Corruption and ethnicity on the African continent: the mediating role of institutions

Bonga-Bonga, Lumengo and Kirsten, Frederich

University of Johannesburg

1 July 2024

Corruption and Ethnicity on the African Continent. The Mediating Role of Institutions.

Lumengo Bonga-Bonga[a] and Frederich Kirsten[bc]

Abstract

While numerous studies have explored variations in ethnic divisions and corruption outcomes at the macro level, few studies examine whether individual corruption experiences at the micro level vary systematically depending on ethnic group affiliation, particularly when accounting for institutional quality as a mediating factor. This paper investigates the presence of an institutional quality threshold effect between ethnic group affiliation and individual corruption experiences in African countries. We find a threshold effect does exist, revealing that the relationship between ethnic affiliation and corruption experiences shifts once an institutional threshold is reached. Specifically, this transition explain the move from an extortive corruption relationship to collusive co-ethnic corruption dynamic. These insights are vital for policymakers, as they show the significant role of institutions in the micro level impact of ethnic affliction on corruption experiences. This underscores the necessity for targeted anti-corruption strategies that account for institutional heterogeneity across African countries.

Keywords: corruption, co-ethnic, extortive corruption, rule of law

[a] *School of Economics, University of Johannesburg, Johannesburg, South Africa.*
[b] *School of Economics, University of Johannesburg, Johannesburg, South Africa.*
[c] Corresponding author: fkirsten@uj.ac.za

1. Introduction

Corruption is a pervasive issue on the African continent, deeply entrenched in the fabric of many societies and with profound implications for development and governance. Hope (2024) presents evidence that corruption in Africa remains a significant obstacle to achieving sustainable development objectives. The author demonstrates a persistent negative correlation between corrupt practices and the progress of sustainable development initiatives across the continent. This ongoing issue of corruption not only hinders Africa's ability to meet its development goals but also impacts the broader aspirations for environmental sustainability, economic stability, and social equity, highlighting the critical need for robust anti-corruption measures and transparent governance to support Africa's journey towards sustainable development.

Mlambo and Masuku (2020) illustrate the pervasive nature of corruption across various sectors in Sub-Saharan Africa, particularly in South Africa, and its detrimental effects on citizen welfare. Their study highlights that during South Africa's intensive efforts to curb the spread of COVID-19, certain public officials exploited the situation for personal gain. Engaging in corrupt activities under the guise of pandemic response, these officials not only undermined public trust but also severely impaired the country's capacity to manage the health crisis effectively. This example underscores the deep-rooted issue of corruption in Africa and its profound impact on both societal welfare and critical public health responses.

Statistics reveal a troubling landscape of corruption across Africa. The Transparency International Corruption Perceptions Index for 2023[d] provides a stark illustration, with several African nations consistently ranked among the most corrupt globally. Notably, countries like the Democratic

[d] See https://www.transparency.org/en/cpi/2023

Republic of Congo, South Sudan, and Libya are positioned at the forefront of this index, labelled as some of the world's most corrupt nations. This consistent ranking underscores the profound challenges that these countries face in combating corruption.

In order to combat corruption, its root causes need to be unravelled. It is in this context that studies have attempted to assess factors that trigger and determine the root causes of corruption. Serra (2006) identifies five key variables as the determinants of corruption, namely, Protestant religion, colonial heritage, uninterrupted democracy, and political instability. The author shows a strong negative correlation between economic development and corruption, as corruption is lower in richer countries. Uninterrupted democracy is also negatively associated with corruption. Conversely, a higher level of political instability is associated with a higher level of corruption. Countries where citizens are predominantly Protestant tend to be less corrupt. Finally, colonial heritage plays a role in determining the level of corruption in many countries.

Joarder and Ahmed (2023) suggest that average growth rates, openness of the country, rule of law, democracy, government expenditure, inequality, and ethnicity are significant determinants of corruption. Regarding the link between ethnicity and corruption, many studies explore this within the complex relationship between ethnicity, public choice, and corruption in African countries (Musila, 2013; Taj et al.,2017; Seim and Robinson, 2020; Chang, 2020; Dincer and Johnston, 2020; Murtazashvili and Murtazashvili, 2020; Boly et al., 2021; Kivoi et al., 2022; Arowolo, 2022). These studies concur that in many African countries, ethnic diversity is high, and political systems often exploit ethnic loyalty to maintain power and control resources. This patronage system encourages corrupt practices, as leaders use state resources to secure the loyalty of their ethnic groups, sidelining merit and transparency. Such dynamics exacerbate tensions and can lead

to cycles of revenge corruption, where successive leaders prioritize their ethnic or regional bases, further entrenching corruption.

