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Women Political Empowerment and Coup d'etat in Africa, 1980-2020

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Abstract

Despite the renewed interest in coup d'etats, especially in Africa, studies on the subject are sparse. This article examines the effect of women's political empowerment on coup d'etats in Africa. The Logit-Probit model is used on a panel of 39 countries over the period 1980-2020. The results show that the political empowerment of women significantly reduces the chances of the occurrence of coup d'etats. The results remain robust to additional control variables. The established negative nexus is driven by the Eastern African region, compared to the Northern African region where the relationship is not significant and two other regions (i.e., Central and Western Africa) where an opposite nexus is apparent. Moreover, the findings remain robust to the disaggregation of the index of women's political empowerment as well as to the employment of different typologies of coups d'état. Good governance is significant in mediating the role of female political empowerment in reducing the chances of coup d'etats. Policy implications are discussed, especially as it pertains to accounting for and better valuing the rights of women as well as their increased participation in political life to improve their contribution to reducing coups d'état.

Keywords: women empowerment; coup d'etat; Africa

JEL Classification: D74; J13; J16; O55

1-Introduction

In recent years, Africa has seen a resurgence of coups that threaten to return it to the 1980s and the era of military rule. It is estimated that 475 coups have occurred around the world since the 1950s, but it is Africa which largely dominates the list with more than 200 attempts to seize power by force (NewsHawks, 2022). According to the narrative, since 2012, fourteen coups have taken place on the continent, including four in West Africa alone. We can cite for example, the coups d'état in Mali (2012, 2020, 2021), in Egypt (2013), in the Central African Republic (2013), in Burkina Faso (2015, 2022), in Chad (2021), in Guinea-Bissau (2012), Sudan (2019, 2021), Zimbabwe (2017), Guinea (2021) and Gabon (2023). Some of these countries have all had their governments overthrown and replaced by a military junta (Bukari & Braimah, 2023; Dossou et al., 2024; Zogo et al., 2024).

A coup d'etat indicates a sudden (lasting from a few hours to at least a week) and sometimes violent overthrow of the existing executive or government by the military and other elites of the state apparatus (Asongu & Ndour, 2023). "Coups d'etat" and "coup" are used interchangeably throughout the study. Interest in coups is based on their economic and political implications. The work of Bennett et al. (2020) shows that coups deteriorate the institutional environment, especially those that succeed. They are notably accompanied by an increase in political corruption. In the same vein, Bjørnskov and Pfaff (2021) demonstrate that rights to physical integrity deteriorate in the years following coups, not least, because effective elections and good governance are likely to decrease such deteriorating conditions (Zeydanli, 2017; Sarpong, & Bein, 2021). Several studies also underline that coups contribute to the reduction of investments (Levine & Renelt, 1992), economic growth increase the cost of debt and influence the conduct of monetary policy (Balima, 2020).

Other work suggests that coups can have beneficial development effects. For example, the work of Thyne and Powell (2011, 2016) suggests that they improve the well-being of populations and lead the country towards the path of modernization and development. However, the beneficial effects of coups are only possible if those in power are more conciliatory and bring democracy without bloodshed or political unrest.

In the literature, various factors are associated with this form of political instability. We can cite: ethnic and income inequalities, cultural pluralism, dictatorships, unprotected property rights, duration in power, manipulation of constitutions, greed, selfishness, inter alia, (Njangang et al., 2024). But little attention has been paid to women, particularly their empowerment and their impact on political instability and therefore conflicts, apart from the pioneering work of Caprioli (2000) who focused on gender inequalities and armed conflicts. It is demonstrated that countries with high levels of gender inequality are more likely to be associated with armed conflicts. Accordingly, to the best of our knowledge, in spite of the renewed interest in the subject, especially in Africa, studies on the subject are sparse.

Indeed, in many societies around the world, women are considered a marginalized group and as a result, they contribute very little to the development process. One of the policy approaches generally mentioned in the literature to help women contribute significantly to development, and which has seen renewed interest in recent years, is women's empowerment. This interest is more visible in the United Nations Sustainable Development fifth objective (i.e., SDG5). According to Adjei (2015), women's empowerment is defined as the process of enhancing women's assets and strengthening their capacities, which enables them to influence institutions that have a direct and an indirect impact on their modes of life. Specifically, the literature on women's empowerment shows that it allows convergence towards economic development through the reduction of infant mortality (Caldwell, 1993; Kumar, 2017), domestic violence (Schuler et al., 2018) and early marriages of young girls (Delprato et al, 2015). Likewise, in the long term, it helps reduce poverty (Chant, 2016), improve

childhood education (Hattlebackk & Gurung, 2016), stimulate economic growth (Duflo, 2012) and sustainable development (Asongu et al., 2023). According to Fayyaz and Kamal (2014), women's empowerment takes into account three dimensions: economic empowerment (rights to own land and property, agriculture, employment, trade and ICT); social empowerment (training, education, and skills development, health, including reproductive health and rights, access to HIV and AIDS prevention, treatment and care, access to water and sanitation system) and political empowerment (peace and security, governance and conflict).

