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Digital Payment Systems and Tax Administration: Examining Theoretical Implications for Tax Compliance, Transparency, Revenue Mobilization, and Financial Inclusion

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Abstract— *This paper examines digital payment systems' relationship to tax administration through the most methodologically rigorous evidence currently available: a 2026 study published in International Tax and Public Finance applying instrumental-variable and endogenous switching regression methods to a panel of 97 emerging market and developing countries observed between 1990 and 2021. Using the spatial lag of mobile money adoption in neighboring countries as an instrument, the study finds mobile money adoption causally increases non-resource tax revenue by 4.29 percentage points of gross domestic product, with an average treatment effect on adopting countries of 9.2 percent, rising to 14.3 percent in low-income countries specifically compared to 3.0 percent in other developing countries, a nearly fivefold difference. The paper finds that bill payments, merchant payments, person-to-person payments, and person-to-government payments carry larger tax-revenue effects than other mobile money service categories, and that mediation analysis attributes 43.7 percent of the total effect to three specific channels operating jointly: reduced corruption, decline in the informal economy, and increased international remittance inflows. Interpreted through the technology-organization-environment framework and third-party reporting theory, the paper argues that digital payment systems' fiscal benefits are conditional on complementary public-service and digital-infrastructure provision, with the same study finding the mobile money-tax revenue relationship strengthening substantially where electricity access and e-government development are more advanced. The paper considers the implications of this evidence for tax administrations and development institutions pursuing digital-payment-based revenue mobilization strategies.*

Keywords— *Financial inclusion; mobile money; revenue mobilization; tax compliance; transparency.*

I. INTRODUCTION

Digital payment systems, and mobile money services specifically, have expanded rapidly across the developing world since their successful introduction in Kenya in 2007, with mobile money now available in 104 countries as of 2021, up from just 37 countries in 2010. This paper examines what the most rigorous currently available evidence shows about digital payment systems' relationship to tax administration specifically, moving beyond the correlational and case-study evidence that has characterized much of the earlier literature on this question toward a causally identified, large-sample empirical foundation.

This paper's focus on tax administration specifically, rather than the broader financial-inclusion and poverty-reduction literature mobile money has generated, reflects a deliberate scope this paper defends given the specific research question this paper's broader companion program addresses. Mobile money's contribution to household risk-sharing, firm investment, and poverty alleviation has been documented extensively in prior research, including well-known findings that mobile money access lifted a measurable share of Kenyan households out of extreme poverty and improved households' capacity to manage economic shocks. This paper does not attempt to review this broader socioeconomic literature comprehensively, instead concentrating specifically on the fiscal and tax-administration dimension of digital payment systems this paper's title identifies, a dimension this paper argues has received comparatively less rigorous causal-identification treatment until the very recent evidence this paper's Section 4 discussion examines in detail.

Azoa Balengla, Keneck Massil, Noah, and Nomo Beyala (2026), publishing in the peer-reviewed field journal International Tax and Public Finance, provide this paper's central empirical evidence. Using a panel of 97 emerging market and developing countries observed from 1990 to 2021, and addressing the endogeneity concern that countries with rising tax revenue might independently be more likely to adopt mobile money, the study employs an instrumental-variable strategy based on the spatial lag of mobile money adoption in neighboring countries, complemented by an endogenous switching regression model addressing potential self-selection bias. The study's headline finding is that mobile money adoption causally increases non-resource tax revenue by 4.29 percentage points of gross domestic product, with the endogenous switching regression model's average treatment effect on the treated indicating a 9.2 percent increase overall, rising to 14.3 percent in low-income countries specifically compared to 3.0 percent in other developing countries.

This paper's decision to treat the Azoa Balengla et al. (2026) study as its central evidentiary anchor, rather than distributing attention evenly across the broader mobile-money-and-taxation literature reflects this paper's assessment that the study represents a genuine methodological advance over its most immediate predecessors specifically. The study's authors

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explicitly position their contribution relative to Apeti and Edoh (2023) and Wandaogo, Sawadogo, and Lastunen (2022), both discussed further in Section 4.2, noting their own study's combination of two distinct identification strategies, instrumental variables and endogenous switching regression, applied sequentially to strengthen robustness beyond what either method achieves independently, alongside a considerably more detailed mediation analysis examining three specific transmission channels jointly rather than in isolation. This paper treats this explicit methodological positioning, evident directly in the study's own text, as a reasonable basis for this paper's own decision to center its analysis on this specific study's findings.

