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Modelling Social Responsibility as a Systemic Driver of Fiscal Performance and Sustainable Development in Emerging Economies

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Abstract

This study examines how digital taxation (DT), as strategic leadership practices (SLP), and social responsibility (SR) interact to influence fiscal performance (FP) and sustainable development outcomes (SDOs) in emerging economies. It explores taxation as a reciprocal social contract between citizens and government, highlighting the mediating role of SR, captured through tax compliance and institutional trust, in strengthening fiscal performance and developmental outcomes. A mixed-methods design combined quantitative survey data ($n = 112$) and qualitative interviews ($n = 10$) from tax experts, business owners, and public officials. Partial Least Squares Structural Equation Modelling (SmartPLS 3) tested hypothesized relationships among DT, SR, FP, and Sustainable Development Goals (SDGs), while thematic analysis of interviews provided contextual depth and triangulation. DT significantly enhances FP ($\beta = 0.762$) and SDOs ($\beta = 0.534$). SR strongly predicts FP ($\beta = 0.359$) but exerts only a weak direct effect on SDOs ($\beta = 0.063$). Mediation analysis confirmed that SR and FP jointly transmit the effects of DT to SDGs, establishing FP as the principal pathway linking compliance and governance to sustainable development. Tax administrators should adopt transparent, data-driven, and user-friendly digital systems to enhance compliance, reduce avoidance, and expand the tax base. Governments should earmark digital tax revenues for visible public goods to foster trust and voluntary compliance. DT can strengthen the social contract when citizens perceive fairness and accountability. Transparent reinvestment of tax revenues in education, infrastructure, and healthcare deepens institutional trust and aligns fiscal policy with SDGs 4, 9, 16, and 17, through SDOs. This paper extends fiscal sociology to the digital era by empirically validating SR as a mediating mechanism between DT, FP, and SDOs. It integrates behavioural, institutional, and developmental dimensions within a single model, offering a novel framework for understanding how fiscal legitimacy translates into sustainable development. The study focuses on Ghana, with comparative references to Uganda, Hungary, Canada, and the EU, limiting generalizability. Future research should expand cross-country analyses and incorporate macroeconomic indicators to assess long-term developmental effects of DT systems.

Keywords: *Digital taxation, Social responsibility, Fiscal performance, Sustainable development outcomes, Institutional trust, Fiscal sociology, Emerging economies, Ghana*

Introduction

Globalisation and COVID-19 disruptions have accelerated digitalisation, fundamentally transforming business and financial systems (Amoah et al., 2023; Wang et al., 2020). These changes have intensified the need for global social responsibility (SR), requiring governments and citizens to act beyond narrow self-interest. In fiscal governance, this responsibility calls for strategic leadership practices (SLP) that balance revenue mobilisation, ethics, and sustainability while advancing collective welfare, consistent with Sustainable Development Goal (SDG) 17 (Partnerships for the Goals).

A central policy response has been digital taxation (DT), increasingly adopted to modernize revenue administration, advance financial system digitization, and strengthen fiscal capacity (Spadavecchia et al., 2025). In this regard, DT is conceptualized as strategic leadership of taxation systems, reflecting institutional design quality, policy transparency, administrative readiness, stakeholder engagement and implementation consistency rather than taxpayer behaviour (Arthur et al., 2022). Effective DT leadership strengthens fiscal performance (FP) by broadening the tax base and improving tax-to-GDP ratios (UNCTAD, 2022; Asamoah et al., 2023). However, many reforms have produced resistance and weak fiscal outcomes due to limited preparedness, perceived inequality, and weak institutional credibility (Amoh et al., 2025; OECD, 2019; PwC, 2025; Sundaravelu, 2021).

Existing tax compliance literature largely emphasises behavioural deterrence and tax morale (Torgler, 2007; Kirchler, 2007; Alm, 2019; Luttmer & Singhal, 2014), with limited attention to SR as a governance mechanism linking DT to FP and sustainable development. This gap is particularly evident in emerging economies, where weak institutional trust and reciprocity informality constrain revenue mobilisation, lower tax-to-GDP ratios (TTGDPR) and weaken the compliance-development nexus (Moore, 2015; Joshi & Prichard, 2018). African studies (Atawodi & Ojeka, 2012; Dabla-Norris et al., 2020; Agyapong & Ibrahim, 2021) mainly emphasise taxpayer knowledge and attitudes, with limited examination of SR's mediating role or its links to institutional trust, FP, and sustainable development outcomes (SDGs) (Adela et al., 2025).

Evidence from Ghana's e-levy, Uganda's 2018 mobile money tax, Hungary's 2014 internet tax, and Canada's digital services tax illustrates that poorly designed DT systems undermine trust and compliance, thereby weakening fiscal outcomes (OECD, 2019; Mwesigye & Matsumoto, 2020; Sundaravelu, 2021; Nutassey et al., 2023; Amoah et al., 2023; Amoh et al., 2025; ICTD, 2025; PwC, 2025; Spadavecchia, 2025). These experiences suggest that fiscal success depends not only on taxation instruments but also on leadership credibility and reciprocal state-society relations.

To address the above-mentioned research gaps, this study poses a central research question: To what extent do strategic leadership of digital taxation systems (SLDTS) and SR influence FP and sustainable development outcomes in emerging economies? Thus, this paper examines how SLDTS and SR interact to shape FP and advance SDGs. It conceptualizes taxation as a reciprocal social contract between citizens and government, where leadership credibility, accountability and responsible governance of digital tax systems jointly determine FP and the attainment of SDGs (4, 9, 16 and 17).

Thus, this paper demonstrates novelty and makes significant contributions to the taxation and public finance literature by empirically validating SR as a mediating fiscal governance mechanism linking DT to FP and the achievement of SDGs. Also, it advances fiscal sociology (FS) as an integrated explanatory framework by positioning taxation as a reciprocal contract between taxpayers and the state, and by demonstrating how this perspective explains tax compliance, FP and sustainable development outcomes (SDOs) in emerging economies. Finally, it reconceptualizes DT as a strategic leadership capability rather than merely a technical instrument.

Theoretically, FS views taxation as a reciprocal institutional relationship linking state capacity, legitimacy, and compliance (Schumpeter, 1918; Moore, 2015; Joshi & Prichard, 2018). This perspective

is particularly relevant in the digital era, where fiscal systems must adapt to digitized financial flows while maintaining legitimacy and developmental purpose. It suggests that tax compliance depends not only on enforcement, as emphasised in the deterrence literature (Torgler, 2007; Kirchler, 2007), but also on whether taxation is perceived as fair, transparent, and development-oriented (Luttmer & Singhal, 2014; Moore, 2015; Joshi & Prichard, 2018; Alm, 2019). This view directly informs how SLDTS reshapes institutional trust and compliance norms. Thus, taxation outcomes depend on both institutional credibility and sound policy design, which are products of strategic leadership practices.

