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Coup d'état and access to electricity in sub-Saharan Africa

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Therese E. Zogo
University of Yaoundé II, Cameroun
E-mail: zogoastrid@yahoo.fr

Christophe M. Mbassi
University of Yaoundé II, Cameroun
E-mail: mbassichristophe@gmail.com

Simplice A. Asongu
School of Economics, University of Johannesburg,
Johannesburg, South Africa
E-mails: asonsusimplice@yahoo.com, asongus@afridev.org

Research Department

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Therese E. Zogo, Christophe M. Mbassi & Simplice A. Asongu

Abstract

This paper assesses the effects of coups on access to electricity in Sub-Saharan Africa (SSA). The study covers a sample of 40 sub-Saharan African countries over the period 1980-2017. The econometric approach employed is the generalized method of moments (GMM). While the extant literature has established that political instability can have both positive and negative effects on access to basic public goods and services, the present study finds that coups significantly reduce access to electricity in SSA. This effect is the same regardless of the type of coup, notably: successful, failed, military or civilian coups. Thus, coups are not conducive for the establishment of real democratic transitions in the region which *inter alia*, are necessary to promote development outcomes such as access to electricity.

Keywords: Coups d'état; Access to electricity.
JEL Classification: D74; H41.

1.Introduction

One of the main problems facing sub-Saharan African countries today is the resurgence of coups d'états, particularly in West Africa. The most recent in this region are those in Burkina Faso (January and September 2022), Sudan (October 2021), Guinea (September 2021) and Mali (May 2021)[1].

Several reasons are usually presented to justify such unconstitutional change of governments. These include: the quality of electoral processes, which remains the main source of tension (Handy and Fonteh, 2020), economic crisis (Collier and Hoeffler, 2004), control of resources by an ethnic group (Morelli and Rohner, 2015), and income inequality (Rueschmeyer, 2004). Thus, the occurrence of a coup d'état can be accompanied by adverse consequences that can affect most spheres (economic, political and social) of a country. For example, the gross domestic product (GDP) may fall, the level of education may stagnate, *inter alia*.

However, Thyne and Powell (2016) have shown that the effect of a coup on economic development depends on the nature of the coup. If the coup turns into a civil war, it is unfavorable to economic development. If, on the other hand, it brings to power more conciliatory leaders who prone for democracy, the coup will improve the well-being of the people and lead the country on the path of modernisation and economic development. In view of the underlying ambiguity, the contemporary propensity of coups d'états is a scholarly opportunity to re-examine the corresponding impact on economic development on the one hand and on the other, channels by which the corresponding nexuses are apparent. Hence the interest of this study is to assess the impact of coups on the energy sector, in the light of its sparse documentation in the extant scholarly literature (Thyne & Powell, 2011; Gore, 2017; Gore et al., 2019).

Indeed, according to the United Nations (UN) General Assembly (2010), the energy sector, particularly electricity, is an essential instrument in promoting economic development through its preponderant role in the productive sector of a country. However, according to the African Energy Outlook (2021), access to electricity remains a real challenge for Sub-Saharan African countries, where there are great disparities in terms of electrification rates. Examples include: Burundi (9%), South Sudan (3%), Liberia (5.3%) and the Central African Republic (3%). The

[1] "Coup" and "coup d'état" are used interchangeably throughout the study. A coup d'état, also known as a coup or overthrow, is a seizure and removal of a government and its powers. Typically, it is an illegal seizure of power by a political faction, politician, cult, rebel group, military, or a dictator.

average annual per capita electricity consumption of about 500 kilowatt hours (kWh) is well below the level observed in other regions of the world (Le Picard, 2021). This position is consistent with Asongu and Odhiambo (2019, 2021) who have argued that the electricity produced in the entire SSA is equivalent to that produced by a single state of the United States such as the New York State.