This paper's central argument, developed across the sections that follow, is that digital payment systems' documented tax-revenue effect operates through specific, empirically identified mechanisms, reduced corruption, informal-sector decline, and increased remittance inflows, that jointly explain nearly half of the total effect, and that this effect is not a fixed technological dividend but is conditional on complementary public-service and digital-infrastructure provision, a conditionality with direct implications for how tax administrations and development institutions should sequence digital-payment-based revenue mobilization strategies. Section 2 reviews the theoretical and empirical literature this paper draws upon. Section 3 describes the data sources and analytical approach. Section 4 presents the results and discusses their interpretation. Section 5 concludes with recommendations.

The practical stakes of this paper's argument extend directly to how international development institutions and national governments prioritize digital-finance investment within broader domestic-resource-mobilization strategies. A policy environment that treats mobile money expansion as a straightforward, universally applicable revenue-generating intervention, without regard to the specific income-level and infrastructure conditions this paper's evidence indicates substantially moderate the resulting fiscal effect, risks both overpromising in contexts where the technology alone will deliver comparatively modest gains and underinvesting in the complementary public-service and digital-infrastructure provision this paper's evidence indicates is necessary to fully realize the technology's documented potential, particularly in the low-income-country contexts where this paper's evidence indicates the stakes are highest.

II. Literature Review

2.1 Third-Party Reporting and Transaction Traceability

This paper's companion research on Internet of Things applications in tax administration develops a theoretical distinction between self-reported data, which a taxpayer controls directly, and genuine third-party-reported data, which an independent party records without the taxpayer's ability to alter it. This paper argues digital payment systems occupy a theoretically more favorable position along this spectrum than the taxpayer-operated devices that companion research examines, since a mobile money transaction generates a record held by the payment operator, an entity independent of both parties to the underlying transaction, rather than a record the transacting parties themselves directly control. This paper reads the Azoa Balengla et al. (2026) finding that indirect tax revenue effects exceed direct tax revenue effects as consistent with this theoretical distinction: indirect taxes, tied to observable transaction flows, benefit more directly from the kind of transaction-level traceability digital payment systems generate than direct taxes, tied to self-reported income and profit figures a payment record alone does not fully verify.

This paper's application of the third-party-reporting distinction to digital payment systems specifically also helps explain why this paper's central evidence source finds these systems achieving a considerably more robust, causally identified revenue effect than the more modest, and in some cases genuinely disappointing, effects this paper's companion research documents for taxpayer-operated point-of-sale devices. A mobile money transaction record exists independently of whether either transacting party subsequently chooses to report that transaction accurately to the tax authority, since the payment operator's own systems retain the record regardless of either party's later reporting behavior; an electronic fiscal device, by contrast, generates no record at all if the operating business simply declines to process a given sale through the device in the first place. This paper argues this distinction, between a transaction record that exists independently of taxpayer cooperation and one that depends entirely on it, represents the single most important theoretical explanation for why this paper's evidence base documents digital payment systems achieving a considerably stronger and more consistently positive tax-revenue effect than the electronic fiscal device evidence this paper's companion research examines.

2.2 The Technology-Organization-Environment Framework and Complementary Infrastructure

Tornatzky and Fleischer's (1990) technology-organization-environment (TOE) framework, applied throughout this paper's companion research on other tax technologies, directs attention to environmental factors, including complementary infrastructure, as determinants of realized technology performance. This paper argues Azoa Balengla et al.'s (2026) finding that the mobile money-tax revenue relationship strengthens with electricity access and e-government development provides a direct, causally identified test of the TOE framework's environmental-context dimension: digital payment systems' fiscal benefit is not a fixed technological dividend realized uniformly regardless of context, but is conditional on the broader public-service and digital-government infrastructure within which the payment technology operates, a conditionality this paper's companion research has identified qualitatively for other tax technologies but which this paper's central evidence source tests with unusual quantitative precision.

