: 5) defined the “state as the authoritative political institution that is sovereign over a recognized territory.” In line with this approach, we define fragility as a weak state capacity. We adopt a stability-based conception in relation to our approach to state capacity. Following Weber’s classic definition of the state,⁴ we define state capacity in terms of the state’s ability to effectively implement policies. Based on neo-

3 The term ‘governance’ was first used by the World Bank in 1989 for the region.

4 “State is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory” (Weber et al. 1946: 78).

weberian conceptualization,⁵ we point to two main subcomponents of state capacity: one that relates to the monopoly of violence, coercive capability, and one that relates to administrative capability, capacity (Weber et al. 1946: 78). In this stream, the concept of state capacity necessitates the establishment of sovereignty and military control over a given territory and the presence of well-functioning state institutions with professionalized bureaucrats. Adopting the definition of state capacity (the Neo-Weberian approach) leads policy practitioners to comprehend state building as a required way of strengthening state institutions (Fukuyama 2005; 2013; Rotberg 2002) As Rotberg (2004) pointed out, state building may encompass international assistance and intervention. Consequently, foreign aid has been reformulated as a means of state building. Aid to fragile countries has been shaped within the framework of good governance principles (Hameiri 2007). Through initiatives such as the Monterrey Consensus, the Paris Declaration, and the principles set by the OECD, donor countries have been encouraged to act in harmony with the recipient countries and to strengthen their state capacities in order for aid to be effective (UN 2002; OECD 2005-2008). ‘New Deal’ was signed between fragile states and partners, based on strengthening the capacity of fragile states (International Dialogue 2011). These international engagements to fragile states have reflected adherence to a neo-Weberian conception of the state (Bouckaert 2023).

In line with this perspective, the main argument of our study is that foreign aid to SSA countries will not significantly reduce their fragility unless their state capacity is strengthened. Prior to evaluating this argument, it is imperative to recognize the existing literature. The aid has been addressed as a ‘curse’ in popular works (Easterly 2006; Moyo 2009; Deaton 2013). However, this approach has been challenged (Goldsmith 2001; Arndt et al. 2015; Clemens et al. 2012; Tait et al. 2015). The literature has also identified factors that contribute to variability in the effects of aid. Consistent with our argument, according to a seminal study by Burnside and Dollar (2000: 868), aid has a positive effect on economic growth under good policy conditions. Guillaumont and Chauvet (2001) endorse the idea that aid effects on growth are not always positive; on the contrary, they can make states more fragile. Thus, donor countries are advised to focus on recipient countries’ policies and institutions to achieve meaningful growth in fragile states (McGillivray and Feeny 2008). Otherwise, it has been shown that aid may weaken the capacity of the receiving state in the long run. Chauvet and Collier (2008) argue that aid can have ambiguous effects, which can prolong a state’s failure.

Many previous empirical studies have shown that foreign aid to SSA can be effective if it strengthens state capacity. In favor of our argument, Bertocchi and Guerzoni (2012) showed that institutions are the main drivers of fragility in the SSA region. Moreover, Dreher et. al. (2018), provided evidence that aid in fragile states is less effective due to weak institutions and a lack of good policies.

Carment et al. (2008), used the ALC framework to examine how state fragility affects aid allocation and showed that authority and capacity are the significant factors. Carment and Samy (2017) demonstrated that the fragility trap is significantly related to ALC performance and indicated that aid cannot buy political reform. Park et al. (2015), found that foreign aid

⁵ There is some diversity within this approach; however, we base on state-centred authors.

does not support overcoming the fragility of SSA. As previously stated, numerous empirical studies have been conducted to investigate the correlation between foreign aid and growth. However, there is little empirical research that focuses specifically on the relationship between aid allocation and fragility (Carment et al. 2008; Ratrout and Köprülü 2022). Finally, building on the work of Carment et al. (2008), we combine the ALC framework with foreign aid in our model, which represents the originality of our research.

Fragility in Sub-Saharan Africa and Aid Policy

Development Assistance Committee (DAC) members gave 63% of their country's net allocable ODA to fragile countries in 2018, the highest amount since 2006 which amounted to USD 60.3 billion. Many of these extremely fragile and aid dependent countries are in SSA (Desai 2020: 12). Although it is the region for which the most aid is allocated, the majority of SSA countries still struggle against the cycle of poverty. Weak rule of law, poor and dysfunctional institutions, lack of accountability, and corruption have characterized many SSA countries. These states, which experienced autocratic regimes, internal conflicts, genocides, and terrorism in the post-colonial period, had difficulties maintaining political stability and forming effective governments, such that SSA has experienced over 90 coups since 1960 (Pellegata 2021). Most of them have failed with respect to authority, legitimacy, or capacity. A state's level of authority is determined by its capacity to