Within this framework, SLDTS reflects government leadership capacity in designing and implementing equitable digital tax systems (Prichard, 2016; Dabla-Norris et al., 2020), while SR represents reciprocal behavioural and institutional responsibility, expressed through taxpayer compliance and accountable public resource management (Torgler, 2007; Moore, 2015; Joshi & Prichard, 2018; Alm, 2019; Dabla-Norris et al., 2020; Asamoah et al., 2023).

Prior studies (Prichard, 2016; Joshi & Prichard, 2018; Sachs et al., 2019; Dabla-Norris et al., 2020; UNESCO, 2021; Agyapong & Ibrahim, 2021; Asamoah et al., 2023; Adela et al., 2025) show that compliance improves when governments demonstrate transparency and reinvest revenues into visible public goods. Conversely, weak governance erodes legitimacy regardless of enforcement intensity. Thus, SR functions as the mechanism that translates policy design into fiscal outcomes.

DT reforms globally confirm this pattern. Where stakeholder engagement and equity considerations are weak, reforms face resistance and underperform fiscally (Adela et al., 2025; ICTD, 2025; OECD, 2019; PwC, 2025; Spadavecchia, 2025; Sundaravelu, 2021). Effective DT, therefore, depends on governance quality rather than technological adoption alone.

From the foregoing discussions, this paper, grounded in FS, proposes a conceptual framework (Figure 1) integrating SLDTS, SR, FP, and SDOs into a single analytical model. SLDTS is conceptualised as a governance and strategic leadership capability that shapes fiscal and development outcomes through direct and indirect pathways. SR captures reciprocal compliance and institutional accountability, while FP reflects fiscal capacity, serving as the primary transmission mechanism through which SLDTS influences sustainable development outcomes, including investment in infrastructure, public health, and education.

The proposed relationships include direct effects (H_1 - H_6) and the mediated pathways (H_7 - H_{11}).

Direct effect hypotheses:

H_1 : SLDTS positively influences SR.

H_2 : SLDTS significantly impacts FP.

H_3 : SR positively influences FP.

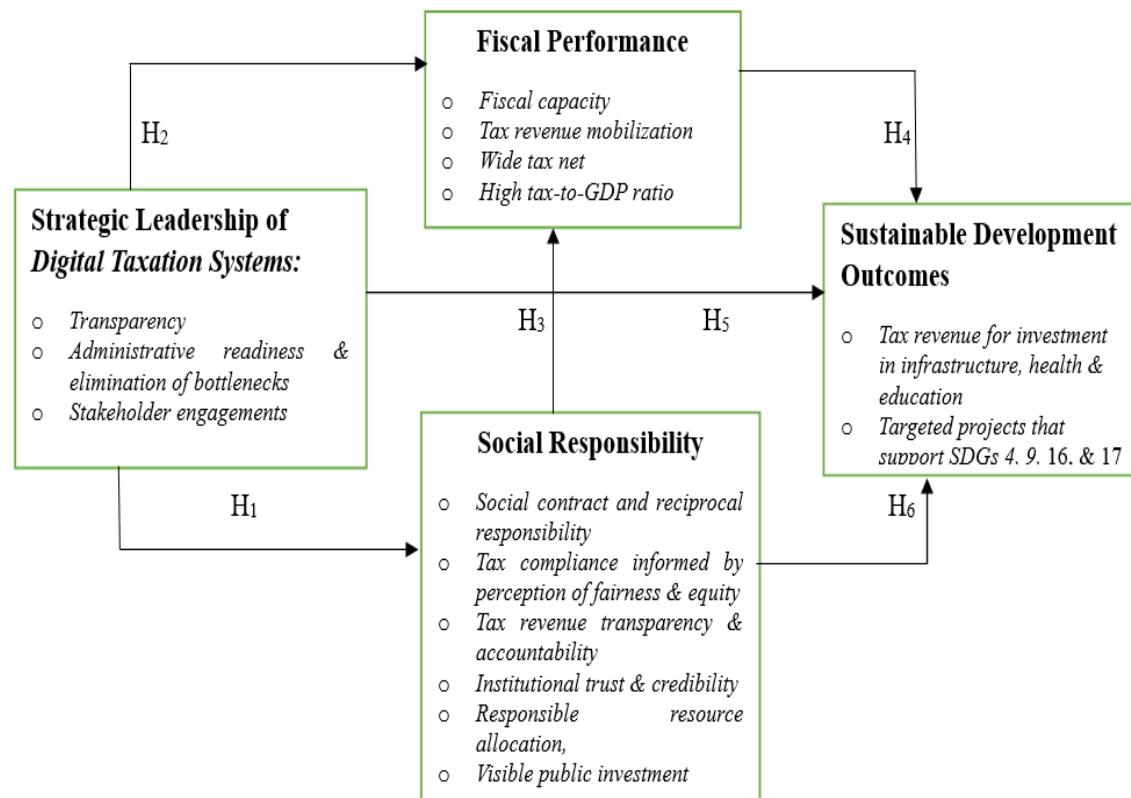
H_4 : FP significantly impacts SDOs.

H_5 : SLDTS directly influences SDOs.

H_6 : SR positively influences SDOs.

Figure 1

Conceptual Framework of Strategic Leadership of Digital Taxation Systems, Social Responsibility, Fiscal Performance and Sustainable Development



Source: Authors' Own Conceptualization

Mediating (indirect effect) Hypotheses include:

H₇: SR mediates the relationship between SLDTS and FP.

H₈: SR mediates the relationship between SLDTS and SDOs.

H₉: FP mediates the relationship between SR and SDOs.

H₁₀: FP mediates the relationship between SLDTS and SDOs.

H₁₁: SR and FP jointly mediate the relationship between SLDTS and SDOs.

Overall, the framework positions taxation as a reciprocal governance mechanism in which SR links strategic leadership-driven taxation systems to fiscal capacity and sustainable development outcomes. The remainder of the paper presents the methodology, results and discussion, implications, recommendations, contributions, limitations, and future research.

Research Design

This study adopted a mixed-methods design that integrates quantitative and qualitative approaches to capture both measurable fiscal effects and nuanced institutional dynamics. The design is particularly suited to investigating the mediating role of SR, operationalized as taxpayer compliance and government

accountability, in the relationship between SLDTs, FP, and SDOs. By combining survey-based quantitative data with narrative interviews and desk reviews, the study ensured both breadth and depth of analysis, aligning with best practices for complex socio-economic inquiries (Creswell & Clark, 2017).