In Africa, according to these different categories, progress has been noted over these six decades (Nga Ndjobo, 2023; Ongo Nkoa et al., 2022; Uwajumogu et al., 2022). It is relevant to note that "women empowerment" and "women political empowerment" are used interchangeably throughout the study. Moreover, while the main measurement of women's political empowers is the Women's Political Empowerment Index (WPEI), for robustness purposes, three more indicators are used, namely: women's civil liberties index (WCLI), women's civil society participation index (WCSPi) and political participation index of Women (WPPI). Similarly, women's labor force participation has increased over the past three decades, although it has seen a downward trend since the global financial crisis, from 55.1 percent in 2007 to 52.4 percent in 2020. Also, the employment rate of women increased from 3.5% in 2007 to 4.7% in 2021, the highest of all regions (ILO, 2021). Finally, women benefit from better access to health services, but they still face many health risks. Specifically in sub-Saharan Africa, almost half of all child births are now attended by qualified health personnel (Tchamyau et al., 2023). In view of this remarkable progress, we ask ourselves whether the empowerment of women can influence, the neglected, yet relevant dimension of governance, especially with the resurgence of coups in Africa? Accordingly, to the best of knowledge, no study has directly assessed the linkage between women's empowerment and coups d'état, though some strands of the extant literature have touched on political instability and conflicts. Overall, based on this literature, two main ideas emerge regarding the effect of women's empowerment on conflicts, discussed in Section 2.1.

In the light of the above, this article aims to explore the relationship between women's empowerment and coups. It makes three contributions: first, we offer an empirical study of the link between women's empowerment and coups d'état in Africa. Second, this article offers important evidence for policies aimed at reducing coups and overcoming the challenge that prevents women from empowering themselves in Africa. Third, we identify both coup' d'état according to their typology (military coup d'état, civil coup d'état, successful coup d'état, failed coup d'état) and regional specificities, as well as the empowerment of women according to the political dimension.

The rest of this article is organized as follows. The second section discusses the theoretical underpinnings as well as identifies and motivates potential transmission channels. The third is devoted to the methodology. The fourth presents the results obtained and corresponding robustness checks. The fifth assesses mechanisms by which the nexus occurs while the sixth concludes with implications and future research directions.

2- Theoretical underpinnings

2.1 Feminist versus pessimistic currents

As highlighted in the introduction, there are two main ideas surrounding the impact of women's empowerment on conflicts. On the one hand, an optimistic trend or feminist theory which shows that women are more peaceful than men in international relations (Tessler & Warriner, 1997). Indeed, Struzik (2020) identifies five reasons why women's empowerment leads to peace and therefore reduces conflict: (i) when women and girls participate in peace negotiations, the quality and duration of peace endures. (ii) The more female suffrage a country has before the occurrence of an international conflict, the more likely it is to resolve the conflict without resorting to military violence. And countries that best protect women and girls experience fewer conflicts. (iii) Likewise, equality between men and women promotes economic development, which helps prevent wars. (iv) Women are often the first to notice growing tensions within their communities and can help alleviate them before they become worse. (v) When women are in leadership positions, the chances of peace in a country are even greater – and women leaders advocate for greater gender equality.

On the other hand, a pessimistic tendency which affirms that both men and women have peaceful attitudes towards conflicts. Additionally, women also support conflicts by taking-up arms to fight; or join armed groups and provide support services. For example, women pressure men in Uganda to engage in violent livestock raids so they can pay expensive bride prices (Specht, 2013).

2.2 Substantive Representation of Women (SRW) in Creative Capital Theory (CCT)

In accordance with the relevant literature, the Creative Capital Theory (CCT) is based on the premise that a valuable and creative working class (i.e., consisting of citizens in economic and political circles who add value to politics and economic, respectively) is important in politico-economic development processes in a country (Asongu et al., 2024; Lopes et al., 2011). When the theory is contextualized to the focus of this study, it becomes apparent that substantive representation of women (SRW) (i.e., women's substantive political representation) can provide a context for a working class of women to improve both economic and political developments, especially as it pertains to providing enabling conditions for the mitigation of coup d'états in the perspective of Struzik (2020) and extant literature on the SRW (Kodila-Tedika & Asongu, 2018).

Building on the above, the CCT in the context of SRW can be understood within the remit of women empowerment reducing opportunities for coups d'états because, in accordance with Struzik (2020), inter alia: women are more predisposed to participate in peace processes and settlement of conflicts. The five main reasons underlying the consistency between the arguments of Struzik (2020), SRW (Kodila-Tedika & Asongu, 2018) and the CCT (Lopes et al., 2011) have been clarified in the introduction. It follows that the SRW by means of women's empowerment can be expected to be negatively associated with opportunities of reducing coup d'états.

While the CCT has received criticism in some scholarly circles because economic development from a specific working class depends on innovation compared to creativity (Amabile, 2018), within the context of this study, the ability of women to engage in constructive processes that engender settlement of conflicts, bring peace and promote political stability, does not depend on exceptional technological innovation, but on the creative ability of women in providing an enabling environment for the reduction of opportunities for coup d'états.

Given the above, the study hypothesizes that:

Hypothesis 1: Women empowerment reduces the chances of coups d' Etat in Africa.

Hypothesis 2: Women's empowerment reduces the chances of coup d'états through strong governance institutions.

3- Methodological Strategy

3.1-Model and empirical data

It is important to recall that the main objective of this article is to examine the influence of women's political empowerment on coups in African countries.

