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Digitalization and the politics of tax in low-income states

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Digitalization and the politics of tax in low-income states

Alex Yeandle*

November 2025

Abstract: The digitalization of low-income economies has made it easier for governments to collect tax, yet many still fail to raise adequate revenues. Why would policy makers in urgent need of resources not fully leverage these new tools? I argue that governments remain constrained by public opinion: digital taxes are perceived as unfair, unaccountable, and lacking tangible benefit among the large groups of voters they affect. As a result, public support for digital taxes depends heavily on how they are designed. I test this argument with a conjoint experiment in Malawi focused on mobile transaction levies, a common form of digital tax introduced across Africa that has provoked strong backlash. Specific design choices, like earmarking revenues for local services or exempting small-scale users, can significantly affect support. This underscores broader political constraints on building fiscal capacity, even as technical limits on the state recede.

Key words: digitalization, tax, fiscal capacity, public opinion, conjoint

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Note: As this research forms part of the author's PhD thesis, the author will retain copyright ownership to facilitate publication of the thesis.

Supplementary material available on the working paper's [webpage](#)

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1 Introduction

The ability of the state to raise tax revenues is fundamental to the development of durable institutions and long-run prosperity (Acemoglu et al. 2016; North et al. 2009). Yet many low-income states continue to struggle to ‘turn inwards’ and collect tax from their domestic economies (Bastiaens and Rudra 2018; Levi 1988; Moore 2004; Olson 1993; Ross 1999; Tilly 1993). This has long been attributed to historical structural barriers from highly informal labour markets that the state cannot ‘see’ to under-resourced bureaucracies and petty corruption that limit how rules are enforced (Castañeda et al. 2020; Fairfield 2015; Holland 2016; Lee and Zhang 2017; Martin et al. 2024; Prichard 2015; Scott 1998). But as economies across the Global South undergo rapid digitalization, many of these constraints have weakened. States are now better able to monitor economic activity, biometrically identify citizens, digitize records, and collect revenue through new channels (Akitoby et al. 2020; Garbe et al. 2024; Gupta et al. 2017; Ndulu et al. 2023; Okunogbe and Santoro 2023). Why, then, do governments still struggle to raise sufficient revenues? And what does this suggest about the politics of state building in an era of technological change?

I argue that although digitalization has expanded the state’s *capacity* to collect tax, doing so is constrained by domestic politics. As administrative barriers fall, governments gain the tools to tax poorer, rural, informal workers who have historically remained outside the tax base. Yet among these groups, who comprise large electoral majorities in many low-income states (Harding 2020), these new taxes are perceived as unfair, delivering few visible benefits and collected through unfamiliar procedures (Branch and Mampilly 2015; Castañeda et al. 2020; Fjeldstad 2004; Martin 2023; Mueller 2018). Although digital reforms have been widely encouraged by international donors (Bachas et al. 2025; Besley and Persson 2014; Martin 2023), their fiscal benefits cannot be fully realized without appreciating the political tensions they provoke.

I focus on a widespread, controversial, and illustrative mode of digital taxation to evidence this argument: levies placed on mobile money transactions. Mobile money platforms allow users to send and receive money digitally, promoting financial inclusion and formalization without requiring a formal bank account (Aker and Mbiti 2010; Apeti and Edoh 2023; Suri and Jack 2016; Wandaogo et al. 2022). Their use has become widespread across the Global South, particularly in sub-Saharan Africa, where transactions exceeded a trillion USD in 2024 and comprise a substantial share of national gross domestic products (GDPs) (Raithatha and Storch 2025: 11). Governments have, in turn, begun taxing these transactions, with even modest levies yielding returns equivalent to a significant share of spending (GSMA 2023; Whitehouse 2021). Transaction taxes exemplify many of the ways in which digitalization raises the state’s capacity to tax, with mobile payments being highly legible, broad-based, difficult to evade, and capturing economic activity in otherwise informal contexts (Clifford 2020; Mader et al. 2022). Yet across the African continent, attempts to introduce them have provoked widespread *political* backlash, including protests, policy reversals, and even physical altercations between parliamentarians (Mader et al. 2022; Naadi 2021; Osae-Kwapong 2022; Yeandle and Doyle 2024).

To measure the determinants of public support for digital taxation, I leverage a conjoint choice experiment in Malawi in which respondents evaluate a hypothetical mobile money tax. Malawi shares many similarities with other low-income states, including considerable efforts from donors to increase digitalization in recent years (Chavula 2024). Like many other African countries, the government also attempted to introduce a transactions levy, before reversing course amid popular opposition (Jomo 2019). In the conjoint, taxes are varied across five attributes that mimic their costs, benefits, and

administration. These are the rate charged, exemptions offered, earmarking of revenues, independent auditing, and method of payment collection. This design lends new insight into how new modes of digital taxation, increasingly available to policy makers in low-income states, are viewed by the citizens they affect. This helps explain why public opinion remains a formidable barrier to their implementation, while highlighting how these taxes might be designed to secure wider support going forward.