Population and Sampling

The study targeted stakeholders directly or indirectly affected by the SLDTs and Ghana's e-levy, including tax experts, business owners, government officials, and public servants. Experts were drawn from a professional body, the Chartered Institute of Taxation, Ghana (CITG), legally mandated to advance taxation practice and policy in Ghana, ensuring statutory relevance and informed institutional perspectives. Such expert-informed sampling is appropriate in governance and policy research where respondents possess specialised knowledge of regulatory processes and implementation dynamics (Bryman, 2016; Creswell & Clark, 2017; Flick, 2018). Importantly, these participants were also taxpayers themselves, offering dual insights as both implementers of tax policy and subjects of taxation, consistent with fiscal sociology approaches that emphasise state-society interactions in tax systems (Prichard, 2016; Joshi & Prichard, 2018).

The sampling strategy was purposive and analytically driven (Bryman, 2016). Because the study examines perceptions of the strategic leadership of digital taxation systems, including the policy design, institutional accountability, and compliance governance, emphasis was placed on respondents with direct exposure to taxation processes and policy discussions (Flick, 2018). Evidence from policy reports and empirical studies indicates that a substantial share of economic activity in Ghana occurs within the informal sector, which remains only partially integrated into the formal tax net and has limited engagement with structured digital taxation systems (Joshi et al., 2014; Moore, 2015; Hammond et al., 2023).

Within this context, the study focused on professionally engaged taxpayers and policy stakeholders capable of providing informed evaluations of SLDTs rather than aiming for statistical representativeness of the entire taxpayer population (Bryman, 2016; Creswell & Clark, 2017; Flick, 2018). While this approach may limit generalisability due to potential selection bias, it enhances analytical insight by capturing informed institutional perspectives. Accordingly, the findings are interpreted as stakeholder-based perceptions reflecting informed institutional viewpoints rather than population-wide behavioural estimates (Saunders et al., 2015).

Consistent with this analytical focus, participants for the quantitative survey were drawn from professional WhatsApp platforms dedicated to taxation and policy information sharing. At the time of the study, membership across these platforms stood at approximately 250, with about 60% (~150) actively engaged, forming the accessible population. Although online professional platforms may over-represent formally engaged taxpayers, they are increasingly recognised as appropriate sampling frames for accessing specialised or informed populations and eliciting informed perceptions on policy awareness, institutional trust, and governance processes among actors directly interacting with taxation systems (Bryman, 2016; Creswell & Clark, 2017).

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Using Yamane's (1967) formula for sample size determination:

$$n = \frac{N}{1+(e)^2}$$

Where:

- n = required sample size
- N = population size (150, determined as $250 \times 60\%$)
- e = margin of error (0.05)

$$n = \frac{150}{1 + 150(0.05)^2} = \frac{150}{1.375} = 109.09 \approx 109$$

The resulting sample size was 109 (≈ 110). To account for potential non-response and to enhance representativeness, this figure was increased by 10% following recommendations by Gbadago (2025), Sarantakos (2005), and Sola (2014), yielding a final target of 121 respondents. The structured questionnaire, designed in Google Forms, was distributed via WhatsApp to actively engaged members. Out of 121 instruments administered, 112 valid responses were obtained after cleaning, representing a 93% response rate. This exceeded the minimum requirements for PLS-SEM analysis and captured heterogeneity across professional and institutional groups.

For the qualitative component, ten purposively selected participants, including tax practitioners, business owners, and policymakers, were engaged in narrative interviews embedded within the survey instrument. This purposive strategy ensured rich contextual insights from actors with first-hand knowledge of the e-levy's design, implementation, and effects, complementing the quantitative findings.

The data analysed in this paper form part of a larger study on taxation, institutional trust, and sustainable development in digitized economies. For the purposes of this paper, the dataset was carefully modified to suit the specific context of DT and e-levy. This approach ensures analytical focus while retaining the richness and credibility of the broader dataset.

Case Justification: Ghana as an Emerging Digitized Economy

Ghana was selected as the case study to address data limitations and also because it represents an emerging digitized economy with rapidly expanding mobile money and electronic transactions. This growth has generated new fiscal opportunities while exposing governance and institutional weaknesses (Adela et al., 2025; Amoah et al., 2023; Nutassey et al., 2023). The introduction and repeal of the e-levy in 2025 highlight tensions between revenue mobilisation, public trust, and equity. Similar challenges have been observed in Uganda, Hungary, Canada, and the EU, where hastily introduced digital taxes lacked data, readiness, or fairness, eroding trust, and effectiveness (Spadavecchia, 2025; OECD, 2019).

Unlike Uganda and Hungary, Ghana justified its levy as a tool to broaden the tax net and reduce aid dependence, though it faced implementation hurdles (PwC, 2025; Sundaravelu, 2021). Studying Ghana thus provides valuable insights into how emerging economies can design equitable digital tax systems that enhance fiscal capacity, institutional trust, and sustainable development.

Data Collection Procedures

Data collection employed both primary and secondary sources to ensure triangulation and empirical depth (Creswell & Clark, 2017; Tashakkori & Teddlie, 2010). Primary data were gathered through a structured Google Form questionnaire combining Likert-scale and open-ended items to capture quantitative

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measures of tax compliance, institutional trust, TTGDPR, and sustainable development, alongside qualitative insights on fairness and governance (Braun & Clarke, 2006; Guest et al., 2013).

Secondary data involved desk reviews of reports, policies, think-tank publications, and scholarly works on DT in contexts like Ghana's e-levy, Uganda's mobile money tax, Hungary's internet tax, Canada's digital services tax, and the EU's levy (OECD, 2019; PwC, 2025). This dual approach enhanced validation, allowing comparison between local experiences and global patterns, thereby strengthening the credibility and contextual grounding of findings (Bryman, 2016; Flick, 2018).

Instruments and Measures

The quantitative instrument comprised five sections aligned with key constructs. Section A covered demographics and occupational details as control variables. Section B measured strategic leadership of digital taxation systems, focusing on institutional design and implementation quality, including policy transparency, administrative accountability, stakeholder sensitivity, and the capacity of digital taxation reforms to sustain confidence in digital taxation systems. Section C assessed FP (revenue mobilisation, fiscal capacity, and the TTGDPR), while Section D assessed SR (tax compliance and reciprocal perceptions of government accountability, transparency, and institutional trust). Section E assessed SDOs, capturing perceived pathways through which SLDTS contributes to progress towards SDGs 4, 9, 16, and 17. Items were rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), with reliability confirmed through Cronbach's alpha and composite validity.

The qualitative component included embedded prompts and follow-up interviews. These captured insights on fairness, trust, and compliance, thereby enriching the quantitative findings within a robust mixed-methods framework.

Data Analysis

Quantitative data were analysed using SPSS (version 21) for descriptive statistics and SmartPLS 3 for PLS-SEM, suitable for small to medium samples and complex mediation or moderation testing (Hair et al., 2014). Six hypotheses (H_1 - H_6) were examined, with SR as a mediator between SLDTS, FP, and SDOs (H_7 - H_{11}). Reliability and validity were ensured using Cronbach's alpha, AVE, and the Fornell-Larcker criterion.