This paper's central evidence source also offers a methodologically distinctive application of Rogers' (2003) diffusion of innovations framework, examined throughout this paper's broader companion research, in constructing its causal identification strategy specifically. Azoa Balengla et al. (2026) build their instrumental variable directly from diffusion theory's own logic, using the spatial lag of mobile money adoption in

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neighboring countries on the reasoning that geographic proximity to early adopters accelerates a country's own subsequent adoption through the kind of peer-observation and information-sharing mechanism Rogers' framework identifies as central to innovation diffusion generally. This paper reads the documented East African sequence, Kenya's 2007 launch followed by Tanzania in 2008 and Uganda in 2009, and the comparable South Asian sequence Azoa Balengla et al. document between Bangladesh and India, as directly consistent with the kind of geographically clustered diffusion pattern this paper's companion research on electronic fiscal devices also documents, lending this instrumental strategy considerable face validity beyond its formal econometric justification alone.

This paper argues the specific use of a diffusion-theoretic instrument represents a genuinely novel methodological contribution this study makes to the broader tax-technology evidence base this paper's companion research examines throughout. Where this paper's companion research on other tax technologies more typically applies diffusion theory as a descriptive or interpretive framework, characterizing observed adoption patterns after the fact, Azoa Balengla et al.'s (2026) study operationalizes diffusion theory's predictive logic directly within its causal identification strategy, using the theory's own prediction, that geographically proximate countries influence each other's adoption timing, as the empirical foundation for isolating mobile money's causal effect from confounding factors. This paper treats this methodological innovation as a specific model for how diffusion-theoretic reasoning, developed originally as a descriptive framework, can be adapted into a genuinely quantitative identification strategy, a possibility this paper's broader research program has not previously had occasion to examine given the more limited causal-identification ambitions of the case-study and cross-sectional-comparison evidence this paper's companion research has more typically relied upon.

2.3 Compliance Theory and the Corruption Channel

Kirchler, Hoelzl, and Wahl's (2008) slippery-slope framework distinguishes enforced tax compliance, sustained through detection probability, from voluntary compliance, sustained through taxpayer trust in the tax authority's fairness and integrity. This paper argues the corruption-reduction transmission channel Azoa Balengla et al. (2026) identify, corroborated by Barasa's (2021) direct finding that mobile money adoption reduced bribery payments in Kenya by 3.1 percentage points, speaks directly to the voluntary-compliance, trust-based channel this framework identifies, distinct from the more mechanical detection-probability channel this paper's companion research on electronic invoicing and electronic fiscal devices emphasizes. This paper reads the combination of a genuine detection-probability channel, operating through the informal-sector-decline and transaction-traceability mechanisms Section 2.1 discusses, and a genuine trust-based channel, operating through reduced corruption specifically, as jointly explaining why digital payment systems' documented tax effect, examined in Section 4, is more robust than the effects this paper's companion research documents for technologies operating through only one of these two compliance channels.

This paper's identification of digital payment systems as operating through both compliance channels simultaneously, rather than through either channel alone, carries a specific theoretical significance worth drawing out explicitly. This paper's companion research on electronic taxation and revenue generation argues that technologies operating predominantly through the enforced-compliance channel alone may generate revenue gains that prove more costly to sustain over time, since enforced compliance requires continued monitoring investment to maintain, absent the more durable, self-reinforcing character voluntary compliance is theorized to carry. This paper argues that digital payment systems' documented corruption-reduction channel specifically offers a plausible mechanism through which at least part of the technology's revenue effect may prove more durable than a purely enforcement-driven effect: a taxpayer who experiences reduced corruption in their own interactions with tax and other government officials, mediated through digital rather than cash-based, face-to-face transactions, may develop the kind of genuine trust in institutional fairness Kirchler et al.'s framework identifies as the foundation of voluntary compliance specifically, a durability advantage this paper's available evidence cannot directly test but which this paper's theoretical framework identifies as a plausible, testable hypothesis for future longitudinal research.

III. METHODOLOGY

3.1 Data Sources

This paper's empirical analysis draws principally on Azoa Balengla, Keneck Massil, Noah, and Nomo Beyala's (2026) study published in International Tax and Public Finance, a peer-reviewed field journal, examining 97 emerging market and developing countries from 1990 to 2021. The study's tax revenue data derive from the UNU-WIDER Government Revenue Dataset, a comprehensive database covering more than 160 countries, while mobile money adoption and service-type data derive from the GSM Association's Mobile Money Deployment Tracker database, an industry-standard source this paper's own companion research on electronic taxation has referenced in related contexts. This paper treats the study's dual identification strategy, combining an instrumental-variable approach with an endogenous switching regression model, and its extensive robustness testing, including four alternative instrument constructions, alternative mobile money proxies, and a falsification test using resource-related tax revenue as a placebo outcome, as providing an unusually strong methodological foundation relative to the more descriptive or correlational evidence this paper's companion research has relied upon for some other tax-technology topics.