The results of the experiment suggest that the public has strong preferences over the design of mobile transaction levies, and that these are congruent with existing research on the wider microfoundations of tax morale. Earmarking revenues for local services has the single largest effect on support, more so than a fivefold increase in the tax rate itself. Respondents also favour exemptions to protect small-scale users and to avoid double taxation of registered firms. While these results make clear the importance of costs and benefits, there is minimal evidence that independent auditing nor the mode of payment collection has a tangible impact. These patterns are generally consistent across a wide range of pre-registered subgroups, likely reflecting the sheer size and cross-cutting nature of the informal workforce affected by such policies.

Taken together, these results contribute to several strands of literature. First, they advance a growing body of work focused on ‘bringing the politics back in’ to debates on digitalization and its consequences for low-income countries. From voters using mobile devices to send and receive remittances, access political information from relatives, and participate in protests (Christensen and Garfias 2018; Donati 2023; Manacorda and Tesei 2020; Yeandle forthcoming) to political parties mobilizing supporters online and bureaucrats leveraging digital platforms to coordinate and curb election fraud (Cheeseman et al. 2020; Fisher et al. 2023; Garbiras-Díaz and Montenegro 2022; Gonzalez 2021; Yeandle 2025), the political impact of digitalization extends far beyond its immediate and well-documented economic benefits (Akitoby et al. 2020; Ndulu et al. 2023). But taxation receives minimal attention in this literature despite the ubiquity of mobile payments infrastructure across the developing world and its wider importance for both short-term domestic politics and long-run economic development. I start to fill this gap.

Second, the paper contributes to a more specific literature on state capacity and the political dynamics that underpin its expansion in the modern age. Historical scholarship has long emphasized the role of technological change and domestic revenue availability in forging durable social contracts, particularly in western Europe (Levi 1988; Tilly 1993). I argue that digitalization in low-income countries, and the taxation of mobile payments infrastructure in particular, represents a contemporary parallel to these shifts (Chavula 2024). I also add to recent work on the political constraints of expanding state capacity, and how these interact with the incentives and expectations of elites in countries both rich and poor (Martin 2023; Suryanarayan 2024). This perspective helps explain why, despite their economic potential and financial value to cash-starved governments, digital taxes are frequently withdrawn or diluted by politicians.

Finally, I contribute to the broader study of public policy preferences in Africa by applying a choice-based conjoint experiment to a high-quality original survey sample. While widely used in Europe, the USA, and Latin America, conjoint designs remain rare in African contexts, with most focused on issues of political representation (Carlson 2015; Ofosu 2024; Ofosu et al. 2024; Wietzke 2024), foreign aid (Doces and Meyer 2022), or elections (Ahlbäck and Yeandle 2025; Gutiérrez-Romero and LeBas 2020). This is despite distributive politics in many African countries being less programmatic than other parts of the world (Bleck and Van De Walle 2013; Elischer 2012), making conjoints

particularly useful at capturing citizens' complex, multidimensional, preferences (Hainmueller et al. 2014).

The paper proceeds as follows. Section 2 discusses the challenges of taxation in low-income states and how digitalization helps overcome structural barriers. Section 3 outlines a framework for understanding public support for digital taxation, while Section 4 introduces the case of Malawi and its failed attempt to tax mobile money. Section 5 outlines the conjoint experiment and approach. Section 6 presents the results of the experiment and Section 7 turns to descriptive data to explain them, before Section 8 concludes.

2 Tax and digitalization in low-income states

2.1 The conventional challenge

Low-income states around the world face a plethora of governance challenges, from the destructive effects of climate change through to food insecurity, youth unemployment, and rapid urbanization (Bastiaens and Rudra 2018; Grindle 2004; Nathan 2019). Solving these challenges is expensive and so the ability of governments to deliver is heavily constrained by their capacity to collect taxes. As a percentage of GDP, the tax take is often half that of OECD countries, a gap which has led to a growing focus from donors and policy makers on building fiscal capacity (Bachas et al. 2025; Besley and Persson 2014; Martin 2023).

Why do low-income states struggle to raise revenues? Existing literature points to several interrelated factors. First, low-income economies are often highly informal, making much economic activity illegible to the state and limiting the government's ability to identify who owes taxes (Lee and Zhang 2017; Scott 1998). This is compounded by the state's uneven presence in more geographically remote, less-populated areas (Herbst 2014). Second, even when taxes are known to be owed, collection is constrained by compliance issues. This includes bureaucratic inefficiencies, from petty corruption and political favouritism through to a general lack of resources and suboptimal administration (e.g., Holland 2016; Weigel et al. 2021), but also private citizens' ability to mask income and/or refuse to pay (e.g., Kasara 2007; Sánchez de la Sierra 2020). Third, rather than 'turning inward' to expand domestic taxation, many governments rely on more readily available natural resource rents. Because resource wealth is largely independent of ordinary taxpayers, there is less incentive to build a social contract with citizens in which taxation and institutional capacity are exchanged for public goods and accountability (Humphreys et al. 2007; Ross 1999). Lastly, public opinion can act as a constraint. Weak public good provision sows distrust toward the broader tax system, creating a vicious circle in which citizens are hostile to new taxes, politicians are deterred from introducing them, and public goods are left underfunded (Castañeda et al. 2020; Martin 2023; Weigel 2020).