Qualitative data were thematically analysed following Braun and Clarke's (2006) six-step framework, combining inductive and deductive coding aligned to the study constructs. Coding was conducted interactively to ensure analytical consistency and reliability within the embedded mixed methods design. Triangulation between key informant interviews, qualitative survey responses, and secondary data enhanced interpretive credibility. The integrated analysis was used to explain and contextualize SEM findings, providing a holistic understanding of the fiscal, institutional, and behavioural implications of SLDTS in emerging digitized economies.

Because all constructs were collected using a single survey instrument, same-source perceptual measures, and a cross-sectional design, potential common method variance (CMV) was considered. Procedural remedies, including assuring anonymity, voluntary participation, and clearer separation of construct items, were applied to reduce response consistency bias (Podsakoff et al., 2003). Collinearity diagnostics showed that indicator VIF values were largely within acceptable limits, with only one item marginally exceeding the conventional threshold, suggesting localised overlap rather than severe multicollinearity concerns (Hair et al., 2019). Together with complementary qualitative evidence, these safeguards suggest that CMV is unlikely to substantially bias the structural relationships. Nevertheless, given the perception-based and cross-sectional design, the results are interpreted cautiously as reflecting expert stakeholder perceptions of digital taxation governance rather than definitive causal effects.

Ethical Considerations

The study complied with international ethical standards for social science research (Resnik, 2018; Bryman, 2016; Flick, 2018). The survey clearly outlined the study's purpose, defined the e-levy, and explained its relevance to SR, including tax compliance, social trust, and development. Participation was voluntary, with respondents free to withdraw at any time. Completion implied informed consent, and data were used solely for academic purposes.

Confidentiality and anonymity were ensured, with all responses securely stored and reported without identifiers. The study posed no harm and respected participants' dignity and autonomy, adhering to principles of informed consent, voluntariness, confidentiality, non-maleficence, and respect for persons.

Results and Discussion

Measurement Model and Advanced PLS-SEM Diagnostics

Consistent with partial least squares structural equation modelling (PLS-SEM) practice, the measurement model evaluation incorporated advanced diagnostics that strengthen measurement robustness and predictive credibility (Hair et al., 2019; Sarstedt et al., 2022). Such assessment is particularly important in governance and public policy research, where perceptual constructs such as institutional trust, fiscal performance, and development outcomes are conceptually related and may exhibit empirical proximity (Henseler et al., 2015).

Reliability and Convergent Validity

Table 1 presents the reliability and validity results for the study constructs, SLDTS, SR, FP, and SDOs. Cronbach's Alpha and Composite reliability values for all constructs exceed the recommended threshold of 0.70 (Hair et al., 2019), confirming internal consistency. For example, FP (CA = 0.93, CR = 0.94) and SDOs (CA = 0.97, CR = 0.98) demonstrate very high reliability, while SR (CA = 0.80, CR = 0.85) remains well within acceptable limits, reflecting the multidimensional nature of the construct. These results suggest that the items consistently measure their respective latent constructs.

Table 1

Construct Reliability, Convergent Validity and Fornell-Larcker Discriminant Validity

<i>Constructs</i>	<i>CA</i>	<i>rho A</i>	<i>CR</i>	<i>AVE</i>	<i>FP</i>	<i>SLDTS</i>	<i>SDOs</i>	<i>SR</i>
FP	0.93	0.93	0.94	0.73	0.85			
SLDTS	0.92	0.93	0.93	0.58	0.74	0.76		
SDOs	0.97	0.98	0.98	0.77	0.80	0.85	0.88	
SR	0.80	0.86	0.85	0.50	0.71	0.76	0.73	0.71

Source: Authors' Survey Results

Note: Fiscal Performance (FP), Strategic Leadership of Digital Taxation Systems (SLDTS), Sustainable Development Outcomes (SDOs), Social Responsibility (SR), (Cronbach's Alpha (CA), Dijkstra-Henseler's rho (rho_A), Composite Reliability (CR), Average Variance Extracted (AVE). Diagonal values in bold represent the square root of AVE.

Convergent validity was assessed using AVE, with all constructs exceeding the recommended 0.50 threshold. FP (0.73), SLDTS (0.58), and SDOs (0.77) demonstrate strong explanatory power. SR records an AVE of 0.50, meeting the minimum acceptable level (Fornell & Larcker, 1981). Given that SR integrates both taxpayer compliance and perceptions of government accountability, this is considered theoretically acceptable.

The Fornell-Larcker criterion confirms the discriminant validity, as the square root of AVE for each construct exceeds inter-construct correlations. For instance, FP's AVE square root (0.85) surpasses its correlations with SLDTS (0.74), SDOs (0.80), and SR (0.71), indicating empirical distinctiveness.

Discriminant Validity: Fornell-Larcker and HTMT Criteria

To provide a more stringent assessment, discriminant validity was further evaluated using the heterotrait-monotrait ratio (HTMT) (Henseler et al., 2015). As shown in Table 2, HTMT values varied from 0.774 to 0.881, remaining below the conservative 0.90 threshold. These findings suggest that SLDTS, SR, FP, and SDOs represent distinct yet empirically separable governance dimensions. This pattern aligns with FS perspectives, which conceptualize taxation as interconnected but analytically distinct state-society processes (Prichard, 2016; Luttmer & Singhal, 2014).

Table 2

Heterotrait-Monotrait Ratio (HTMT)

<i>Label</i>	<i>FP</i>	<i>SLDTS</i>	<i>SDOs</i>	<i>SR</i>
FP				
SLDTS	0.782			
SDOs	0.831	0.881		
SR	0.782	0.835	0.774	

Source: Authors' Survey Results

Note: Fiscal Performance (FP), Strategic Leadership of Digital Taxation Systems (SLDTS), Sustainable Development Outcomes (SDOs), Social Responsibility (SR). All HTMT values are below the 0.90 threshold, indicating acceptable discriminant validity.

Indicator Reliability and Cross-Loading Assessment

Cross-loading analysis (Table 3) was conducted to assess indicator reliability and discriminant validity further. The results indicate that indicators generally loaded highest among assigned constructs, supporting indicator reliability (Hair et al., 2019; Henseler et al., 2015). However, relatively high secondary loadings among SLDTS, SR, FP, and SDOs suggest that, although the constructs are distinguishable, they are also empirically interrelated and should be interpreted with caution.

