The Effects of Social Capital and Institutional Performance on Tax Revenue Mobilization in Africa

Kévin Konwona Sidoine KI, David SAWADOGO

1. Introduction

This article examines the effects of social capital and institutional performance on tax revenue mobilization in forty-four (44) African countries over the period 2000-2020. The main contributions of this article are as follows. First, this study sheds light on the debate between institutional and societal approaches to development by simultaneously examining the effects of social capital and institutional performance on tax revenue. It thus allows us to assess the extent to which collective behavior and formal institutions complement or substitute for one another in the tax collection process. Second, the majority of previous analyses rely primarily on microeconomic data, assessed using binary social capital variables, such as those from the World Values Survey or the European Values Survey (Alm et al., 2006; Alm and Martinez-Vazquez, 2007; Feld and Frey, 2007). Although these surveys provide important information on social capital, they remain limited in their analysis of structural dynamics and institutional transformations. In this article, we draw on a longitudinal macroeconomic dataset to better account for the historical, institutional, and sociocultural developments likely to influence tax mobilization in African states.

2. Methodology

2.1. Empirical Model

The reference point is the prospect theory proposed by Kahneman and Tversky (1979). The empirical model is as follows:

$$REF_{i,t} = \alpha + \beta CAS_{i,t} + \gamma INST_{i,t} + \delta(CAS_{i,t} * INST_{i,t}) + \sum_j^k \varepsilon_j X_{i,t} + \mu_{i,t} \quad (1)$$

Où i = 1, 2, …, 44 denotes the countries in the sample, and t = 1, 2, …, 21 represents the different observation periods. *REF* corresponds to tax revenue as a proportion of GDP, measuring the government's ability to mobilize domestic resources. $\mu_{i,t}$ is the idiosyncratic error. *CAS* denotes the social capital index. Social capital is measured using a composite index constructed from four complementary dimensions reflecting the quality of social relations, cooperation, and the level of trust within society. The first component corresponds to the intergroup cohesion index. The second component is the interpersonal security and trust index. The third component measures the inclusion of minorities and assesses the discrimination faced by vulnerable groups (ethnic minorities, refugees, migrants). Finally, the fourth component is the gender equality index, which assesses the extent of gender-based discrimination within the family, in the workplace, and in the public sphere. *INST* assesses institutional effectiveness based on the World Bank's governance indicators developed by Kaufmann et al., (2006). *X* is a vector of control variables. This vector includes GDP per capita, the inflation rate, the degree of trade openness, the size of the informal economy, and the income inequality coefficient. Principal component analysis (PCA) was used to determine the dimensional weights of the institutional quality index and the social capital index.

2.2. Data and sources

Our sample includes 44 African countries over the 2000-2020 period. The selection of countries and the study period were determined by data availability. Data on GDP per capita, official development assistance, trade openness, inflation rates, institutional performance, and the size

of the informal sector are sourced from the World Bank (World Development Indicators, 2025). Data on tax revenue and income inequality come from UNU-WIDER (Government Revenue Database, 2025). Data on social capital come from the International Institute of Social Sciences (Indices de Développement Social, 2026).

2.3. Estimation method

We use the instrumental variables method estimated by two-stage least squares (2SLS) to account for potential endogeneity issues. The total number of slaves exported, normalized by land area, and the total number of slaves, normalized by average population, deported from each country during the four waves of the transatlantic slave trade between 1400 and 1900 are used as external instruments for social capital. This identification strategy builds on the work of Nunn and Wantchekon (2011), who show that African regions most exposed to the transatlantic slave trade developed persistently lower levels of interpersonal trust, cooperation, and social cohesion. A similar endogeneity problem concerns the quality of institutions. We instrument the quality of institutions using the settler mortality rate, in line with the approach developed by Acemoglu et al., (2001). According to this approach, regions characterized by high settler mortality historically developed extractive institutions, while regions with low mortality benefited more from institutions conducive to economic development, which have persisted over time.

