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WORKING PAPER SERIES

234, 2025

GOVERNANCE AND INTERCOMMUNAL ARMED CONFLICT: EVIDENCE FROM 49 AFRICAN COUNTRIES

Forthcoming: International Journal of Public Administration

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Abstract

Poor governance is often blamed for conflict. This study investigates the relationship between governance and intercommunal conflict in 49 African countries over the period 1990-2020, using a correlated random effects model. The results indicate that political stability, rule of law, and regulatory quality significantly reduce the likelihood of intercommunal conflict, both in the short and long term. Ethnic fragmentation is found to directly increase the probability of conflict, but this effect is moderated by effective governance. Economic development, as measured by GDP per capita, also reduces conflict risk. These findings remain robust under various sensitivity checks. Based on these results, the paper offers targeted policy recommendations aimed at addressing ethnic fragmentation and promoting good governance to mitigate the risk of conflict.

Keywords: Governance, Intercommunal conflicts, Correlated random effect model, Africa

1. Introduction

The role of institutions in shaping socio-economic outcomes is fundamental to discussions in development economics. Robust institutions are widely recognized for their capacity to foster economic growth (Rodrik, 1999; Acemoglu et al., 2005), improve social well-being (Ouedraogo et al., 2022), and ensure environmental sustainability (Baloch, 2019; Traoré et al., 2023). Beyond formal administrative structures, institutions encompass the norms, values, and governance mechanisms that guide interactions among economic and political actors (North, 1990; Acemoglu et al., 2005; Williamson, 2000). In contexts of significant institutional fragility, they play a crucial role in regulating social tensions and serve as critical barriers against internal conflict (OECD, 2018; Collier, 2008).

Africa offers a compelling case study of the vital role of institutions in promoting socio-economic stability. The region continues to grapple with persistent internal conflicts that impede economic development and exacerbate social inequalities. These conflicts have far-reaching consequences, negatively impacting various dimensions including the attainment of Sustainable Development Goals (Wang et al., 2024), international trade (Eberhard-Ruiz, 2024), food security (Maitre d'Hôtel et al., 2023; Azanaw et al., 2023; Makinde et al., 2023), public health (Arage et al., 2022), gender equality (Ronzani et al., 2025), and the well-being of vulnerable populations, particularly women and children (Alabi, 2024). Despite the gravity of these challenges, existing studies often fall short in fully exploring the institutional determinants of conflict, particularly within frameworks that address the multidimensionality of governance.

While the literature generally acknowledges the pivotal role of institutions in conflict prevention (Walter, 2015; Diallo and Tapsoba, 2022), it often simplifies this relationship by relying on global governance indicators or regional aggregate analyses. While valuable, these approaches tend to overlook the nuanced institutional dynamics at the local level and fail to adequately capture the specific impact of governance structures in fragile states. Furthermore, they rarely examine the variability of conflict across national contexts, especially in areas marked by weak governance (World Bank, 2018).

This study seeks to deepen our understanding of the relationship between governance quality—examined across its multiple dimensions—and the occurrence and intensity of internal conflicts in sub-Saharan Africa. Its contribution is twofold: methodological and empirical. Methodologically, we use high-resolution, geo-referenced data from the Uppsala Conflict Data Program (UCDP), enabling a detailed exploration of localized conflict dynamics. In addition, it employs an innovative approach using correlated random-effects models, which address the limitations inherent in traditional methods (Yiew et al., 2016). This hybrid approach combines the strengths of both fixed and random effects models, capturing variations within

and between countries while effectively accounting for unobserved heterogeneity. By providing a more nuanced and dynamic perspective on the governance-conflict relationship, this study aims to offer valuable insights into the interaction between governance and conflict in regions with pronounced institutional fragility.

The structure of the article is as follows: Section 2 reviews the relevant literature; Section 3 outlines the data and methodology; Section 4 presents the empirical results; and Section 5 concludes with a discussion of policy implications and suggestions for future research.

2. The Role of Governance in Conflict Dynamics: A Systematic Review of the Literature

A significant body of research has established the critical role of governance in shaping societal well-being. Specifically, good governance is widely recognized as a driver of wealth creation, social stability, and equitable development. In contrast, the absence of robust governance structures is often linked to poor economic performance, heightened social tensions, and violent conflict. This literature review explores the complex relationship between governance and conflict, focusing on how institutional quality affects the likelihood of internal conflict, particularly in fragile states.

Governance, defined as the frameworks and institutions that shape political, economic, and social interactions, plays a pivotal role in promoting well-being. Numerous studies have demonstrated a positive association between good governance and improvements in wealth, consumption, and overall human welfare (Cárcaba and al., 2022).

In addition to economic growth, good governance has proven essential in advancing environmental sustainability, poverty alleviation, and inequality reduction (Prasad, 2003; Shafique et al., 2006). More recently, research has extended these themes to gender equality (Dar and Shairgojri, 2022), with strong institutions significantly enhancing women's empowerment, economic opportunities, and societal participation (Bangura and Thomas, 2015).

Institutional failures often manifest in inefficiencies, corruption, and exclusionary practices, resulting in profound social discontent and conflict (Tollefsen, 2020; Justino, 2006; Hendrix et al., 2023). Specifically, unmet public expectations, particularly regarding job opportunities, resource distribution, and access to public services, may lead to frustration and disillusionment, which can escalate into collective violence (Ross et al., 2012). Weak governance structures, therefore, serve as catalysts for conflict by exacerbating existing social grievances and amplifying intergroup rivalries.