Given that the dependent variable is a dichotomous variable, from the existing literature (Bijsterbosch & Dahlhaus, 2011; Cincotta, 2023), the nonlinear empirical probabilistic model to be estimated is specified as follows in Equation (1):

$$Y_{it} = \alpha_i + \beta WPEI_{it} + \lambda X_{it} + \varepsilon_{it} \quad (1)$$

with Y_{it} defined as the ratio between the probability noted p_{it} that event i occurs at time t and the probability that it does not occur, noted $1 - p_{it}$. This is the dependent variable that measures the occurrence of coups and is extracted from two secondary sources. These sources are needed to take into account the different modalities of coups in this study. The first comes from the Center for Systemic Peace database and measures the occurrence of coups. This is a dichotomous variable that takes the value 1 if a coup occurs and 0 otherwise. We also consider the variable "failed coups" which takes the value 1 if the coup is failed and 0 otherwise. Finally, we retain the "successful coup d'état" which is a binary variable which takes 1 if there was a successful coup d'état during the year and 0 otherwise. To this end, we use the database proposed by Bjørnskov and Rode (2021).

Women Political Empowerment Index_{it} (WPEI) is the main independent variable that measures political empowerment. Accordingly, the Women's Political Empowerment Index (WPEI) has been used in the extant literature as an indicator of female political empowerment (Asongu et al., 2022). This index considers women's civil liberties and women's participation in political affairs and civil society. Additionally, it varies between "0 and 1". The value "0" denotes the absence of empowerment while the value "1" denotes strong empowerment of women and is taken from the VDEM data base which is a secondary data source.

X_{it} reflects the vector of control variables representing the potential determinants of the occurrence of coups d'état retained in this study from a secondary source. These are: education (EDUC), Trade (TRADE), natural resources (TNT), Remittance of migrants (Remittances). The variables listed above come from the World Development Indicators (WDI). The indicators have been documented in the extant literature as determinants of political instability and coup d'état literature (Bell, 2016; Gassebner et al., 2016; Hiroi & Omori, 2013; Powell, 2012).

The data covers the period 1980 to 2020 (i.e., 40 years). Only the availability of data justifies the choice of this period as well as the corresponding panel made-up of 39 African countries out of the 54 nations in the continent. The countries are: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Chad, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome and Principe, Sénégal, Seychelles, Sierra Leone, Somalia, South Africa, Togo, Tunisia, Uganda, Zambia and Zimbabwe. The corresponding descriptive statistics and correlation matrix are provided in Table 1 and Table 2, respectively.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
totalcoups	1520	.735	.441	0	1
Failedcoups	1520	.438	.496	0	1
Succescoups	1520	.297	.457	0	1
millcoup	1520	.507	.5	0	1
civilcoup	379	.208	.406	0	1
WPEI	1520	.337	.244	.038	.912
WCLI	1520	.616	.218	.023	.938
WCSPi	1520	.625	.198	.054	.894
WPPI	1520	.809	.202	0	1
Trade	1520	68.58	38.89	6.32	347.997
Educ	1520	48.591	25.571	2.484	115.957
TNR	1444	7.63	7.719	0	88.592
Remittance	1520	4.168	11.088	0	235.928
language	1520	.572	.302	.012	.923
religion	1520	1.174	5.061	.003	40.507
ethnic	1520	1.358	5.072	.039	40.324

Source: Authors

Table 2: Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) totalcoups	1.000															
(2) Failedcoups	0.602	1.000														
(3) Succescoups	0.263	-0.607	1.000													
(4) millcoup	0.578	0.177	0.357	1.000												
(5) civilcoup	0.271	0.357	-0.159	-0.608	1.000											
(6) WPEI	-0.091	0.004	-0.090	-0.156	0.091	1.000										
(7) WCLI	-0.131	-0.090	-0.023	-0.322	0.245	0.407	1.000									
(8) WCSPI	0.097	0.052	0.030	-0.010	0.093	0.343	0.751	1.000								
(9) WPPI	0.181	0.235	-0.111	0.009	0.150	0.089	0.313	0.461	1.000							
(10) Trade	0.097	0.142	-0.076	-0.419	0.569	-0.073	0.079	-0.126	0.252	1.000						
(11) Educ	0.121	0.305	-0.252	-0.007	0.119	-0.048	-0.070	-0.101	0.155	0.172	1.000					
(12) TNR	0.087	-0.007	0.095	0.341	-0.317	-0.077	-0.222	-0.059	-0.138	-0.297	-0.266	1.000				
(13) Remittance	-0.214	-0.222	0.054	-0.115	-0.180	0.132	0.279	0.164	0.220	-0.003	-0.060	-0.103	1.000			
(14) language	-0.126	-0.064	-0.047	-0.047	-0.044	0.151	0.292	0.250	0.093	-0.168	-0.560	0.154	0.141	1.000		
(15) religion	-0.060	0.238	-0.344	0.062	-0.156	0.241	0.307	0.433	0.023	-0.338	-0.199	0.210	0.043	0.511	1.000	
(16) ethnic	0.032	0.071	-0.052	0.105	-0.057	-0.110	-0.190	-0.210	-0.124	-0.218	-0.226	0.007	-0.053	0.559	0.150	1.000

Source: Authors

3.2-Estimation technique

The estimation process of our model takes place in two steps: the first consists of estimating a normal logistic regression while the second step entails the estimation of a probit regression. Indeed, the factors explaining the occurrence of coups are analyzed using a logistic regression model, similar to the study carried out by Bijsterbosch and Dahlhaus (2011) and Cincotta (2023). This estimation technique is relevant because the dependent variable is in a binary form, taking the value 1 if the coup occurs and 0 otherwise. Specifically, the probability of occurrence of coups is summarized in Equation (2):

$$P[y = 1] = \frac{\exp(x_i\beta)}{1 + \exp(x_i\beta)} \quad (2)$$

where y represents the occurrence of coups (yes = 1, no = 0), x_i is a set of explanatory variables and β the vector of parameters that we must estimate.