Table 3

Indicator Cross Loadings

<i>Label</i>	<i>FP</i>	<i>SLDTS</i>	<i>SDOs</i>	<i>SR</i>
SLDTS1	0.679	0.817	0.691	0.592
SLDTS2	0.692	0.915	0.802	0.735
SLDTS3	0.596	0.826	0.709	0.594
SLDTS4	0.405	0.664	0.512	0.439
SLDTS5	0.504	0.696	0.579	0.536
SLDTS6	0.596	0.821	0.709	0.621
SLDTS7	0.527	0.734	0.654	0.576
SLDTS8	0.448	0.713	0.514	0.531
SLDTS9	0.707	0.859	0.772	0.704
SR1	0.719	0.797	0.759	0.813
SR2	0.223	0.246	0.206	0.429
SR3	0.427	0.415	0.399	0.610
SR4	0.542	0.587	0.556	0.845
SR5	0.468	0.509	0.525	0.775
SR6	0.473	0.482	0.427	0.699
FP1	0.870	0.595	0.658	0.594
FP2	0.884	0.595	0.708	0.570
FP3	0.828	0.669	0.710	0.639
FP4	0.784	0.604	0.599	0.614
FP5	0.892	0.583	0.640	0.578
SDOs1	0.718	0.837	0.934	0.706
SDOs2	0.759	0.796	0.936	0.660
SDOs3	0.738	0.813	0.953	0.670
SDOs4	0.780	0.816	0.964	0.695

Source: Authors' Survey Results

Note: Primary loadings are shown in bold. Although all indicators load highest on their assigned constructs, some relatively high secondary loadings are observed, particularly among SLDTS, SR, FP, and SDOs.

The SLDTS indicators exhibit strong primary loadings, especially SLDTS2 (0.915) and SLDTS9 (0.859). FP indicators also loaded strongly on fiscal performance, ranging from 0.784 to 0.892, while SDOs items recorded very high primary loadings from 0.934 to 0.964). The SR items

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loaded highest on SR, particularly SR4 (0.845) and SR1 (0.813). Nonetheless, some indicators showed notable cross-loadings. For instance, SR1 loaded 0.813 on SR, but also 0.797 on SLDTS and 0.759 on SDOs. Similarly, the SDOs items loaded on SLDTS in addition to their primary construct.

These results suggest moderate overlap among conceptually related governance, fiscal and development constructs. Such pattern is theoretically plausible, given the close relationship between SLDTS, SR, FP, institutional trust, compliance behaviour, and sustainable development outcomes within taxation systems (Alm, 2019; Joshi & Prichard, 2018). However, because the data were collected from the same respondents through a single survey instrument, the possibility of residual common method variance cannot be ruled out (Podsakoff et al., 2003, 2012).

Table 3 provides cautious support for indicator reliability and construct distinctiveness, as the high cross-loadings suggest possible conceptual overlap or shared method effects. However, the HTMT results in Table 2 confirm acceptable discriminant validity. Accordingly, the findings remain theoretically meaningful, although some shared method influence or construct proximity may have affected the observed relationships. Overall, the cross-loading pattern confirms indicator reliability and reinforces discriminant validity, indicating that the measurement model captures empirically distinct yet theoretically related dimensions of strategic leadership of digital taxation systems (Sarstedt et al., 2022).

Multicollinearity Assessment

Variance inflation factor (VIF) analysis was conducted to ensure that multicollinearity did not bias structural estimates. Across constructs, VIF values largely varied from 1.356 to 3.392 (Table 4), indicating acceptable correlations among indicators (Hair et al., 2019).

Table 4

Variance Inflation Factor

<i>Label</i>	<i>Measure</i>	<i>VIF</i>
<i>Strategic Leadership of Digital Taxation Systems (SLDTS)</i>		
SLDTS1	Digital taxation policies are clearly communicated and transparently implemented.	3.392
SLDTS2	Digital taxation systems are designed to support participation in e-commerce and digital transactions.	3.125
SLDTS3	Digital tax policies are designed to minimise excessive cost burden on users and consumers.	1.692
SLDTS4	Digital taxation systems consider labour market condition and income realities.	3.063
SLDTS5	Digital taxation systems are structured to avoid undue pressure on household welfare and social obligations.	1.884
SLDTS6	Digital taxation systems are administered with accountability and sound public financial management.	3.104
SLDTS7	Digital tax systems align with policies promoting secure, inclusive commerce and livelihood opportunities.	2.175
SLDTS8	Digital taxation systems are supported by clear, credible and evidence-based policy justification.	1.956

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SLDTS9	Digital taxation systems are implemented in ways that sustain confidence in formal digital payment systems.	1.358
	<i>Fiscal Performance (FP)</i>	
FP1	Domestic tax revenue mobilisation and tax-to-GDP ratio have improved.	3.200
FP2	Illicit financial flows within the economy have decreased.	2.398
FP3	Taxpayer self-assessment compliance and tax return filing have improved.	2.020
FP4	The informal sector has become more included in the tax net.	5.157
FP5	Fiscal capacity has improved, reducing dependence on donor support for government budgets.	2.711
	<i>Social Responsibility (SR)</i>	
SR1	Paying digital taxes alongside existing taxes is regarded as a civic responsibility.	1.700
SR2	Accurate declaration of income for tax purposes is regarded as a responsible civic obligation.	1.356
SR3	Compliance with tax filing requirements reflects responsible taxpayer behaviour.	1.620
SR4	Tax evasion is socially unacceptable under a fair tax system.	2.863
SR5	Aggressive tax avoidance is viewed as socially irresponsible.	2.518
SR6	Timely payment of taxes reflects a reciprocal obligation between citizens and the state.	1.507
	<i>Sustainable Development Outcomes (SDOs)</i>	
SDOs1	Macroeconomic stability supports sustained investment in education and human capital development (SDG 4).	1.899
SDOs2	Income stability and inclusive economic participation contribute to improved living standards (SDGs 4 & 9).	1.929
SDOs3	Investment, innovation, and digital infrastructure development are improving within the economy (SDG 9).	4.427
SDOs4	Institutional effectiveness, transparency, and collaborative governance are strengthening sustainable development partnerships (SDGs 16 & 17).	2.668

Source: Authors' Survey Results

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Note: Variance Inflation Factor (VIF). Most values fall within acceptable limits, although FP4 slightly exceeds the conventional threshold of 5.0, and accordingly interpreted with caution.

Within SLDTs, VIF values fall within moderate levels, suggesting that indicators capture complementary aspects of digital taxation leadership without redundancy. Similarly, SR indicators show consistently low VIF values, confirming that dimensions of compliance behaviour and perceived government accountability remain empirically distinct.

Within FP, item FP4 recorded the highest VIF (5.157), reflecting its strong conceptual association with broader fiscal capacity and informal sector integration. Likewise, SDOs3 registered a relatively higher VIF (4.427) due to its close linkage with investment and sustainable development outcomes. Despite these higher values, all indicators remain within tolerable limits and were retained due to strong theoretical relevance. Overall, the VIF results indicate that multicollinearity is not a significant concern, supporting stability and interpretability of the structural model estimates.