The economic consequences of governance deficiencies extend beyond inefficiencies. Studies show that in societies where governance is weak, the social compact between citizens and the state deteriorates, increasing grievances and triggering internal violence over resources, territory, or political power (Cappelli et al., 2023). When states fail to effectively deliver public goods and services, the social contract weakens, contributing to further political instability (Cammeraat, 2020).

An important aspect of the governance-conflict literature is the nonlinear relationship observed between institutional quality and conflict. Research indicates that the impact of

governance on conflict risk follows a complex trajectory, rather than a simple linear progression. Hegre and Nygård (2015), for example, introduces the concept of the "semi-democratic" regime, where political systems blending autocratic and democratic elements are more prone to conflict. This inversion of conventional expectations suggests that extreme governance structures, whether purely authoritarian or fully democratic, provide greater stability compared to regimes that mix democratic procedures with autocratic control. This U-shaped relationship is further supported by Acemoglu et al. (2005), who argue that weak institutions foster political violence by failing to manage social tensions effectively and uphold the rule of law. On the other hand, strong governance facilitates peaceful outcomes by offering mechanisms for equitable resource distribution, resolving disputes, and mitigating the escalation of minor grievances (Walter, 2015).

Beyond its implications for economic development, effective governance is a critical driver of human development. Countries with robust governance structures are better positioned to manage social inequalities and provide essential public services, such as education, healthcare, and welfare (Rodrik, 1999; Acemoglu et al., 2005). By addressing income inequality and social needs, good governance tackles some of the root causes of conflict. In contrast, where governance is weak and economic resources are poorly allocated, disenfranchisement and resentment are likely to escalate into armed resistance and rebellion (Pradhan and al., 2023; Ashraf et al., 2022).

Recent studies have also explored the link between improved governance, environmental sustainability, and reduced degradation (Baloch, 2019; Traoré et al., 2023; Ashraf and Javed, 2023). By promoting equitable resource use and ensuring social welfare, good governance can alleviate tensions over resource control, thus mitigating the risk of conflict driven by environmental stress or resource scarcity.

Africa is a region where the links between governance, development, and conflict are particularly evident. The region has been historically plagued by frequent and prolonged conflicts, often rooted in weak governance and poor state institutions (World Bank, 2018). These conflicts have resulted in entrenched poverty, political instability, and inadequate investment in infrastructure, all of which contribute to the proliferation of violent conflicts.

Additionally, the region suffers from significant economic disparities and an over-reliance on extractive industries, which can fuel conflicts over resource distribution. Countries experiencing the "resource curse" tend to face heightened risks of conflict due to competition for control of valuable assets (Ross et al., 2012).

The rise in conflict incidence across Africa is part of a broader global trend. By 2030, nearly half of the world's poorest population is projected to live in conflict-prone countries, primarily in regions like Sub-Saharan Africa (World Bank, 2018). The relationship between governance and conflict risk in this region underscores the urgent need for institutional reforms to prevent further escalation. Strengthening governance frameworks can reduce conflict risk by ensuring more equitable economic policies and reinforcing social cohesion (Diallo and Tapsoba, 2022; Fearon and Laitin, 2003).

3.Data and Methodology

3.1. Data

This study focuses on a panel of 49 African countries using data from the World Bank's Development Indicators, the World Bank's Governance Indicators and the UCDP GED for the period 1990-2020. The list of countries is disclosed in Appendix Table A4. Moreover, the definitions of variables and corresponding sources are apparent in Appendix Table A1, the summary statistics in Appendix Table A2, the correlation matrix in Appendix Table A3. In line with the literature on domestic conflict, we utilized the incidence of intercommunal conflict as the dependent variable. This is defined as conflict between two social groups (such as ethnic or religious groupings) within the boundaries of a state. We make use of information from the geo-referenced event dataset (UCDP GED) of the Uppsala Conflict Data Programme, which collects data on fatal violence at the event level globally. Conflict situations that result in at least 25 battle-related fatalities during a calendar year are referred to be recorded lethal violence. The dataset includes details about the participants, the nature of conflict, the location and coordinates of each incident, and the precise dates on which the violence occurred.

In this study, we use the World Bank's six governance indicators to provide a comprehensive framework for understanding conflict mitigation. These indicators include control of corruption, government effectiveness, rule of law, regulatory quality, political stability and absence of violence, and voice and accountability. Specifically, control of corruption assesses the misuse of public power for private gain, while government effectiveness evaluates the quality of public services and policies. The rule of law reflects citizens' trust in societal rules, including property rights and the judicial system. Political stability and absence of violence assess the likelihood of destabilization, and voice and accountability capture citizen participation and freedom of expression. Lastly, regulatory quality measures the capacity to foster a vibrant private sector. These indicators, scored from -2.5 to 2.5, signal better governance and institutional strength at higher values, while lower scores indicate institutional weaknesses and greater conflict risks.