4- Presentation of results and discussion

4.1. Preliminary results

Table 3 presents the results of the equation estimates of the impact of women's political empowerment on coups in Africa for the overall sample over the period 1980-2020. We carried out the estimations under different specifications using the Probit and Logit methods. The independent variables of interest and control variables are significant in all specifications. Specifically, our results show that women's political empowerment reduces the chances of the occurrences of a coup d'état. In other words, the political empowerment of women can reduce the odds of coups d'état in Africa. Such a result can be explained by statistics from the Afrobarometer (2021), especially as it pertains to recent progress in the representation rate of women in parliament as well as the working population.

Table 3. Basic estimate of the effect of political empowerment on coups

	(1)	(2)	(3)	(4)
	Probit		Logit	
VARIABLES	Coups d'Etat			
WPEI	-0.291*** (0.0884)	-0.536*** (0.175)	-0.499*** (0.157)	-0.856*** (0.325)
Trade		0.00262*** (0.000964)		0.00452* (0.00259)
Educ		-0.00637*** (0.00180)		-0.0113*** (0.00345)
TNR		0.0221** (0.0109)		0.0561* (0.0313)
Remittances		-0.113*** (0.0192)		-0.248*** (0.0574)
Country fixed effect	Yes	Yes		Yes
Time fixed effect	Yes	Yes		Yes
Constant	1.114*** (0.0408)	2.069*** (0.233)	1.868*** (0.0738)	3.610*** (0.612)
Observations	1520	1,507	1520	1,507
Log pseudolikelihood	-2196	-499.9	-2199	-497.9
Pseudo R2	0.108	0.317	0.107	0.320
Chi2	500.8	346.0	445.5	265.0
P-value	0.000	0.000	0.000	0.000

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

4.2. Robustness test

The previous section used the WPEI as a measure of women's empowerment. This measure may result in a restricted assessment of the impact of women's empowerment on coups, given that women's political empowerment is comprised of several indicators and approaches. In addition, the results can also be influenced by the estimation technique. This is why to test the robustness of our main results; we carry out two significant robustness tests in this sub-section. First, we reproduce the previous regressions by disaggregating the women's political empowerment index (Table 4) into: women's civil liberties index (WCLI), women's civil society participation index (WCSPi) and political participation index of Women (WPPI). Second, we also break down coups by typology (Tables 5 and 6) to make our results more robust. These

are: military coup, civil coup, successful coup and failed coup. Results from the two sets of robustness checks are consistent with those disclosed in Table 3. Concerning the control variables, education and remittances reduce the chances of coup d'etat occurrence while natural resources and trade have the opposite incidence. A reason could be that education improves understanding of the negative consequences of coup d'etat while natural resource (i.e., the natural resource curse phenomenon) and trade (i.e., even trade in natural resources) instead have the opposite tendency. Moreover, remittances can provide citizens with income that reduces their propensity to be involved in politics for better standards of living.

Table 4. Disaggregated effect of political empowerment on coups

	(1)	(2)	(3)	(4)	(5)	(6)
	Probit			Logit		
VARIABLES	Coups d'Etat					
WCLI	-0.802*** (0.222)			-0.942* (0.494)		
WCSPi		-0.448 *** (0.0842)			-0.404*** (0.084)	
WPPI			- 0.391 *** (0.424)			-0.364*** (0.0951)
Trade	0.00474*** (0.00104)	0.00386*** (0.00103)	0.00324*** (0.000878)	0.00531** (0.00223)	0.00429** (0.00214)	0.00442** (0.00208)
Educ	-0.0217*** (0.00187)	-0.0222*** (0.00192)	-0.0103*** (0.00192)	-0.0393*** (0.00380)	-0.0405*** (0.00379)	-0.0177*** (0.00392)
TNR	0.0354*** (0.00860)	0.0324*** (0.00857)	0.00891 (0.00691)	0.0962*** (0.0189)	0.0889*** (0.0182)	0.0192 (0.0163)
Remittance	-0.152*** (0.0224)	-0.153*** (0.0213)	-0.115*** (0.0187)	-0.379*** (0.0588)	-0.370*** (0.0524)	-0.260*** (0.0529)
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.731*** (0.220)	3.310*** (0.287)	3.865*** (0.441)	5.160*** (0.489)	6.388*** (0.593)	7.139*** (0.940)
Observations	1,520	1,520	1,520	1,520	1,520	1,520
Log pseudolikelihood	-742.6	-731.7	-514.3	-706.2	-693.9	-510.4
Pseudo R2	0.342	0.352	0.351	0.375	0.386	0.356
Chi2	356.0	337.1	391.2	299.4	280.6	291.6
P-value	0.000	0.000	0.000	0.000	0.000	0.000