While the above studies have investigated variations in ethnic division and corruption outcomes at the macro level, few studies examine whether individual corruption experiences at the micro level vary systematically depending on ethnic group affiliation, specifically whether belonging to an influential ethnic group influences the probability of being involved in corrupt activities. Except for the study by Isaksson (2015), which attempted to assess the existence of systematic micro-level variation in corruption along ethnic lines, no other study, to the best of our knowledge, has ever attempted to examine whether individual corruption experiences at the micro level vary systematically depending on ethnic group affiliation.

This study aims to make two key contributions to the existing literature on corruption and ethnicity. Firstly, it assesses the relationship between ethnicity and individual corruption experiences at a micro level, controlling for institutional quality. Previous studies have been conducted without considering the influence that institutional quality may have on the relationship between ethnicity and individual corruption experiences. By accounting for the level of institutional quality, this study presents key insights into the heterogeneous ethnicity-corruption relationship among African countries. Secondly, the paper endeavors to determine a threshold of institutional quality for the ethnicity-corruption nexus on the African continent. Specifically, the paper assesses whether this threshold defines a level where corruption may be mitigated or reveals the turning point that marks the shift from one type of corruption, namely extortive corruption, to another type, namely collusive corruption. It is worth mentioning that while the literature distinguishes between collusive and extortive corruption (Isaksson, 2015; Poynting and Whyte, 2017; Binhadab et al., 2021), no study has ever investigated how the threshold of institutional quality in the ethnicity-

corruption nexus can provide insight into the mechanisms and principles governing the existence of these types of corruption within this context.

It is important to recognise that collusive and extortive corruption are two distinct types of corrupt practices that influence the relationship between corruption and ethnicity in unique ways. Collusive corruption involves a mutual agreement between the corrupt official and the private party, often from the same ethnic group, where both benefit from the corrupt act (Dechenaux and Samuel, 2012; Hummel, 2018; Buckenmaier et al., 2020; Liu, 2020). This form of corruption typically includes bribery, where the bribe-giver and the bribe-taker collaborate to achieve an illegal or unethical advantage. Both parties gain from the transaction, with the private party willingly participating. Collusive corruption often involves ongoing relationships where both parties repeatedly engage in corrupt activities. It tends to be more concealed, making it harder to detect and prosecute. We postulate that the concealed nature of this corruption may imply that it can occur mostly when the rule of law is strong, as the parties involved can protect themselves from possible prosecution as no party can betray or denounce the other, thus, enabling the corrupt actors to exploit the justice system's integrity to their advantage.

Collusive corruption can exacerbate ethnic divides if certain ethnic groups disproportionately benefit from such practices, leading to perceptions of favoritism and inequality. In diverse societies, collusive corruption can deepen ethnic tensions if one group is seen as monopolizing access to corrupt networks and the resulting benefits (Lambsdorff, 2007; Bardhan, 2017). Collusive corruption can create institutionalized networks that favor specific ethnic groups, leading to systemic inequality. This perpetuation of ethnic inequalities highlights the significant impact of collusive corruption on social and institutional dynamics.

Extortive corruption occurs when a corrupt official demands a bribe or other forms of payment from a private party as a condition for performing (or not performing) an official duty. This form of corruption is coercive and overt, with the private party often participating under duress. Extortive corruption primarily benefits the corrupt official, while the private party is often unwillingly involved, paying the bribe to avoid harm or to obtain necessary services. Given that extortive corruption is more overt and that the corrupt official does not concern themselves with legal consequences, this study postulates that this type of corruption is more likely to occur when the rule of law is weak or nonexistent in a country.

The study further postulates that extortive corruption is less likely to be employed by public officials against fellow members of their own ethnic group, presumed to be the key ethnic group, as these officials are indebted to their ethnic peers for voting them into office. Unfortunately, extortive corruption can disproportionately affect marginalized ethnic groups who may have less power and fewer judicial resources to resist corrupt officials (Husted, 1999; Olken and Pande, 2012).