Model Fit Evaluation

Global model fit was assessed using standardised root mean square residual (SRMR) and discrepancy indices. The saturated model produced an SRMR value of 0.070 (Table 5), below the recommended 0.080 threshold, indicating acceptable model fit (Hu & Bentler, 1999). Supporting statistics ($d_{ULS} = 3.286$; $d_G = 2.754$) further indicate adequate approximation between the empirical and model-implied correlations. The Normed Fit Index ($NFI = 0.746$) reflects moderate fit, which is common in predictive PLS-SEM applications involving complex socio-institutional constructs where explanatory capability is prioritised over covariance reproduction (Sarstedt et al., 2022).

Table 5

Model Fit Summary

<i>Measure</i>	<i>Saturated Model</i>	<i>Recommended Threshold</i>
SRMR	0.07	< 0.08
d_{ULS}	3.286	Lower values preferred
d_G	2.754	Lower values preferred
Chi-Square	1328.592	Lower values preferred
NFI	0.746	> 0.90

Source: Authors' Survey Results

Note: Standardised Root Mean Square Residual (SRMR), squared Euclidean distance between the empirical and model-implied correlation matrices (d_{ULS}), geodesic distance between the empirical and model-implied correlation matrices (d_G).

Model Selection and Predictive Adequacy

Information-theoretic model selection criteria (Table 6), including Akaike's Information Criterion (AIC), Unbiased Akaike's Information Criterion (AICu), Corrected Akaike's Information Criterion (AICc), Bayesian Information Criterion (BIC), Hannan-Quinn Criterion (HQ), and Corrected Hannan-Quinn Criterion (HQc), were examined to assess the model parsimony and predictive adequacy. The predominantly negative AIC, BIC and HQ values observed across FP, SR, and SDOs indicate improved model fit relative to complexity. This suggests that the structural specification achieves efficient explanatory performance.

Table 6***Model Selection Criteria***

<i>Item</i>	<i>AIC</i>	<i>AICu</i>	<i>AICc</i>	<i>BIC</i>	<i>HQ</i>	<i>HQc</i>
FP	-96.302	-93.261	18.072	-88.147	-92.993	-92.558
SDOs	-164.618	-160.545	-50.052	-153.744	-160.206	-159.503
SR	-94.273	-92.255	19.949	-88.836	-92.067	-91.837

Source: Authors' Survey Results

Note: Akaike Information Criterion (AIC), Unbiased Akaike Information Criterion (AICu); Corrected Akaike Information Criterion (AICc); Bayesian Information Criterion (BIC); Hannan-Quinn Criterion (HQ); Corrected Hannan-Quinn Criterion (HQc).

Although corrected criteria (AICc) vary across constructs, the overall pattern supports a parsimonious and theoretically coherent representation of SLDTs relationships (Burnham & Anderson, 2004).

Structural Model Evaluation and Bootstrapping

Structural relationships were assessed using bootstrapping procedures to generate stable standard errors, confidence intervals, and significance estimates for path coefficients. Bootstrapping is particularly appropriate for PLS-SEM because it avoids strict distributional assumptions and enhances inferential robustness in behavioural and policy research contexts (Hair et al., 2019). Together with predictive relevance (Q^2) assessment reported in the structural model results, the findings indicate satisfactory explanatory and predictive capability.

Integrative Interpretation

Collectively, the reliability statistics, HTMT ratios, cross-loading diagnostics, multicollinearity checks, SRMR model fit indices, and model selection criteria provide convergent evidence that the measurement and structural models meet contemporary PLS-SEM robustness expectations. These diagnostics strengthen confidence that the observed relationships represent substantive effects of strategic leadership of digital taxation systems rather than results arising from measurement overlap or model misspecification issues.

PLS-SEM Path Analysis and Hypothesis Testing

The path analysis results in Table 7 provide strong empirical support for the hypothesized relationships among SLDTs, SR, FP, and SDOs. The model demonstrates strong explanatory power, with R^2 values of 0.580 for SR, 0.595 for FP, and 0.784 for SDOs. This means that the framework explains nearly 78% of the variance in SDOs, underscoring its robustness and relevance in understanding fiscal-development linkages in emerging economies.

Table 7

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Path Analysis of the Relationship Among SLDTs, SR, FP, and SDOs

<i>Hypotheses</i>	<i>Relationships</i>	<i>B</i>	<i>Total Effects</i>	<i>Std Dev</i>	<i>T-statistics</i>	<i>p-Values</i>	<i>Decision</i>	<i>f²</i>	<i>Remarks</i>
Direct Effects									
H ₁	SLDTs → SR	0.762	0.762	0.0440	17.390	0.000	Supported	1.380	Large
H ₂	SLDTs → FP	0.462	0.736	0.0440	16.600	0.000	Supported	0.220	Large
H ₃	SR → FP	0.359	0.359	0.1080	3.337	0.001	Supported	0.130	Small
H ₄	FP → SDOs	0.360	0.360	0.0870	4.164	0.000	Supported	0.240	Large
H ₅	SLDTs → SDOs	0.534	0.846	0.0360	23.790	0.000	Supported	0.450	Large
H ₆	SR → SDOs	0.063	0.192	0.0820	2.343	0.019	Supported	0.010	Small
Indirect Effects									
H ₇	SLDTs → SR → FP	0.274	0.274	0.0890	3.071	0.002	Supported		
H ₈	SLDTs → SR → SDOs	0.048	0.048	0.0570	0.834	0.404	Not Supported		
H ₉	SR → FP → SDOs	0.129	0.129	0.0530	2.438	0.015	Supported		
H ₁₀	SLDTs → FP → SDOs	0.166	0.166	0.0540	3.110	0.002	Supported		
H ₁₁	SLDTs → SR → FP → SDOs	0.099	0.099	0.0420	2.328	0.020	Supported		
	Endogenous Construct	R²	R² Adjusted						
	SR	0.580	0.577						
	FP	0.595	0.588						
	SDOs	0.784	0.778						

Source: Authors' Survey Results

Direct Effects

The findings show that SLDTs has a strong and significant effect on SR (H₁: $\beta = 0.762$, $p < 0.001$, $f^2 = 1.38$, large), indicating that SLDTs strengthens institutional trust, perceived fairness, and compliance behaviour. This result suggests that well-designed digital taxation systems enhance citizens' willingness to cooperate with fiscal authorities by promoting transparency, accountability, and confidence in revenue governance rather than merely enforcing compliance.

Similarly, SLDTs exerts a direct and significant positive influence on FP (H₂: $\beta = 0.462$, $p < 0.001$, $f^2 = 0.22$, large). The result confirms that SLDTs improves fiscal capacity by broadening the tax base by formalising previously untaxed financial flows, including mobile money and digital transactions. Although the magnitude of the effect is smaller than the impact on SR, it highlights that fiscal gains arise not only from direct revenue mobilisation but also from governance improvements that strengthen compliance systems.