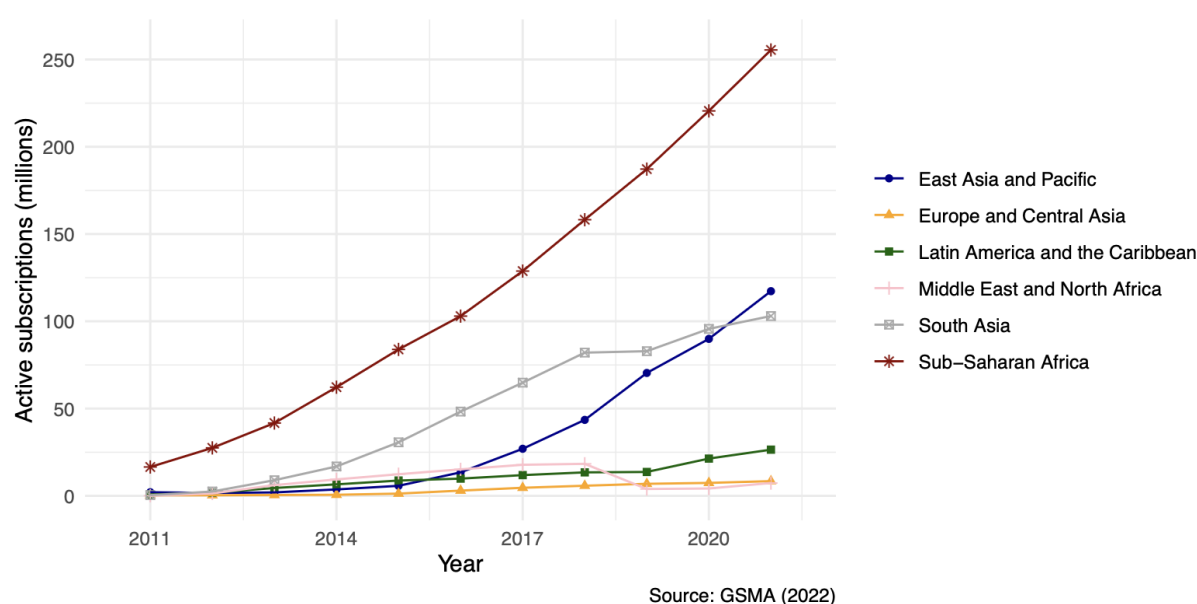
2.2 Digital payments as a new source of revenue

In recent years low-income states have seen a pronounced digitalization of their economies, creating new opportunities to expand the tax base and overcome longstanding barriers to revenue collection. Governments have adopted online platforms for public services, including digital IDs (Garbe et al.

2024), tax collection systems (Gupta et al. 2017; Nose and Mengistu 2023; Zeitlin and Eissa 2016), and the disbursement of welfare payments (Suri and Jack 2016), while businesses increasingly use digital tools to improve productivity and streamline income reporting (Hjort and Tian 2025). Together, these developments make it easier for governments to monitor and tax economic activity, opening up new avenues for expanding fiscal capacity. Recognizing this promise, international donors, particularly the World Bank, have invested heavily in digitalization initiatives across the low-income world (Bachas et al. 2025).

Perhaps the most striking indicator of this structural transformation is the widespread adoption of mobile payment platforms. So-called ‘mobile money’ services allow users to send and receive funds without a formal bank account, as well as to pay taxes and receive transfers from the government (Aker and Mbiti 2010). Balances are typically linked to a user’s SIM card, verified with an ID, and can be exchanged for physical cash at kiosks. A growing body of research highlights the economic benefits of mobile money in low-income states, including gains in formalization, productivity, financial resilience, and gender equality (Aker and Mbiti 2010; Apeti and Edoh 2023; Aron 2018; Economides and Jeziorski 2017; Mbiti and Blumenstock 2015; Riley 2018; Suri et al. 2023; Wandaogo et al. 2022). Figure 1 plots the exponential growth of mobile money users over the past two decades.

Figure 1: Active mobile money accounts by region



Note: Active account means any account that has been used to make a transaction at least once in the previous 90 days.

Source: Our World in Data (2024).