Distinguishing between extortive and collusive corruption is crucial in studying the relationship between ethnicity and corruption, as it highlights the different mechanisms through which corruption impacts ethnic groups. This distinction informs the design of more effective and equitable anti-corruption policies, ensuring that interventions are appropriately targeted to address the specific challenges posed by each type of corruption. Understanding these differences is essential for promoting social justice, reducing ethnic disparities, and fostering inclusive development in African economies.

The remainder of the paper is divided as follows; section 2 presents the data and methodology. Section 3 present and discuss the results and section 4 concludes the paper.

2. Data and Methodology

The study employs data from the 8th wave of the Afrobarometer dataset, collected between 2019 and 2021, across 34 African countries. The Afrobarometer is a comprehensive multi-country survey project that collects data across multiple African nations and specializes in political and economic attitudes and behaviour of citizens (Afrobarometer, 2021). Our sample consists of ten countries: five representing a cluster of low institutional quality and five representing a cluster of high institutional quality. The level of institution quality is defined based on the rule of law scores from the World Justice Project's Rule of Law Index (World Justice Project, 2023). Scores for the World Justice Project's rule of law range from 0 to 1, with 1 indicating the strongest adherence to the rule of law. For low institutional countries, Cameroon, Sudan, Ethiopia, Zimbabwe and Gabon are selected, and for high institutional countries, Cape Verde, Mauritius, Botswana, Namibia and Ghana are selected. The sample consists of roughly 14 000 respondents from the ten countries.

2.1 Dependent variable

To measure corruption, the methodology aligns with Isaksson (2015), focusing on the direct experience individuals have with corruption rather their overall perception of corruption within government structures. A question for the Afrobarometer survey is utilized, which inquires: "How often, if ever, did you have to pay a bribe, give a gift, or do a favour for a government official in order to get the document you needed." Respondents are recorded on a Likert style rank with options including *"Never," "Once or twice", "a few times"* and "*often".* These responses were coded such that *"Never"* takes the value of zero and one if respondent acknowledges any experience of corruption. The survey question also includes a *"not applicable*" option that captures around 63% of the sample. Since it represents no contact with corruption this option was removed from the analysis.

2.2 Independent variable

The variable of interest focuses on ethnic group affiliation, particularly belonging to an influential ethnic group. To determine the variable belonging to the largest ethnic group we make use of home language as a proxy for ethnic group. Consistent with literature, language still provides one of the best proxies for ethnicity, especially in an African context (Bratton et al., 2005, Posner, 2003; Isaksson, 2015). The dominant ethnic group is represented by a dummy variable that takes the value of one if respondents belong to the largest ethnic group, and zero otherwise.

The second variable of interest is an interaction term that captures the mediating role of institutional quality and allows for a threshold assessment. The five low and high institutional countries are grouped into an institutional country dummy with high institution countries taking the value of one, and low institutional countries zero. The institutional dummy is then multiplied with the largest ethnic group dummy to create an interaction variable that is also used for the threshold analysis.

It is important to note some limitations to the variable of interest. Firstly, the largest ethnic group does not always automatically translate into the most influential ethnic group or the one closest to the ruling party. Studies find various alternative measures for the most influential ethnic group based on subjective measures of respondent's ethnic group's economic position and political influence (Isaksson, 2015). While these alternative subjective measures do provide further control for possible discrepancy between relative size and influence of ethnic groups, their subjective nature creates significant noise in the analysis. Since previous studies from Isaksson (2015) shows no significant change in the results when using alternative measure and since the 8^{th} wave of the Afrobarometer does not capture these subjective measures, we only focus on the objective measure of largest ethnic group.

Additionally, various control measures are included to account for factors that could influence individual corruption experiences. These measures include individual characteristics like gender, age, location, education, employment status, religion and socioeconomic position Since average level of corruption is likely to vary across countries, the analysis also controls for also for country variation using country specific dummy variables and regional controls that include the share of education, share of rurality, share of employment and share of religion.

