Effect of Social Capital on Tax Revenue Mobilization in African

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Abstract

This article examines the effects of social capital on tax revenue mobilisation in forty-four African countries over the period 2000–2020. The study employs an econometric approach based on the double least squares method (2SLS). The results show that social capital has a positive effect on tax revenue mobilisation in Africa. They suggest that strengthening institutional trust, intergroup cohesion, gender equality and Civic Activism improves voluntary tax compliance, broadens the tax base and increases the efficiency of tax administrations. Policy-makers must refocus public policy on promoting inclusive social capital, reducing political and ethnic divisions, and promoting territorial equity.

Keywords: Social capital, Tax revenue, Instrumental variables, 2SLS Method, Africa

JEL Classification: A13, H20, C26, Z13, 055.

1. Introduction

Revenue mobilisation is a crucial challenge for most African countries. Despite a series of tax reforms since the 1990s, tax revenues remain below the levels required to sustainably finance essential public policies such as education, health, infrastructure and security (Seraphin 2025). This situation is largely due to the size of the informal sector. A large proportion of economic actors evade traditional tax mechanisms, thereby reducing the state's ability to collect taxes (Alm et al. 2004). Furthermore, the work of Reinganum and Wilde (1985) on tax evasion has shown that the public administration's control mechanisms are generally sub-optimal. In this context, social capital appears to be a potential lever for mobilising tax revenue, capable of influencing both taxpayer behaviour and the effectiveness of public action (Alm and Gomez 2008). This observation is fully in line with the vision set out in Agenda 2063 and the SDGs, particularly SDG 17, which place taxation and tax compliance at the heart of development financing.

Social capital refers to the set of norms, shared values and levels of trust that facilitate coordination and cooperation within a society (Putnam 2001; Helliwell and Putnam 1999). A strong social capital base helps to create an environment in which paying tax is seen as a civic duty (Frey and Feld 2002). In this sense, the theory of tax compliance developed by Frey and Feld (2002) suggests that tax-compliant behaviour is driven by a desire to conform to social norms. According to Becker (1968), firms are motivated to comply not only for economic reasons such as tax penalties, but also by social sanctions and the preservation of their reputation in order to avoid criticism or judgement. This highlights the importance of social pressure and the willingness to conform to social norms in firms' tax decisions (Méda 2002).

Unlike social capital theory, the theory of economic rationality posits that there is not necessarily a link between changes in social capital and tax compliance. According to this approach, firms weigh up the costs and benefits associated with tax compliance and base their decisions on this (Alm et al. 2004). If the costs outweigh the benefits, they may be less compliant and seek ways to minimise these costs. The cost-benefit theory thus highlights the strength of economic incentives in firms' tax compliance behaviour. Most rational individuals would have an incentive to under-report income not subject to withholding tax or to overstate tax deductions not subject to independent verification, given the low probability of detection of income not subject to verification (Webley 1991).

From an empirical perspective, given the difficulty of finding suitable measures to capture social capital, several measures have been considered in the empirical literature, notably civic activism, membership of associations and interpersonal trust. Thus, Kangave et al. (2018) show that generalised trust promotes responsible tax behaviour. Audia and Teckchandani (2010), Filippin et al. (2013) find that active participation in voluntary organisations promotes direct interactions between their members and helps to strengthen their civic engagement.

However, contradictory findings are reported by Andriani (2016), who notes that tax compliance is lower among individuals involved in associations in Palestine. Similarly, James Alm et al. (2017) observe that social capital, in the form of group membership, can be both a cause and a remedy for tax non-compliance. Certain social and ethnic groups often find themselves trapped in a harmful imbalance of norms and values that hinder individual and collective development. Once non-compliance is established, this imbalance is perpetuated through the influence of role models and peer groups. Adhering to such an equilibrium is rational from an individual perspective, as any deviation leads to reprisals from the group, and thus a decline in individual well-being. However, society as a whole suffers, as this gives rise to socially sub-optimal behaviour.

These findings offer useful insights into understanding the effects of social capital on tax revenue mobilisation. However, they remain fragmented and do not allow for the identification of general mechanisms. Almost all dimensions of social capital and tax performance show relatively significant differences between regions. In the countries of the Organisation for Economic Cooperation and Development (OECD), according to the United Nations University's Global Research Institute on Development Economics (2025), tax-to-GDP ratios often exceed 30%. Conversely, in several African countries, although tax reforms have become more frequent, tax revenues remain stagnant at around 12 to 17% of GDP. This divergence highlights the existence of intangible factors not directly linked to the economic structure or the material capacities of the tax administration. On average, according to the International Institute of Social Studies (2026), African countries have a relatively low level of social capital, at around 0.451, compared to OECD countries, whose average index stands at around 0.525.

The comparison with the Asian tigers notably South Korea, Singapore and Taiwan is even more revealing. These countries have a higher level of social capital, estimated at an average of 0.568, and have succeeded in establishing strong fiscal discipline and the effective mobilisation of public resources. This outcome can be partly explained by a high level of trust in institutions, strengthened social cooperation and civic norms that encourage compliance with tax

obligations. Thus, a comparative analysis of Africa, OECD countries and emerging Asian economies suggests that social capital is a fundamental determinant of fiscal performance, influencing taxpayers' acceptance of taxation and voluntary compliance.

In light of the above, the research question is as follows: what are the effects of social capital on tax revenue mobilisation in Africa? By incorporating social capital, our research offers a holistic view of tax mobilisation. It also suggests that socio-demographic factors play an important role in an individual's intrinsic motivation to pay taxes. The main objective of this research is to analyse the effects of social capital on tax revenue mobilisation in Africa. We hypothesise that high social capital improves tax revenue mobilisation in Africa.