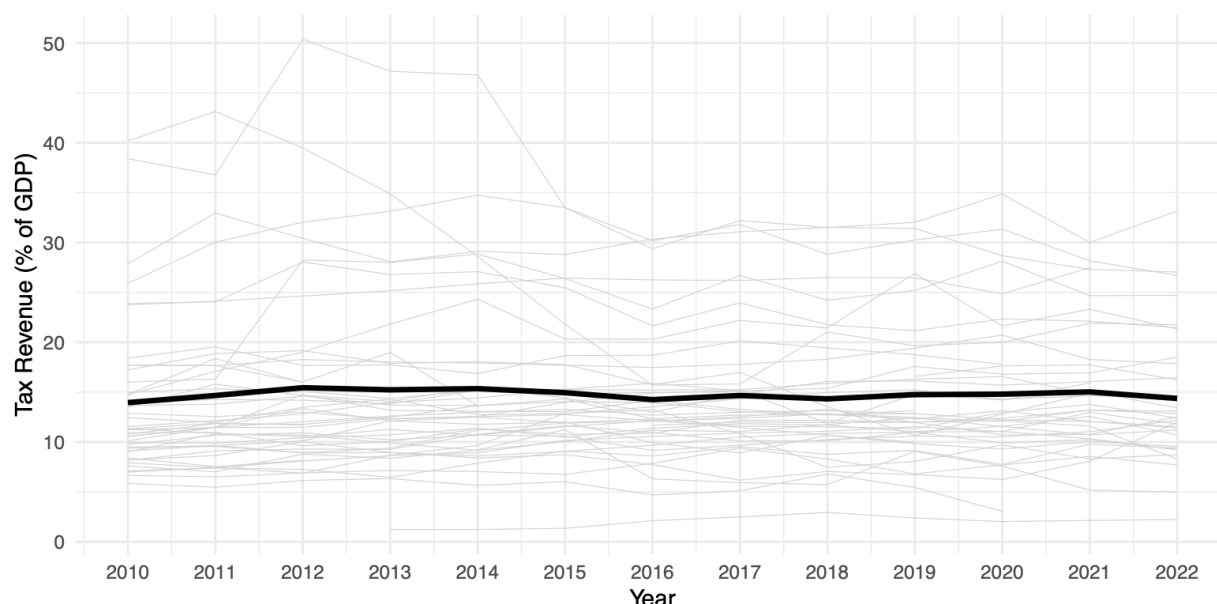
Mobile money is especially significant for state building because of the reach and regularity of its use. In sub-Saharan Africa, where the technology is most embedded, more than a trillion USD are transacted each year over mobile platforms across hundreds of millions of individual accounts (Raithatha and Storchi 2025). These transactions are not confined to urban elites or formal sector workers; rather, they reflect a broad uptake across different geographies, income groups, and sectors (Aker and Mbiti 2010). Payments that once took place in cash now leave a digital record, allowing the state to observe, quantify, and potentially tax a much greater share of the informal exchanges that comprise the bulk of their GDP (Aron 2018; Barasa 2025). In contexts where public bureaucracies

struggle to monitor or tax dispersed and unregistered economic activity, mobile money platforms can thus offer powerful new infrastructure for expanding the tax base.

Governments have sought to capitalize on mobile payment systems by imposing taxes upon them. Across Africa politicians have introduced percentage-based transaction levies on mobile money, in addition to collecting value-added tax (VAT) on account fees and services (Clifford 2020). These charges are appealing because they are very easy to collect; taxes are taken automatically by telecom operators, reducing concerns about compliance, and they apply to all transactions, therefore covering economic activity that was previously illegible. In recent years levies have been announced across the continent, including in Ghana, Gabon, Kenya, Côte d'Ivoire, Cameroon, the Democratic Republic of the Congo, Congo-Brazzaville, Malawi, Uganda, Zimbabwe, and Zambia. Given the sheer volume of payments transacted on mobile platforms, even a small percentage levy can come to represent a significant portion of government budgets, making these taxes highly lucrative.

But while attempts to introduce this new form of digital tax are widespread, in many countries they have *not* been successful. Oftentimes the announcement of levies has sparked mass outrage and protest, leading taxes to be significantly watered down or entirely abandoned by politicians (Lees and Akol 2021; Yeandle and Doyle 2024). Levies can also collect less revenue than forecast, as some users revert back to physical cash in order to avoid them, blunting the wider welfare gains of mobile money adoption (Anyidoho et al. 2023). These responses help explain why, despite the expansion of digital payment systems and new technical tools for revenue collection, the overall tax take across sub-Saharan Africa has remained largely flat in recent decades. Figure 2 illustrates this pattern using data from the UNU-WIDER Government Revenue Dataset (UNU-WIDER 2023).

Figure 2: Trends in tax revenue across sub-Saharan Africa



Note: Tax figures exclude social contributions. The dark line represents the mean. Note that countries with an apparent high tax base tend to have very small fluctuating GDPs, and include taxes reallocated through regional customs sharing agreements.

Source: Author's illustration based on data from UNU-WIDER (2023).

Despite this well-observed backlash we still lack systematic evidence on how citizens evaluate digital taxes. In one of the only existing studies to address this topic, Yeandle and Doyle (2024) use a priming experiment to assess the attitudinal effects of Ghana's 'e-levy', finding that the policy reduced overall tax morale, especially among opposition voters and those most financially exposed. But while this shows that digital taxes can generate public resistance, it stops short of identifying the reasons behind that resistance or evaluating how alternative tax designs might improve support.