2.3 Model Specification

To analyze the relationship between ethnicity and corruption, and to examine the threshold of quality, we employ a probit regression model. The model is specified as follows:

$$\Pr(Cor_i) = \Phi\ (\beta_0 + \beta_1 InfluentialGroup_i + \beta_2 InfluentialGroup\ x\ InstitutionalQuality_i + \beta_i X_i + \epsilon_i) \quad (1)$$

Where $\Pr(Cor_i)$ represents the probability that individual i experiences corruption. Φ shows the cumulative distribution function of the standard normal distribution and β_0 the interaction term. β_1 is the coefficient of one of the main variables of interests, belonging to the most influential ethnic group ($InfluentialGroup$). While β_2 is the coefficient of the other variable of interest, the interaction between belonging to the most influential ethnic group and an institutional quality dummy ($InfluentialGroup\ x\ InstitutionalQuality$). β_2 is also the coefficient that represents the threshold effect of institutional quality. X_i is a vector of control variables.

It is important to note that Equation 1 emphasizes the role of institutional quality in assessing how influential groups affect the probability of corruption. Specifically, the equation highlights the

potential heterogeneity in the impact of these influential groups on the likelihood of corruption. From Equation 1, the following can be derived:

$$\frac{d(Pr(Cor_i))}{d(InfluentialGroup_i)} = \beta_1 + \beta_2\, InstitutionalQuality_i \quad (2)$$

Equation 2 implies that the effect of influential groups on the probability of corruption will depend on the signs of $\beta_1 \, and \, \beta_2$. If β_1 is negative and β_2 is positive , with both coefficients being statistically significant, the effect of the influential group on the probability of corruption will follow a U-shaped curve. This means that at a lower level of institutional quality, the marginal effect of the influential group on the probability of corruption will be lower than that of less influential groups. However, at higher levels of institutional quality, the effect of the influential group on the probability of corruption will be higher. This outcome suggests that extortive corruption will prevail when the quality of institutions is low, and collusive corruption will dominate when the quality of institutions is high, whereby corrupt officials and their fellow ethnic members benefit from corrupt activities under mutual discretion to escape the justice system.

Conversely, if β_1 is positive and β_2 is negative , with both coefficients being statistically significant, the effect of the influential group on the probability of corruption will be high when the quality of institutions is low and will be lower compared to less influential groups when the quality of institutions is high. This will result in an inverted U-shaped curve, with collusive corruption existing at low levels of institutional quality and extortive corruption prevailing at high levels of institutional quality.

We note that the threshold of the quality of institution that will result from the change in one type of corruption to the other will be at the level where $the \; quality \; of \; institution = \frac{-\beta_1}{\beta_2}$.

2.4 Robustness Analysis

To ensure the robustness of the threshold effect, we employed various diagnostic and alternative measures. For diagnostics we make use of the Wald test to assess the joint significance of the threshold effect. To verify that the results are not led by the initial selection of countries, we also use alternative samples of countries. Again, based on the rule of law index, Burkina Faso, eSwatini, Guinea, Mali and Nigeria were group as low institutional countries, while Senegal, Malawi, South Africa, Benin and Sierra Leone were grouped as high institutional countries. The robustness of the threshold effect should confirm the generalizability of our findings. Moreover, we utilize alternative measures for corruption. This allows us to the validate the threshold relationship with different measures of corruption, consistent with Isaksson (2015), these alternative measures support the validity of the ethnic corruption relationship and in our case the mediating role of institutional quality.

3. Results

This section empirically investigates through the different estimation of Equation 1 whether belonging to the largest ethnic group (influential group) affects individual corruption experiences based on different levels of institutional quality. Following the analysis of the benchmark estimations, various alternative specifications are also evaluated.

3.1 Main findings

Firstly, the results of the estimated probit regressions in Table 1 indicate that, referring to Equation 1, the coefficient β_1 is negative , equal to -0.236, and β_2 is positive, equal to 0.279. Both coefficients are statistically significant. As discussed earlier, this outcome implies that when the quality of institutions is low, the marginal effect of the influential group on the probability of corruption is lower compared to that of less influential group members. This outcome clearly shows the predominance of extortive corruption.

The rationale behind this finding of extorsive corruption is that at a low level of institutional quality, corrupt officials compel members of non-influential groups to pay bribes for various services. Given the poor quality of institutions, especially the rule of law, these officials do not fear repercussions, even if they are reported by members of minority groups. Since extortive corruption primarily benefits the bribe-taker and imposes additional costs on the bribe-giver, public officials are less inclined to engage in corrupt activities with members of their own ethnic group, preferring instead to target other minority ethnic groups (Miquel, 2007; Banerjee and Panda, 2007).