The main contributions of this paper are as follows. First, this research contributes to the economic literature by highlighting the role of intangible factors, particularly social capital, in fiscal performance in Africa. Whilst traditional analyses of tax mobilisation focus primarily on economic structure, administrative capacity or coercive instruments (Allingham and Sandmo 1972), this research adopts a broader approach that incorporates trust, social norms and civic cooperation as key determinants of tax mobilisation.

Secondly, the majority of previous analyses of tax compliance rely primarily on microeconomic data, assessed using binary variables of social capital, such as 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 insights into social capital, they remain limited in their analysis of structural dynamics and institutional transformations. In this article, we draw on a set of longitudinal macroeconomic data from the International Institute of Social Sciences in order to better account for the historical, institutional and socio-cultural developments likely to influence the fiscal mobilisation of African states. Furthermore, unlike the databases used previously, this dataset offers the possibility of incorporating several new measures of social capital, notably those relating to security and interpersonal trust, intergroup cohesion, gender discrimination, civic activism, and the inclusion of minorities. This enables us to analyse the differentiated effects of the various dimensions of social capital on tax revenue, thereby allowing policymakers to implement targeted policies.

The remainder of this article is organised as follows. The second section reviews the theoretical and empirical literature. Section three presents the methodology. The fourth section presents the results and discussion. The fifth section concludes and draws policy implications.

2. Review of the economic literature on tax compliance

2.1. Review of the theoretical literature

Taxpayers' decisions regarding their tax obligations are the result of multiple influences drawn from behavioural, economic and social sciences. Without claiming to be exhaustive, the economic literature distinguishes between two groups of theories for assessing tax revenue mobilisation: so-called traditional theories and so-called modern theories (Nkoa and Song 2022).

With regard to traditional theories, the theory of rational choice and tax deterrence by Allingham and Sandmo (1972) constitutes the benchmark economic model for the analysis of tax compliance. This model posits that taxpayers rationally weigh up the potential costs and benefits associated with tax compliance, and their decision depends on the balance between these factors. If the costs outweigh the benefits, they may be less compliant (Alm et al. 2004). Depending on the results of this analysis, SMEs may decide to comply fully with tax regulations, seek legal tax minimisation strategies, or take other measures to maximise tax management and prioritise their tax obligations. Assuming absolute risk aversion, an increase in penalties and the perceived probability of detection of tax evaders leads to a decrease in tax evasion (Williams 2014; Williams and Horodnic 2015, 2017).

In contrast to this first category of theories, so-called modern theories incorporate the theory of social conformity developed by Feld and Frey (2007), the theory of planned behaviour by Ajzen (1991), and the psycho-sociological theory of taxation by Schmölders (1960). These theories argue that improved tax compliance is accompanied by a strengthening of social capital, trust in public institutions and the perceived legitimacy of the state, rather than a mere increase in coercive and punitive mechanisms. According to social compliance theory, tax-compliant behaviour is driven by social norms. Indeed, SMEs are motivated to comply with tax regulations to avoid social sanctions and to preserve their reputation. Social capital thus becomes a strategy for tax compliance and a means of social sanction against businesses. As argued by Alm et al. (1999), there is a social norm of tax compliance that influences individual decisions regarding tax returns. According to Putnam (1995), social networks, just like physical and human capital, hold value for individuals, and the way in which interactions between economic actors are embedded in civic virtue. From this perspective, social capital enables participants to act collectively more effectively to achieve common goals.

In a broader context, the psycho-sociological theory of taxation by Schmölders (1960) considers that tax behaviour cannot be explained solely by economic factors or legal constraints. People may be influenced by psychological and emotional factors in their choices regarding tax compliance. This theory argues that taxpayers' perceptions, emotions, beliefs and attitudes play an important role in their tax decisions. Individuals are influenced by what those around them consider to be socially acceptable in tax matters. If the majority of people in a community pay taxes and regard this as a civic duty, this creates social pressure for others to do the same, thereby enhancing the state's ability to sustainably raise public revenue.

From the perspective of the Theory of Planned Behavior, Damayanti et al. (2015) show that attitudes and social norms strongly influence the intention to comply. The fundamental idea is that societies with higher social capital where individuals are more connected, interpersonal trust is high, and civic and volunteer activities are more widespread are likely to be more cohesive in their adherence to civic norms. Conversely, when tax evasion is socially tolerated, fraudulent behavior can spread more easily. The prospect theory proposed by Kahneman and Tversky (2013) provides a formal analytical framework for behavioral economics in the context of tax compliance. For Kahneman and Tversky (2013), civic behaviour that conforms to social norms becomes a reference point. Deviating from this is perceived not as a mere alternative choice, but as a loss, whether financial, social or moral. Risk and loss aversion lead individuals to adopt tax-compliant behaviour, insofar as tax evasion is perceived as likely to result in social sanctions.

However, the extent of this compliance depends largely on the institutional and social framework within which taxpayers operate. Indeed, the benchmark against which individuals assess their tax behaviour is not fixed; it is strongly influenced by the quality of the relationship between citizens and their government. When trust erodes, whether due to corruption, mismanagement or the perception that funds are not being put to good use, this can undermine tax compliance (Scholz and Lubell 1998; Horodnic 2018). An exclusive focus on the group's interests at the expense of broader collective interests can encourage and exclude those who do not belong to it. Relatively homogeneous groups may be characterised by a high degree of internal trust and cooperation, but a low degree of trust and cooperation towards the rest of society.

