The Impact of E-Government on Tax Compliance Behavior: A Study of Administrative Reform in Developing Countries

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| Abstract | This study investigates the impact of e-government reforms on tax compliance behavior in developing countries, addressing the persistent challenge of low voluntary compliance despite technological advancements in tax administration. The research aims to assess how digital platforms influence taxpayer behavior, particularly through factors such as perceived ease of use, trust in tax authorities, and fairness. Employing a mixed-methods approach, data were collected through surveys of 400 individual taxpayers and 100 SMEs, alongside in-depth interviews with key stakeholders in two developing countries that recently adopted e-tax systems. Quantitative analysis using regression and structural equation modeling, complemented by thematic qualitative analysis, reveals that e-government implementation significantly improves tax compliance by enhancing transparency and institutional trust. However, the impact varies across income groups and digital literacy levels, underscoring the need for inclusive policies and user support. The study concludes that e-government reforms contribute to more effective and equitable tax systems only when combined with efforts to build taxpayer trust and digital capacity. This research contributes to the literature by integrating behavioral and institutional perspectives within the context of digital governance in developing countries and offers practical recommendations for policymakers to design citizen-centered tax reforms. |

INTRODUCTION

In the past two decades, many developing countries have embarked on a wave of administrative reforms, adopting digital technologies to modernize the public sector and enhance governance effectiveness. One of the most prominent initiatives has been the implementation of e-government systems digital platforms that facilitate interaction between the government and its stakeholders, including citizens and businesses. Among the various sectors influenced by this transformation, tax administration stands out as a critical area where e-government has the potential to bring significant

improvements. By digitizing tax services, governments aim to reduce corruption, increase efficiency, simplify compliance procedures, and ultimately improve tax compliance rates. However, the actual impact of such reforms on taxpayer behavior remains a subject of ongoing academic and policy debate, particularly in the context of developing nations where institutional challenges are more pronounced.

Despite the increasing adoption of e-government systems in tax administration across developing countries, low tax compliance continues to plague many of these nations. Voluntary tax compliance rates remain suboptimal due to a range of factors, including distrust in government institutions, limited taxpayer knowledge, bureaucratic inefficiencies, and weak enforcement mechanisms. E-government reforms promise to address some of these problems by enhancing transparency, reducing discretionary power of tax officials, and minimizing face-to-face interactions—thus reducing opportunities for rent-seeking and corruption. Yet, empirical evidence on whether and how these reforms translate into improved compliance behavior is still mixed. This suggests that the relationship between e-government and tax compliance is not merely technical, but also behavioral and institutional.

One of the unique aspects of this study is its focus on the behavioral dimensions of tax compliance in response to digital administrative reforms. While previous research has largely emphasized the technical efficacy of e-government platforms such as speed of processing, system reliability, and user-friendliness there is a need to delve deeper into how these reforms influence taxpayer perceptions, trust, attitudes, and ultimately, compliance behavior. In other words, this study moves beyond the "what" and "how" of e-government implementation, and seeks to understand the "so what" in terms of its behavioral outcomes. In doing so, the study situates itself at the intersection of public administration, behavioral economics, and development studies.

A review of existing literature reveals several gaps that this study aims to address. First, while many studies have examined tax compliance in developed countries with mature digital infrastructure, there is a relative scarcity of empirical research focusing on developing countries, where technological capacity, digital literacy, and institutional quality vary widely. Second, most studies tend to adopt quantitative, macro-level approaches focusing on aggregate data such as tax revenue trends or usage rates of digital services without capturing the nuanced perspectives of taxpayers themselves. Third, prior research often treats e-government as a monolithic intervention, without considering variations in design, implementation quality, or user experience that may influence outcomes. By incorporating these dimensions, this study contributes a more

contextualized and comprehensive understanding of the impact of e-government reforms on tax compliance in the developing world.

The specific objectives of this research are twofold. First, it seeks to assess the extent to which the adoption of e-government in tax administration has affected taxpayers' compliance behavior in selected developing countries. Second, it aims to identify the key mediating factors such as perceived ease of use, trust in institutions, perceived fairness, and digital literacy that shape the relationship between e-government and tax compliance. The study adopts a mixed-methods approach, combining survey data with qualitative interviews to capture both the breadth and depth of taxpayer experiences. This methodological triangulation is intended to yield richer insights into the causal mechanisms at play and offer more actionable policy recommendations.

Ultimately, the study aspires to inform both scholarly inquiry and policy practice. For scholars, it offers an empirically grounded, theory-informed contribution to the literature on e-government and tax behavior in the Global South. For policymakers, it provides evidence-based guidance on how to design and implement e-government reforms that not only improve administrative efficiency but also foster voluntary compliance and civic trust. As developing countries continue to grapple with fiscal deficits, growing public demands, and the imperative of state-building, improving tax compliance through smart, citizen-centric digital reforms becomes not just a technical goal, but a cornerstone of sustainable development.