This paper treats the study's falsification test specifically as deserving particular emphasis given its direct relevance to this paper's confidence in the causal interpretation this paper's Section 4 discussion relies upon throughout. The study's authors test whether their instrumental variable predicts resource-related tax revenue, a category theoretically unrelated to mobile money adoption since resource tax revenue depends primarily on commodity prices and extraction activity rather than domestic transaction patterns, finding no significant relationship in this placebo test. This paper reads this null

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finding as directly supporting the plausibility of the exclusion restriction underlying the study's instrumental-variable strategy, since a spurious or confounded instrument would plausibly predict resource-related revenue as well as non-resource revenue, whereas a genuinely valid instrument operating specifically through mobile money's effect on non-resource economic activity should show precisely the differential pattern the study's falsification test documents.

This paper supplements this central source with Barasa's (2021) African Economic Research Consortium research paper documenting mobile money's specific effect on bribery payments in Kenya, cited directly within Azoa Balengla et al.'s (2026) own corruption-channel discussion, providing this paper with independent, country-specific corroboration of one of the three transmission mechanisms this paper's central source identifies at the cross-country panel level.

3.2 Analytical Approach

This paper's analytical approach is descriptive; it reports the published causal estimates directly and computes simple derived comparisons, including the ratio between the low-income and non-low-income average treatment effects, using straightforward division. This paper does not conduct independent econometric analysis of the underlying country-panel data, relying instead on the peer-reviewed, published findings Azoa Balengla et al. (2026) report, interpreted through the third-party-reporting, TOE-framework, and compliance-theoretic structure developed in Section 2.

This paper's reliance on a single central study, rather than the multi-study comparative approach this paper's companion research on other tax technologies sometimes employs, reflects a specific judgment about the relative quality and comprehensiveness of the available evidence in this particular domain. Where this paper's companion research on machine learning fraud detection specifically benefits from comparing multiple studies precisely because no single study achieves comparably strong causal identification, this paper's central source achieves a level of methodological rigor, large-sample causal identification through instrumental variables, complemented by selection-bias correction through endogenous switching regression, and extensive robustness testing, that this paper argues justifies treating it as a primary, load-bearing evidence source in its own right, supplemented rather than superseded by the comparator studies this paper discusses in Section 4.2 specifically to test the robustness of individual findings rather than to establish the central causal claim itself.

IV. Results and Discussion

4.1 A Causally Identified Revenue Effect

Azoa Balengla et al.'s (2026) instrumental-variable estimates find mobile money adoption associated with a 4.29 percentage point increase in non-resource tax revenue as a share of gross domestic product, a coefficient the authors describe as capturing the aggregate fiscal effect of mobile money services once endogeneity concerns are addressed through the spatial-lag instrumental strategy. This paper reads this specific magnitude against the study's own reported comparison: median non-resource tax revenue stands at 12.8 percent of gross domestic product in mobile-money-adopting countries compared to 10.6 percent in non-adopting countries, a 2.2-percentage-point raw gap that the study's causal 4.29-percentage-point estimate suggests may actually understate mobile money's full causal contribution once confounding factors are properly addressed.

This paper's reading of the gap between the raw, uncontrolled 2.2-percentage-point comparison and the causally identified 4.29-percentage-point instrumental-variable estimate deserves particular emphasis given its methodological significance. A naive comparison of mobile-money-adopting and non-adopting countries risks understating the technology's true causal effect if, for instance, countries facing greater underlying fiscal or institutional challenges were systematically less likely to adopt mobile money for reasons unrelated to the technology's own potential benefit, a confounding pattern the study's instrumental-variable strategy is specifically designed to address. This paper treats the larger causal estimate relative to the raw comparison as evidence that such confounding was indeed present in the raw, uninstrumented data, reinforcing this paper's confidence that the study's causal identification strategy, rather than the simpler descriptive comparison, provides the more reliable estimate of mobile money's actual contribution to tax revenue.