As the quality of institutions improves, Equation 2 implies that the derivative $\frac{d(Pr(Cor_i))}{d(InfluentialGroup_i)}$ becomes positive. This indicates that the probability of corruption is increasingly driven by members of influential groups compared to less influential groups. This outcome suggests that, due to the fear of prosecution, corrupt public officers are more likely to engage in corrupt activities with members of their own ethnic group. They do so expecting discretion and an ability to share the benefits of their corrupt actions with these group members.

Several studies have highlighted the link between ethnic favoritism and corruption (Akbari et al., 2020; De Luca et al., 2018). These studies commonly assume that corruption can arise from

individuals' preferences to favor members of their own ethnic group over outsiders. This favoritism is rooted in shared ethnic identification.

Mauro (1995) argues that in societies with substantial ethnic heterogeneity, or fractionalization, corruption is likely to occur along ethnic lines. Early evidence supported this association, showing a correlation between ethnic fractionalization and corruption in cross-country analyses (Alesina et al., 2003). This implies that in ethnically diverse societies, individuals might be more inclined to engage in corrupt practices to benefit their ethnic group, even if it harms broader societal interests. Understanding the dynamics of ethnic fractionalization is therefore crucial for developing effective anti-corruption strategies in these contexts.

Contrary to the study by Isaksson (2015), which did not emphasize the significance of the institutional quality threshold in the corruption-ethnicity nexus, this paper highlights the importance of considering this threshold. By accounting for the extent of institutional quality, this research provides a deeper understanding of how the probability of corruption varies due to ethnic factors, particularly focusing on the majority ethnic groups in African countries.

This paper demonstrates that the quality of institutions plays a crucial role in moderating the relationship between ethnicity and corruption. It reveals that as the quality of institutions improves, the impact of ethnic favoritism on corruption becomes more pronounced. This is particularly relevant in African countries, where majority ethnic groups often wield significant influence. By incorporating the institutional quality threshold, the study offers a more nuanced analysis of the corruption-ethnicity dynamic, which can inform more effective anti-corruption strategies tailored to the specific context of these countries.

[Table 1 near here].

3.2 Robustness Checks and Diagnostics

To verify the robustness of the threshold finding, various diagnostic tests and robustness measures have been performed. Table A1 presents the results of the Wald test. Here the unrestricted model includes the interaction effect of institutional quality, while the restricted excludes the interaction effect. The null hypothesis can be rejected and affirms the threshold effect of belonging to the largest ethnic group in a high institutional context. For additional robustness, Table A2 in the appendix provides the estimates a similar probit regression using an alternative sample of countries. In this alternative sample, eSwatini, Mali, Nigeria, Burkina Faso and Guina were classified as low institutional countries, while Malawi, South Africa, Senegal, Benin and Sierra Leone were classified as high institutional countries, based on their rule of law indices. The specifications of the original probit model (table 1) remains the same. The results confirm the presence of the threshold effect similar to our main findings where the coefficient of belong to the most influential ethic group (β_1) is negative and significant and the interaction term (β_2) is positive and significant. Suggesting a reverse of the ethnicity-corruption relationship in high institutional countries. This consistency across different sampled countries strengthens our findings of an institutional threshold effect. It also highlights the complex interplay between ethnicity, corruption and institutional quality in African countries.

Table A3 provides further robustness by estimation the probit regression with regional controls included. Since the relationship between corruption, ethnicity and institutional quality might vary based on might vary based on the population composition in regions regional controls are added that include share of education, share or rural, share of employment and share of religion by region. The results confirm the institutional threshold effect and provides further support for the

underlying relationship between corruption experiences, influential ethnicity groups and institutional quality.

Furthermore, to confirm our finding on the changing nature of the type of corruption given the quality of institution threshold, we also control for different measures of corruption using a question asked to respondents if in the past year, *how often, if ever, did you have to pay a bribe, give a gift, or do a favour for a teacher or school official in order to get the services you needed from the schools?* Unlike our original measure that focuses on the application for documents, this alternative measure of corruption captures individuals experience with corruption related to basic education service delivery. The results in table A4 of the appendix confirms the threshold effect with the interaction between belonging to the most influential ethnic group and high institutional country remains positive, yet insignificant. Overall, these robustness measures supports the institutional threshold effect on the ethnicity and corruption experiences among African countries.