To account for this heterogeneity, Putnam (2002) distinguishes between bridging social capital and bonding social capital. On the one hand, bridging social capital connects people from different backgrounds. It tends to increase tolerance and acceptance of differences in people,

values and beliefs through contact with diverse individuals. In contrast, bonding social capital connects people of similar backgrounds based on their social identity. This results in strong social cohesion within a homogeneous group, where members trust one another simply by virtue of belonging to the group. Unlike bridging social capital, bonding social capital is more likely to be associated with negative externalities due to its exclusive nature. It can indeed create barriers to trust towards people outside the group who do not share its social identity or values. This form of exclusive attachment can hinder social cohesion and civic cooperation. According to Smith (1994), homogeneous groups rarely meet, even for leisure, without the conversation degenerating into a conspiracy against the public interest.

2.2.Review of the empirical literature

The empirical literature largely highlights a positive effect of social capital on tax revenue. For example, Alm et al. (1995), drawing on experimental results from Spain and the United States, find evidence that social norms have a positive effect on tax compliance. Kaplan et al. (1988) examined the decisions of 52 professional US tax preparers and found that moral development influences the effectiveness of educational communications aimed at improving tax compliance. In a longitudinal follow-up study of 1,161 Australian citizens, Wenzel (2005) established that personal and injunctive norms positively influence tax compliance behaviour. Alm et al. (2006), using microeconomic data on Russia from the World Values Survey and the European Values Survey for the years 1991, 1995 and 1999, highlight the importance of social norms in tax compliance. The community's perception of tax evasion and of a corrupt and inefficient state leads to a decline in tax compliance. They also indicate that the restoration of a higher level of trust in the state, following certain progress in the transition to a market economy, has had a positive influence on tax compliance. Conversely, when the perceived level of tax evasion is high and other taxpayers are perceived as free riders, citizens' tax morale is lower.

Feld and Torgler (2007) demonstrate a direct influence of patriotism on the level of tax compliance across countries. Their research reveals that the level of tax compliance is lower in cultures where the distance to power is greater. Alm and Gomez (2008), drawing on data from the Spanish Centre for Sociological Research, highlight the important role of social capital indicators as determinants of tax compliance. Active participation in voluntary organisations fosters direct interactions between members and strengthens their civic engagement. Similarly, Çevik (2016) shows that a stronger sense of belonging to a community in general has a positive influence on tax compliance. Feld et al. (2008) by comparing the level of tax compliance in an

environment similar in terms of deterrent measures but with different cultural characteristics, observe higher tax compliance in East Germany than in West Germany. This result indicates that tax compliance is determined more by factors other than deterrent measures, such as informal institutions. The findings of Blanthorne and Kaplan (2008) suggest that individual ethical beliefs are particularly important, as they found that social norms directly influence ethical beliefs, which in turn positively affect compliance behaviour.

By analysing individuals living in the same environment but from different cultures, Kountouris and Remoundou (2013) examine the level of tax compliance among immigrants in Europe and conclude that tax compliance in the country of origin influences that of individuals in the host country. According to Russo (2013), social capital, measured by active engagement in community life or participation in elections, has a positive impact on tax compliance. Bobek et al. (2013) examine the role of social norms in tax compliance among 174 taxpayers in the US. The analysis reveals that individuals' behavioural norms and ethical convictions, as well as the expectations of their relatives and friends, directly influence their decisions regarding tax compliance.

However, other studies have reached the opposite conclusion. Some of the literature highlights those certain forms of social capital, particularly when based on closed networks, exclusive forms of solidarity or strong community-based approaches, can have adverse effects. For example, Andriani (2016) uses a bivariate probit model and a Palestinian public opinion survey, conducted in 2007 in the West Bank and the Gaza Strip, to assess the impact of community involvement on tax compliance among Palestinians. The estimated conditional probabilities suggest that tax compliance is lower amongst Palestinians who take part in community activities. Cascavilla et al. (2024), using data from the fifth wave of the European Values Study, conducted among citizens of 34 countries, distinguish the effects of social capital measured by membership of different types of bridging and bonding associations on individual tax compliance in Europe. The results show that respondents involved in bridging associations tend to display higher levels of tax compliance, whilst the opposite is observed for bonding associations.

The results show that social capital, underpinned by cultures and social norms, influences tax revenue mobilisation. Despite the importance of the subject, research analysing this issue in African countries remains largely limited. This study sheds new light on the social determinants of tax mobilisation in developing economies. Furthermore, it makes a methodological contribution by explicitly addressing the problem of endogeneity between social capital and tax

revenue. Indeed, an improvement in public revenue may itself strengthen citizens' trust through better provision of public goods and services, thereby creating a reverse causality. To address this issue, this study employs an instrumental variables approach using exogenous historical instruments drawn from the literature by Nunn and Wantchekon (2011), namely the volume of slave exports normalised by land area and the volume of slave exports normalised by historical population. This identification strategy makes it possible to isolate the exogenous component of social capital and to identify its causal effect on tax revenue more rigorously.

3. Methodology

3.1.Empirical model

The reference point is the prospect theory proposed by Kahneman and Tversky (2013). Individuals evaluate gains and losses relative to a reference point. When this reference point is the social norm, the decision to pay or evade tax is assessed in relation to what others are doing or what is socially expected. Consequently, a loss of utility occurs if individuals fail to reach a certain benchmark. According to Kahneman and Tversky (2013), individuals are loss-averse; deviating negatively from the social norm is psychologically more costly than the benefit of a positive deviation. Any negative deviation from this norm is perceived as a social loss. Thus, in economies where social norms of tax compliance are high, tax revenues tend to be more significant. More formally, the empirical model is as follows:

$$REF_{i,t} = \alpha + \beta CAS_{it} + \sum_j^k \gamma_j X_{i,t} + \boldsymbol{\varepsilon_{i,t}} \, (1)$$

Where $i = 1, 2, \ldots, 44$ refers to the countries in the sample, $t = 1, 2, \ldots, 21$ represents the different observation periods and $k = 1, 2, \ldots, 6$ represents the number of control variables that may explain tax revenue. REF corresponds to tax revenue as a percentage of GDP, measuring the state's ability to mobilise domestic resources. CAS stands for the share capital index share capital. This article constructs a time-varying index based on data from the International Institute of Social Sciences. ε is the idiosyncratic error. X is a vector of control variables used to account for institutional and contextual characteristics. This vector includes GDP per capita, the inflation rate, the degree of trade openness, the quality of institutions as well as the size of the informal economy and the income inequality rate.