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

Table 5. Effect of political empowerment on Coup Categories

	(1)	(2)	(3)	(4)
	Probit		Logit	
VARIABLES	millcoup	civilcoup	millcoup	civilcoup
WPEI	-0.423*** (0.141)	-0.425 (0.542)	-0.821*** (0.246)	-0.590 (1.151)
Trade	-0.0148*** (0.00100)	-0.00760 (0.0212)	-0.0231*** (0.00211)	-0.0254 (0.0606)
Educ	-0.00707*** (0.00170)	0.111* (0.0592)	-0.0102*** (0.00327)	0.180 (0.201)
TNR	0.0799*** (0.0124)	0.00646 (0.0266)	0.190*** (0.0337)	0.0146 (0.0528)
Remittance	-0.127*** (0.0133)	0.0538 (0.206)	-0.215*** (0.0233)	0.323 (0.662)
Constant	1.843*** (0.226)	-17.58*** (5.135)	2.688*** (0.489)	-44.15** (18.02)
Country fixed effects	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes
Observations	1,520	379	1,520	379
Log pseudolikelihood	-812.8	-75.16	-792.5	-75.00
Pseudo R2	0.331	0.694	0.348	0.695
Chi2	545.5	1577	419.7	321.2
P-value	0.000	0.000	0.000	0.000

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

Table 6. Effect of political empowerment on types of coups

	(1)	(2)	(3)	(4)
	Probit		Logit	
VARIABLES	Failed coups	Succes coups	Failed coups	Succes coups
WPEI	0.888*** (0.133)	-0.530*** (0.158)	0.388 *** (0.226)	-0.976*** (0.291)
Trade	0.00482*** (0.000741)	-0.000964* (0.000557)	0.00570*** (0.00141)	-0.00200** (0.000956)
Educ	0.00480*** (0.00164)	-0.0270*** (0.00265)	0.00955*** (0.00310)	-0.0555*** (0.00759)
TNR	0.0379*** (0.00812)	0.00989 (0.00703)	0.0664*** (0.0176)	0.00460 (0.0146)
Remittance	-0.132*** (0.0226)	0.0210*** (0.00798)	-0.334*** (0.0525)	0.0361*** (0.0127)
Constant	-0.480** (0.208)	0.600*** (0.205)	-0.338 (0.436)	1.701*** (0.509)
Time fixed effect	Yes	Yes	Yes	Yes
Country fixed effect	Yes	Yes	Yes	Yes
Observations	1,520	1,520	1,520	1,507
Log pseudo likelihood	-953.7	-707.4	-921.0	-703.7

Pseudo R2	0.193	0.180	0.220	0.184
Chi 2	278.7	313.7	238.4	244.3
P-value	0	0	0	0
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1				
Source: Authors				

To assess whether the findings are stable when taking possible omissions in account, additional variables are included, as apparent in Table 7. Accordingly, several factors have been documented in the literature to explain coups (Bell, 2016; Gassebner et al., 2016; Hiroi & Omori, 2013; Powell, 2012). It follows that baseline findings could be biased if these other factors are not accounted for. We therefore include two additional control variables: (i) socio-cultural variables and (ii) regional effects.

The interest in carrying out this sensitivity analysis is to assess whether the effects of women's political empowerment withstand empirical scrutiny when socio-cultural variables are added. The results of the sensitivity analysis with the socio-cultural variables are provided in Table 7. These results, further reveal that the political empowerment of women reduces the odds of occurrence of coups in Africa. The results are consistent with those obtained in the baseline model or Table 3. When regional factors are taken into account as apparent in Table 8, the findings reveal that the negative nexus between the WPEI and the outcome variable is driven by Eastern African countries, compared to: (i) Southern African countries (i.e., where the effects is not significant) and (iii) Central and Northern African countries (i.e., in which the effects have the opposite sign). The underlying finding by African regions is further clarified in Figure 1.

Table 7. Addition of socio-cultural factors

VARIABLES	(1)	(2)	(3)	(4)
	Coups d'Etat			
WPEI	-0.395** (0.181)	-0.657*** (0.185)	-0.526*** (0.177)	-0.523*** (0.195)
Trade	0.00113 (0.000888)	0.00330*** (0.00103)	0.00307*** (0.000993)	0.00245** (0.00103)
Educ	-0.0138*** (0.00249)	-0.00645*** (0.00174)	-0.00535*** (0.00178)	-0.0220*** (0.00358)
TNR	0.0262** (0.0112)	0.0205** (0.0104)	0.0226** (0.0108)	0.0268** (0.0121)
Remittance	-0.114*** (0.0186)	-0.114*** (0.0186)	-0.111*** (0.0191)	-0.112*** (0.0170)
Language	-0.428*** (0.064)			-0.428*** (0.064)
Religion		0.467*** (0.126)		0.231*** (0.0361)
Ethnic			0.210*** (0.0413)	0.631* (0.335)
Time fixed effect	Yes	Yes	Yes	Yes
Country fixed effect	Yes	Yes	Yes	Yes
Constant	3.284*** (0.301)	1.951*** (0.236)	1.820*** (0.239)	3.664*** (0.407)