This paper seeks to fill that gap by investigating the underlying preferences that influence support for digital taxation. Using a conjoint choice experiment, I examine which features of mobile transaction levies tend to increase or decrease public backing. In so doing I provide new insights into how the design of digital taxes matters for building public consent, while contributing to broader debates on the microfoundations of tax morale and the political challenges low-income states face in expanding fiscal capacity.

3 Understanding public support for digital taxes

Why do digital taxes provoke such strong public resistance? Focusing on mobile transaction levies, one of the most widespread forms of digital taxation in sub-Saharan Africa, I argue that these charges are perceived by citizens as unusually and unfairly extractive. They impose visible costs on routine economic activity, are difficult to avoid paying, deliver few direct benefits, and are administered in ways that appear opaque and susceptible to corrupt practice. Although these taxes are easy for low-capacity states to collect, reaching voters across a country who might otherwise lie beyond the state's reach, they amplify longstanding concerns that undermine wider tax morale, including perceptions of fairness, reciprocity, and trust in government.

First, digital taxes differ from conventional modes of revenue collection in their visibility and uniformity. In low-income settings conventional taxes on income and capital mostly impact workers in the formal sector—comparatively high earners who tend to be based in large cities (Joshi et al. 2018). Indirect taxes like VAT are bundled with the price of goods and so are often less visible to consumers (Chetty et al. 2009). By contrast mobile transaction levies are automatically applied to all transactions, however routine, and require that senders either pay more or recipients receive less. Moreover, these taxes are used extensively in informal economic exchanges and so seep into everyday economic life, placing a noticeable burden on consumers.

Beyond their visibility, transaction levies also raise questions about fairness. By applying a flat rate to all payments, they disproportionately affect poorer citizens, for whom the tax represents a larger share of disposable income. This is compounded by poorer citizens' reliance on mobile money for a range of activities, from receiving remittances from relatives living far away (Yeandle forthcoming) to accessing various cash transfer programmes that, across Africa, are increasingly available only through mobile payment platforms (Chibwana et al. 2025). There are also concerns among business owners that levies represent a 'double-dip', adding to the various sales taxes and market charges they are already exposed to when buying and selling produce (Yeandle and Doyle 2024). Taken together, these concerns suggest that measures to reduce the cost and regressivity of transaction levies can raise support. For instance, charging a lower rate and providing exemptions for targeted groups may help overcome backlash related to the visible costs and perceived unfairness of these charges.

Implication 1: Digital taxes that cost less and include exemptions for vulnerable or high-exposure groups will receive greater public support.

Second, there are concerns about the reciprocity of transaction levies. This refers to the balance between the costs that a tax imposes on a citizen relative to the gains, through enhanced public spending, that they receive (Meltzer and Richard 1981). When costs are highly visible it suggests a tax must bring significant benefit to be worthy of support. In the case of mobile transaction levies, these benefits are often left unclear. To would-be payers, levies are untraceable in the broader scale of government spending, and it is difficult to see how they benefit one personally. This problem is particularly acute in low-capacity states, where there is often widespread concern about partisan or ethnic favouritism in the distribution of state resources (Burgess et al. 2015; Stokes et al. 2013), first-hand exposure to corruption when interacting with local bureaucrats (Brierley and Pereira 2023; Peiffer and Rose 2018; Seim and Robinson 2020), or knowledge that several basic services are funded by aid organizations rather than through tax revenues (Briggs 2019; Jablonski and Seim 2024). Building on existing literature I therefore expect support for transaction levies to be higher when funds are clearly designated for local services that are of value to citizens, and where funding can make a tangible difference.

Implication 2: Earmarking digital tax revenues for specific, tangible public services, especially those valued by citizens and where government presence is weak, will increase support.

Third, mobile transaction levies introduce procedural opacity into the collection process. Unlike conventional taxes, which are paid directly to the state or withheld from salaries, mobile taxes are collected by telecom operators on the government's behalf. This creates confusion for users about whether deductions are standard fees or a tax, and whether the funds will ever reach government accounts. These concerns are particularly pertinent across Africa, where telecom firms typically hold significant market power, negotiate discounted tax rates directly with the government, and are often implicated in corruption scandals (Mann 2018; Sahgal 2025). In such settings delegating collection authority to private operators can erode trust. I expect that public support for transaction levies will be therefore higher when the tax is sent directly to the government, and when payment systems are independently audited to ensure revenues reach their correct destination.

Implication 3: Support for digital taxation is higher when the collection process is transparent, state-controlled, and subject to credible independent oversight.