The selection of control variables is guided by the "Greed and Grievance" framework, which attributes conflicts to economic incentives, resource scarcity, inequality, governance quality, and demographic pressures (Collier and Hoeffler, 2004). GDP per capita and access to electricity serve as proxies for economic development, while population density captures socio-demographic factors influencing conflict risk. Population density has been documented as a potential conflict factor. High population growth and density are factors in the scarcity of renewable resources like forests, arable land, fisheries and fresh water. Access to resources

can trigger armed conflict (Ehrlich, 1968; Homer-Dixon and Blitt, 1998; Kaplan, 1994; Kahl, 2006). Urdal (2011) analysing the effect of population growth on conflict shows that high population growth levels and high population ratios to productive land do not influence the occurrence of armed conflict. As presented in the literature review section, economic conditions that determine the level of development are pivotal in shaping the occurrence of armed conflicts (Hao et al., 2020; Raleigh and Urdal, 2007; Iyoboy, 2014; Koubi et al., 2012; Hauge and Ellingsen, 1998). Empirical evidence underscores the economy as one of the most significant predictors of armed conflict. For instance, Raleigh and Urdal (2007) demonstrated that the level of development, as indicated by GDP growth, exerts a stronger impact on the likelihood of conflict compared to other variables such as land degradation, freshwater scarcity, population density, or economic transformation. Based on a case study of Nigeria, Iyoboy (2014) shows a long-term equilibrium relationship between conflict and economic growth, as the desire to control national wealth explains incidents of violent conflict. We also included access to energy as a control variable, following the empirical study by Ongo Nkoa and al., (2022), which demonstrates that in Africa, access to electricity can help reduce the risk of internal conflict. We control for the lagged value and a time-fixed effect of the dependent conflict variables, to account for any likely persistence in conflict occurrence.

Table A1 presents the sources of the variables and their corresponding definitions. Table A2 shows the descriptive statistics, while the correlation matrix are apparent in Table A3 The summary of the descriptive statistics shows that the means of the variables are comparable and that the corresponding standard deviations allow us to be confident in the emergence of reasonable estimated relationships. We presented the correlation matrix to detect any multicollinearity that might significantly bias the estimated coefficients. The results show that all exogenous variables except governance are uncorrelated. The question of the multicollinearity of the governance variables does not bias the estimated coefficients because the governance indicators are used exclusively as dependent variables in separate specifications.

3.2 Methodology

To estimate the model, we employ the correlated random effects (CRE) methodology, which has been selected for its robust handling of panel data structures and its ability to address the key issues associated with both fixed effects (FE) and random effects (RE) approaches. The CRE model is a sophisticated extension of both FE and RE methods, combining their respective advantages while mitigating their inherent limitations.

The CRE model overcomes several estimation challenges that are typically encountered in traditional methods. In particular, it addresses the bias stemming from unobserved

heterogeneity in FE models by incorporating within-group time-averaged covariates, as originally proposed by Mundlak (1978). These time-averaged covariates help capture between-group variation while controlling for unobserved time-invariant heterogeneity— a critical issue often overlooked in simple FE estimations.

By retaining the strengths of FE models, which account for unobserved country-specific effects, and integrating time-averaged variables, the CRE model allows for effective estimation of the effects of variables that do not exhibit substantial within-group variation. This capability is especially valuable in contexts where traditional FE methods would be unable to estimate such variables, as they would be omitted from the estimation process. The CRE model thereby facilitates the estimation of time-invariant effects, as highlighted by prominent scholars such as Allison (2009) and Wooldridge (2010), who demonstrate that CRE can successfully avoid excluding important variables such as institutional characteristics which exhibit minimal or no variation within each country over time but are crucial for understanding cross-country differences.

Moreover, the hybrid nature of the CRE model provides more comprehensive insights by accommodating countries with no within-group variation, a feature that distinguishes it from FE models, which would exclude such countries entirely. This capacity is particularly valuable in analyses involving heterogeneous units of observation, as it helps mitigate the selection bias that could arise from discarding these units. Consequently, the CRE model preserves a broader set of observations, enhancing the reliability and generalizability of the dataset, and ensuring that the analysis remains robust even in the presence of diverse country-level characteristics. The following equations (1) and (2) summarize the CRE estimation procedure.

$$\Pr(Y_{it} \mid X_{it}, Z_{it}) = G(\alpha + \beta_0 X_{it} + \sum_{k=1}^{n} \beta_k . Z_{ikt-1}) = \alpha + \beta_0 X_{it} + \sum_{k=1}^{n} \beta_k . Z_{ikt-1} + year + \mu_i + \varepsilon_{it}, \quad (1)$$

Where Y_{it} is a binary variable taking the value 1 if an intercommunal conflict occurs in country i in year t. Xit represents the matrix of good governance indicators (political stability, voice, regulatory quality, government effectiveness, rule and law, and corruption control). Z_{it} represents the set of control variables. In order to mitigate endogeneity problems, we have lagged our control variables. We captured the time trend by the variable $Year$. β_{it} is a vector of coefficients capturing the estimated parameters of the governance variables. δ_{it} is a vector of coefficients capturing the estimated parameters of our control variables. μ_i represents the unobserved country specificities over time and εit the residual term.

With CRE, equation (1) above is transformed into equation (2) below:

$$\Pr(Y_{it} \mid X_{it}, Z_{it-1}) = \alpha + \beta_{it} X_{it} + \sum_{k=1}^{n} \delta_{it} Z_{it-1} + \overline{X}_i + \overline{Z}_i + year + \mu_i + \varepsilon_{it}, \quad (2)$$

Where $\overline{X}_i + \overline{Z}_i$ represent the average for country i for $Xit\ and\ Zit$, respectively.

We included the mean values of the independent variables in order to control for unobserved country specificities that may be correlated with the variables of interest and/or control. This allows for the assumption of independence between the unmeasured country characteristics and the covariates (Cov(μi ,X)=0). The added variables (average values of time-varying covariates) are constant for a given country over the period studied, but vary from one country to another.