The role of SR is equally critical. The analysis shows that SR significantly predicts FP (H₃: $\beta = 0.359$, $p = 0.001$, $f^2 = 0.13$, small), demonstrating that responsible taxpayer behaviour and institutional accountability jointly enhance revenue outcomes. In addition, FP significantly influences SDOs (H₄: $\beta =$

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0.360, $p < 0.001$, $f^2 = 0.24$, large), confirming that improved fiscal capacity translates into greater investment in public goods and development programmes aligned with the SDGs.

Interestingly, the direct effect of SR on SDOs (H_6 : $\beta = 0.063$, $p = 0.019$, $f^2 = 0.01$, small) is weak though statistically significant. This suggests that responsible taxpayer behaviour alone contributes only modestly to development unless supported by effective fiscal management and credible allocation of public resources. By contrast, SLDTs directly predicts SDOs (H_5 : $\beta = 0.534$, $p < 0.001$, $f^2 = 0.45$, large), emphasising that strategically governed digital taxation systems can directly support development through improved revenue administration, transparency, and targeted public investment in areas such as education, infrastructure, and governance strengthening.

Indirect Effects

The mediation results provide further nuance. SR mediates the relationship between SLDTs and FP (H_7 : $\beta = 0.274$, $p = 0.002$), underscoring compliance and trust as the bridge between tax design and fiscal outcomes. However, the pathway from SLDTs through SR to SDOs was not supported (H_8 : $\beta = 0.048$, $p = 0.404$), indicating that compliance alone is insufficient to guarantee developmental outcomes unless supported by credible fiscal governance.

Other mediation pathways were significant. SR influences SDOs indirectly through FP (H_9 : $\beta = 0.129$, $p = 0.015$), showing that responsible behaviour only translates into development when it boosts fiscal capacity. Similarly, SLDTs indirectly impacts SDOs via FP (H_{10} : $\beta = 0.166$, $p = 0.002$), reaffirming FP as a critical mechanism. The extended chain, SLDTs $\rightarrow$ SR $\rightarrow$ FP $\rightarrow$ SDOs (H_{11} : $\beta = 0.099$, $p = 0.020$), further validates the reciprocal contract between taxpayers and the state: taxation strengthens fiscal space, which, when managed responsibly, delivers developmental dividends.

Discussions

Taken together, these findings reinforce the insights from the literature review and provide empirical validation of the conceptual framework. SLDTs emerges not merely as a revenue tool but as a dual fiscal-developmental instrument whose effectiveness depends on the mediating role of SR, specifically the reciprocal contract between taxpayers and the state. As highlighted by Alm (2019) and Kirchler (2007), deterrence and compliance cannot be sustained without trust and fairness. The results confirm that FP is enhanced when citizens perceive taxation as equitable and governments demonstrate transparency and accountability in resource use.

The weak direct effect of SR on SDOs further reflects lessons from prior failures in Ghana, Uganda, and Hungary, where levies collapsed under weak institutional credibility (Spadavecchia, 2025; ICTD, 2025). Compliance alone, without visible and accountable reinvestment, risks eroding trust, echoing Moore's (2015) and Joshi and Prichard's (2018) argument that taxation is sustainable only when it strengthens the state-society contract. This validates the framework's positioning of FP as the critical pathway through which compliance and institutional trust translate into developmental outcomes.

The novelty of this study lies in empirically integrating SLDTs, SR, FP, and SDOs within a single analytical model. By demonstrating how SLDTs enhances fiscal capacity (e.g., TTGDPR) while simultaneously conditioning state-society relations, the framework extends fiscal sociology to the digital era. Moreover, the results highlight that legitimacy and SDG alignment, particularly SDGs 4, 9, 16, and 17, depend not just on the design of taxes but on their ability to close the loop between collection and visible social investment. In this sense, the study bridges behavioural, institutional, and developmental literatures, responding directly to the gaps identified in the review.

Qualitative Results and Discussion

To complement the quantitative findings, which identified SR as a mediator linking SLDTs with FP and SDOs, qualitative evidence from ten purposively selected key informants, tax professionals, business owners, and government officials, provided interview responses that elaborated on open-ended questions embedded within the survey instrument. These responses were analysed alongside secondary evidence from failed digital taxation initiatives in Ghana, Uganda, Hungary, Canada, and the EU to provide contextual insight into policy fairness, institutional trust, compliance behaviour, and developmental expectations associated with SLDTs and e-levy.

The qualitative themes, generated through thematic analysis, involving coding iteratively aligned with the study constructs, SLDTs, SR, FP, and SDOs to ensure analytical coherence (Braun & Clarke, 2006; Flick, 2018). Consistent with the embedded explanatory design, reliability was strengthened through repeated coding checks and alignment with construct definitions rather than formal intercoder testing (Creswell & Clark, 2017). The resulting themes were used to interpret and contextualize the SEM findings, providing explanatory triangulation rather than independent causal claims (Saunders et al., 2019).

Perceptions of Trust, Fairness, and Fiscal Sociology

Key informant interviews explored participants' perceptions of fairness, distributive impacts, and the legitimacy of digital taxation policies. Respondents frequently described e-levy as inequitable, particularly for low-income earners and small businesses, with several characterising it as double taxation on already-taxed income transfers. One interviewee noted that "the e-levy punishes small-scale businesses more than big ones." Consistent with FS (Schumpeter, 1918; Luttmer & Singhal, 2014), these narratives frame taxation within a social contract in which perceived fairness and government credibility shape compliance behaviour. Qualitative evidence, therefore, helps explain the strong SLDTs → SR relationship ($\beta = 0.762$) observed in the SEM results, indicating that SR emerges primarily from institutional legitimacy rather than policy enforcement alone.

Trust in Government Institutions and Accountability in Revenue Use

Interview prompts further examined expectations regarding transparency and public resource allocation. Key informants consistently linked willingness to comply with visible reinvestment of tax revenues into public infrastructure, education, and healthcare. This finding reinforces the mediating role of SR identified in the structural model, showing that FP depends on reciprocal accountability between citizens and government. The qualitative evidence clarifies that SR operates as a shared governance outcome rather than a purely taxpayer-driven behaviour, thereby strengthening the interpretation of the SR → FP pathway.

Ease of Compliance

Participants were also asked to reflect on administrative processes associated with digital taxation. Responses emphasised that compliance, as an expression of SR, improves when systems are simple, transparent, and predictable, whereas procedural complexity encourages avoidance behaviour. As one respondent stated, "If the process is straightforward and we see the benefits, more people will comply". These insights contextualize the positive association between SR and FP by demonstrating how administrative design translates institutional trust into actual compliance behaviour, consistent with FS's emphasis on procedural fairness.