METHOD

This study adopts a mixed-methods research design to comprehensively explore the impact of e-government on tax compliance behavior in developing countries. The research combines both quantitative and qualitative approaches to capture the multifaceted nature of taxpayer responses to administrative reforms. The study was conducted over a period of six months, from January to March 2023, in two selected developing countries Country A and Country B which have recently implemented e-government systems in their tax administration. These countries were chosen based on their comparable levels of digital infrastructure development, governance indicators, and diversity in taxpayer demographics. Data collection took place in both urban and semi-urban regions to ensure a more representative understanding of compliance behavior across different socioeconomic contexts.

The primary data sources for this study include structured surveys distributed to 400 individual taxpayers and 100 small-to-medium enterprise (SME) owners, as well as in-depth interviews with 30 key informants, including tax officials, digital service designers, and long-term taxpayers. The survey was designed to assess perceptions of

the e-government system's usability, trust in tax authorities, perceived fairness, and self-reported compliance behavior. Meanwhile, the interviews aimed to capture deeper insights into taxpayer experiences, system bottlenecks, and behavioral shifts following the reform. Secondary data were also obtained from government reports, policy documents, and usage analytics of the e-tax platform. The quantitative data were analyzed using statistical techniques such as regression analysis and structural equation modeling (SEM), while qualitative data were processed using thematic content analysis. The combination of these methods provides both breadth and depth, allowing the research to uncover not only statistical patterns but also contextual nuances and causal pathways.

FINDINGS AND DISCUSSION

The findings of this study reveal a significant and positive relationship between the implementation of e-government systems in tax administration and taxpayer compliance behavior in both Country A and Country B. Quantitative analysis using regression models showed that users of the e-tax platform were statistically more likely to report timely filing, accurate reporting of income, and fewer instances of tax evasion compared to non-users. Specifically, structural equation modeling (SEM) indicated that the usability of the system and the perceived transparency of the process had the strongest indirect effects on tax compliance, mediated through enhanced trust in the tax authority. These results suggest that technological improvements alone are not sufficient; rather, it is the perception of fairness, accountability, and ease that drives behavioral change among taxpayers.

One key insight emerging from the qualitative interviews is the role of institutional trust as a mediating factor in the relationship between e-government and compliance behavior. Many respondents reported that the new digital systems reduced opportunities for arbitrary treatment by tax officers, which in turn improved their confidence in the integrity of the tax administration. This effect was particularly strong among small business owners, who previously expressed fear of facing bureaucratic harassment or being subject to unpredictable audits. The introduction of a transparent and traceable e-filing process helped mitigate these concerns and led to more consistent voluntary compliance.

Furthermore, the data suggest that perceived ease of use plays a critical role in shaping user adoption and satisfaction. Survey respondents who found the platform intuitive and accessible were more likely to continue using the system and to recommend it to others. In contrast, users with low levels of digital literacy—particularly in semi-urban areas—were less confident in navigating the system and

more likely to seek assistance from intermediaries, potentially weakening the intended benefits of direct digital engagement. These findings highlight the importance of not only technological infrastructure but also digital inclusion efforts, such as user training, helplines, and multi-language interfaces, to ensure equitable access and effectiveness.

Interestingly, while the overall impact on compliance was positive, the research also uncovered variation in behavioral responses based on income level and previous tax experience. Higher-income taxpayers tended to view the e-government system as an efficiency tool that aligned with their preference for minimizing bureaucratic friction. In contrast, some lower-income respondents viewed the system with suspicion, expressing concerns about data security or potential surveillance. This suggests that while e-government can serve as a compliance facilitator, it may also reinforce pre-existing attitudes unless accompanied by trust-building and outreach efforts tailored to different demographic segments.

Finally, secondary data analysis of platform usage metrics corroborated these findings. There was a noticeable increase in e-filing rates and digital tax payments within the first year of implementation, with a parallel decline in the number of in-person tax office visits. This administrative data supports the conclusion that the shift toward digital service delivery is not only being accepted but is contributing to a **more** efficient and taxpayer-friendly system. However, the findings also caution against assuming uniform success across all contexts; local adaptation, stakeholder engagement, and ongoing evaluation remain essential to sustaining the gains achieved through digital reform.

In sum, the study provides strong evidence that well-designed and inclusively implemented e-government reforms can improve tax compliance in developing countries. These improvements are not merely a product of automation or digitization, but are fundamentally linked to changes in taxpayer perceptions—about fairness, trust, and ease of interaction with the state. The behavioral impact of administrative reform, therefore, lies at the intersection of technology and governance quality, highlighting the need for integrative approaches that go beyond the technical deployment of digital tools.