Social capital is measured using a composite index (CAS) constructed from five 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 (PC_1), which assess

the extent of ethnic, religious or sectoral tensions, as well as the associated discrimination. The second component is the interpersonal trust and security index (PC_2), which measures local perceptions of crime, the homicide rate and the level of trust in others. The third component is civic activism (PC_3) and measures media usage, freedom of expression and patterns of public protest. The fourth component measures the inclusion of minorities (PC_4) and assesses the discrimination experienced by vulnerable groups (ethnic minorities, refugees, migrants). Finally, the fifth component is the gender equality index (PC_5), which assesses the extent of gender-based discrimination in the family, workplace and public spheres. In order to obtain a synthetic measure of social capital, this study uses principal component analysis (PCA). The first step in creating this index is to apply the Min-Max approach in order to standardise the dataset.

$$CAS_{ij} = \sum_{j=1}^{5} \omega_j PC_{ij} \quad (2)$$

PC_{ij} represents the value of social capital dimension j for country i, whilst ω_j denotes the weight associated with that dimension. The weights correspond to the factor loadings estimated by PCA, which allows the relative contribution of each dimension to the construction of the composite social capital index to be taken into account.

In terms of evidence, research has shown that societies with high social norms experience a more vibrant civic life. Conversely, where such norms are absent or have eroded over time, it becomes more difficult for individuals to form groups and participate in collective action. Thus, high social norms increase tax compliance (Scholz and Lubell 1998; Alm et al. 2006; Kouamé 2021). As regards the potential influence of income on tax compliance, the empirical literature does not reach a consensus. On the one hand, wealthier individuals might demonstrate greater tax compliance, having more disposable income and therefore a greater propensity to pay their taxes. However, in progressive tax systems, a higher income level may be negatively correlated with tax compliance (Torgler 2006 ; Alm, et al. 2006). Trade openness is included in the tax revenue function as a measure of a country's effort to tax international trade. An increase in international trade raises the tax revenue (Piancastelli and Thirlwall 2020). A rise in the inflation rate increases the cost of taxation. When inflation is high, the real value of tax revenue is reduced (Tanzi 1978). Inequality encourages individuals to evade taxation and consequently reduces revenue (Rosser et al. 2000). The size of the informal sector is a major obstacle to tax revenue mobilisation (Teera 2003). Institutional factors reflect perceptions of the quality of public services; this variable is assumed to have a positive effect (Brun et al. 2011).

3.2.Data and Variables

Our sample comprises 44 African countries over the period 2000–2020. The sample countries and the time period selected are determined by data availability. The list of countries included in this research is set out in Table A1 in the appendix. The data used in this study are drawn from several sources. Data on GDP per capita, trade openness, inflation rate, institutional performance and Size of the informal sector are sourced from the World Bank(World Development Indicators 2025). Data on tax revenue and income inequality are sourced from the UNU-WIDER (Government Revenue Database 2025). Data on social capital are drawn from the International Institute of Social Sciences (Indices de Développement Social 2026).

3.3.Descriptive statistics and correlation of variables

Table 1 presents the mean, standard deviation, and minimum and maximum values for all variables. The mean value of tax revenue as a percentage of GDP is 13.523 percent, suggesting relatively low ratios in the African countries. The average share of the informal sector stands at 36.94 percent, highlighting its predominance in African economies. The average annual GDP per capita observed was dollar 1 759.756, with a minimum GDP per capita of dollar 109.594 and a maximum GDP per capita of dollar 18 210.6. The average share of the informal sector stands at 37.347 percent, highlighting its predominance in African economies. The openness rate averages 50.09 percent, with a standard deviation of 26.534, reflecting high volatility amongst the African countries included in the study. The institutional variables show negative averages over the entire period, reflecting weak institutional foundations in the region. The sample exhibits high volatility in the general price level, high income inequality and relatively low levels of social capital, with moderate dispersion indicating low heterogeneity amongst the countries studied.

Table 1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Tax revenue	878	13.523	7.51	2.291	60.946
Civic Activism	764	0.472	0.056	0.028	0.55
Intergroup cohesion	759	0.523	0.09	0.028	0.763
interpersonal trust and security	566	0.435	0.073	0.021	0.669
Gender equality	902	0.558	0.107	0.424	0.876
Inclusion of Minorities	547	0.441	0.033	0.284	0.535
Quality of institutions	879	-0.497	2.053	-2.099	1.283
Size of the informal sector	887	37.347	8.123	19.335	64.438
Inflation rate	887	9.508	32.79	-16.86	557.202
GDP per capita	924	1759.756	2296.477	109.594	18210.6

Trade openness	924	50.093	26.534	7.806	175.377
Income inequality	924	55.047	7.087	32.997	74.225

***Source**: Authors*

The correlation matrix presented in Table 2 allows us to examine the linear relationships between the main variables used in the analysis. The level of tax revenue shows a positive and significant correlation with generalised trust and the level of community safety; conversely, membership of clubs and associations is negatively associated with the rate of tax mobilisation. The quality of institutions, GDP per capita and trade openness are positively correlated with tax revenue, which may reflect the impact of a country's level of development on the tax revenue. The size of the informal sector is negatively and significantly correlated with the tax mobilisation rate at the 1 percent significance level. Contrary to expectations, income inequality is positively and significantly correlated with tax revenue at the 1 percent significance level, suggesting that taxation policies target concentrated income as a means of redistribution. Overall, these relationships warrant a more in-depth multivariate analysis.