Impact on Fiscal Performance

Government officials acknowledged that SLDTs has the potential to broaden the tax base and enhance revenue mobilisation but stressed that outcomes depend on sustained taxpayer acceptance. These accounts

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help to interpret the significant SLDTS $\rightarrow$ FP relationship ($\beta = 0.462$) by showing that fiscal gains are conditional upon perceived legitimacy and voluntary compliance. Comparative experiences from Uganda and Canada similarly (Spadavecchia, 2025; PwC, 2025) show that low acceptance undermines expected digital tax revenues, thereby confirming the mediating mechanism identified in the SEM analysis

Sustainable Development Outcomes (SDOs)

Interview discussions explored whether SLDTS translates into tangible development outcomes. While interviewees expressed cautious optimism about SLDTS's potential to raise revenues for financing infrastructure, education, and healthcare aligned with SDGs 4, 9, 16, and 17, scepticism remained about implementation effectiveness. For instance, one respondent noted, "If the e-levy leads to real growth, more roads, education, healthcare delivery, and better public services, then it's worth it, but we haven't seen that yet". These narratives help explain why SR showed only a weak effect on SDOs ($\beta = 0.063$) despite strong indirect pathways through FP. The qualitative evidence, therefore, challenges overly linear assumptions by indicating that compliance alone does not guarantee developmental outcomes without credible governance, transparency and visible reinvestment.

Consistent with FS, the qualitative findings suggest that taxation operates as a reciprocal social contract between citizens and the state (Schumpeter, 1918; Luttmer & Singhal, 2014). Thus, simplified and transparent systems enhance legitimacy and compliance, positioning FP as the key channel through which SR contributes to SDOs and progress towards SDGs 4, 9, 16, and 17.

Integrated Interpretation

The qualitative findings both converged with and nuanced the SEM results, reinforcing key structural relationships while revealing implementation uncertainties that help explain weaker or indirect effects observed in the model. Overall, the qualitative findings support FS's conception of taxation as a reciprocal state-society relationship (Schumpeter, 1918; Luttmer & Singhal, 2014). By explaining both strong and weaker SEM relationships, narrative evidence deepens the interpretation of the quantitative model, demonstrating that fairness perceptions, institutional trust, and administrative simplicity are critical mechanisms through which digital taxation influences FP and SDOs.

Summary and Conclusion

This study examined DT as both a fiscal and developmental tool through the lens of FS. Findings show that its sustainability depends not only on FP but also on SR, expressed as the reciprocal contract between citizens and the state. Quantitatively, DT significantly influenced FP ($\beta = 0.762$) and SDOs ($\beta = 0.534$). SR predicted FP ($\beta = 0.359$) but had a weaker direct effect on SDOs ($\beta = 0.063$), validating taxation as a social contract beyond revenue collection.

Qualitative evidence underscored fairness, institutional trust, and administrative simplicity as drivers of compliance. Citizens were more willing to comply when taxes were transparent and reinvested in public goods, whereas opacity and inequity eroded trust. Thus, compliance alone cannot yield development without accountable governance. FP emerges as the key pathway linking SLDTS and SR to progress on SDGs 4, 9, 16, and 17, reaffirming SLDTS's legitimacy as a reciprocal social contract.

Policy, Governance and Research Implications

Policy Implications

The findings carry important policy implications for the design and implementation of SLDTS. The legitimacy of SLDTS depends not only on its technical efficiency but also on its alignment with SR. Governments should prioritise transparent communication about the purpose, collection, and allocation of digital tax revenues. Earmarking a portion of revenues for visible developmental projects, and ensuring equitable distribution of tax burdens can strengthen public trust and reinforce perception of fairness.

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Integrating digital taxes within national SDG strategies further enhances legitimacy by visibly linking tax revenues to tangible developmental outcomes, thereby reinforcing the reciprocal fiscal contract between citizens and the state.

Practical Implications

For tax authorities and policymakers, the practical implications lie in the design of user-friendly, low-cost systems that reduce compliance burdens. Streamlined processes and mobile-friendly platforms encourage participation, particularly among SMEs and the informal sector, while balancing enforcement with education and incentives fosters a culture of voluntary compliance. Administrative efficiency therefore, becomes not only a technical matter but also a governance strategy that strengthens the fiscal contract between citizens and the state.

Governance Implications

From a governance perspective, the study underscores the importance of institutional credibility. Accountability mechanisms such as transparent revenue reporting, independent audits, and digital governance platforms are vital to maintaining trust. Governments must also strengthen partnerships with civil society, professional bodies, and business associations to co-create tax policies that are equitable and legitimate. By doing so, digital taxation becomes embedded not just in fiscal systems but in broader governance frameworks that foster long-term legitimacy.

Research Implications

The research implications of this study extend fiscal sociology by empirically linking SLDTs, SR, FP, and SDOs within one framework. This integration opens new avenues for comparative cross-country studies, longitudinal analyses of compliance dynamics, and explorations of how technological innovations such as blockchain could enhance transparency and accountability in digital tax systems.

Recommendations

Actionable recommendations follow from the results of this paper. First, governments should publish regular and accessible reports on taxes generally, but particularly digital tax revenues and their uses, earmark proceeds for priority development projects, and simplify compliance procedures through modern platforms. Second, strengthening partnerships with civil society and professional associations, balancing deterrence with supportive measures such as taxpayer education, and conducting regular policy reviews will ensure that digital taxation remains aligned with developmental objectives.

Contributions

The contributions of this paper are threefold. Theoretically, it extends fiscal sociology to the digital age by empirically framing taxation as a reciprocal social contract. Empirically, it provides robust evidence that SR mediates the relationship between SLDTs and FP, advancing understanding of compliance and legitimacy. Practically, it offers a framework and actionable strategies for policymakers to design sustainable digital tax regimes that foster trust and developmental outcomes.

Limitations and Future Research Agenda

Despite the methodological strengths of this study, some limitations remain. First, the stakeholder-focused sample limits generalisability beyond professionally engaged taxpayers. Second, the use of a single survey instrument, same-source perceptual measures, and a cross-sectional design means that common method variance cannot be fully ruled out, even though procedural remedies were applied. Third, some indicators showed signs of localised overlap, including a slightly elevated VIF for FP4, suggesting that certain relationships should be interpreted with caution.

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In addition, although SRMR indicated acceptable approximate fit, the NFI was below the preferred threshold, implying that the model demonstrates adequate rather than strong overall fit. Further, SDOs were measured using perceptual rather than objective macroeconomic indicators, and SR may not have fully captured institutional accountability as a distinct dimension. Future research should therefore use broader and more diverse samples, incorporate objective development indicators, refine overlapping items, and apply multi-source or longitudinal designs to strengthen robustness, validity, and external generalisability.

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Conflict of Interest Statement

The authors declare no conflict of interest.

AI Disclosure Statement

No artificial intelligence (AI) tools were used in the preparation of this study.

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