4.2 A Striking Income-Level Disparity

Figure 1, Panel A, presents the endogenous switching regression model's average treatment effect on the treated, disaggregated by income level: mobile money adoption is associated with a 14.3 percent increase in tax revenue among low-income countries specifically, compared to a considerably more modest 3.0 percent increase among non-low-income developing countries, a nearly fivefold difference. This paper reads this disparity as one of the study's most policy-relevant findings, indicating that digital payment systems' fiscal benefit is not distributed evenly across the developing world but is concentrated disproportionately among precisely the lowest-income countries facing the greatest domestic resource mobilization challenges.

This paper's reading of the income-level disparity also connects directly to the endogenous switching regression methodology's own underlying logic, distinct from the instrumental-variable strategy examined in Section 4.1. Where the instrumental-variable approach addresses reverse causality and omitted-variable bias through external identification, the endogenous switching regression model explicitly accounts for the possibility that countries with favorable unobserved characteristics, such as stronger administrative capacity or greater public trust in financial institutions, might be simultaneously more likely to adopt mobile money and more likely to achieve strong tax-revenue outcomes for reasons unrelated to mobile money itself. This paper argues the fact that the low-income-country effect remains substantially larger than the non-low-income effect even after this selection-bias correction strengthens confidence that the disparity reflects a genuine differential causal effect, rather than merely reflecting low-income countries' more favorable unobserved

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characteristics being disproportionately captured by the mobile-money-adoption variable.

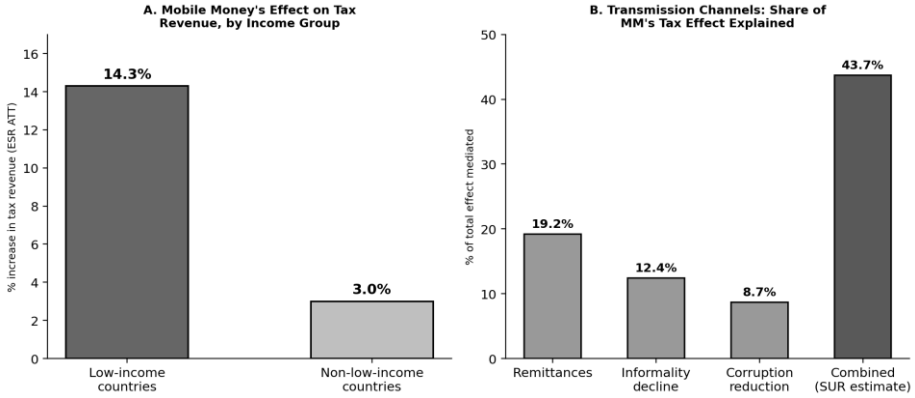


Fig. 1. Panel A: Mobile money's estimated effect on tax revenue by income group (endogenous switching regression average treatment effect on the treated). Panel B: Share of the total tax-revenue effect explained by three identified transmission channels. Source: Azoa Balengla, Keneck Massil, Noah, and Nomo Beyala (2026).

This paper argues this income-level disparity is theoretically consistent with the TOE-framework and third-party-reporting arguments developed in Section 2: low-income countries plausibly begin from a lower baseline of formal-sector transaction traceability and third-party-verified financial information, meaning the marginal contribution of introducing digital payment infrastructure, in the sense of generating genuinely new, independently held transaction records, is correspondingly larger than in economies where formal banking penetration and transaction traceability were already comparatively well established prior to mobile money's introduction.

This paper's reading of Azoa Balengla et al.'s (2026) findings against two closely related prior studies helps calibrate confidence in the specific magnitudes this paper reports. Apeti and Edoh (2023), publishing in the Journal of Development Economics using an entropy balancing method, similarly find mobile money increasing tax revenue, though their analysis finds the effect larger for direct tax revenue than indirect tax revenue, a result Azoa Balengla et al. (2026) explicitly contrast with their own opposite finding, discussed in Section 2.1, that indirect tax effects exceed direct tax effects. Wandaogo, Sawadogo, and Lastunen (2022), in a World Institute for Development Economics Research working paper focusing specifically on person-to-government mobile payments, find these payments alone associated with an increase in direct tax revenue of up to 1.3 percentage points, operating through corruption control and informal-sector decline, the same two channels Azoa Balengla et al.'s broader analysis identifies among its three mediating mechanisms. This paper reads the convergence between Wandaogo et al.'s narrower, service-specific finding and Azoa Balengla et al.'s broader, multi-service analysis as mutually corroborating evidence for the corruption and informality channels specifically, even as the direct-versus-indirect tax disagreement between Apeti and Edoh and Azoa Balengla et al. indicates this literature has not yet fully converged on every dimension of mobile money's tax-revenue effect.