4. Conclusion

Corruption is a pervasive issue on the African continent and has a longstanding impact on its ethnically diverse regions. While many studies focus on the macro view of corruption and ethnicity, few have managed to uncover the micro-dynamics between corruption experiences and ethnicity. A notable exception is a stand-alone paper by Isaksson, which found a positive correlation between belonging to the most influential ethnic group and corruption experiences. The findings support the co-ethnic collusive nature of corruption and ethnicity, where public officials engage in mutually beneficial corrupt activities with those from their own social networks and ethnic groups.

However, no study has yet tested the mediating role of institutional quality and its effect on the changing nature of corruption. Since institutional quality plays a significant role in corruption dynamics, this paper estimates an institutional threshold effect on the relationship between the most influential ethnic group and corruption experiences. Our findings reveal that extortive corruption prevails when the quality of institutions is low. However, as the quality of institutions improves, collusive corruption becomes more prevalent.

The collusive nature of corruption suggests that, due to the fear of prosecution, corrupt public officers are more likely to engage in corrupt activities with members of their own ethnic group. They expect discretion and an ability to share the benefits of their corrupt actions with these group members.

By recognizing the role of ethnic favoritism in perpetuating corruption, policymakers can better address the underlying social and cultural factors that contribute to corrupt behaviors. This understanding can lead to more targeted and effective interventions aimed at reducing corruption

and promoting fairer governance. Addressing ethnic favoritism and improving institutional quality are essential steps in combating corruption and fostering a more just and equitable society.

Declaration of interest statement

The authors report there are no competing interests to declare

Reference list

Afrobarometer. (2021). Afrobarometer Round 8: The Quality of Democracy and Governance in Africa, 2019-2021. Afrobarometer. https://www.afrobarometer.org/data.

Akbari, M., Bahrami-Rad, D., Kimbrough, E. O., Romero, P. P., & Alhosseini, S. (2020). An experimental study of kin and ethnic favoritism. *Economic inquiry*, *58*(4), 1795-1812.

Arowolo, D. E. (2022). Ethnicisation of corruption in Nigeria. *Journal of Financial Crime*, *29*(1), 246-257.

Banerjee, A. V., & Pande, R. (2007). Parochial Politics: Ethnic Preferences and Politician Corruption. Harvard Center for International Development. CID Faculty Working Paper No. 147

Bardhan, P. (2017). Corruption and development: a review of issues. *Political corruption*, 321-338.

Billger, S.M. and Goel, R.K. (2009), "Do existing corruption levels matter in controlling corruption?: cross-country quantile regression estimates", Journal of Development Economics, Vol. 90 No. 2, pp. 299-305.

Binhadab, N., Breen, M., & Gillanders, R. (2021). Press freedom and corruption in business-state interactions. *Economic Systems*, *45*(4), 100922.

Boly, A., Konte, M., & Shimeles, A. (2021). Corruption perception and attitude towards taxation in Africa. *Journal of African Economies*, *30*(Supplement_1), i140-i157.

Buckenmaier, J., Dimant, E., & Mittone, L. (2020). Effects of institutional history and leniency on collusive corruption and tax evasion. *Journal of Economic Behavior & Organization*, *175*, 296-313.

Bratton, M., Mattes. R., & Gyimah-Boadi, E. (2005). Public opinion, democracy, and market reform in Africa. Cambridge: Cambridge University Press.

Chang, E. C. (2020). Corruption predictability and corruption voting in Asian democracies. *Public Choice*, *184*(3), 307-326.

Dechenaux, E., & Samuel, A. (2012). Pre-emptive corruption, hold-up and repeated interactions. *Economica*, *79*(314), 258-283.

De Luca, G., Hodler, R., Raschky, P. A., & Valsecchi, M. (2018). Ethnic favoritism: An axiom of politics?. *Journal of Development Economics*, *132*, 115-129.

Dincer, O., & Johnston, M. (2020). Legal corruption?. *Public choice*, *184*(3), 219-233.