Taken together, these dimensions highlight how digitalization simultaneously makes the state more powerful and exposes it to political vulnerabilities. When seen as high cost, low benefit, and procedurally opaque, mobile transaction levies provoke sharp public resistance that undercuts their transformative potential in raising fiscal capacity. I now turn to the case of Malawi, where the government adopted and then swiftly reversed a mobile transactions tax, to evaluate the argument's implications.

4 The case

I study public support for digital taxation in Malawi, a country with a historically low tax base, a rapidly digitalizing economy, and significant public resistance to new modes of taxation. Using the case of an

abandoned mobile money tax, Malawi offers a valuable setting through which to examine the political feasibility of digital taxes and the conditions under which citizens are willing to accept them.

4.1 Tax, development, and digitalization in Malawi

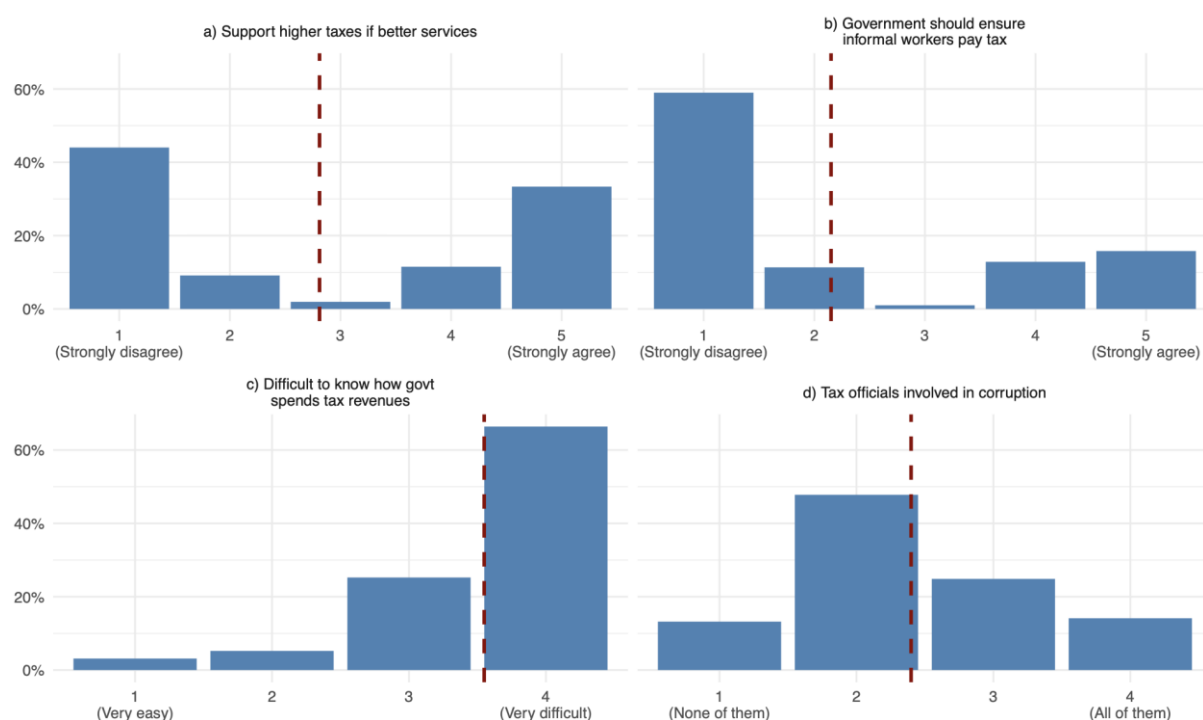
Malawi is one of the world's poorest countries, and policy makers struggle with a state low in capacity and resources. While estimates vary, the country's tax to GDP ratio is around 10%, slightly below the Africa-wide average and around three and a half times smaller than its average OECD counterpart (UNU-WIDER 2023; World Bank 2025).¹ In recent years it has fallen short of the World Bank's 15% target, with considerable development assistance going toward increasing fiscal capacity in the country (World Bank 2025).

Many broader constraints to widening the tax base accurately describe historical dynamics in Malawi. The government estimates that around 90% of workers are in the informal sector, meaning the wages they receive do not show up on formal government records and are thus harder to tax (Government of Malawi 2022). More broadly, compliance remains constrained by bureaucratic favouritism (Seim and Robinson 2020), lack of information (Jablonski and Seim 2024), and uneven state presence in many of the country's more remote rural areas (Yeandle 2025).

Beyond these structural barriers public opinion has been hostile to recent efforts to expand the tax base. Figure 3 uses data from a battery of tax-related questions contained in round 8 of the Afrobarometer, a nationally representative survey of the country from late 2019. The public recognizes the need to expand the tax base (panel a), with around half of respondents agreeing or strongly agreeing that 'it is better to pay higher taxes if it means there will be more services provided by government'. But there is sharper opposition when asked whether those in the informal sector should pay (panel b), and there is uncertainty about what the government uses tax revenues to do (panel c) and a perception that the tax authorities are corrupt (panel d). Overall, this suggests there is support for raising taxes *in principle*, but with common concern about who pays and what citizens receive in return.