impose binding laws on its citizens, to use coercive force to impose its will on its sovereign territory, and to maintain a safe and stable environment for its people. Legitimacy refers to the public loyalty to the authority. Capacity refers to the power of a state to provide public services. These three characteristics of the Weberian state have not actually existed in practice in the region. These states have failed to control their territories and populations, monopolize violence, and fail to provide basic services to their populations (Brooks 2005). Government effectiveness, which refers to capacity, and political stability, which refers to the level of authority and legitimacy, affect SSA countries' levels of fragility. The states in the region do not have the capacity to provide public services, to establish and enforce policies — that is, government effectiveness, and the capacity to prevent politically driven violence, especially terrorist activity — that is, political stability. The weak capacity of SSA countries is closely connected to their colonial history. The effect of colonialism makes it difficult for these states to perform the basic functions expected of a modern state. According to Laasko and Olukoshi (1996: 8) “it is perhaps in Africa, more than in other parts of the world, that the crisis of the nation-state project is most obvious and overwhelming.” The nation-state model is primarily faced with a vacuum of authority and a lack of legitimacy and capacity in Africa, where national borders do not mean much. The colonial rule created arbitrary borders, imported institutions, and imposed an artificial state (Kalu 2018: 28). Osaghae (2010: 281) focuses on the region and concludes that the characteristics of fragile states are rooted in a particular historical context in which colonialism played an important role. It has been difficult for native society to claim both the colonial state and its imported postcolonial successor, resulting in a persistent legitimacy crisis in the region (Osaghae 2010: 281). Political institutions and bureaucracy established by colonial empires were completely incompatible with native society. In addition,

because of the way the SSA was colonized, there was no regional elite or bourgeoisie qualified to govern the country when imperial powers left (Karadeli 2009: 124). According to Vallings and Torres (2005: 12), who cite poor institutions as the primary driver of fragility, the legacy of colonialism is obvious in SSA: Institutions lacked capacity and legitimacy as a result of not being rooted in domestic power dynamics. The failure to restructure these institutions left behind by the European empires is one of the major contributors to the fragility of the region (Giovannetti 2009). According to Acemoglu and Robinson (2010), these historical dynamics of the region made state institutions “intensely absolutist and patrimonial” and sustained economic decline. When the economic crises combined with the severe civil wars fueled by ethnic partitioning, the stability crisis in the region deepened even more (Bräutigam and Knack 2004). The Stockholm International Peace Research Institute (SIPRI) stated that there were at least 18 active armed conflicts (out of a total of 49) in SSA in 2021. The number of multinational peace operations (22) hosted by SSA countries remained higher than that of any other part of the world (SIPRI 2022). There is no evidence of a significant connection between ethnic diversity and civil wars. However, Collier and Bates (2007) found that ethnic diversity enhances the likelihood of conflict when rulers have used violence to consolidate their position in Africa. Michalopoulos and Papaioannou (2016) found that ethnic partitioning in Africa significantly increased civil conflict. Furthermore, natural resource wealth of socially divided, weak states can also emerge as a source of instability (Collier and Hoeffler 2005). Howard (2010) found that state failure increases the use of political violence in SSA. According to Collier et al. (2003), once states experience civil wars, there is an increased risk that conflicts may erupt again. Consequently, many SSA countries are stuck in a ‘fragility trap,’ which refers to an interconnected circle of political instability and poor economic performance. They have weak state capacity, and many of these countries eventually become aid-dependent.

Our study will utilize the FSI framework to operationalize fragility in the region. According to the index, fragility includes: “the loss of physical control of its territory or a monopoly on the legitimate use of force; the erosion of legitimate authority to make collective decisions; an inability to provide reasonable public services.”⁶ This approach encompasses and represents our conceptualization of state capacity. Our model is based on the idea that weaknesses in any or all of these dimensions, which refer to authority, legitimacy, and capacity respectively, determine the level of fragility of SSA countries.

Methodology

The panel data consists of N cross-sectional units and data containing T -dimensional time series observations for each cross-sectional unit. These data include two-dimensional observations, the i -subscript cross-sectional units dimension and the t -subscript time series dimension.

$$y_{it} = \hat{x}_{kit}\theta + \varepsilon_{it} \quad i=1, \dots, N; \quad t=1, \dots, T \quad (1)$$

In the model given by Equation (1), assumptions are made for the structure of the error term to have equal variance (homoscedastic), no autocorrelation and no correlation between the

⁶ See, <https://fragilestatesindex.org/> (Accessed 29 July 2022).

cross-sectional units. In this case, the variance-covariance matrix (Ω) of the residual becomes the unit matrix. However, when these assumptions are not valid, the variance-covariance matrix will not be equal to the unit matrix (Tatoğlu 2013: 241). When heteroscedasticity is present or traditional procedures are used without taking into consideration the presence of cross-sectional dependence, it will produce inconsistent estimates of the standard errors of the parameters (Driscoll and Kraay 1998: 549). In this case, standard errors are corrected to obtain robust standard errors.