4.3 Three Channels, Not One

Figure 1, Panel B, presents Azoa Balengla et al.'s (2026) mediation analysis, finding that reduced corruption, decline in the informal economy, and increased international remittance inflows jointly mediate 43.7 percent of mobile money's total effect on tax revenue, with remittances individually mediating 19.2 percent, informality decline 12.4 percent, and corruption reduction 8.7 percent when examined separately. This paper reads the substantial unexplained remainder, over half of the total effect, as indicating that these three identified channels, however individually well corroborated, do not exhaust the full mechanism through which digital payment systems affect tax revenue, leaving room for additional channels this paper's available evidence cannot fully specify, including the direct transaction-traceability mechanism this paper's Section 2.1 theoretical discussion emphasizes but which the mediation analysis does not appear to isolate as a distinct, separately measured channel.

This paper's reading of the corruption channel specifically gains further support from Barasa's (2021) independent, Kenya-specific finding that mobile money adoption reduced bribery payments by 3.1 percentage points, a finding Azoa Balengla et al. (2026) cite directly as corroborating their own cross-country corruption-mediation result. This paper treats the convergence between a large-sample, causally identified cross-country panel finding and an independent, single-country study using entirely different data and methodology as meaningfully strengthening confidence in the corruption channel specifically, consistent with the kind of multi-source triangulation this paper's broader research program has applied throughout its examination of tax-technology evidence.

This paper's reading of the substantial unexplained remainder in the mediation analysis, over half of the total effect not attributable to the three identified channels, also connects to the methodological distinction between individual and combined mediation estimates the study's own analysis draws directly. The individual channel estimates, summing to 40.3 percent when remittances, informality, and corruption are each

considered separately, understate the combined 43.7 percent estimate the study obtains when accounting for correlated residuals across the three mediator regressions through a seemingly unrelated regression approach, itself a modest but genuine illustration of how examining transmission channels jointly rather than independently can reveal additional explanatory power beyond what any single-channel analysis captures. This paper argues this methodological lesson, that mediating channels frequently operate in correlated rather than fully independent fashion, likely extends to whatever additional, currently unidentified channels account for the remaining unexplained variation this paper's Section 5 discussion treats as a priority for future research.

4.4 Which Payment Types Matter Most

Azoa Balengla et al.'s (2026) service-type disaggregation finds bill payments, merchant payments, person-to-person payments, and person-to-government payments carrying larger tax-revenue effects than other mobile money service categories, including simple airtime top-ups or cash-in and cash-out transactions. This paper reads this pattern as directly consistent with the third-party-reporting theoretical framework developed in Section 2.1: the four service types identified as most fiscally consequential each generate a transaction record connecting two economically meaningful parties, a business and its supplier or customer, or a citizen and a government agency, precisely the kind of economically substantive, traceable transaction third-party reporting theory predicts should carry the greatest compliance-relevant information content, as opposed to simple value-transfer transactions, such as basic person-to-person remittances used primarily for informal cash management, that carry less direct connection to underlying taxable economic activity.

This paper's reading of the person-to-government payment category specifically, one of the four highest-impact service types, connects directly to the digitalization of government-collected fees and payments a case study Azoa Balengla et al. (2026) cite from Kenya documents concretely: the digitalization of person-to-government payments increased transparency, accountability, and traceability of collected funds, enabling public bodies to minimize fraud. This paper also notes the study's citation of a Côte d'Ivoire case in which paying school fees through mobile money significantly decreased lost payments, fraud, and theft, a finding this paper reads as illustrating the same underlying mechanism at a more granular, sector-specific level than the aggregate cross-country panel evidence this paper's Section 4.1 through 4.3 discussion otherwise examines. This paper argues these case-level illustrations, while not carrying the same causal-identification strength as the panel-level instrumental-variable estimates, offer concrete, intuitively graspable examples of the more abstract transaction-traceability mechanism this paper's theoretical framework emphasizes throughout.