¹ For instance, these two credible datasets on Malawi, from UNU-WIDER and the World Bank, give Malawi's 2022 tax to GDP ratio as 8.8% and 13.2% respectively.

Figure 3: Tax attitudes in Malawi



Source: Author's compilation based on Afrobarometer Data (Malawi) Round 8 (Afrobarometer 2021).

Amidst these challenges, however, Malawi has also seen rapid advances in the digitalization of its economy. Building from an extremely low infrastructural base, the government, in collaboration with the World Bank and other donors, has introduced several programmes aimed at improving efficiency and expanding financial inclusion. This includes digitizing the disbursement of some social protection payments, implementing ways to report taxes online, and mandating that businesses accept at least one form of electronic (i.e. non-cash) payment (Chibwana et al. 2025; Marwa 2023). The government has also launched initiatives to increase mobile phone and money access, alongside expanding phone and internet coverage into peripheral areas (Yeandle 2025). These efforts have been largely successful; as of 2024, 82% of Malawians had access to a mobile phone and 75% to a mobile money account.²

4.2 The abandoned mobile money tax

Like their counterparts across Africa, policy makers in Malawi have sought to leverage the country's digital turn to expand the tax base. This includes a recent failed effort to introduce a mobile money tax, which forms the basis for the intervention used in this study.

In 2019 the then Finance Minister Joseph Mwanamvekha announced the introduction of a 1% levy on mobile payments when presenting that year's budget to parliament. Little detail was given about the

² Figures from Afrobarometer R10 (Afrobarometer 2025a). 'Access' is defined as either the respondent or someone in their household owning a phone/account.

policy, with the word 'mobile' mentioned only once in the entire speech. The 1% tax was justified on the grounds that it would ensure 'a large number of the citizenry are motivated to contribute toward national building through payment of taxes and ensure that Government has scope to improve service delivery'. The minister also noted that the policy was 'in line with developments in neighbouring countries', pointing to the widespread nature of these taxes across the African continent and policy learning by low-income governments (Malawi Ministry of Finance and Economic Affairs 2019).³

The announcement sparked wide backlash among the public, civil society groups, and businesses, and was withdrawn by the government. The Malawi consumers association decried the tax as 'against fairness and neutrality', suggesting it would turn people back to cash and 'reduce the same tax base in the long-run' (Nyasa Times 2019), while the country's telecom operators claimed the levy would significantly harm their efforts to boost financial inclusion (Clifford 2020; Nation Online 2019). Leading figures from opposition parties stressed the unfair nature of the tax and its detrimental effects on rural development, with both the Malawi Congress Party (MCP) and United Transformation Movement (UTM), who went on to form a government together the following year, pledging to reverse it (ZimEye 2019). This partisan divergence took place in a context of ongoing protests against the government following alleged irregularities in the general election a few months earlier (Nkhata et al. 2021). Following the extent of this backlash, the finance minister cancelled the policy just weeks after first unveiling it, saying that 'although this measure is in line with policy developments in (other) neighbouring countries, the government has ... proceeded to withdraw this proposed tax' (Malakata 2019).

This episode acts as a microcosm for the trade-offs associated with introducing new types of digital taxation in low-capacity states. On the one hand, as a 'negative case', it shows how public backlash constrains the ability of low-income governments to introduce policies that expand the tax base. At the same time it highlights the significant loss of revenue that accompanies the withdrawal of such policies. For instance, it is estimated that in the year prior to Malawi's mobile money tax announcement, more than US\$2 billion were transacted on the country's mobile payment platforms. If the government were able to collect just 1% of this amount, it would be equivalent to around 12% of the annual state budget for healthcare that year.⁴ Moreover, as mobile money has become even more widespread in Malawi over the years since, the size of this revenue pot grew more than fivefold in the year to 2024.⁵ As a result, developing ways to tax mobile transactions that have wider public consent is a lucrative challenge for policy makers in Malawi and countries like it, with implications for the study of state capacity and public opinion more broadly.

³ The relevant paragraph about the tax is on page 51 (point 146).

⁴ 1.6 trillion kwacha were transacted through mobile payment systems between July 2018 and June 2019, equivalent to approximately US\$2 billion using the exchange rate from 1 July 2019. The resulting tax take from a 1% transactions levy would therefore be K16 billion. Total spending on healthcare in the budget was 134 billion kwacha, so the tax revenue would cover 11.9% of this. Mobile transaction data taken from reports from Q4 2018 and Q2 2019 (Reserve Bank of Malawi 2018, 2019). Budget data available from UNICEF (n.d.).

⁵ In 2024 around 24 trillion kwacha were transacted (see Reserve Bank of Malawi 2025). When converted into USD at prevailing rates, this represents an increase of around five times relative to 2019.