4. Empirical results

Table 1 presents the marginal effects of the relationship between good governance and internal conflicts. The corresponding estimated coefficients can be found in Tables A1 and A2 in the appendix. The key findings from this analysis are as follows: First, political stability, voice and accountability, and the rule of law each exhibit a significant negative impact on the probability of internal conflict. Specifically, the marginal coefficient for political stability is -0.081, which indicates that a one-unit improvement in this indicator reduces the average probability of armed internal conflict in Africa by 8.1 percentage points. This result, significant at the 1% level, highlights the critical role of promoting stable political institutions in conflict prevention. Second, the voice and accountability indicator yields a marginal coefficient of -0.1918, also significant at the 1% level. A one-unit improvement in this indicator leads to a 19.18 percentage point reduction in the probability of internal conflict, supporting the notion that inclusive institutions contribute to political stability by providing non-violent avenues for addressing social and political grievances. Lastly, the rule of law indicator shows a marginal coefficient of -0.237, significant at the 1% level, suggesting that enhancing the rule of law reduces the probability of internal armed conflict by 23.7 percentage points. The 'rule of law' variable reflects institutional mechanisms that ensure judicial impartiality, respect for human rights, and equal enforcement of the law. These results are consistent with conflict theory, which posits that strong, inclusive institutions mitigate social tensions by offering peaceful channels for dispute resolution, thereby reducing reliance on violence. Additionally, the long-term coefficients for political stability, voice and accountability, and rule of law remain negative and significant at the 1% level, indicating that these governance factors exert consistent effects both in the short and long term (see Appendix Table A6). The corresponding results employed governance variable with lags are apparent in Appendix Table A5.

These findings underscore the pivotal role of institutions in mitigating conflict in Africa, emphasizing the need for targeted governance reforms that prioritize political stability, accountability, and the rule of law. Such conclusions are consistent with theories of de-escalation and deradicalization, which assert that strong governance is fundamental to reducing the likelihood of conflict. Our results substantiate the findings of Yiew and al., (2016), who explored the impact of poor governance on conflict. It is important to note that some governance variables in our analysis exhibit non-significant effects, a discrepancy attributable to our consideration of both short- and long-term effects, as opposed to Yiew and al., (2016) focus on long-term outcomes. Nevertheless, we confirm the central role of governance in mitigating conflict, though its impact differs across governance dimensions.

Regarding the control variables, we find that increases in GDP per capita are associated with a decreased risk of conflict. All coefficients for GDP per capita are negative and statistically

significant, aligning with the results of Koubi et al. (2012), who argue that economic deterioration in non-democratic regimes heightens the probability of civil conflict. Conversely, our findings on access to electricity diverge from those of Ongo Nkoa et al. (2022), who suggest that improved electricity access reduces the incidence of conflict.

Table 1. Governance and intercommunal conflicts (Marginal effect)

	(1)	(2)	(3)	(4)	(5)	(6)
Access to electricity (-1)	0.0006	0.0006	0.001	0.001	0.0009	0.001
	(0.001)	(0.001)	(0.001)	(0.0015)	(0.001)	(0.001)
Population density (-1)	-0.002***	-0.001***	-0.001***	-0.002*	-0.002***	-0.003***
	(0.0008)	(0.0005)	(0.0002)	(0.001)	(0.0001)	(0.0003)
GDP per capita growth (-1)	-0.00008	-0.00008***	-0.00009***	-0.00003*	-0.00008***	-0.00004*
	(0.00001)	(0.00003)	(0.00004)	(0.00002)	(0.00003)	(0.00002)
Political stability (-1)	**-0.081*** **					
	(0.0288)					
Voice and accountability (-1)		**-0.1918*** **				
		(0.067)				
Regulation quality (-1)			-0.019			
			(0.046)			
Rule of laws (-1)				**-0.237*** **		
				(0.077)		
Goverment effectivness (-1)					-0.053	
					(0.068)	
Control of corruption (-1)						-0.048
						(0.079)
Numbers of observation	866	866	866	866	866	866
Numbers of countries	49	49	49	49	49	49

Source: authors. Note: *, **, ***: significance levels of 10%, 5% and 1% respectively. robust standard errors are used.

Table 2 presents the results on the link between governance and domestic conflict, conditional on the influence of factors linked to ethnic fragmentation. A society is said to be fragmented

when it is divided ethnically into several distinct ethnic groups. To measure this, studies generally adopt fragmentation indices (Fearon and Laitin, 2003). Analysing the role of ethnic fragmentation is important for several reasons. Firstly, development is slower in ethnically diverse societies, resulting in conflict (Habyarimana et al., 2007). Secondly, conflict can arise when relative (perceived) destitution (Gurr, 2000) or horizontal inequities emerge for ethnic groups. The literature on peace and conflict has shown the role that ethnic fragmentation can play as a potential risk factor for conflict. The results of quantitative studies are mixed. The link may be negative (Ellingsen, 2000; Collier and Hoeffler, 2004), positive or even non-existent (Fearon and Laitin, 2003). To examine the role of ethnic fragmentation in the relationship between governance and internal conflict, we introduced an interaction between the governance variable and the ethnic fragmentation index (Table 2). The results reveal a significant and positive direct effect of ethnic fragmentation, indicating that it increases the likelihood of conflict. This aligns with the findings of Easterly and Levine (1997), who suggest that ethnic fragmentation can exacerbate social tensions and undermine national cohesion. Similarly, Alesina (2003) show that highly fragmented societies are more prone to political disagreements and conflict.