Driscoll and Kraay (1998) propose a nonparametric covariance matrix estimator that is robust to general spatial and temporal correlation patterns and produces consistent standard errors in the presence of heteroscedasticity and autocorrelation. Driscoll and Kraay’s approach proposes a Newey-West type correction for cross-sectional averages. A correction applied in this way ensures that the covariance matrix estimator is consistent regardless of the cross-section size. Therefore, Driscoll and Kraay’s estimator is a strong estimator even when the cross-section size of the panel increases ($N > T$), eliminating the shortcomings of other estimators. For equation (1), the consistent parameter estimation with the pooled least squares method is obtained as $\hat{\theta} = (XX)^{-1}Xy$. Driscoll and Kraay’s standard errors are obtained with the help of the diagonal elements of the robust covariance matrix as follows:

$$V(\hat{\theta}) = (XX)^{-1}\hat{S}_T(XX)^{-1} \tag{2}$$

In this equation, \hat{S}_T is defined by Newey and West (1987) as follows:

$$\hat{S}_T = \hat{\Omega}_0 + \sum_{j=1}^{m(T)} w(j, m)[\hat{\Omega}_j + \hat{\Omega}_j'] \tag{3}$$

In (3), $m(T)$ represents the lag length for the autocorrelation of the residuals. The $(K+1) \times (K+1)$ dimensional $\hat{\Omega}_j$ matrix is defined by the equation $h_t(\hat{\theta}) = \sum_{i=1}^{N(t)} h_{it}(\hat{\theta})$ as follows:

$$\hat{\Omega}_j = \sum_{t=j+1}^T h_t(\hat{\theta})h_{t-j}(\hat{\theta})' \tag{4}$$

Here, the sum of $h_t(\hat{\theta})$ for each unit is calculated for N ’s with different t ’s from 1 to $N(t)$ and thus Driscoll and Kraay’s (1998) original estimators become usable in unbalanced panel data models (Hoechle 2007: 282).

A Model of Fragility: Empirical Results

The study basically aims to identify the factors affecting fragility for the years 2007-2019 and 39 SSA countries.⁷ The dataset in the study is monitored yearly, and the period is chosen by considering the dataset’s availability. In implementing fragility, our model adapts the two subcomponents of state capacity (the neo-Weberian approach) as government effectiveness and political stability and combines them with economic factors. Our expectation is that foreign aid to SSA countries will not significantly reduce their fragility unless their capacity is strengthened. The model is basically constructed based on Carment et al. (2008) and Carment and Samy’s (2017) studies and the available relevant literature as follows:

7 For the replication data of the manuscript, please visit <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/QODOZ1>

$$\ln(fsi)_{it} = \beta_0 + \beta_1 \ln(income)_{it} + \beta_2 grow_{it} + \beta_3 \ln(oda)_{it} + \beta_4 \ln(imf)_{it} + \beta_5 ps_{it} + \beta_6 ge_{it} + \varepsilon_{it} \quad (4)$$

The Fragile States Index (FSI) calculated by the Found of Peace (FFP) was used as the dependent variable in the analysis.⁸ The independent variables are as follows: income indicates gross domestic product per capita (real GDP per capita); grow indicates the growth of gross domestic product (real GDP growth, % annual); ODA, Official Development Assistance, OECD Development Assistance Committee (DAC, real USD), indicates government aid aimed at promoting the economic development and well-being of developing countries; and IMF indicates the amount of IMF loan usage (real USD). ps indicates the absence of politically motivated violence; ge indicates government effectiveness. These two variables were taken from the World Governance Indicators (WGI) dataset and range from -2.5 (weak) to +2.5 (strong).⁹

The natural logarithm of the variables (variables denoted by ln in the model) was taken to eliminate the scale difference in the model. In the following part, the findings of various econometric procedures such as complementary statistics and testing of assumptions regarding the variables used in the study and the estimation results of our model are presented.