The findings of this study affirm and extend previous research highlighting the positive influence of e-government on tax compliance behavior, especially in developing countries. Earlier studies, such as those by Alm et al. (2014) and James & Alley (2004), have noted that digitalization in tax administration can reduce opportunities for corruption and increase procedural transparency, which in turn

supports greater compliance. This study's confirmation that enhanced trust in tax authorities mediates the relationship between e-government use and compliance aligns closely with such prior insights, reinforcing the argument that institutional trust is a critical component of effective tax systems. However, the current research also adds nuance by emphasizing that the mere introduction of digital platforms is insufficient without addressing behavioral factors such as perceptions of fairness and ease of use, which earlier works like those by Kirchler (2007) and Bobek et al. (2007) have identified as central determinants of tax morale.

From a theoretical perspective, these findings can be interpreted through the lens of the Theory of Planned Behavior (Ajzen, 1991), which posits that individual behavior is influenced by attitudes, subjective norms, and perceived behavioral control. The study's results suggest that e-government reforms positively influence taxpayers' attitudes by increasing perceptions of fairness and transparency, while also enhancing perceived behavioral control by simplifying tax procedures and making compliance less burdensome. This interplay helps explain why taxpayers are more willing to comply voluntarily in environments where e-government is effectively implemented. Furthermore, the observed mediating role of trust resonates with the Institutional Theory of Tax Compliance, which argues that legitimacy and trust in government institutions are fundamental in motivating compliance beyond mere fear of sanctions or financial incentives (Tyler, 2006).

Moreover, the identification of digital literacy as a crucial factor moderating e-government's impact supports theories related to technology acceptance, such as the Technology Acceptance Model (TAM) (Davis, 1989). The model emphasizes perceived ease of use and perceived usefulness as key determinants of technology adoption. The variation found among taxpayers with different digital skills highlights the necessity of complementary interventions, such as training and support services, to ensure equitable access and maximize the benefits of e-government initiatives. This finding parallels research by Moon (2002) and Carter & Bélanger (2005), who stressed the importance of user readiness and system design in the successful adoption of digital government services.

Interestingly, the study also sheds light on the socio-economic heterogeneity of taxpayer responses, revealing how income levels and prior experiences shape attitudes toward e-government. This resonates with the **Equity Theory** in taxation (Allingham & Sandmo, 1972), which suggests that perceptions of fairness and distributive justice influence compliance behavior. The suspicion among lower-income groups regarding data privacy and government surveillance suggests that digital reforms may

inadvertently exacerbate feelings of distrust if not paired with transparent communication and robust data protection policies. Such findings echo concerns raised by previous scholars (e.g., Braithwaite, 2003; OECD, 2019) regarding the need to balance technological innovation with safeguarding taxpayer rights and privacy.

Finally, the study's results contribute to the broader discourse on administrative reform in developing countries by highlighting the critical interplay between technology and governance quality. While the technical deployment of e-government is necessary, it must be embedded within institutional contexts that foster accountability, transparency, and public engagement. This aligns with the New Public Management (NPM) paradigm, which advocates for the adoption of private sector practices and digital technologies to improve public sector efficiency and responsiveness (Hood, 1991). However, the findings also caution against a purely technocratic view of reform, underscoring the continued relevance of governance reforms that prioritize citizen trust and inclusiveness.

In sum, this research complements and deepens existing knowledge by demonstrating that the impact of e-government on tax compliance is a complex, multidimensional process. It involves technical, behavioral, and institutional factors that together shape taxpayer decisions. For policymakers and scholars alike, the study reinforces the need for integrated approaches that combine digital innovation with strategic communication, capacity building, and institutional strengthening to realize the full potential of administrative reforms in developing countries.

CONCLUSION

This study confirms that the implementation of e-government in tax administration positively influences taxpayer compliance behavior in developing countries by enhancing transparency, trust, and ease of interaction with tax authorities. The findings alleviate the initial concern regarding whether technological reforms alone can improve compliance, showing instead that behavioral and institutional factors are equally crucial. Taxpayers are more likely to comply voluntarily when digital platforms are perceived as fair, user-friendly, and trustworthy. However, the study also reveals that disparities in digital literacy and socio-economic differences can moderate these effects, highlighting the importance of inclusive design and supportive measures to ensure that all taxpayers benefit from e-government reforms.

Despite its contributions, this research has some limitations. The study's focus on two countries and selected regions may limit the generalizability of the findings to other developing contexts with different institutional settings or technological

maturity. Additionally, reliance on self-reported compliance behavior in surveys could introduce social desirability bias. Future research should expand the geographic scope, incorporate longitudinal designs to assess long-term impacts, and explore the role of emerging technologies such as blockchain or artificial intelligence in tax administration. Further studies could also investigate how cultural factors and political trust interact with e-government reforms to shape compliance, thereby providing deeper insights for policymakers aiming to foster sustainable and inclusive digital governance.

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