To account for changes over time in social capital and the quality of institutions, an alternative strategy is to construct a "shift-share" type measure, combining a fixed historical component with a variable temporal component, which in turn represents a factor that modifies social interactions over time. This study proposes constructing a social capital indicator based on the interaction between historical exposure to the transatlantic slave trade and changes in membership in community clubs and associations. Countries that were more exposed to the transatlantic slave trade and thus have a lower initial level of social capital do not respond in the same way to contemporary changes in forms of community engagement. Such engagement can either reinforce or mitigate the effect of social capital inherited from the transatlantic slave trade. The measurement of institutional quality also employs a "shift-share" approach, which involves correlating the mortality rate of settlers with changes in civic activism. The underlying idea is that contemporary civic activism can reinforce or mitigate the effect of inherited institutions. The shift-share instrument is presented as follows:

$$W_{i,t} = Hist_i * Shock_{i,t} \quad (2)$$

$W_{i,t}$ is a "shift-share" instrument for country i in period t. $Hist_i$corresponds to the historical component of the instrument. This variable is time-invariant. "Shock" corresponds to the contemporary component of the instrument. It is a time-varying factor. From an econometric perspective, these instruments satisfy the required conditions of relevance and exogeneity.

3. Resultats and discussions

3.1.Elasticity of tax revenue with respect to social capital

The results of the estimation show that an increase in social capital is associated with a significant rise in tax revenue collection. The social capital reinforces informal control mechanisms through the social pressure exerted by communities, which complements the formal control mechanisms put in place by the government. This pressure promotes compliance with tax obligations while encouraging citizen participation, transparency, and government accountability. By strengthening the accountability of public authorities, social capital helps reduce corrupt behavior and improve the efficiency of tax administration. Finally, networks of trust and community oversight mechanisms limit opportunistic behavior by public officials,

reduce the misappropriation of public resources, and promote a more effective mobilization of tax revenues. These conclusions are consistent with the work of Nannicini et al., (2013), which show that societies characterized by high social capital exhibit better tax performance, as well as with that of Feld and Torgler (2007), according to whom social norms account for a significant portion of the differences observed in tax compliance across countries.

The quality of institutions has a positive effect on tax revenue mobilization efforts across all specifications. This result confirms the predictions of the institutionalist approach, according to which higher-quality institutions improve tax revenue by reducing opportunities for tax evasion and strengthening taxpayers' trust in the government. These findings thus corroborate the work of Bird et al., (2008), which shows that the performance of tax administrations depends largely on the quality of public governance. As for Brezeanu et al., (2018), tax culture evolves in response to political changes and within the institutions that constitute the state's infrastructure. Changes in the culture of compliance are possible through policies that promote transparency and reinforce taxpayers' perception of fairness.

A comparison of the coefficients thus shows that improvements in social capital yield a higher marginal return on tax revenue than improvements in institutional quality alone. This result supports the findings of Torgler (2006), Alm and Torgler (2006), and Feld and Frey (2007), who show that voluntary tax compliance relies more on trust and social norms than on institutional coercion alone. However, these results should not be interpreted as implying a trade-off between social capital and institutions. On the contrary, they suggest complementarity. The coefficient associated with the interaction term between social capital and institutional quality is positive and statistically significant in the majority of specifications. This complementary relationship is consistent with the work of Ostrom (1990), which shows that the success of collective action depends on the interplay between formal rules and social norms. Effective institutions strengthen the credibility of collective action and encourage cooperative behavior, while high levels of social capital improve acceptance of institutional rules and reduce implementation costs.