The literature on the determinants of access to electricity has identified several explanatory factors classified into three groups according to Onyeji (2010), Kwakwa and Adusah-Poku (2019) namely: the availability of financial resources, population characteristics and finally the quality of institutions. Specifically, Poloamina and Umoh (2013) conclude that access to electricity in SSA is influenced by per capita income, the proportion of rural population, population density, transmission and distribution losses. Earlier, more microeconomic studies had highlighted other determinants such as household credit (Louw et al, 2008), literacy level of the head of the household (Banerjee et al., 2015), the Human Development Index (HDI) (Oona, 2010), private investment (Mwizerwa and Bikorimana, 2018) and institutions (Tehero, 2021), *inter alia.*

With regard to the latter, the literature dwells on the role of political institutions in access to electricity. On the one hand, it reveals that in developing countries, electricity distribution and access are generally a political decision because the government plays a key role in building and pricing energy infrastructure - subsidizing the price of electricity (Van Beers and Strand, 2013). Electricity access and distribution are also central to political campaigns because politicians promise to reduce energy prices and expand electrification, especially in rural areas. On the other hand, the work of Sarkodie and Adams (2020) shows that improving the policy environment in SSA is essential to ensure better access to electricity. Indeed, government efforts in terms of investment in energy sector infrastructure, energy technology development and long-term political commitment to energy policies provide an enabling environment for electricity access by reducing financial and investment risks.

In view of these elements, it can be seen that the thesis of political instability, of which coup d'état is a form (Alesina et al., 1996), is a determinant that has been very little documented, particularly in SSA, with the exceptions of the work of Thyne and Powell (2011). Moreover, according to the narratives, a great bulk of the literature has focused on analysing energy and its impact on political instability. With this in mind, this paper makes a critical contribution to the existing literature on the consequences of political instability. We first consider coups indiscriminately and then acknowledge the phenomena according to their nature (attempted

coup, successful coup, failed coup) and typology (military coup and civilian coup). Accordingly, the objective of this article is to assess the effects of coups on access to electricity in SSA in order to contribute to the extant literature which is highlighted in the previous paragraphs and more critically-engaged in Section 2.

The main argument in the manuscript is that coups d'états do not provide an enabling environment for the delivery of public commodities which include providing the population with access to services such as electricity. Accordingly, a coup d'etat is generally characterized by periods of political instability which reduce the effectiveness of the government in delivering corresponding public services such as access electricity. Whether the underlying argument or intuition withstand empirical scrutiny is a matter of empirical validity, not least, because as clarified in the previous paragraphs, political instability in general can have both positive and negative effects on access to basic public goods and services (Thyne and Powell, 2011, 2016; Van Beers and Strand, 2013; Asongu and le Roux, 2024).

The rest of the paper is organised as follows. Section 2 provides a brief review of the literature. Section 3 presents the methodology and data. Section 4 discloses and discusses the results and Section 5 concludes the study.

2.Literature review

As mentioned above, the empirical literature generally focuses on the effects of political instability without a particular emphasis on coups. In this paper, we try to fill this gap. According to Thyne and Powell (2011), the effect of coups on access to basic services depends on the nature of the coup. If the coup degenerates into a bloody civil war, as was the case with the Afghan war after the communist coup in 1978, then it is a brake on economic development with massive loss of life as a consequence. If, on the other hand, a coup brings to power more conciliatory leaders who embrace democracy without bloodshed or political unrest, then the coup will improve the welfare of the people and lead the country on the path to modernization and economic development. This is the example of the overthrow of the Omani Sultan Said bin Taimur by his own son Qaboos bin Said al-Said in 1970. Other African-centric examples are worth discussing in what follows.

Drawing broadly on the literature that highlights the influence of political instability on access to basic services, of which electricity is a key one, two main insights can be drawn. First, we

note that political instability reduces access to basic services by influencing the provision of such services. Indeed, political instability destabilizes the organization of work and the production of goods and services as it reduces the public savings that enable a government to provide public goods (Ndokang and Tsambou, 2015). It is in this sense that Ahlborg et al. (2015) argue that lack of electricity supply, for example, results in low levels of consumption.