Table 2: Correlation Matrix

Variables	*Tax revenue (1)*	*Civic Activism (2)*	*Intergroup cohesion (3)*	*interpersonal trust and security (4)*	*Gender equality (5)*	*Inclusion of Minorities (6)*	*Quality of institutions (7)*	*Size of the informal sector (8)*	*Inflation rate (9)*	*GDP per capital (10)*	*Trade Openness (11)*	*Income inequality (12)*
1	1.000											
2	0.093**	1.000										
3	0.105***	-0.052	1.000									
4	0.040	0.167***	-0.401***	1.000								
5	0.048	-0.149***	0.691***	-0.451***	1.000							
6	0.134***	0.156***	0.145***	0.371***	-0.015	1.000						
7	0.473***	0.269***	0.328***	0.184***	0.241***	0.344***	1.000					
8	-0.355***	-0.153***	0.018	-0.163***	0.065*	-0.160***	-0.474***	1.000				
9	-0.004	-0.098***	-0.049	0.005	-0.006	0.033	-0.125***	0.101***	1.000			
10	0.319***	0.236***	0.007	0.030	-0.056*	-0.014	0.404***	-0.469***	-0.055*	1.000		
11	0.564***	0.061*	0.098***	-0.064	0.044	0.092**	0.239***	-0.271***	-0.025	0.383***	1.000	
12	0.203***	-0.123***	0.242***	-0.361***	0.223***	0.038	0.075**	-0.009	0.031	-0.016	0.179***	1.000

****p<0.01, **p<0.05, *p<0.*
***Source**: Authors*

3.4.Multicollinearity test

The results of the multicollinearity test, presented in Table 3, confirm the absence of multicollinearity amongst the independent variables included in the regression model. The VIF values, which serve as standard benchmarks, are all below the conventional threshold of 10, with a mean of 1.769. A low VIF implies that the estimates obtained can be considered reliable and unbiased by issues of multicollinearity. Consequently, the results reinforce the validity of the model's conclusions and support the robustness of the policy implications arising from the study.

Table 3: Variance Inflation Factor

Variables	VIF	1/VIF
Institutional quality	2.813	0.355
GDP per capita	2.681	0.373
Size of the informal sector	1.545	0.647
Trade Openness	1.489	0.672
Social capital	1.445	0.692
Inequality (Gini)	1.354	0.738
Inflation (CPI)	1.054	0.949
Mean VIF	1.769	.

Source: *Authors*

3.5.Estimation method

We use the instrumental variables method estimated by two-stage least squares (2SLS) to account for any endogeneity issues. In societies characterised by a high level of trust and cooperation, citizens are more likely to view tax payment as a collective responsibility that contributes to the funding of public goods. This increases the state's ability to raise tax revenue. However, the relationship may also be bidirectional. Indeed, improved tax mobilisation enables the state to fund high-quality public services, which can strengthen citizens' trust and thus social capital The total number of slaves exported normalised by land area and the total number of slaves normalised by average population deported from each country during the four waves of the slave trade between 1400 and 1900 are used as external instruments for social capital. This identification strategy draws on the work of Nunn and Wantchekon (2011), who show that the African regions most exposed to the slave trade developed persistently lower levels of interpersonal trust, cooperation and social cohesion. According to Nunn and Wantchekon (2011), abductions, intra- and inter-community conflicts, and the disintegration of social networks caused by the slave trade profoundly altered norms of reciprocity and mechanisms of cooperation, leading to a persistent erosion of social capital.

In order to account for changes in social capital over time, an strategy is to construct a shift-share-type instrument, combining a fixed historical component with a variable temporal component, which in turn represents a factor that alters social interactions over time. More specifically, we propose constructing an instrument based on the interaction between historical exposure to the slave trade and changes in community networks. The underlying idea is that countries that were more exposed to the slave trade do not respond in the same way to contemporary changes in community social networks. In societies where associative networks are more developed, the effects of historical determinants tend to be mitigated by the emergence of new forms of cooperation and trust.

$$W_{i,t} = Slave_i * Club_{i,t} \quad (3)$$

$W_{i,t}$ is a shift-share instrument for country i at period t. Slave is the historical component of the instrument. It measures country i's historical exposure to the transatlantic slave trade. This variable is time-invariant and reflects the historical legacy that has had a lasting impact on levels of trust and cooperation within African societies. Club is the contemporary component of the instrument. It is a time-varying factor that influences social interactions and, consequently, the development of social capital.

The validity of the instruments was assessed using several econometric tests. Firstly, the under-identification test proposed by Kleibergen and Paap (2006) examines the null hypothesis that the instruments are uncorrelated with the endogenous variable. Rejection of this hypothesis, indicated by a p-value below the conventional threshold of 10 percent, confirms that the instruments are sufficiently correlated with the instrumented variable. Secondly, the strength of the instruments is assessed using the statistics proposed by Cragg and Donald (1993) and Kleibergen and Paap (2006). The validity of these tests relies on comparing the observed statistics with the critical values proposed by Stock and Yogo (2005). When the F-statistics exceed 10, the weak instrument hypothesis is rejected. The instruments can then be considered sufficiently informative to ensure the consistency of the 2SLS estimators. Finally, the exogeneity of the instruments is tested using Hansen (1982) over-identification test. A p-value greater than 10 percent leads to the hypothesis not being rejected, confirming that the instruments satisfy the exogeneity condition and can be considered valid.