Hope, Sr. K. R. (2024). The corruption and sustainable development nexus in Africa: a contemporary review and analysis. *Journal of Financial Crime*, *31*(2), 331-346.

Hummel, C. (2018). Bribery cartels: Collusive corruption in Bolivian street markets. *Latin American Research Review*, *53*(2), 217-230.

Husted, B. W. (1999). Wealth, culture, and corruption. *Journal of international business studies*, *30*, 339-359.

Isaksson, A. (2015). Corruption Along Ethnic Lines: A Study of Individual Corruption Experiences in 17 African Countries, *The Journal of Development Studies*, 51(1), 80-92.

Joarder, M. A. M., & Ahmed, M. U. (2023). Does natural resource abundance breed corruption? The role of political institutions. *SN Business & Economics*, *3*(9), 178.

Khandker, A. (2015), "The effect of economic freedom on corruption: the case of South Asian countries", International Journal of Economics and Business Research, Vol. 9 No. 4, pp. 403-414.

Kivoi, D. L., Odhiambo Yogo, K., Luseno, S., & Malicha, W. (2022). Negative Ethnicity, Identity and Political Corruption: A Kenyan Perspective. *Identity and Political Corruption: A Kenyan Perspective (June 27, 2022)*.

Lambsdorff, Johann Graf. *The Institutional Economics of Corruption and Reform: Theory, Evidence, and Policy*. Cambridge University Press, 2007.

Liu, A. (2020). Collusive corruption in public services: evidence from Chinese state corruption audits. *Eurasian Economic Review*, *10*(2), 283-307.

Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics* CX (1995), 681-712

Miquel. G. P. I. (2007). The Control of Politicians in Divided Societies: The Politics of Fear. *The Review of Economic Studies*, 74 (4), 1259-1274.

Mlambo, V. H., & Masuku, M. M. (2020). Governance, corruption and COVID-19: The final nail in the coffin for South Africa's dwindling public finances. *Journal of Public Administration*, *55*(3-1), 549-565.

Murtazashvili, J., & Murtazashvili, I. (2020). Wealth-destroying states. *Public Choice*, *182*(3), 353-371.

Musila, J. W. (2013). Does democracy have a different impact on corruption in Africa?. *Journal of African Business*, *14*(3), 162-170.

Pieroni, L. and d'Agostino, G. (2013), "Corruption and the effects of economic freedom", European Journal of Political Economy, Vol. 29, pp. 54-72.

Posner, D. (2003). The colonial origins of ethnic cleavages: The case of linguistic divisions in Zambia. Comparative Politics, 35, 127–146.

Mohd-Rashid, R., Mehmood, W., Ooi, C.-A., Che Man, S. Z., & Ong, C. Z. (2022). Strengthened rule of law to reduce corruption: evidence from Asia-Pacific countries. *Journal of Money Laundering Control*, *26*(5), 989-1006. https://doi.org/10.1108/jmlc-06-2022-0076.

Olken, B. A., & Pande, R. (2012). Corruption in developing countries. *Annuual Review of Economics.*, *4*(1), 479-509.

Poynting, S., & Whyte, D. (2017). Special edition: Corruption downunder-Guest editors' introduction. *International Journal for Crime, Justice and Social Democracy*, *6*(4), 1-11.

Serra, D. (2006). Empirical determinants of corruption: A sensitivity analysis. *Public Choice*, *126*(1), 225-256.

Seim, B., & Robinson, A. L. (2020). Coethnicity and corruption: Field experimental evidence from public officials in Malawi. *Journal of Experimental Political Science*, *7*(1), 61-66.

Taj, A., Abdullah, F., & Khan, S. (2017). Political Clientelism—Beyond the Public Choice Explanation. *The Journal of Humanities & Social Sciences*, *25*(1).

World Justice Project. (2023). World Justice Project Rule of law index 2023. Washington.