Second, political instability that leads to the establishment of democracy (Thyne and Powell, 2016) facilitates access to basic services. This is because the system of democratic institutions requires that a country's leaders are accountable to its citizens, as elections give them the power to replace leaders who fail to meet their expectations after an evaluation (Lake and Baum, 2001). Democratic rule thus leads to the efficient provision of public goods accessible to the population through, for example, affordable electricity prices (Acemoglu and Robinson, 2006).

In light of this controversy, the role of political instability in access to basic services can be channelled through various mechanisms. First, within the remit of the institutional channel, coups weaken institutions when there is conflict by stimulating corruption and private appropriation of public resources. The result is the breakdown of social order and the government's inability or unwillingness to provide basic services (OECD, 2008). Second, in the presence of deteriorating infrastructure, poor management techniques and a weak information system, access to basic services may be unsustainable (OECD, 2008). Finally, the government may lack the financial resources to provide services (Welle, 2008), leading to low levels of access and the degradation of existing infrastructure through neglect of operation and maintenance. Zerriffi et al. (2002) show that power circuits are vulnerable during conflict as belligerents target cables and power plants, leading to long outages and the need to restore the system.

Even if the most obvious hypothesis is that coups are likely to slow down access to basic infrastructure, it is worth mentioning that the facts relating to a few African examples do not always point in this direction. On the contrary, access to electricity seems to take quite heterogeneous trajectories after the occurrence of a coup, or at least after an episode of political instability. In Zimbabwe, for example, access to electricity deteriorated until 2014, before rising again despite political instability. A similar pattern was identified in Uganda after the civil conflict that ended in 1986. In the case of Tunisia, a certain stability in access to electricity was noted in the aftermath of the revolution, while in Madagascar, the political crisis and coup of 2009 seem to have brought about a notable improvement in access to electricity. Such heterogeneity is also evidenced by the data (World Bank, 2022).

Moreover, regarding the instances where there has been an increase in electricity following a coup or civil war, it is relevant to emphasize that, even while access to electricity may eventually increase over time as a result of the coup or battle, access to electricity is still incredibly slow. A good example of this scenario is the case of Uganda, where access to electricity has increased since 1986, but at a very slow pace. According to World Bank data and authors writing about electricity in Uganda, access to electricity has remained appallingly low twenty years later, though it has only increased more rapidly since 2015 (Gore, 2017; World Bank, 2022). In fact, access to electricity did indeed improve in Zimbabwe after 2014 (Gore, 2017; Gore et al., 2019). Similarly, according to the narrative, Tanzania's rate of power access in a somewhat stable environment is comparable to that of Uganda. In these situations, as well as for the continent at large, it is critical to acknowledge the attention that investing in access to power and the global market for African energy investments receives. Therefore, while the present study uses panel data, a deeper understanding of the unique impact of coups requires an awareness of the specific country background, regime, and donor policy regarding electrification (Gore, 2017; Gore et al., 2019).

These various patterns then raise other questions, notably how long it takes for the coup to have an effect, whether positive or negative. In fact, it is difficult to give a definitive answer. It all depends on the motivation for the move, between altruism and adventurism. In the altruism thesis as explained by Thyne and Powell (2016) and Marinov and Goemans (2014), putschists commit a coup because of an objective of economic prosperity and political legitimacy. They then aim to open up the country to foreign aid as well as trade and investment, especially with democracies, and to end international sanctions as quickly as possible. This is how we can understand the 2010 coup in Mali, for example. In line with the thinking of previous authors (Braimah and Forson, 2023; Osei-Tutu and Weill, 2023; Faré et al., 2023), the more or less rapid improvement in living conditions is intimately linked to the pace at which democratization is implemented in the economy. Consequently, the faster the progress towards democracy, the faster (in our case) access to electricity can improve. The existence of constraints to the democratization process could then explain why, in some cases, even with altruistic motivations, access to basic public services remains low. With regard to the adventurism thesis, it appears as an infantile attempt at governance (Pryce and Time, 2023), completely opposed to democracy. In such a context, where the putschist thinks above all of retaining power, very little attention is paid to the well-being of the population, and military spending occupies an

increasingly important place to the detriment of social spending. In this case, access to basic public services can deteriorate rapidly. In some cases, the putschist initially presents an image of liberator, giving hope to the people, before setting up a repressive regime.