4. Results and discussion

4.1. The effect of social capital on tax revenue mobilisation

In order to assess the effect of social capital on tax revenue mobilisation, estimates are carried out using a sequential approach that involves gradually introducing the various categories of explanatory variables. This approach makes it possible to assess the stability of the coefficient associated with social capital and to verify that its effect does not result from the omission of factors that may simultaneously influence the level of tax revenue. The estimation results are presented in Table 4. The LM statistics from Kleibergen and Paap (2006) allow us to reject the null hypothesis of under-identification, indicating that the instrumental variables are sufficiently correlated with the endogenous variable. The strength of the instruments is assessed using the F-statistics from Cragg and Donald (1993) and Kleibergen and Paap (2006). The values obtained are all above the conventional threshold of 10 recommended by Stock and Yogo (2005), which allows us to reject the hypothesis of weak instruments. Finally, the p-values associated with Hansen (1982) tests are well above the 10 percent significance threshold. Consequently, the null hypothesis of joint validity of the instruments cannot be rejected. This result indicates that the instruments used appear to be exogenous.

The results of the estimation show that an increase in social capital is associated with a significant rise in tax revenue mobilisation across all specifications. Tax compliance and the enforcement of tax legislation within a society are shaped by ethnic and sectarian tensions, as well as by the level of discrimination within that society. Taxpayers' sense of obligation to pay their taxes and the influence of the attitudes of those around them both depend on the socio-cultural context in which they live. Tax compliance is often higher than expected in a society characterised by a strong sense of collective responsibility and institutional trust, even in the absence of coercive measures. Paying tax is perceived more as a collective contribution to public services than as a mere legal obligation. This perception strengthens voluntary tax compliance and reduces the collection costs borne by the tax authorities. These findings are consistent with the work of Nannicini et al. (2013), who show that societies characterised by high social capital exhibit better tax performance, as well as with those of Feld and Torgler (2007), according to whom social norms account for a significant proportion of the differences observed in tax compliance between countries.

With regard to the estimated coefficients associated with the control variables, we find that they are consistent and in line with existing data on the determinants of tax mobilisation. More specifically, our results indicate a positive and direct relationship between trade openness and

tax revenue mobilisation. Indeed, revenues from international trade constitute a more easily taxable base than domestic income or consumption. This observation is consistent with the fact that many developing countries rely heavily on trade taxes, such as import duties, not only for their potential to generate tax revenue, but also as a means of domestic protection or import substitution. The impact of the informal sector on revenue has been found to be statistically negative. The informal economy undermines fiscal efforts by reducing the tax base. Owing to the inherent difficulties in taxing the informal sector, any growth in this sector leads to a fall in tax revenue. The informal sector serves as a haven for tax evaders. This finding is consistent with previous studies.

Furthermore, the results suggest that GDP per capita significantly increases tax revenue. When households have higher incomes, savings and investment rise, which broadens the tax base, particularly for income tax, value added tax and levies on economic transactions. Furthermore, high-income economies tend to have a smaller informal sector and higher levels of tax compliance, enabling a more efficient mobilisation of public resources. Contrary to expectations, income inequality produces a counter-intuitive result. An increase in income inequality leads to a 0.108 percent rise in tax revenue. This could be viewed, on the one hand, as a redistribution policy targeting concentrated incomes (Ramsey's principle), the predominance of indirect taxes (on goods and services), or as a measure of urgent needs regarding healthcare expenditure, quality infrastructure and improvements in educational standards, which would justify increasing government revenue from concentrated incomes.

Institutional quality has a positive effect on tax revenue mobilisation efforts in the African countries included in the analysis. This implies that countries with strong institutions tend to achieve higher levels of tax revenue mobilisation. Higher-quality institutions enhance transparency, administrative efficiency, tax law enforcement and citizens' trust in the state. Brezeanu et al. (2018) indicate that tax culture evolves in response to political changes and within the institutions that constitute the state's infrastructure.

Table 4: The effect of social capital on tax revenue mobilisation

Variables	Two-Stage Least Squares Estimation (2SLS)						
	Dependent variable: Tax revenue						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Capital social	**3.0939*** (0.8401)**	**1.3852** (0.5901)**	**2.9390*** (0.9705)**	**1.8476** (0.8285)**	**4.1547*** (0.9374)**	**2.3352*** (0.4708)**	**2.9443*** (0.6839)**
Quality of institutions		1.8861*** (0.2086)	0.7460** (0.3695)	1.1165*** (0.3053)	2.0273*** (0.6181)	1.5298*** (0.3613)	1.7823*** (0.4356)
Size of the informal sector			-0.3629*** (0.0958)	-0.3108*** (0.0877)	-0.2538*** (0.0750)	-0.1610*** (0.0417)	-0.1798*** (0.0484)
Rate inflation				-0.0124 (0.0483)	-0.0465 (0.0451)	-0.0336 (0.0371)	-0.0353 (0.0410)
GDP per capita					0.0034*** (0.0005)	0.0023*** (0.0003)	0.0025*** (0.0003)
Trade Openness						0.1712*** (0.0148)	0.1803*** (0.0172)
Inequality (Gini)							-0.0603 (0.0427)
Constant	15.4506*** (0.4172)	14.0419*** (0.3709)	27.9178*** (3.6830)	25.7679*** (3.2851)	19.9892*** (2.9327)	9.8579*** (1.7083)	13.2681*** (3.1537)
Number of observations	373	365	342	335	335	335	335
Countries	44	44	44	44	44	44	44
Kleibergen-Paap LM	38.193	35.633	20.070	18.162	24.199	29.890	22.237
Cragg-Donald F	31.119	29.195	17.208	15.595	20.659	27.791	17.025
Kleibergen-Paap Wald	26.874	26.571	12.774	12.020	15.464	22.568	15.136
Hansen	73.438	57.053	34.923	34.244	6.623	14.202	9.146

*Note: Standard errors are shown in parentheses. ***p<0.01, **p<0.05, *p<0.1,*
***Source**: Authors*

4.2.Robustness analysis

4.2.1. Additional control variables

In order to reduce the risk that unaccounted-for domestic factors might influence our results; we include additional control variables. The aim is to take better account of factors likely to influence tax revenue. As in the previous section, we introduce a set of determinants of tax revenue, official development assistance, agricultural value added, the gross enrolment rate in higher education and the share of natural resources in GDP. The results are presented in Table 5 and confirm the robustness of the initial findings. The results confirm that social capital is a significant determinant of tax revenue mobilisation.