4.5 Diversification and the Breadth of Digital Payment Adoption

Beyond the specific service-type comparison examined in Section 4.4, Azoa Balengla et al. (2026) find that a more diversified mobile money service structure, measured as the share of available service types a given country's mobile money industry actually offers, is itself independently associated with higher tax revenue. This paper reads this diversification finding as complementing, rather than merely restating, the service-type-specific findings examined in Section 4.4: a country whose mobile money sector has expanded beyond basic person-to-person transfers into the full range of bill payment, merchant payment, and government payment services captures a broader share of daily economic activity within the transaction-traceable digital payment ecosystem, consistent with this paper's argument that digital payment systems' fiscal contribution scales with the breadth of economic activity the system actually intermediates, not merely with the binary fact of the technology's initial adoption.

V. Conclusion and Recommendations

This paper has examined digital payment systems' relationship to tax administration through the most methodologically rigorous evidence currently available, a causally identified study of 97 developing countries published in International Tax and Public Finance. The analysis finds mobile money adoption increases non-resource tax revenue by 4.29 percentage points of gross domestic product, with effects nearly five times larger in low-income countries specifically, operating substantially through reduced corruption, informal-sector decline, and increased remittance inflows, and strengthening further where complementary public-service and digital-infrastructure provision is more developed.

This paper's evidence base carries specific limitations worth restating together. This paper relies on a single, if unusually rigorous, study for its central causal estimates, and while the study's extensive robustness testing addresses many standard econometric concerns, this paper cannot independently verify the underlying panel data or replicate the reported estimates using alternative specifications beyond what the original study itself reports. The mediation analysis this paper examines in Section 4.3 leaves over half of the total effect unexplained by the three identified channels, meaning this paper's understanding of the full causal mechanism remains genuinely incomplete. This paper's cross-country panel evidence, while covering ninety-seven countries, cannot speak with certainty to any single country's specific experience, and the substantial income-level heterogeneity documented in Section 4.2 suggests considerable caution is warranted in extrapolating the study's average effects to any particular national context without regard to that context's own income level and existing infrastructure. This paper's comparison with Apeti and Edoh's (2023) contrasting direct-versus-indirect-tax finding, discussed in Section 4.2, further indicates this literature has not yet reached full consensus on every dimension of mobile money's tax-revenue effect, and this paper's reliance on Azoa Balengla et al.'s (2026) specific findings should be read with this ongoing scholarly disagreement in mind.

Three recommendations follow from this analysis. First, tax administrations and development institutions should treat digital payment system expansion as a genuine, causally supported revenue mobilization strategy, particularly in low-

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income-country contexts where this paper's evidence indicates the fiscal returns are substantially larger, while calibrating expectations downward for middle-income contexts where the same evidence indicates more modest returns, and should design monitoring and evaluation frameworks around the specific income-contingent effect sizes this paper's central evidence source documents. Second, tax administrations should pursue complementary public-service and digital-infrastructure investment, particularly electricity access and e-government development, alongside digital payment system expansion specifically, given this paper's evidence that these complementary factors substantially amplify the fiscal returns to mobile money adoption rather than operating as independent, separable investments, sequencing infrastructure investment to precede or accompany digital-payment expansion rather than treating the two as sequential, independently justified projects. Third, researchers should pursue further mediation analysis capable of identifying the substantial share of mobile money's tax effect this paper's central study leaves unexplained by its three identified channels, potentially incorporating the direct transaction-traceability mechanism this paper's theoretical framework emphasizes as a candidate fourth channel meriting explicit empirical testing, and should pursue country-specific replication studies capable of resolving the direct-versus-indirect-tax disagreement this paper's Section 4.2 discussion identifies between the two leading studies in this literature.

The evidence reviewed in this paper indicates that digital payment systems carry a genuine, causally identified, and substantial positive effect on tax revenue mobilization in developing countries, with this effect operating through multiple, partially identified mechanisms and varying systematically by income level and complementary infrastructure development. This paper's central contribution is to demonstrate that this effect, while genuinely large in low-income-country contexts specifically, is neither uniform nor unconditional, but depends on the same kind of complementary organizational and environmental capacity this paper's broader research program has repeatedly found to determine tax technologies' realized value — a pattern this paper argues should inform how tax administrations and international development institutions sequence and prioritize digital-payment-based revenue mobilization strategies going forward.

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