Observations	1,474	1,507	1,507	1,474
Log pseudo likelihood	-475.0	-487.0	-492.8	-452.1
Pseudo R2	0.329	0.335	0.327	0.361
Chi2	371.4	365.3	380.6	412.0
P-value	0.000	0.000	0.000	0.000

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

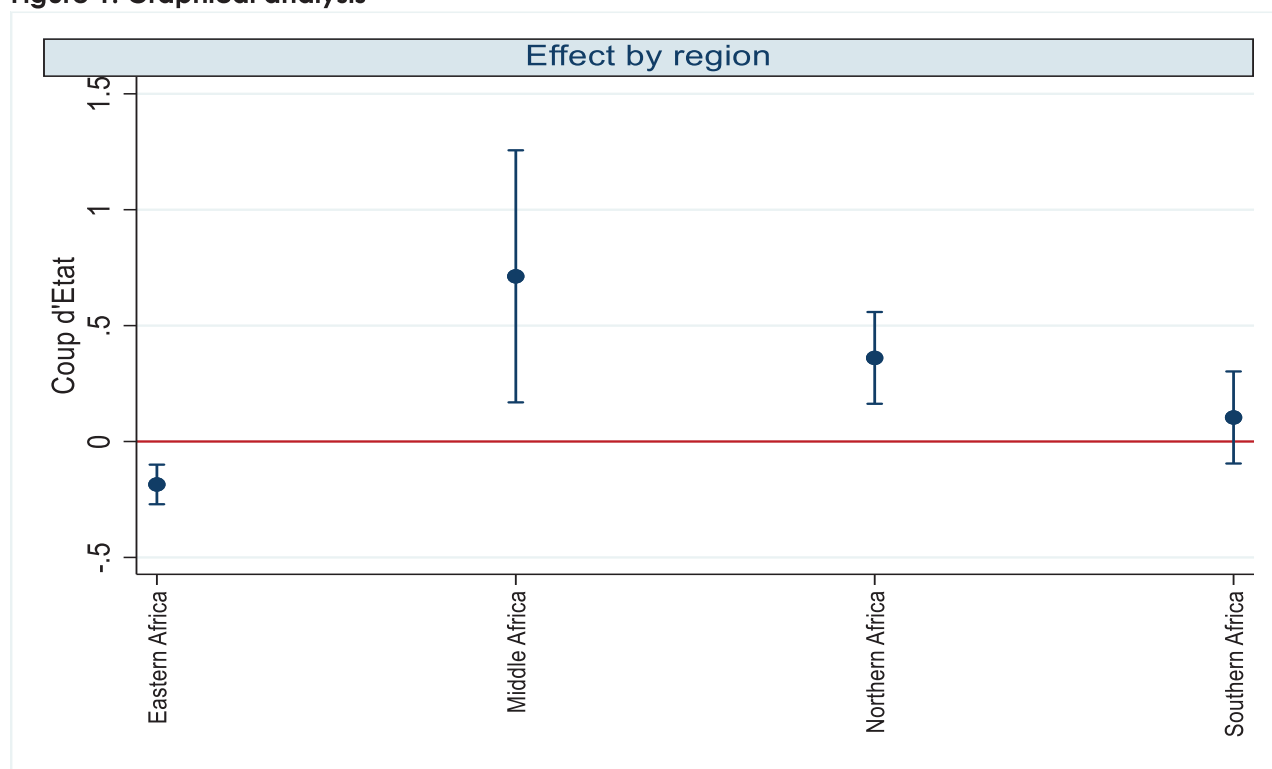
Table 8. Marginal effects of regional heterogeneity

Variables	Eastern Africa	Central Africa	Northern Africa	Southern Africa
WPEI	-0.185*** (0.043)	0.713*** (0.277)	0.360*** (0.101)	0.103 (0.101)
Observations	1,076	1,076	1,076	1,076

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

Figure 1. Graphical analysis



Source: Authors

5. Analysis of the mediation effect

The transmission channels are examined in this section. We consider four main governance mechanisms, notably: control of corruption, government effectiveness, political stability and quality of regulation. The approach is consistent with Ang (2013) and based on simultaneous equation modeling. Graphical insights into the mediation are provided in Figure 2.

The underlying mediation which is focused on testing Hypothesis 2, involves the subsequent simultaneous estimation of Equation (3) and Equation (4) below:

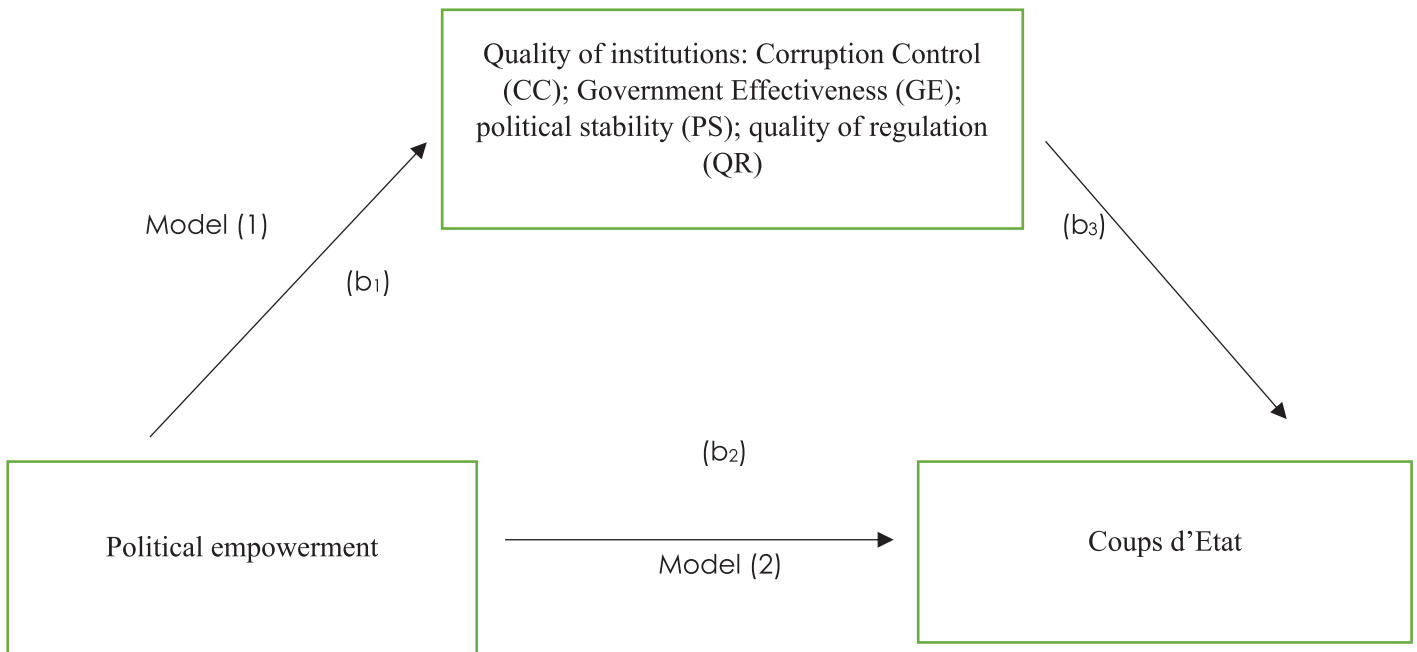
$$\text{Model 1: } Med_i = a_1 + b_1 WPEI_i + c'_1 X_i + u_i \quad (3)$$

$$\text{Model 2: } Coup\ Etat_i = a_2 + b_2 WPEI_i + b_3 Med_i + c'_2 X_i + v_i \quad (4)$$

where Med_{it} represents the mediation variables (control of corruption, government effectiveness, political stability and quality of regulation). The composition effect is derived from the above two models as follows:

Indirect effect: $b_1 * b_3$; direct effect : b_2 and total effect: $(b_1 * b_3) + b_2$.

Figure 2. Modeling the mediating effects of institutional quality



Source: Authors

The findings in Table 9 confirm the significant roles of governance dynamics in mediating the role of female political empowerment in reducing the odds of the occurrence of coup d'etats in Africa, especially as it pertains to the mediating mechanisms of political stability, regulatory quality, corruption-control and government effectiveness. It follows that in order to reduce coup d'etats, female political empowerment potentially contribute to increasing respectively, political stability, regulatory quality, corruption-control and government effectiveness.

Table 9: Mediation analysis in the impact of women political empowerment on coup d'états								
	(i) Mediator : Political stability		(ii) Mediator : Regulatory quality		(iii) Mediator : Corruption-control		(iv) Mediator : Government effectiveness	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
VARIABLES	PS	Coups d'Etat	QR	Coups d'Etat	CC	Coups d'Etat	GE	Coups d'Etat
stabpoetabsviol		- 0.1657*** (0.013)						
WPEI	0.8789*** (0.083)	0.3022*** (0.036)	0.5779*** (0.052)	0.2915*** (0.036)	0.8319*** (0.058)	0.2769*** (0.041)	0.6521*** (0.056)	0.3389*** (0.034)
QR				- 0.2701*** (0.020)				
CC						- 0.1452*** (0.019)		
GE								-0.2774*** (0.016)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.9671*** (0.040)	0.5919*** (0.059)	-0.7694*** (0.030)	0.6334*** (0.056)	-0.7975*** (0.024)	0.6646*** (0.067)	-0.7897*** (0.030)	0.5395*** (0.054)
Observations	1, 444	1, 444	1, 444	1, 444	1, 444	1, 444	1, 444	1, 444
	Coef	P-value	Coef	P-value	Coef	P-value	Coef	P-value
(A) Mediation tests								
Step 1 (X → M)	0.879	0.000	0.578	0.000	0.832	0.000	0.652	0.000
Step 2 (M → Y)	-0.166	0.000	-0.270	0.000	-0.145	0.000	-0.277	0.000
Step 3 (X → Y)	0.302	0.000	0.291	0.000	0.277	0.000	0.339	0.000
Sobel test (of indirect effect)								
(A) Composition of the effect								
RIT	0.931		1.153		0.774		1.145	

RID	0.482	0.536	0.436	0.534
Conclusion BK	The mediation is partial	The mediation is partial	The mediation is partial	The mediation is partial
Conclusion ZLC	The mediation is partial	The mediation is partial	The mediation is partial	The mediation is partial