Table 5: Robustness test with an additional control variable

Variables	Two-Stage Least Squares Estimation (2SLS)						
	Dependent variable: Tax revenue						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Capital social	**3.8077*** (1.4374)**	**3.5025*** (1.1215)**	**3.3067*** (1.2659)**	**3.1144*** (1.1568)**	**2.8898*** (0.9393)**	**2.0851*** (0.4880)**	**2.0761*** (0.4915)**
Quality of institutions		0.9145** (0.3922)	1.1304** (0.4959)	0.9095** (0.4423)	1.3570*** (0.4815)	1.5195*** (0.3009)	1.5094*** (0.3025)
Size of the informal sector			-0.1888** (0.0845)	-0.1774** (0.0779)	-0.1674** (0.0772)	-0.1308*** (0.0391)	-0.1195*** (0.0442)
Rate inflation				-0.1851** (0.0905)	-0.2076*** (0.0804)	-0.1379** (0.0544)	-0.1423*** (0.0536)
GDP per capita					0.0015*** (0.0005)	0.0010*** (0.0004)	0.0009** (0.0004)
Trade Openness						0.1837*** (0.0142)	0.1805*** (0.0146)
Inequality (Gini)							0.0334 (0.0516)
Official Development Assistance	-0.8172 (0.5621)	-1.5254*** (0.5140)	-1.4277*** (0.5050)	-1.4374*** (0.4444)	-0.8497* (0.4923)	0.3713 (0.3834)	0.3556 (0.3872)
Domestic Credit/GDP	0.1466*** (0.0226)	0.1567*** (0.0243)	0.1358*** (0.0253)	0.1241*** (0.0212)	0.0848*** (0.0177)	0.0704*** (0.0101)	0.0698*** (0.0100)
Agriculture/GDP	-0.3473*** (0.0666)	-0.3744*** (0.0629)	-0.3956*** (0.0693)	-0.3628*** (0.0680)	-0.2831*** (0.0775)	-0.1999*** (0.0500)	-0.1886*** (0.0489)
Natural Resources/GDP	0.0991 (0.1120)	0.0515 (0.1047)	0.0230 (0.0985)	0.1057 (0.0980)	0.1336 (0.0913)	-0.0753 (0.0635)	-0.0683 (0.0637)
Gross enrolment rate in higher education	0.0482 (0.0771)	0.0226 (0.0617)	-0.0419 (0.0636)	-0.0161 (0.0681)	-0.0556 (0.0561)	-0.0566* (0.0293)	-0.0232 (0.0597)
Constant	33.1769*** (11.5964)	49.5259*** (10.1232)	56.3312*** (9.7761)	55.9939*** (8.7826)	41.2296*** (10.7037)	6.7169 (8.1469)	4.4445 (8.2987)
Number of observations	373	365	342	335	335	335	335
Countries	44	44	44	44	44	44	44
Kleibergen-Paap LM	9.347	18.083	12.855	10.932	11.179	9.933	14.154
Cragg-Donald F	14.196	17.610	16.519	16.025	16.573	16.221	17.544
Kleibergen-Paap Wald	14.999	11.116	18.262	16.964	17.933	17.446	10.238
Hansen	0.880	0.581	0.916	0.324	0.108	0.430	0.275

*Note: Standard errors are shown in parentheses. ***p<0.01, **p<0.05, *p<0.1,*
***Source**: Authors*

4.2.2. Components of social capital on tax revenue

In order to identify the channels through which social capital is transmitted, we substitute each of the index's components for the aggregate index in separate regressions. The estimation results are presented in Table 6. An increase in civic activism is associated with a decline in tax revenue mobilisation. In the African context, civic activism reflects, to a greater extent, opposition to public policies and a growing demand for social and institutional accountability rather than support for state action. Thus, a high score limits the ability of public administrations

to voluntarily raise revenue. This interpretation is consistent with the literature on the fiscal contract, according to which tax compliance is based on reciprocity between the state and its citizens. When citizens believe that public resources are mismanaged or that institutions lack credibility, they are less inclined to contribute voluntarily to the financing of the state.

The impact of interpersonal trust and security norms on tax revenue collection is found to be positive for the African countries included in the analysis. The study shows that societies characterised by high levels of trust and reliability generate higher levels of tax revenue. Conversely, in societies where citizens fear a violation of their personal and property rights, tax revenue collection tends to be lower. Indeed, when standards of security and interpersonal trust are absent or have eroded over time, it becomes more difficult for individuals to form groups and participate in collective action. As Feld and Frey (2007) explain, compliance with tax obligations can be seen as an implicit psychological contract between taxpayers and the tax authorities; consequently, trust in the latter, as well as in other formal institutions, can influence tax revenue in a country. This has been extensively supported by empirical research, which consistently shows a positive link between vertical trust and the willingness to pay taxes (Scholz and Lubell 1998; Alm et al. 2006; Kouamé 2021)

Furthermore, as gender-based discrimination decreases, individuals are better able to realise their potential and contribute fully to the tax base. Empirical analyses, notably those by Elmadbouh and Zouiri (2026) and by Kolovich and Newiak (2024), highlight that gender equality promotes economic growth and productivity, thereby generating a tax dividend. The inclusion of minorities in the economic ecosystem improves acceptance of taxation and promotes voluntary tax compliance. When individuals, regardless of their ethnic, religious or social background, perceive public institutions to be fair and feel that they are treated without discrimination, they develop greater trust in the state, thereby reducing tax evasion and tax fraud. This interpretation is consistent with Feld and Frey (2007) tax exchange theory, according to which citizens are more willing to contribute to the financing of public goods when they consider that the benefits of public policy are distributed fairly and inclusively. These findings are in line with the literature on inclusive institutions developed by Robinson and Acemoglu (2012), which suggests that institutions promoting broad public participation stimulate economic growth and the state's fiscal capacity. The findings are also consistent with the work of Rothstein (1998), which shows that the impartiality of public institutions strengthens public trust and enhances people's willingness to comply with tax rules.

