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Tax Revenue in Emerging Markets and Developing Countries: Does Digital Finance Matter?

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Introduction

The context of multiple crises in recent times, including the COVID-19 pandemic, the war in Ukraine, and the rising number of severe climate-related events, has once again emphasised the pressing need for emerging markets and developing countries (EMDCs) to expand their fiscal capacities. Identifying new tax revenue drivers is now a key concern for many governments and researchers worldwide.

Digital financial services like mobile money services have emerged as a transformative force shaping the financial inclusion landscape in the developing world, allowing people and firms previously excluded from the traditional banking sector to access basic financial services. From its initial focus on domestic person-to-person transfers, the mobile money services industry has diversified its product range considerably. The industry now offers a range of mobile solutions for bill payments, merchant payments, person-to-government transfers or international remittances, thereby facilitating the completion of daily transactions for individuals and businesses.

Given this context, this paper aims to explore the potential impact of the rapid expansion of mobile money services on non-resource tax revenues in EMDCs.

How does digital finance affect tax revenues?

Mobile money services have the potential to impact tax revenues in several ways.

- **Reducing corruption.** Corruption represents a significant obstacle to tax collection in developing countries, primarily due to the pervasive reliance on cash transactions. Consequently, moving from cash-based transactions to digital payments can mitigate corruption by eliminating the necessity for physical or face-to-face interactions between taxpayers and tax administration officials. Moreover, digital finance facilitates enhanced transparency, traceability, and accountability, thereby reducing bribe payments and embezzlement of public funds.
- **Reducing the size of the informal economy.** Informality is a distinctive feature of developing countries and constrains fiscal performance. However, mobile money services have the potential to broaden the tax base by increasing the productivity and profitability of micro-enterprises (often informal), reducing their operating costs and facilitating commercial transactions in a safer, more fluid and less costly manner. This, in turn, increases the opportunity cost of remaining in the small and less productive informal sector. Furthermore, digital finance can facilitate access to credit for self-employed workers or micro-firms, thereby encouraging the transition from the informal sector to the formal sector.
- **Enhancing inflows of international remittances.** Digital finance has profoundly transformed how remittances cross borders. Thanks to mobile money, people can now receive funds with greater ease, speed and affordability than was previously possible with traditional remittance methods. This ease of receiving funds decreases household consumption instability and increases spending on investment goods like education, health and housing. Consequently, international remittances can increase tax revenue, particularly through value-added tax revenues, due to higher consumption.

Research design and data

We examine the impact of mobile money on non-resource tax revenues (expressed in percentage of GDP) using a large sample of 97 EMDCs over the period 1990–2021. Data on tax revenue-related variables are collected from the UNU-WIDER Government Revenue Dataset. Data on mobile money adoption and type of mobile money service come from the GSM Association's Mobile Money Deployment Tracker database. The mobile money variable is measured using a dummy variable that takes the value 1 from the year the mobile money service is launched in a given country and 0 otherwise. Our empirical approach is based on three methods: the instrumental variables approach, the system-GMM estimator, and the endogenous switching regression. The spatial lag of mobile money adoption in neighbouring countries is used as an instrument for mobile money.

Findings

Our empirical analyses find that mobile money helps to boost tax revenues in EMDCs. This positive effect is stronger in low-income countries. On average, tax revenues increase by 9.2 per cent when mobile money is adopted, according to the estimates from the endogenous switching regression model. On average, this rises to 14.3 per cent in low-income countries and 3 per cent in non-low-income countries. The results also indicate that bill payments, merchant payments, person-to-person payments and person-to-government payments have a greater impact on tax revenue than other types of mobile money services.

When exploring the potential transmission mechanisms, the study demonstrates that the decline in corruption and in the size of the informal economy, coupled with the increase in inflows of international remittances facilitated by mobile money, play a mediating role in almost 50 per cent of the total impact of mobile money on tax revenues.

Our findings also show that the impact of mobile money has a bigger impact on tax revenues when public services such as electricity are more widely available.

Policy implications

Our paper's findings have important practical policy implications, and we can offer a policy toolkit to increase tax revenues in EMDCs.

- First, digital finance represents a powerful tool for improving tax collection in developing countries. Consequently, it is essential to facilitate the deployment of mobile money services in countries where they are not yet available and, in particular, to diversify the range of services available.
- Second, EMDCs would benefit from investing more in telecommunications infrastructure to enable mobile money operators to reach the maximum number of people and thus broaden the tax base.
- Third, the effectiveness of mobile money-related gains will be contingent upon policymakers implementing measures to enhance financial literacy and reinforce consumer protection, with the objective of mitigating potential risks.
- Fourth, the deployment of mobile money services alone is insufficient. It must be accompanied by the implementation of other development policies, such as the improvement of access to public services. It is only under these conditions that developing countries can fully realise the leapfrogging effects associated with digital financial services.

"We find that adopting mobile money leads to more non-resource tax revenue in EMDCs, with a more significant positive effect in low-income countries."

Further reading

Azoa Balengla, T.M.; Keneck Massil, J.; Noah, A. and Nomo Belaya, B.C. (2024) *Tax Revenue in Emerging Markets and Developing Countries: Does Digital Finance Matter?* ICTD Working Paper 194, Brighton: Institute of Development Studies, DOI: 10.19088/ICTD.2024.042

Credits

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