3.Empirical framework

This section describes the data and the empirical methodology.

3.1Model specification and estimation

In order to assess the effects of coups on access to electricity in SSA, we specify the following dynamic empirical model:

$$Elec_{it} = \alpha_1 Elec_{it-1} + \alpha_2 .Coup_{it} + \alpha_3 .X_{it} + \varepsilon_{it}$$

Where i and t represent the country and time respectively. Elecit captures access to electricity and Elecit-1 its lagged value. Coup denotes the coups d'etat variable and Xit represents the set of control variables used. ε_{it} is the error term that includes individual and time specific effects. Given the dynamic nature of the above equation, standard panel methods are not appropriate. Furthermore, the estimation of this equation is subject to a potential endogeneity bias which may result from the fact that some regressors are not fully exogenous due to reverse causality with the dependent variable, measurement bias and omitted variable bias. The literature shows, for example, that access to basic services also influences the quality of institutions (Asongu and Le Roux, 2024). It is also possible that the country-specific effect is correlated with one or more regressors. Failure to account for endogeneity bias may lead to underestimation of the coefficients and unreliability of the corresponding statistical inferences. Similarly, the results cannot be interpreted in terms of causal effects.

For the above reasons, equation (1) is estimated by the generalized method of moments (GMM) originally proposed by Arellano and Bond (1991). Due to the limitations of difference GMM[2] especially for small samples, we opt for system GMM as suggested by Arellano and Bover (1995) and Blundell and Bond (1998). The system GMM estimator includes the difference equation and the level equation. As such, it suffers from the problem of instrument proliferation. In order to limit this problem, Roodman (2009) proposes that the number of instruments should not exceed the number of countries. We perform a set of tests to check the validity of our estimates. On the one hand, the over-identification test which asserts under the null hypothesis

[2]Difference GMMs generally produce biased estimators for small samples.

that the instruments are exogenous, and therefore valid. On the other hand, the autocorrelation test which should lead to the rejection of the null hypothesis of no autocorrelation at order 1, but accept it at order 2. Finally, we obtain robust standard errors using Windmeijer's (2005) finite sample correction.

3.2 Data

The study covers the period 1980-2017 and includes a sample of 40 SSA countries listed in Table A.1 in the Appendix. The variables used in the different estimates are described below. Access to electricity is the dependent variable used in the study. It is defined as the percentage of the total population with access to electricity. The variable is taken from the World Bank's World Development Indicators (WDI) database. Coups d'état represents our main explanatory variable of interest. In order to test the sensitivity of the results, the data for this variable are drawn from two sources. The first is from the Center for Systemic Peace database and measures the occurrence of coups. It is a dichotomous variable that takes the value of 1 if a coup d'état occurs and 0 otherwise. We also consider the variable 'missed coups' which takes the value 1 if the coup is missed and 0 otherwise. Subsequently, we use the database proposed by Bjørnskov and Rode (2020). In addition to the occurrence of coups and successful coups, this database has the advantage of distinguishing between military and civilian coups. All the control variables come from the World Bank's WDI database. These are: real GDP per capita in logarithm, foreign direct investment (FDI), natural resources, trade openness, national savings and rural population. The control variables have been documented in the extant literature covered in the introduction and Section 2. Regarding the anticipated signs from the control variables: real GDP per capita, FDI and national savings are expected to improve access to electricity in contrast to the size of the rural population. The effects of natural resources and trade openness are rather ambiguous. Table A.2 in the appendix provides summary statistics and data sources.

4.Empirical results

In this section, we present and discuss the results obtained from our different empirical exercises. Table A.3 in the appendix shows the correlation between the selected variables. It shows that there is a negative and significant correlation between coups and access to electricity in SSA. Indeed, whatever the nature of the coup (successful or failed, military or civilian), the correlation coefficient is always negative and significant at the 1% level. This presumes a negative relationship between the two variables. To test the validity of this presumption of

causality, we present in the following the results of our estimations by the GMM method in a two-stage system.