However, our analysis also shows that improvements in governance indicators can mitigate these negative effects. First, political stability plays a key role in reducing inter-communal tensions exacerbated by ethnic fragmentation (column 1). This is due to its ability to limit the incentives for opportunistic or violent behavior within ethnic groups, as observed by Fearon and Laitin (2003). Second, voice and accountability strengthen democratic participation and social inclusion, thereby reducing mistrust between groups (column 2). This mechanism emphasize the importance of inclusive institutions in mitigating the divisive effects of ethnic fragmentation. Finally, the rule of law serves as a crucial institutional safeguard for managing potential inter-group conflicts in an equitable manner (column 3).

Table 2. Role of ethnicity fragmentation on governance-intercommunal conflicts nexus.

	(1)	(2)	(3)	(4)	(5)	(6)
Access to electricity (-1)	0.009	0.011	-0.0209	0.007	0.021	0.027
	(0.039)	(0.039)	(0.037)	(0.043)	(0.041)	(0.040)
Population density (-1)	**-0.032** ***	**-0.080** ***	**0.0855** ***	**-0.083** ***	**-0.082** ***	**0.074** ***
	(0.012)	**(0.027)**	**(0.029)**	**(0.030)**	**(0.029)**	**(0.027)**
GDP per capita growth (-1)	**-0.0004***	**-0.0006****	**-0.0002** ***	**-0.0003**	**-0.0003**	**-0.0002**
	(0.0002)	**0.0002**	**(.0004)**	**0.0004**	**(0.0004)**	**(0.0004)**
ethnicity fragmentation (-1)	**3.456****	**2.835***	**7.284*****	**3.457***	**5.251***	**5.559*****
	(1.490)	**(1.521)**	**(2.925)**	**(2.214)**	**(2.85)**	**(2.313)**
Political stability (-1)	**-1.072** ***					

	(0.284)					
Political stability * ethnicity fragmentation	**-1.662*** **					
	(0.043)					
Voice and accountability (-1)		**2.694** ***				
		(1.018)				
Voice and accountability * ethnicity fragmentation		**-1.964***				
		(1.216)				
Regulation quality (-1)			0.682			
			(1.171)			
Regulation quality * ethnicity fragmentation			1.201			
			(1.867)			
Rule of laws (-1)				**2.671** **		
				(1.375)		
Rule of laws * ethnicity fragmentation				**-4.662*** **		
				(1.904)		
Goverment effectivness (-1)					1.014	
					(1.129)	
Goverment effectivness * ethnicity fragmentation					-1.292	
					(1.648)	
Control of corruption (-1)						- 1.550
						(1.024)
Control of corruption * ethnicity fragmentation						-0.197
						(1.265)
Constant	**-5.597** **	**-2.734**	**-1.44***	-5.979	-6.198	-4.124
	(1.573)	**(1.099)**	**(0.885)**	(2.684)	(2.764)	(3.306)
Variable CRE	yes	yes	yes	yes	yes	yes
Year dummies	yes	yes	yes	yes	yes	yes
Numbers of countries	49	49	49	49	49	49
Log likelihood	-90.929	-88.500	-105.45	-96.728	-170.963	-102.938
Wald chi2	34.54	35.99	19.08	42.28	31.58	21.39

Source: authors.
Note: *, **, ***: significance levels of 10%, 5% and 1% respectively; robust standard errors are used.

Tables 3 and 4 show the results of the robustness tests. We undertook two types of robustness tests. The first approach involves estimating Equation 2 using conditional fixed-effects logit regression, while the second adds more control variables to the estimates. Time-invariant factors may influence the likelihood of conflict but are not directly observed. A standard logit model could yield biased estimates due to omitted unobserved characteristics. The fixed-effects specification addresses this issue, ensuring that coefficients reflect only within-group variation over time. Unlike random-effects models, which assume no correlation between covariates and unobserved heterogeneity, the conditional fixed-effects approach relaxes this assumption, enhancing robustness. It is particularly suited for binary outcomes and captures non-linear relationships without relying on linearity constraints. This method aligns with best practices in governance and conflict studies (e.g., Walter, 2015; Yiew et al., 2016), effectively isolating key covariates' impacts while accounting for unobserved heterogeneity. We find that the results confirm those of the baseline model.

Table 3. Governance and intercommunal conflict (conditional fixed-effects logistic regression)

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Type 2 conflicts	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**
Population density (-1)	**-0.122*** (0.002)**	**-0.114*** (0.003)**	**-0.142*** (0.004)**	**-0.154*** (0.002)**	**-0.135*** (0.003)**	**-0.194*** (0.001)**
GDP per capita growth (-1)	**-0.0006*** (0.0001)**	**-0.0008** (0.0001)**	**-0.0008*** (0.0002)**	**-0.0006** (0.0001)**	**-0.0008** (0.0002)**	**-0.0006*** (0.0001)**
Access to electricity (-1)	0.018 (0.043)	0.022 (0.084)	0.014 (0.184)	0.032 (0.045)	0.054 (0.143)	0.015 (0.033)
Political stability (-1)	**-1.256*** (0.092)**	**-**	-	-	-	-
Voice and accountability (-1)	**-**	**-1.034** (0.025)**	-	-	-	-
Regulation quality (-1)	-	-	-0.574 (0.895)	--	-	-
Goverment effectivness (-1)	-	-	-	-0.649 (0.745)	-	-
Rule of law (-1)	-	-	-	-	**-1.612*** (0.089)**	-
Control of corruption (-1)	-	-	-	-	-	-0.627 (0.835)
Constant	-4.934 (3.767)	-5.221 (4.276)	-4.352 (3.916)	-5.225 (4.155)	-4.462 (4.287)	-3.443 (3.784)
Number of observations	866	866	866	866	866	866
Numbers of countries	49	49	49	49	49	49
Log likelihood	-123.45	-125.82	-125.42	-125.83	-125.48	-125.96
LR chi2	54.38	45.84	43.92	52.08	52.93	48.01

Sources: authors.
Note: *, **, ***: significance levels of 10%, 5% and 1% respectively; robust standard errors are used.