Table 1. Descriptive Statistics

Variables	Observation	Mean	Std. Error	Min.	Max.
fsi	507	4.454658	0.189104	3.66099	4.7362
income	507	7.211286	1.006948	5.62877	9.70739
grow	507	4.171625	4.683442	-36.392	20.7158
oda	505	5.47066	1.408115	0.506818	8.2986
imf	507	13.33905	4.028816	10.93706	17.46957
ps	507	-0.55852	0.896053	-2.69919	1.20023
ge	507	-0.71439	0.628183	-1.84905	1.05667

First, the Breusch Pagan (1980) test and then the Hausman (1978) test were performed to determine the correct panel model. According to the Breusch Pagan test, the model should not be estimated using the pooled least squares method.¹⁰ According to the Hausman test results conducted to choose between fixed-effects and random-effects model, the null hypothesis was rejected and it was concluded that analyzes should be done with the estimator of the fixed-effects model.¹¹ In the fixed-effects model we estimated, the Driscoll-Kraay estimator with robust standard errors was used, which gives reliable statistical results even in the presence

8 Fragile states index values were compiled from (<https://fragilestatesindex.org/>).

9 The official development assistance (ODA) variable was taken from the OECD official site, while the other variables were taken from the World Bank.

10 Breusch- Pagan: $\chi^2= 189.28$ (0.000).

11 Hausman: $\chi^2=(6)=98.69$ (0.000).

of cross-sectional dependence, heteroscedasticity and autocorrelation.¹² In the continuation of the study, the estimation results of the model are presented in Table 2 and the results related to the estimated coefficients are discussed.

Table 2. Determinants of Fragility

Independent Variables	(1)	(2)	(3)
income	-0.0285556 (0.024)**	-0.0374606 (0.001)***	-0.0586953 (0.038)***
grow	0.0001155 (0.777)	0.0000693 (0.847)	0.0003752 (0.174)
oda	0.0163155 (0.000)***	0.0133067 (0.004)**	0.0113988 (0.000)***
imf	-	0.0154258 (0.023)**	0.0140129 (0.012)**
ps	-	-	-0.0239296 (0.000)***
ge	-	-	-0.0750111 (0.000)***
constant	4.572264 (0.000)***	4.446467 (0.000)***	4.321888 (0.000)***
R²	0.21	0.25	0.35

Note: Values in parentheses are p- values ***, ** and * indicate significance according to the critical values of 1%, 5% and 10%, respectively.

According to the estimation results, estimated coefficient of the income variable is statistically significant at the 5% level and negatively marked in all models, which means that income is an important factor and reduces fragility. These results are consistent with Carment et al. (2008) and Feeny et al. (2015). On the other hand, it is seen that the estimated coefficient of the growth variable is statistically insignificant for all models at the 10% level. The estimated coefficient official development assistance (oda) and IMF loans (imf) are statistically significant at the 5% level and positively marked in all models, which means that aid and loans increase fragility. It is concluded that foreign aid to SSA countries in the 2007-2019 period did not reduce or even increase fragility. The results are in line with Kim et al. (2015) and Carment et al. (2008), who find that aid has not reduced the fragility of SSA.

The estimated coefficients of government efficiency and political stability variables are statistically significant at the 1% level, according to the findings. Finally, it is determined that the variables of political stability and government effectiveness have a reducing effect on fragility. Consequently, it is seen that the variable that reduces fragility the most is government efficiency, with a coefficient of (-0.075). This is consistent with Bertocchi and Guerzoni (2012), who found that government effectiveness reduce fragility, and Carment and Samy

12 Pesaran CD test for cross-sectional dependence, Modified Wald test for heteroscedasticity, and Baltagi Wu LBI test for autocorrelation were performed and it was found that the assumptions were not met.

(2017), who found ALC performance to be a key driver of fragility. Then, taking into account the crisis year, the robustness of the results for the periods 2010–2019 was checked out. It was seen that the results were very similar for our main variables: foreign aid, political stability, and government effectiveness. The analysis results are robust to different data periods.¹³

Conclusion

As the World Data Lab (2022) estimates, the vast majority of the world's poor will be living in fragile states by 2030. This seems to be the case in sub-Saharan Africa, where the states have weak capacity and are mostly aid-dependent. It is more critical than ever to focus on the fragility of the region. This study sought to shed some light on the potential impact of economic and institutional factors on fragility articulated around the idea of state capacity by focusing on sub-Saharan Africa using the State Fragility Index. To address the roots of fragility in sub-Saharan Africa, this study is based on the ALC approach, which stands for authority, legitimacy, and capacity. In this context, our study has contributed to the existing literature by developing a conceptual framework that combines state capacity and foreign aid within the model. Our findings, as we expected at the outset, suggest that government effectiveness and political stability reduce fragility in sub-Saharan Africa. Our study also found that foreign aid, considered as Official Development Assistance (ODA), did not reduce the fragility of states in sub-Saharan Africa; on the contrary, it increased fragility. Regarding policy insights, we propose two recommendations: Donors need to devise strategies focused on state capacity and work with recipient countries to break the vicious circle of fragility in the region. Our study concentrated on primarily domestic factors that contribute to fragility. However, future studies may produce more comprehensive results by including external factors.

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¹³ The robustness results are given in the replication data at <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/QODOZ1>

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