Table 1. Baseline results

	Occurrence of coups	Unsuccessful coup
L.Access to electricity	0.996***	0.996***
	(0.018)	(0.012)
Coup	-0.969***	-0.729***
	(0.312)	(0.164)
GDP per capita (log)	1.678***	1.603***
	(0.604)	(0.534)
Foreign direct investments	0.051***	0.037***
	(0.017)	(0.009)
Natural resources	-0.060***	-0.065***
	(0.011)	(0.011)
Trade openness	-0.006	-0.006
	(0.005)	(0.004)
National saving	-0.048***	-0.035***
	(0.015)	(0.011)
Rural population	0.003	-0.003
	(0.033)	(0.032)
Constant	-8.729	-8.119
	(5.836)	(5.579)
Observations	672	672
Number of countries	39.00	39.00
Number of instruments	35.00	39.00
AR (1) test *p-value*	0.00	0.00
AR (2) test p-value	0.87	0.82
Hansen test p-value	0.22	0.30
F-Statistics	82372.39***	102713.30***

Notes: This table reports the results of a set of dynamic panel estimations aimed at estimating the effect of coups on access to electricity. All regressions are estimated with annual data from 1980 to 2017, using the two-step system GMM estimator. The bottom of the table reports the p-values of standard specification tests. Robust (Windmeijer) standard errors are in brackets. p < 0.10, ** p < 0.05, *** p < 0.01.

Table 1 below shows the results of our baseline model in which the coup d'état variable is taken from the Center for Systemic Peace database. From an econometric point of view, the post-estimation tests validate our results. The autocorrelation tests indicate that the null hypothesis of no autocorrelation is rejected at order 1 while it is not rejected at order 2. Similarly, Hansen's overidentification test allows us not to reject the null hypothesis of instrument validity. With regard to the effect of coups on access to electricity, the results of the estimations support the intuitions of the correlation tests. We find that coups have a negative and significant effect on access to electricity in SSA. This result does not change, even when considering failed coups. Our results then suggest in light of the arguments proposed by Ahlborg et al. (2015), Ndokang

et al. (2015) and Thyne and Powell (2011) that coups in SSA do not systematically lead to democratic transitions that are conducive to the provision of basic public goods and services. Similarly, failed attempts do not appear to discipline incumbent governments in terms of improved electricity provision.

Table 2 presents the results of the alternative estimates. We use an alternative database from the work of Bjørnskov and Rode (2020) to measure the occurrence of coups. We also test the effect of successful coups as well as the effects of military and civilian coups. The results obtained are not sensitive to the use of alternative data since the first column indicates that the occurrence of coups significantly reduces people's access to electricity as in Table 1. The result remains the same when we consider successful coups. The latter also hinders access to electricity in SSA. Finally, with regard to the distinction between military and civilian coups (the last two columns of the table), it appears that neither is favourable to the people in SSA. Indeed, both significantly reduce access to electricity in the region.

Table 2. Results from alternative measures of coup d'état

	Occurrence of coups	Successful coup	Military coup	Civilian coup
L.Access to electricity	0.903***	0.973***	0.959***	0.992***
	(0.018)	(0.011)	(0.026)	(0.011)
Coup	-1.154***	-1.100***	-1.563***	-1.414***
	(0.345)	(0.365)	(0.516)	(0.427)
GDP per capita (log)	3.377***	1.421**	1.955**	1.157**
	(0.520)	(0.538)	(0.907)	(0.526)
Foreign direct investments	0.048***	0.065***	0.061***	0.059***
	(0.016)	(0.016)	(0.016)	(0.016)
Natural resources	-0.026	-0.012	-0.052***	0.034
	(0.018)	(0.017)	(0.016)	(0.022)
Trade openness	-0.025***	-0.021***	-0.009***	-0.017***
	(0.006)	(0.006)	(0.003)	(0.005)
National saving	-0.074***	-0.050***	-0.098***	-0.034*
	(0.013)	(0.015)	(0.028)	(0.018)
Rural population	0.021	0.000	-0.039	-0.001
	(0.018)	(0.016)	(0.037)	(0.016)
Constant	-17.660***	-5.708	-5.918	-5.511
	(4.046)	(3.966)	(7.578)	(4.037)
Observations	700	700	700	700
Number of countries	40.00	40.00	40.00	40.00
Number of instruments	35.00	35.00	34.00	35.00
AR (1) test p-value	0.00	0.00	0.00	0.00
AR (2) test p-value	0.88	0.84	0.96	0.79
Hansen test p-value	0.22	0.18	0.22	0.15
F-Statistics	21767.18***	114045.16***	23066.58***	50718.57***