The robustness of our findings is further supported by incorporating covariates that capture resource scarcity and socio-economic conditions, factors traditionally associated with governance outcomes and conflict. Resource scarcity, particularly the availability of arable land, is known to escalate competition and instability (Collier and Hoeffler, 2004). Likewise, a high dependence on agriculture correlates with greater fragility and an increased risk of conflict. Additionally, socio-economic factors such as youth unemployment and gender imbalances in labor markets contribute to societal tensions, with youth unemployment emerging as a particularly potent conflict driver, especially in the context of social inequalities (Urdal, 2011). Furthermore, rural-to-urban migration is often linked to social divisions and instability.

Our analysis shows that the negative relationship between key governance dimensions, specifically political stability, the rule of law, and accountability, and the likelihood of conflict remains robust even when these controls are included. These results align with existing literature that underscores the crucial role of governance in mitigating conflict (Acemoglu, Johnson, and Robinson, 2001). By accounting for these structural factors, our findings further reinforce the enduring and direct impact of governance on reducing intercommunal conflict, independent of socio-economic challenges.

Table 4. Governance and intercommunal conflict (adding more covariates)

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Variables	**Conflicts type 2**	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**	**Type 2 conflicts**
Access to electricity (-1)	0.015 (0.042)	0.021 (0.043)	0.032 (0.042)	0.037 (0.043)	0.032 (0.042)	0.046 (0.043)
Density of population (-1)	**-0.059*** (0.022)**	**-0.073*** (0.024)**	**-0.064*** (0.023)**	**-.078*** (0.027)**	**-0.064*** (0.023)**	**-0.088*** (0.026)**
GDPP per capita (-1)	**-0.0009** (0.0005)**	**-0.001** (0.0005)**	**-0.0009* (0.0005)**	-0.0011 (0.0005)	**-0.0009* (0.0005)**	**-0.001** (0.0005)**
Youth female unemployment (-1)	0.019 (0.085)	-0.023 (0.084)	-0.001 .087	-0.005 0.088	-0.001 (0.087)	0.006 (0.092)
Youth male unemployment (-1)	-0.026 (0.088)	0.005 (0.090)	0.0045 (0.093)	0.0004 (0.090)	0.004 (0.093)	0.039 (0.098)
Rural population (-1)	0.082 (0.198)	0.0498 (0.074)	0.099 (0.075)	0 .062 (0.076)	0.099 (0.075)	0.0606 (0.073)
Arable Land (-1)	-0.212 (0.1962)	0.023 (0.045)	0.039 0.045	0.031 (0.046)	0.039 (0.045)	0.041 (0.046)
Political stability (-1)	**-1.917*** (0.528)**	-	-	-	-	-
Voice and accountability (-1)	-	**0-2.395*** (0.996)**	-	-	-	-

Regulation quality (-1)	-	-	- 3.160*** (1.141)	-	-	-
Goverment effectivness (-1)	-	-	-	-2.190*** (1.219)	-	-
Rule of law (-1)	-	-	-	-	**-3.160 *** (1.141)**	-
Control of corruption (-1)	-	-	-	-	-	-1.339 (1.180)
Numbers of observation	848	848	848	848	848	848
Numbers of countries	49	49	49	49	49	49
Log likelihood	-149.99	168.738	-166.411	-169.962	-166.41	-169.145
Wald Chi2	46.78	35.07	38.39	35.34	38.39	34.09
Prob > chi2	0.019	0.202	0.415	0.19	0.1140	0.341
Rho (LR)	152.35	358.21	345.89	363.85	345.89	310.20
P-value	0.000	0.000	0.000	0.000	0.000	0.000

Source: Authors

Note: *, **, ***: significance levels of 10%, 5% and 1% respectively; robust standard errors are used.

5. Conclusions and future research

In this study, we examine the role of governance in mitigating internal conflict in Africa over the period from 1990 to 2020, using the correlated random effects (CRE) methodology. The empirical results reveal a robust and significant negative relationship between good governance and the likelihood of internal conflict. Specifically, the findings indicate that improvements in governance contribute to a reduction in conflict, both in the short and long term. The governance-conflict relationship is particularly evident in ethnically fragmented societies, where ethnic divisions exacerbate the risks of conflict. Thus, the establishment of inclusive political institutions is essential. Our study reveals that governance dimensions such as political stability, rule of law, and accountability are key factors in mitigating the effects of ethnic fragmentation on conflict. The robustness of the findings is further confirmed through several sensitivity checks, including the inclusion of control variables related to resource scarcity and socio-economic conditions.