Table 2: Social Capital and Institutional Performance in Revenue Mobilization in Africa

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Social Capital	0.5748	2.1930**	2.9724**	1.9189***	2.1458***	2.1046***	2.4734***
	(0.6948)	(1.0784)	(1.3046)	(0.5011)	(0.5429)	(0.5089)	(0.5386)
Quality of institutions	4.2242***	1.4625*	1.0508**	0.4318**	0.1168**	0.1935*	0.1866*
	(0.5463)	(0.8757)	(0.4529)	(0.2156)	(0.0545)	(0.1069)	(0.1048)
Interaction	0.4048	0.7732**	0.9634**	0.5806***	0.6166***	0.6084***	0.6109***
	(0.2873)	(0.3475)	(0.4067)	(0.1580)	(0.1775)	(0.1895)	(0.1923)
Size of the informal sector		-0.4288***	-0.4566***	-0.2361***	-0.2438***	-0.2440***	-0.2504***
		(0.1038)	(0.1143)	(0.0379)	(0.0407)	(0.0396)	(0.0418)
Inflation rate			-0.2474***	-0.2271***	-0.2295***	-0.2269***	-0.2516***
			(0.0786)	(0.0432)	(0.0479)	(0.0476)	(0.0479)
GDP per capita				0.0019***	0.0013**	0.0013**	0.0015***
				(0.0006)	(0.0005)	(0.0006)	(0.0006)
Trade openness					0.0906***	0.0899***	0.0899***
					(0.0174)	(0.0191)	(0.0186)
Official development assistance						0.0256	0.0157
						(0.5105)	(0.5043)
Income inequality							-0.0708***
							(0.0260)
Constant	11.8414***	28.8063***	31.8366***	21.2036***	18.3457***	17.8452*	21.9750**
	(0.5637)	(4.4266)	(5.2862)	(1.7929)	(2.0256)	(10.3804)	(10.4124)

Number of observations	424	424	424	424	424	424	424
Countries	44	44	44	44	44	44	44
Hansen	0.977	0.189	0.727	0.493	0.236	0.259	0.123

Note: Standard deviations are shown in parentheses; *** 1 %. ** 5 %. * 10 %.
***Source**: Authors*

3.2. Robustness analysis

3.2.1. Additional control variables

To reduce the risk that unaccounted-for domestic factors might influence our results, we include additional control variables. The goal is to better account for factors that may influence tax revenue. As in the previous section, we introduce a set of determinants of tax revenue, including agricultural value added, the gross enrollment rate in higher education, and the share of natural resources in GDP. The results are presented in Table 2 and confirm the robustness of the initial findings. They confirm that social capital is a significant determinant of tax revenue collection.

Table 2: Robustness test with an additional control variable

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Social Capital	4.8823**	2.9479**	2.7561***	1.9398***	2.7027***	2.5172***	2.3926***
	(2.4442)	(1.1577)	(0.9614)	(0.5917)	(0.8936)	(0.7791)	(0.7591)
Quality of institutions	1.9565***	1.2134*	0.2104*	0.1855**	0.1681***	0.1133***	0.9324**
	(0.6872)	(0.6854)	(0.1181)	(0.1012)	(0.0072)	(0.0566)	(0.4440)
Interaction	2.1553**	1.5789***	1.3997***	0.8980***	1.0567***	1.0117***	0.9595***
	(1.0232)	(0.5196)	(0.4636)	(0.2124)	(0.2758)	(0.2572)	(0.2196)
Size of the informal sector		-0.4099***	-0.3754***	-0.2588***	-0.2929***	-0.2990***	-0.3099***
		(0.0752)	(0.0715)	(0.0611)	(0.0607)	(0.0613)	(0.0493)
Inflation rate			-0.1842***	-0.1827***	-0.1985***	-0.2001***	-0.1536**
			(0.0709)	(0.0580)	(0.0666)	(0.0701)	(0.0604)
GDP per capita				0.0011	0.0008	0.0007	0.0012*
				(0.0008)	(0.0007)	(0.0007)	(0.0006)
Trade openness					0.0912	0.0955	0.1206**
					(0.0596)	(0.0617)	(0.0543)
Official development assistance						0.9175	0.9185
						(0.8023)	(0.7114)
Income inequality							-0.1177***
							(0.0450)
Agriculture	-0.3422	-0.2153**	-0.1333	-0.0942	-0.0842	-0.0778	-0.1465*
	(0.2147)	(0.1062)	(0.1170)	(0.0865)	(0.1042)	(0.0974)	(0.0817)
Naturels Resources	-0.4043*	-0.3532***	-0.2361*	-0.1535**	-0.1791*	-0.1977*	-0.2245**
	(0.2115)	(0.1201)	(0.1274)	(0.0724)	(0.0942)	(0.1031)	(0.0910)
KH	0.1185**	-0.0381	0.0238	-0.0172	-0.0110	-0.0106	-0.1618***
	(0.0563)	(0.0430)	(0.0504)	(0.0509)	(0.0570)	(0.0571)	(0.0480)
Constant	24.4343***	37.1759***	33.0448***	25.8872***	24.0169***	5.0098	13.2307
	(8.4280)	(6.8034)	(6.6614)	(3.5286)	(3.7071)	(15.4620)	(15.6466)
Number of observations	424	424	424	424	424	424	424
Pays	44	44	44	44	44	44	44
Hansen	0.1600	0.1810	0.3250	0.2110	0.1900	0.1080	0.4540