Notes: This table reports the results of a set of dynamic panel estimations aimed at estimating the effect of coups on access to electricity. All regressions are estimated with annual data from 1980 to 2017, using the two-step system GMM estimator. The bottom of the table reports the p-values of standard specification tests. Robust (Windmeijer) standard errors are in brackets. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A brief analysis of the effect of control variables indicates that real GDP per capita and foreign direct investment have a positive and significant effect on access to electricity, while national savings have a negative effect. It is more difficult to comment on the effects of natural resources and trade openness. But in any case, their effects are not positive in the specifications.

5.Conclusion and policy implications

In this paper we have assessed the effects of coups on access to electricity in Sub-Saharan Africa. These effects are not necessarily easy to predict given the conflicting positions in the extant literature, especially as it pertains to contingencies on the institutional and political implications of coups. If coups lead to a democratic transition, then better access to basic public goods and services can be expected. But if the result is conflict, then it is more likely to lead to deterioration in access to public goods and services. The effect of coups on access to electricity is ultimately an empirical question. To the best of our knowledge, there is no study that has specifically addressed this issue. This study has thus complemented the extant literature by focusing on a sample of 40 SSA countries over the period 1980-2017. The econometric approach is a dynamic panel estimation based on the generalized method of moments (GMM). Our results are unanimous and indicate that coups significantly reduce access to electricity in SSA. This result does not depend on the type of coup, whether it was a successful or failed coup, military or civilian. Thus, coups in SSA do not result in a democratic transition that would be beneficial to people's greater access to basic public services.

Accordingly, given that access to electricity is understood in the study within the remit of grid access, measures should be taken to diversify mechanisms of access to electricity in sampled countries, not least, because grid access is not the only source of electricity and increasing grid access is particularly difficult in access. Other sustainable alternatives that are consistent with the United Nations Sustainable Development Goals (SDGs) on renewable energy could be considered. These alternatives should include, small forms of access such as small solar home systems because Africa gets much more hours of sunlight compared to other continents of the world (Boadu and Otoo, 2024). Hence, governments of sampled countries, multinational financial institutions such as the African Development Bank and donors should consider these

alternative sources of electricity when funding projects designed to increase electricity access in the continent. Such investments could also involve wind energy in view of robustly diversifying the sources of electricity access and by extension, buffering against weak institutions and undemocratic regime change.

Furthermore, diversifying electricity access modes both in terms of national and global strategies is imperative, especially as it pertains to government and donors continuing to promote investment that is consistent with the diversity of needs in energy access. Accordingly, the underlying diversity could be a worthwhile way of buffering against future coups. Moreover, more solar home systems and decentralized generation systems could deflect attention from the investment needs and deterioration of the main generation source or central grid, which should be considered by policy makers when such diversification strategies are being implemented.

In terms of institutional investments that are worthwhile to drive electricity access through other mechanisms, both private and public energy financing projects should be tailored such that energy finance commitments are based on needs and not exclusively driven by potential profits, so that countries that are more prone to coup d'etats are not left behind (Oyintarelado, 2023). Governments should also be open to more suppliers of renewable forms of electricity in view of increasing competition and reducing the cost of installation to the average household. Moreover, policymakers from countries providing the funding could tailor funds by prioritizing a criterion for the distribution of finance that is based on yearly demands, especially from countries that have historically received comparatively low funding and yet are prone to political instability and coups d'état. The underlying success of above recommendations can be further facilitated by diversifying funding sources, especially as it pertains to potential funders redirecting financing mechanisms to investors and regional African banks and then leave governments of sampled countries to tailor complementary policies towards crowding-in private funding to projects that are characterized by a substantial potential of renewable electricity access that is robust to political instability and coups d'etats.