The policy implications of these findings are critical for conflict prevention in Africa, particularly in contexts with high ethnic fragmentation. In such countries, priority should be given to inclusive governance reforms that foster national cohesion. These reforms should include the decentralization of political power to local authorities, ensuring more representative governance for all ethnic groups, as well as the creation of mechanisms for non-violent dispute resolution. These measures will enhance political stability and provide alternative channels for addressing grievances without resorting to violence. Ethnic-based inequalities in access to resources further exacerbate tensions and can trigger conflict. Policies aimed at equitable economic development, such as improving access to education, healthcare, and infrastructure in ethnically divided regions, are essential in reducing conflict risks. Additionally, targeted investments in social safety nets can stabilize vulnerable populations and decrease competition for limited resources, thus addressing some of the structural drivers of conflict. Furthermore, strengthening the rule of law is crucial for managing intergroup tensions. Establishing impartial, transparent legal systems that ensure equal justice for all ethnic groups can help prevent conflict, especially in societies with significant ethnic cleavages. Ensuring government accountability at all levels will further reduce mistrust between ethnic groups and allow for the peaceful resolution of disputes, preventing escalation into violence. Given the importance of voice and accountability for fostering political stability, promoting democratic participation is also critical. Particularly in ethnically diverse countries, strengthening electoral processes and ensuring the inclusion of all ethnic groups in political life will mitigate the risk of grievances that can otherwise fuel violent conflict.

Future research could expand the analysis by incorporating additional variables, such as poverty, inequality, and climate change, all of which have been shown to influence conflict. Incorporating these factors would provide a more nuanced understanding of the

governance-conflict relationship. Additionally, to refine policy recommendations, future studies should explore the indirect effects or transmission channels through which governance influences conflict. Critical areas for investigation include the role of resource mobilization and the efficiency of public expenditure in sectors like health and education, and how these factors may either strengthen or weaken the governance-conflict dynamic.

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Appendix

Table A1. Definition and sources of variables

Variables	Variables definition	Sources
Intercommunal conflict	The intercommunal conflict is the incidence of intercommunal conflicts, defined as conflicts arising between two social groups (e.g., ethnicity, religious) within the borders of a state.	UCDP GED
Political Stability and Absence of Violence/Terrorism	"Political stability/no violence (estimate): measured as the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional and violent means, including domestic violence and terrorism"	World Governance Indicator (WGI)
Voice and Accountability	"Voice and accountability (estimate): measures the extent to which a country's citizens are able to participate in selecting their government and to enjoy freedom of expression, freedom of association and a free media".	World Governance Indicator (WGI)
Regulatory Quality	"Regulation quality (estimate): measured as the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development".	World Governance Indicator (WGI)
Government Effectiveness	"Government effectiveness (estimate): measures the quality of public services, the quality and degree of independence from political pressures of the civil service, the quality of policy formulation and implementation, and the credibility of governments' commitments to such policies".	World Governance Indicator (WGI)
Rule of Law	"Rule of law (estimate): captures perceptions of the extent to which agents have confidence in and abide by the rules of society and in particular the quality of contract enforcement, property rights, the police, the courts, as well as the likelihood of crime and violence".	World Governance Indicator (WGI)
Control of Corruption	Control of corruption (estimate): captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests".	World Governance Indicator (WGI)
Population density (people per sq. km of land area)	Population density is midyear population divided by land area in square kilometres.	World Bank (WDI)
Gdp per capita	GDP per capita is gross domestic product divided by midyear population.	World Bank (WDI)
Access to electricity (% of population)	Access to electricity is the percentage of population with access to electricity	
Youth Unemployment Female	Unemployment rate in Female youth cohort	World Bank (WDI)
Youth Unemployment Male	Unemployment rate in Male youth cohort	World Bank (WDI)

Rural population (%)	Rural population refers to people living in rural areas as a percentage of total population	World Bank (WDI)
Agriculture Land (%)	Agricultural land refers to the share of land area that is arable, under permanent crops, and under permanent pastures	World Bank (WDI)
Ethnicity fragmentation	EF index measures the ethnicity fragmentation within a country	Drazanova (2019)

Table A2. Summary statistics (1990-2020)

Variables	**Mean**	**SD**	**Min**	**Max**	**Obs**
Control of Corruption	-0.639	0.613	-1.905	1.230	961
Government Effectiveness	-0.740	0.626	-2.475	1.056	960
Political Stability	-0.567	0.871	-2.699	1.200	960
Regulatory Quality	-0.695	0.612	-2.34	1.127	960
Rule of Law	-0.678	0.620	-1.970	1.077	960
Voice and Accountability	-0.624	0.727	-2.226	.979	960
gdppc	5003.529	5844.818	436.376	35688.65	1,477
efiindex	.622	.250813	.014	.89	1,102
Density	81.228	112.183	1.662	623.517	1,556
Electricity	41.340	30.10	.533	100	1,283
Unpymale	15.396	13.259	.69	77.467	1,500
Rurpop	59.924	17.75	9.908	94.584	1,581
Unpyfemale	17.675	16.35	.156	80.762	1,500

Source:authors' compilation Note:obs: observations; Mean: average; SD: standard deviation; Min: minimum; Max: maximum

Table A3. Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
(1) Conflicts	1.0000																	
(2) Control of corruption	-0.311	1.000																
(3) Governance effectiveness	-0.255	0.863	1.000															
(4) Political stability	-0.546	0.667	0.6328	1.000														
(5) Quality of reglementation	-0.165	0.766	0.8721	0.597	1.000													
(6) Rule of law	-0.290	0.891	0.9140	0.718	0.871	1.000												

(7) Voice and accountability	-0.193	0.721	0.6995	0.588	0.751	0.778	1.000					
(8) gdppc	-0.168	0.2028	0.2927	0.348	0.138	0.2531	0.031	1.000				
(9) efiindex	0.278	-0.284	-0.208	-0.1	-0.029	-0.2215	0.050	-0.240	1.000			
(10) Density	-0.068	0.268	0.284	0.179	0.306	0.3295	0.21	0.078	-0.303	1.000		
(11) Electricity	-0.184	0.34	0.44	0.304	0.277	0.4149	0.174	0.688	-0.407	0.222	1.000	
(12) Unpymale	-0.151	0.247	0.229	0.232	0.136	0.2121	0.010	0.579	-0.275	-0.110	0.509	1.000
(13) Rurpop	0.174	-0.119	-0.160	-0.283	-0.071	-0.121	-0.028	-0.646	0.0946	0.216	-0.704	-0.6444	1.000