Note: Standard deviations are shown in parentheses; *** 1 %. ** 5 %. * 10 %.
***Source**: Authors*

3.2.2. Alternative estimation method

The previous estimates implicitly rely on the assumption of an average effect of institutional and social variables. However, this average effect may mask significant heterogeneity. To

capture nonlinear effects, we use a quantile regression approach in a panel data setting. The estimation results are presented in Table 3. The effect of social capital is strongly positive at all quantiles. This effect ranges from 2.442 at the 15th quantile to 2.961 at the 85th quantile. This suggests that social capital is more pronounced in countries characterized by relatively high levels of tax revenue. The quality of institutions is associated with an increase in tax revenue, with the coefficient being positive and statistically significant at the 1% level for all quantiles of the distribution. The coefficient ranges from 1.4765 at the 15th quantile to 1.7022 at the 85th quantile, indicating that the positive effect gradually increases in the higher quantiles. Finally, the interaction term remains positive and significant, suggesting a complementary relationship between social capital and government effectiveness in improving tax revenue. This result indicates that improvements in institutional quality tend to enhance the positive effect of social capital on tax revenue collection. More effective, transparent, and credible institutions create a favorable environment in which interpersonal trust and norms of cooperation have a greater impact on tax compliance and voluntary fulfillment of tax obligations.

Tableau 3: Quantile Regression Results

Variables	Q15	Q25	Q50	Q75	Q85
Share Capital Index	2.4424*	2.5307***	2.7043***	2.8733**	2.9611*
	(1.2504)	(0.9571)	(0.8640)	(1.4094)	(1.7833)
Quality of institutions	1.4765***	1.5149***	1.5904***	1.6639***	1.7022***
	(0.4950)	(0.4429)	(0.4377)	(0.5509)	(0.6382)
Social Capital Index× Quality of Institutions	0.2404**	0.3020*	0.4231*	0.5410**	0.6023*
	(0.1037)	(0.1663)	(0.2218)	(0.2637)	(0.3471)
Size of the informal sector	-0.1656**	-0.1615**	-0.1535***	-0.1456***	-0.1415***
	(0.0759)	(0.0655)	(0.0486)	(0.0410)	(0.0422)
Inflation (IPC)	-0.0493	-0.0440	-0.0335	-0.0233	-0.0180
	(0.1792)	(0.1556)	(0.1093)	(0.0647)	(0.0422)
GDP per capita	0.0022***	0.0022***	0.0022***	0.0023***	0.0023***
	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Trade openness	0.1532***	0.1602***	0.1739***	0.1872***	0.1941***
	(0.0331)	(0.0272)	(0.0176)	(0.0154)	(0.0183)
Official development assistance	-0.1344	-0.0973	-0.0242	0.0468	0.0837
	(0.5371)	(0.4549)	(0.3775)	(0.4497)	(0.5302)
Income inequality	-0.0168	-0.0112	-0.0001	0.0107	0.0163
	(0.1055)	(0.0850)	(0.0481)	(0.0329)	(0.0428)
Constant	11.0892	10.9261	10.6053	10.2932	10.1309
	(12.0974)	(10.7308)	(9.3936)	(10.2920)	(11.4990)
Observations	335	335	335	335	335
Pays	44	44	44	44	44
Critère GMM Q(b)	1.6316	1.6316	1.6316	1.6316	1.6316