The underlying implications on electricity governance as well as investments in access obviously concern Agenda 2063 of the African Union on environmental sustainability and the United Nations 2030 SDGs focusing on renewable and sustainable energy, not least, because clean and renewable forms of electricity access will *inter alia*, reduce the use of biomass and gasoline that have been established to be used in many African countries to generate electricity and fuel (Perros et al., 2024; Peters et al., 2024). While this study has focused on sub-Saharan

Africa, the corresponding implications could appeal to North African countries as well as other developing countries experiencing the same concerns. However, extension of the attendant policy implications should be subject to empirical scrutiny and validity.

Beyond the above policy considerations, political stability and the establishment of inclusive institutions are a real necessity in the region. These would go a long way to providing enabling conditions for access to public commodities such as electricity which is fundamental in driving economic development and by extension, sustainable development outcomes. It follows that this present study can be extended by considering the empirical framework within the remit of other United Nations' Sustainable Development Goals (SDGs). Moreover, country-specific studies should also be considered for more targeted country-oriented implications.

Appendices

Table A.1. List of countries

1	Angola	**11**	Cote d'Ivoire	**21**	Liberia	**31**	Rwanda
2	Benin	**12**	Eswatini	**22**	Madagascar	**32**	Senegal
3	Botswana	**13**	Ethiopia	**23**	Malawi	**33**	Seychelles
4	Burkina Faso	**14**	Gabon	**24**	Mali	**34**	Sierra Leone
5	Burundi	**15**	Gambia, The	**25**	Mauritania	**35**	South Africa
6	Cabo Verde	**16**	Ghana	**26**	Mauritius	**36**	Sudan
7	Cameroon	**17**	Guinea	**27**	Mozambique	**37**	Tanzania
8	Comoros	**18**	Guinea-Bissau	**28**	Namibia	**38**	Togo
9	Congo, Dem. Rep.	**19**	Kenya	**29**	Niger	**39**	Uganda
10	Congo, Rep.	**20**	Lesotho	**30**	Nigeria	**40**	Zambia

Table A.2 Summary statistics and data sources

Variables	Obs	Mean	Std.Dev.	Min	Max	Definition	Sources
Coup d'Etat	1579	0.027	0.163	0	1	Number of successful coups d'état that occurred in the year of record.	Center for Systemic Peace
Unsuccessful coup	1579	0.058	0.249	0	4	Number of attempted (but ultimately unsuccessful) coups d'état that occurred in the year of record.	
Coup d'Etat	1634	0.082	0.294	0	2	Number of total attempted coups d'état that occurred in the year of record.	Bjørnskov and Rode (2020)
Successful coup	1634	0.031	0.172	0	1	Number of successful coups d'état that occurred in the year of record.	
Military coup	1634	0.054	0.227	0	1	Number of military coups d'état that occurred in the year of record.	
Civilian coup	1634	0.021	0.143	0	1	Number of civilian coups d'état that occurred in the year of record.	
Access to electricity	915	33.342	25.744	0.01	100	Access to electricity is the percentage of population with access to electricity. In the context of Africa, this mainly corresponds to grid access.	World Development Indicators
GDP per capita (log)	1597	6.993	1.017	5.101	9.93	Gross domestic product divided by midyear population. Data are in constant 2015 U.S. dollars.	
Foreign direct investments	1580	3.222	8.389	-28.624	161.824	Net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor (% of GDP).	
Natural resources	1584	11.353	11.06	0	84.229	Sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents (% of GDP).	
Trade openness	1458	67.646	36.25	6.32	311.354	Sum of exports and imports of goods and services (% of GDP).	
National saving	1170	16.382	13.259	-70.263	87.096	GDP less final consumption expenditure (% of GDP).	
Rural population	1634	65.829	15.624	11.024	95.661	People living in rural areas, defined as the difference between total population and urban population (% of total population).	