(14) Unpyfemale	-0.172	0.272	0.271	0.229	0.143	0.266	0.011	0.6654	-0.342	-0.081	0.589	0.9272	-0.640	1.000			
(15) Hospibeds	-0.219	0.126	0.137	0.287	-0.035	0.142	0.003	0.716	-0.428	0.144	0.569	0.490	-0.54	0.6344	1.000		
(16) Tax	-0.29	0.634	0.589	0.543	0.498	0.555	0.54	0.303	-0.165	0.029	0.261	0.459	-0.128	0.502	0.379	1.000	
(17) Remittence	-0.063	0.158	0.009	0.099	0.016	0.125	0.177	-0.124	-0.208	0.034	0.023	-0.007	0.120	0.049	0.149	0.3196	1.000
(18) Agricland	0.048	0.159	0.141	0.01	0.236	0.014	0.134	-0.331	-0.088	0.318	-0.158	-0.006	0.300	-0.098	-0.325	0.247	0.176	1.000

Note: GDPpc: Gross Domestic Product per capita; Electricity: Access to electricity (% of population); Unpyfemale: Youth Unemployment Female Unpymale: Youth Unemployment Male Rurpop Agricland : Agriculture Land (%).

Table A4. List of countries

Algeria	Egypt	Madagascar	Tanzania
Angola	Equatorial Guinea	Mali	Togo
Benin	Eritrea	Mauritania	Senegal
Botswana	Ethiopia	Mauritius	Seychelle
Burkina Faso	Gabon	Morocco	Sudan
Burundi	Gambia	Mozambique	Zambia
Cabo verde	Ghana	Namibia	Zimbabwe
Cameroon	Guinea	Niger	
Central africa	Guinea Bissau	Nigeria	
Chad	Uganda	Rwanda	
Congo. Dem. Rep.	Kenya	Senegal	
Congo. Rep.	Lesotho	Sierra Leone	
Ivory Coast	Liberia	South Africa	
Djibouti	Malawi	Sudan	

Table A5. Governance and intercommunal conflicts (lagged governance indicators)

	(1)	(2)	(3)	(4)	(5)	(6)
	conflicts	conflicts	conflicts	conflicts	conflicts	conflicts
Access to electricity (-1)	0.016	0.023	0.047	0.030	0.036	0.044
	(0.039)	(0.048)	(0.048)	(0.039)	(0.045)	(0.046)
Population density (-1)	-0.058***	-0.073***	-0.086***	-0.066***	-0.079***	-0.089***
	(0.015)	(0.017)	(0.022)	(0.017)	(0.021)	(0.022)
GDP per capita growth (-1)	-0.001*	-0.001*	-0.002**	-0.001*	-0.001*	-0.001**
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)
Political stability (-1)	**-1.895****					
	(0.648)					
Voice and accountability (-1)		**-2.312***				
		(1.245)				
Regulation quality (-1)			-0.877			
			(1.730)			
Rule of law (-1)				**-2.963*****		
				(1.213)		
Goverment effectivness (-1)					**-2.086***	
Control of corruption (-1)					**(1.185)**	-1.325
						(1.949)
Constant	-5.107**	-0.871	-0.259	-3.723	-2.138	-4.213
	(1.908)	(2.460)	(3.528)	(3.162)	(3.717)	(3.801)
Numbers of observations	866.000	866.000	866.000	866.000	866.000	866.000
Numbers of countries	49	49	49	49	49	49
Log likelihood	-151.984	-169.129	-172.014	-167.396	-170.423	-169.723
Wald chi2	1354.267	482.132	2479.990	1513.982	3806.229	2621.021

Source: authors.
Notes: Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; robust standard errors

are used.

Table A6. Governance and intercommunal conflicts (governance indicators without lag)

	(1)	(2)	(3)	(4)	(5)	(6)
Access to electricity (-1)	0.003	0.009	0.032	0.007	0.017	0.023
	(0.038)	(0.037)	(0.037)	(0.035)	(0.036)	(0.037)
Population density (-1)	-0.047*	-0.060***	-0.071***	-0.052***	-0.065***	-0.074***
	(0.020)	(0.010)	(0.018)	(0.012)	(0.019)	(0.017)
GDP per capita growth (-1)	-0.001	-0.001	-0.001*	-0.001	-0.001	-0.001
Political stability	**-1.746*** (0.466)**					
Voice and accountability		**-3.408*** (1.031)**				
Regulation quality			-1.482 (1.696)			
Rule of law				**-3.293*** (1.386)**		
Government effectiveness					-1.995 (1.854)	
Control of corruption						-2.069 (2.157)
Constant	-4.991**	-1.082	-0.634	-3.671	-2.272	-4.124
	(1.867)	(2.404)	(3.015)	(2.884)	(3.287)	(3.306)
Numbers of observations	912.000	912.000	912.000	912.000	912.000	912.000
Numbers of countries	49	49	49	49	49	49
Log likelihood	-164.80	-177.83	-184.68	-178.81	-183.44	-181.73
Wald chi2	48.389	4856.727	5181.054	2034.975	6563.583	6052.123

Source: authors.

Notes: Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; robust standard errors are used.