Table 1: Probit regression predicting the impact of largest ethnic group on corruption experiences (probit marginal effects)

	Coefficients	Standard errors
Largest ethnic group	-0.236***	(0.0859)
Institution quality	-1.495***	(0.184)
Largest ethnic group*institution quality	0.279*	(0.147)
Female	-0.201***	(0.0576)
Age	-0.00695***	(0.00246)
Age squared	5.80e-06**	(2.50e-06)
Primary	-0.0723	(0.107)
Secondary	0.0113	(0.105)
Tertiary	0.0680	(0.113)
Part-time	0.237***	(0.0841)
Full-time	0.200***	(0.0696)
Rural	0.00853	(0.0625)
Christian	0.146	(0.0993)
Muslim	0.131	(0.103)
Poverty index	0.145***	(0.0350)
country1	-0.178	(0.162)
country2	-0.575***	(0.191)
country3	0.955***	(0.147)
country4	-0.216	(0.210)
country6	0.0452	(0.126)
country7	-0.803***	(0.124)
country8	-0.258**	(0.129)
country9	-0.423***	(0.154)
Constant	0.0237	(0.207)

Observations	5,108

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix

Table A1: Wald test

Statistic	**Low institution group**
Chi-squared	3.58
Degrees of Freedom	1
P-value	0.056

Table A2: Probit regression predicting the impact of largest ethnic group on corruption experiences (alternative sample)

	Coefficients	Standard errors
Largest ethnic group	-0.371***	(0.0619)
Institution quality	-0.445***	(0.127)
Largest ethnic group*institution quality	0.223**	(0.0954)
Female	-0.151***	(0.0448)
Age	0.00398	(0.00821)
Age squared	-0.000129	(9.59e-05)
Primary	-0.0231	(0.0666)
Secondary	-0.0339	(0.0671)
Tertiary	0.139*	(0.0776)
Part-time	0.0410	(0.0749)
Full-time	0.0529	(0.0621)
Rural	-0.312***	(0.0485)
Christian	0.134**	(0.0657)
Muslim	-0.340***	(0.109)
Poverty index	0.203***	(0.0258)
country1	-0.170*	(0.0963)
country2	-0.618***	(0.108)
country3	0.194*	(0.101)
country4	0.147*	(0.0892)
country6	0.740***	(0.141)
country7	0.0739	(0.122)
country8	-0.0458	(0.117)
country9	-0.000810	(0.111)
Constant	-0.520**	(0.204)
Observations	4,589	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A3: Probit regression predicting the impact of largest ethnic group on corruption experiences (regional controls)

	Coefficient	Standard error
Largest ethnic group	-0.236***	(0.0859)
Institution quality	-2.781***	(0.858)
Largest ethnic group*institution quality	0.279*	(0.147)
Education regional	9.889*	(5.596)
Employment regional	13.39	(8.392)
Rurality regional	10.35*	(5.833)
Religion regional	0.0160	(0.581)
Female	-0.201***	(0.0576)
Age	-0.00695***	(0.00246)
Age squared	5.80e-06**	(2.50e-06)
Primary	-0.0723	(0.107)
Secondary	0.0113	(0.105)
Tertiary	0.0680	(0.113)
Part-time	0.237***	(0.0842)
Full-time	0.200***	(0.0696)
Rural	0.00853	(0.0625)
Christian	0.146	(0.0994)
Muslim	0.131	(0.103)
Poverty index	0.145***	(0.0350)
Constant	-41.00*	(24.38)
Observations	5,108	

Table A4: Probit regression predicting the impact of largest ethnic group on corruption experiences (alternative corruption measure)

	Coefficient	Standard error
Largest ethnic group	-0.0480	(0.0895)
Institution quality	-0.637***	(0.203)
Largest ethnic group*institution quality	0.00272	(0.163)
Female	-0.0577	(0.0631)
Age	0.00687	(0.0119)
Age squared	-0.000145	(0.000144)
Primary	-0.425***	(0.112)
Secondary	-0.326***	(0.110)
Tertiary	-0.135	(0.116)
Part-time	0.217**	(0.0926)
Full-time	0.144*	(0.0869)
Rural	-0.0694	(0.0754)
Christian	-0.0707	(0.102)
Muslim	0.147	(0.111)
Poverty index	0.145***	(0.0398)
country1	-0.247	(0.197)
country2	-0.492**	(0.198)
country3	0.560***	(0.142)
country4	-0.366	(0.260)
country6	0.442***	(0.166)
country7	-0.464***	(0.172)
country8	0.325*	(0.182)
country9	-0.119	(0.201)
Constant	-0.806***	(0.295)
Observations	5,106	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1