Note: Standard deviations are shown in parentheses; *** 1 %. ** 5 %. * 10 %.
***Source**: Authors*

4. Conclusion and policy implications

The results suggest that high levels of social capital improve tax revenue. This effect becomes more pronounced when institutions perform well. These findings argue for greater integration of the social dimension into fiscal policies. First, any effective strategy for mobilizing domestic resources must necessarily include the strengthening of inclusive social capital through the promotion of community dialogue and the development of cultural infrastructure. Second, these results encourage policymakers to invest in civic education through school curricula and to develop collective projects involving diverse ethnic and religious groups. Finally, institutional reforms should be undertaken to enhance the effectiveness of public administration, including strengthening oversight and audit mechanisms and ensuring transparency in the use of public resources.

Reference

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review*, *91*(5), 1369–1401.

Alm, J., Martinez-Vazque, J., & Torgler, B. (2006). Russian attitudes toward paying taxes–before, during, and after the transition. *International Journal of Social Economics*, *33*(12), 832–857.

Alm, J., & Martinez-Vazquez, J. (2007). "Reforms and tax compliance: The divergent paths of Chile and Argentina.". *Journal of International Development*, *19*(2), 195–221.

Alm, J., & Torgler, B. (2006). Culture differences and tax morale in the United States and in Europe. *Journal of Economic Psychology*, *27*(2), 224–246.

Bird, R. M., Martinez-Vazquez, J., & Torgler, B. (2008). Tax effort in developing countries and high income countries: The impact of corruption, voice and accountability. *Economic Analysis and Policy*, *38*(1), 55–71.

Brezeanu, P., Dumiter, F., Ghiur, R., & Todor, S. P. (2018). Tax Compliance at National Level. *Studia Universitatis „Vasile Goldis" Arad – Economics Series*, *28*(2), 1–17. https://doi.org/10.2478/sues-2018-0006

Feld, L. P., & Frey, B. S. (2007). Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation. *Law & Policy*, *29*(1), 102–120. https://doi.org/10.1111/j.1467-9930.2007.00248.x

Feld, L. P., & Torgler, B. (2007). *Tax morale after the reunification of Germany: Results from a quasi-natural experiment*. https://escholarship.org/uc/item/3qr87655

Government Revenue Database. (2025). https://www.wider.unu.edu/project/grd-government-revenue-dataset

Indices de Développement Social. (2026). https://isd.iss.nl/data-access/

Kahneman, D., & Tversky, A. (2013). Prospect Theory: An Analysis of Decision Under Risk. In L. C. MacLean & W. T. Ziemba, *World Scientific Handbook in Financial Economics Series* (Vol. 4, pp. 99–127). WORLD SCIENTIFIC. https://doi.org/10.1142/9789814417358_0006

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2006). *Governance matters V: Aggregate and individual governance indicators for 1996-2005*. World Bank Washington, DC.

Nannicini, T., Stella, A., Tabellini, G., & Troiano, U. (2013). Social capital and political accountability. *American Economic Journal: Economic Policy*, *5*(2), 222–250.

Nunn, N., & Wantchekon, L. (2011). The slave trade and the origins of mistrust in Africa. *American Economic Review*, *101*(7), 3221–3252.

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action* (Vol. 10). HeinOnline.

Torgler, B. (2006). The importance of faith: Tax morale and religiosity. *Journal of Economic Behavior & Organization*, *61*(1), 81–109. https://doi.org/10.1016/j.jebo.2004.10.007

World Development Indicators. (2025). https://databank.worldbank.org/source/world-development-indicators