Table A.3 Correlation matrix

Coup d'Etat (SCP)	1											
Unsuccessful coups (SCP)	0.0865***	1										
	(0.000)											
Coup d'Etat (BR, 2020)	0.267***	0.404***	1									
	(0.000)	(0.000)										
Successfulcoups(BR, 2020)	0.421***	0.137***	0.616***	1								
	(0.000)	(0.000)	(0.000)									
Military coup(BR, 2020)	0.296***	0.332***	0.815***	0.563***	1							
	(0.000)	(0.000)	(0.000)	(0.000)								
Civil coup(BR, 2020)	0.0497***	0.184***	0.502***	0.264***	-0.0170	1						
	(0.000)	(0.000)	(0.000)	(0.000)	(0.187)							
Accesstoelectricity	-0.0744***	-0.144***	-0.152***	-0.0929***	-0.139***	-0.0721***	1					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)						
GDP per capita (log)	-0.0985***	-0.125***	-0.154***	-0.114***	-0.136***	-0.0736***	0.781***	1				
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
Foreigndirectinvestment	-0.0212	-0.0297*	-0.0324*	-0.0223	-0.0288*	-0.0143	0.0578***	0.0940***	1			
	(0.130)	(0.034)	(0.016)	(0.097)	(0.033)	(0.289)	(0.000)	(0.000)				
Naturalresources	0.0342*	0.0332*	0.0398**	0.0208	0.0300*	0.0158	-0.221***	-0.148***	-0.00200	1		
	(0.014)	(0.017)	(0.003)	(0.119)	(0.025)	(0.237)	(0.000)	(0.000)	(0.882)			
Tradeopenness	-0.0544***	-0.0669***	-0.0860***	-0.0643***	-0.0873***	-0.0306*	0.259***	0.299***	0.284***	-0.00240	1	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.026)	(0.000)	(0.000)	(0.000)	(0.861)		
National saving	-0.0506**	-0.0956***	-0.0967***	-0.0634***	-0.0705***	-0.0628***	0.246***	0.346***	-0.0388**	0.182***	0.178***	1
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.009)	(0.000)	(0.000)	
Ruralpopulation	0.0998***	0.100***	0.127***	0.105***	0.115***	0.0636***	-0.728***	-0.837***	-0.0966***	0.0200	-0.259***	-0.255***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.134)	(0.000)	(0.000)

Note: *p*-values in parentheses. $^{*}p< 0.05$, $^{**}p< 0.01$, $^{***}p< 0.001$. SCP = Center for Systemic Peaceand BR=Bjørnskov and Rode (2020).

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Author biographies

Therese E. Zogo

Dr. Therese E. Zogo (PhD) is Senior lecturer in the Faculty of Economics and Management at the University of Yaoundé II. Her research focuses on Development Economics, on themes such as institutions, trade facilitation, human capital development and financial inclusion. She also has strong interest in research focused on gender inclusion and is currently a Research Fellow in the Association for Promoting Women in Research and Development in Africa (ASPROWORDA).

Christophe M. Mbassi

Dr. Christophe Martial Mbassi (PhD) is Senior lecturer in the Faculty of Economics and Management at the University of Yaoundé II. He is currently the Head of the Research Office in the same Faculty. He is the author of some scientific publications in international journals. His current research focuses on the dynamics that link macroeconomics and financial policies to internal and external macroeconomics stability, environmental concerns, among others. He is also interested in development issues in Africa.

Simplice A. Asongu

Professor Simplice A. Asongu (PhD) is currently the Lead Economist and Director of the African Governance and Development Institute; Distinguished Visiting Professor at the University of Johannesburg and the Lead Economist and Director of the European Xtramile Centre of African Studies. He is also a: Senior Research Fellow at the Africa Growth Institute; PhD Supervisor at Covenant University, the University of Ghana; DBA Supervisor at Management College of Southern Africa and Research Associate in the University of South Africa (Pretoria, South Africa), and Oxford Brookes University (Oxford, UK).