Notes: This table presents the partial results of the identification of the transmission channels of the effects of female political empowerment on coup d'état. These results are obtained from the estimation of structural equation models following Zhao et al. (2010) and Baron and Kenny (1986). The channels tested are government effectiveness, corruption-control, regulatory quality and political stability. For each channel, the table offers a conclusion on the existence or not of mediation and on the partial or complete nature of the mediation. For Zhao et al. (2010), there is no mediation if the coefficient of the indirect effect obtained by the Monte Carlo z test is not significant. There is complete mediation if the test of the indirect effect is significant, but not the direct effect. Mediation is partial if, on the contrary, the direct effect is significant and, in particular, complementary if the indirect and direct effects are of the same direction and concomitant if these effects are of opposite signs. There is "some" mediation if both of the aforementioned effects are significant, in which case, (i) mediation is complete if the test for the indirect effect is significant, but not the test for the direct effect; (ii) it is partial if only one of the direct and indirect effects is significant; or (iii) neither is significant. P values are in parentheses. ZLC: Zhao et al. (2010); BK: Baron and Kenny (1986). * $p < 0.10$. ** $p < 0.05$. *** $p < 0.01$.

Concerning the nexus of the findings with the extant literature, the overall results on the negative influence of the investigated linkage is consistent with the strand of literature on the positive relevance of the SRW in politico-economic outcomes, especially as it pertains to, *inter alia*, the relevance of SRW in democracy. Moreover, the findings only partially confirm the results of Kodila-Tedika and Asongu (2017) who have established that “women in power” does not necessarily improve “the power of women”, especially as it relates to the finding of Northern Africa which is not significant. The positive or negative significance of the findings in two regions (*i.e.*, Central and Western African regions) and Eastern Africa, respectively, run counter to the results of Rivas (2013) and Xu (2015) who have established that the political engagement of women is essentially restricted to development issues in local communities.

Thus, overall, the heterogeneity of the findings is broadly inconsistent with the strand of literature that the SRW within political spheres does not guarantee favorable political outcomes (Celis & Childs, 2008; Htun & Weldon, 2010) with exception of the Eastern African experience. In summary, the findings are both consistent with the optimistic and pessimistic schools of thought, especially as concerns how SRW is affecting political outcomes, notably: (i) the optimistic school from Tessler and Warriner (1997) and Struzik (2020) is confirmed for Eastern Africa while (ii) the pessimistic school (Specht, 2013) is valid for Central and Western Africa.

6. Conclusion

The objective of this study has been to analyze the effect of women's political empowerment on coups d'état in Africa. To achieve this objective, we have specified a coup d'état model in which, the political empowerment of women plays a crucial role, considering the specificities of African countries. The analysis of the statistical properties of our data for 39 African countries observed over the period 1980-2020, has motivated the use of the Logit-Probit method for the corresponding empirical analysis. We have found that women's empowerment, measured by the political empowerment index, contributes significantly to reducing the odds of the occurrence of coups d'état in Africa. This can be explained by the sharp increase in the representation of women in parliament. The results obtained remain generally stable when we integrate other control variables such as socio-cultural factors. The findings are robust to different dimensions of women political employment and dynamics of coups d'état. The established negative nexus is driven by the Eastern African region, compared to the Northern African region where the effect is not significant and two other regions (i.e., Central and Western Africa) where an opposite effect is apparent.

To improve the contribution of women's political empowerment to the reduction of coups in Africa, we recommend that the promotion of women's rights and their greater participation in political life should be strongly encouraged, especially as it pertains to promoting gender equality in decision-making positions. Moreover, there is a need to strengthen the capacities of women groups in the areas of lobbying, networking and leadership which would serve as a platform for exchange and availability of knowledge regarding the roles of women in achieving more justice. A practical strategy through which to increase women's political participation is to impose a minimum threshold of women in political and administrative portfolios at the local, regional and national levels of governance.

Obviously, we have also established from the findings that the negative linkage is driven by the Eastern African region. This implies, countries in the Western and Central African regions in which an opposite effect is apparent need to do more in terms of bringing women on board the political processes that can ultimately avert coup d'états. As clarified in the previous paragraph, a major step in this direction is more involvement of women in the political processes. Furthermore, given the frontier nature of Eastern African countries in terms of how gender political empowerment influence coup d'états, there are obvious lessons that can be learnt by corresponding countries in Western and Central Africa, especially as it pertains to maintaining democratic institutions and building good governance structures which have been established in the robustness section of the study as critical mediating frameworks through which female political empowerment affects the occurrence of coup d'états.

The study evidently leaves opportunities for future research, especially in considering how other United Nations' sustainable development goals (SDGs) are related to the rising phenomenon of coup d'états in Africa. Moreover, narrowing the perspective to specific event studies, especially as it pertains to country-specific studies will provide policy makers and scholars with insights into country-specific policy implications. Further research should also be tailored to account for more dimensions of endogeneity. Accordingly, there are four main causes of endogeneity: (i) the unobserved heterogeneity; (ii) variable omission bias; (iii) measurement errors and (iv) simultaneity or reverse causality. This study has accounted for the first-three dimensions by respectively, (i) controlling for time and country fixed effects; (ii) involving

variables in the conditioning information set to account for omitted variables and (iii) employing alternative dependent and independent variables of interest in order to address potential measurement errors. Hence, future studies should consider alternative estimation techniques to tackle the unaddressed simultaneity or reverse causality concern.

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