Table 6: The impact of the various components of social capital on tax revenue

Variables	Two-Stage Least Squares Estimation (2SLS) Dependent variable: Tax revenue				
	(1)	(2)	(3)	(4)	(5)
Civic Activism	**-4.9364*** (1.2864)**				
Intergroup Cohesion		**1.6456*** (0.6259)**			
interpersonal trust and security			**0.8810*** (0.1132)**		
Gender Equality				**0.6790*** (0.1353)**	
Inclusion of Minorities					**1.6702 (1.0790)**
Quality of institutions	0.6851*	7.4321***	-0.3111	3.9377***	0.6754*
	(0.4052)	(2.8553)	(0.1970)	(0.7708)	(0.3569)
Size of the informal sector	-0.3426***	-0.4163***	-0.1334***	-0.3023***	-0.1123**
	(0.0885)	(0.1490)	(0.0348)	(0.0593)	(0.0481)
Rate inflation	-0.0782	-0.0721	-0.0152	-0.0465	-0.0374
	(0.0819)	(0.0596)	(0.0246)	(0.0477)	(0.0268)
GDP per capita	0.0035***	0.0043***	0.0008***	0.0028***	0.0015***
	(0.0007)	(0.0013)	(0.0002)	(0.0004)	(0.0004)
Trade Openness	0.1252***	0.2120***	0.2225***	0.2323***	0.2025***
	(0.0349)	(0.0405)	(0.0160)	(0.0172)	(0.0257)
Inequality (Gini)	0.0878	-0.0434	0.1639***	0.0506	0.1330***
	(0.0580)	(0.0891)	(0.0425)	(0.0347)	(0.0427)
Constant	253.4867***	-67.1488**	-4.5671	-26.6160***	-74.3961
	(66.0904)	(27.6941)	(7.6431)	(6.1494)	(49.7624)
Number of observations	398	370	382	398	352
Countries	44	44	44	44	44
Kleibergen-Paap LM	16.303	7.636	22.427	25.992	3.423
Cragg-Donald F	10.961	13.628	17.052	21.189	12.880
Kleibergen-Paap Wald	10.768	4.160	14.053	20.689	1.822
Hansen	1.194	0.628	63.430	1.004	36.115

*Note: Standard errors are shown in parentheses. ***p<0.01, **p<0.05, *p<0.1,*
***Source**: Authors*

5. Conclusion and economic policy implications

This article examines the effect of social capital on tax revenue mobilisation in Africa. To this end, we carried out an estimation covering 44 African countries for the period 2000–2020, using an econometric approach based on the double least squares (2SLS) method. The results suggest that high levels of social capital improve tax revenue by fostering a climate of trust, perceived fairness and social cohesion. These findings argue in favour of better integration of the social dimension into fiscal policies. Firstly, any effective strategy for mobilising domestic resources must necessarily include strengthening inclusive social capital by promoting community dialogue and the development of cultural infrastructure. Secondly, the findings encourage public policymakers to invest in civic education through school curricula and to develop collective projects involving diverse ethnic and religious groups. Finally, the findings highlight

the need to invest in policies promoting gender equality. Greater economic and social inclusion of vulnerable groups helps to broaden the tax base and strengthen domestic resource mobilisation capacities.

This study does, however, have certain limitations relating to data availability. Firstly, due to the lack of complete time series, the analysis is restricted to the period 2000–2020. However, this period does not allow for the inclusion of the most recent developments observed since 2021, characterised by the consequences of the COVID-19 pandemic, the acceleration of the digital transformation of tax administrations, and the development of electronic payment systems. Consequently, the results do not capture the institutional and economic changes that have taken place in recent years. Future research might wish to examine the effect of specific government policies on social norms. Taxpayers may hold a more favourable view of certain programmes than others. These perceptions may also influence social norms and behaviour regarding tax compliance. Finally, a more nuanced distinction between the different forms of social capital notably neighbourhood social capital, bridging social capital and institutional linking social capital would help to better identify the dimensions most likely to foster tax compliance and improve policies for mobilising domestic resources in African countries.

Conflict of interest statement

The authors have no conflicts of interest to declare.

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The data that support the findings of the study are available from the corresponding author upon reasonable request.

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Appendix

Table A1: List of countries covered by the study

Countries	Countries	Countries	Countries
Angola	Cabo Verde	Morocco	Sudan
Burundi	Egypt	Madagascar	Senegal
Benin	Ethiopia	Mali	Sierra Leone
Burkina Faso	Ghana	Mozambique	Chad
Botswana	Guinea	Mauritania	Togo
Central African Republic	Gambia. The	Mauritius	Tunisia
Cote d'Ivoire	Guinea-Bissau	Malawi	Tanzania
Cameroon	Equatorial Guinea	Namibia	Uganda
Congo. Democratic Republic of the	Kenya	Niger	South Africa
Congo. Republic of the	Liberia	Nigeria	Zambia
Comoros	Lesotho	Rwanda	Zimbabwe

***Source**: Authors*