5 Research design

Building on Malawi's abandoned mobile money tax, I present results from a conjoint choice experiment in which respondents are presented with hypothetical tax policies. These mimic both the key attributes of those adopted by other countries and the dimensions outlined in Section 3. This allows us to examine which specific attributes are preferred by respondents (Hainmueller et al. 2014), and thus how digital taxes might be best designed to maintain public support in the longer term.

The experiment was part of an original survey of 1,243 respondents conducted in October 2024 and implemented by the Institute for Public Opinion Research, a research organization based in Zomba, Malawi. Fieldwork took place in two districts, Blantyre and Salima, chosen to ensure overall political and ethnic diversity within the sample. Communities were randomly selected using census data, and households then selected by a random walk procedure similar to that used for the Afrobarometer survey in Malawi (Afrobarometer 2025b).

The survey and study design received ethical approval from both the author's home institution and local Malawian institutional review board. Participants gave their informed consent before taking part, while the conjoint experiment itself was carefully reviewed to ensure realism and clarity.

More details on the survey, including sampling strategy and representativeness, can be found in Section A of the supplementary materials.

5.1 Intervention and attributes

Respondents were presented with pairs of mobile money taxes that randomly vary across five attributes. These were the tax rate, exemptions, earmarking of revenues for specific projects, independent monitoring, and the mode of payment collection. These are all important tools available to governments and vary significantly across existing mobile money taxes across the continent. Collectively, they highlight core aspects of taxation and the social contract.

Costs of the tax

The first attribute of the proposed mobile money tax is the rate at which it is charged. I vary whether the levy is set at a lower rate of 1% or a higher rate of 5%. The lower rate is deliberately similar to existing mobile money taxes across Africa, while the 5% figure is realistically, but noticeably, higher. Somewhat self-evidently, I expect respondents to prefer the lower rate of tax, all else equal (H_{1a}). The main purpose of including the rate attribute, however, is to help benchmark the substantive importance of others; i.e. how important is a particular policy feature relative to a fivefold increase in the amount of money one would be liable to pay.

Second, and related, is exemptions. I vary whether all transactions will be covered by the tax, or whether there are carve-outs for a) a daily personal allowance of 5,000 kwacha (~US\$3), or b) for tax-registered businesses using mobile money. These exemptions are very similar to those present in Ghana's e-levy (Anyidoho et al. 2023) and are designed to tie into perceptions of cost and fairness. The more exemptions present, the less money the median respondent will expect to pay relative to the value of goods and services received (Meltzer and Richard 1981). And if certain types of

transactions that affect ordinary people are exempted, the tax may seem more legitimate and less regressive, one of the central critiques of the version announced in 2019. I expect respondents to prefer these exemptions (H_{2a}).

Benefits of the tax

I next turn to the tangible benefits that the public receive from the tax. I vary whether revenues are reserved or 'earmarked' for specific purposes, or whether they simply enter the general national budget to be spent as the government sees fit. By earmarking revenue for a particular good or service, the reciprocal benefits of taxation become more salient to voters and this can raise support (Khan et al. 2022; Krause 2020; Martin et al. 2024; Weigel and Ngindu 2023). It can also make the performance of those public services directly attributable to politicians, which will ultimately improve voter welfare (Harding 2015; Harding and Stasavage 2013).

I focus on healthcare in Malawi, a visible form of public good that is highly salient, largely locally administered, and one of the main ways in which citizens directly engage with the state. In round 10 of the Afrobarometer, health was named by respondents as the second most important issue facing the country, with 72% of respondents interacting with a public hospital or clinic over the past year, 70% worrying about costs, and 60% reporting going without treatment (Afrobarometer 2025a). Perhaps due to these difficulties, there is a clear appetite for raising taxes to improve health facilities, with more than 60% agreeing or strongly agreeing that the 'government should ensure that all citizens have access to adequate healthcare, even if that means raising taxes'.⁶ In keeping with these trends, I expect that respondents will prefer a mobile money tax whose revenues are earmarked for local health spending (H_{3a}).

Administration of the tax

Lastly, I turn to the opacity with which digital taxes are administered. Building on the earmarking attribute above, a further barrier to citizens' willingness to pay tax is the perception that revenues will not only be misspent but also be lost to corruption. In Malawi such concerns are particularly apparent, with corruption a core issue in political debate (Wahman 2023), especially in public administration, law enforcement, and medical supply chains (Jablonski et al. 2023; Robinson and Seim 2018; Seim and Robinson 2020). I vary whether revenues collected from the mobile money tax are audited by various bodies, each of which is perceived to be more or less trustworthy by the public. Against a baseline audit by the Malawi Ministry of Finance, a partisan government institution, I expect respondents to prefer a tax that is monitored by an arms-length entity, in this case either the domestic Anti-Corruption Bureau or an international donor (H_{4a}).⁷

I also vary how payment is collected. In Malawi, as elsewhere, there is significant uncertainty about who exactly collects tax revenues from mobile payments and any subsequent taxes. Sometimes,

⁶ Afrobarometer Round 8. Though of course this statement is not connected to any specific tax policy and gives no indication of who would be liable to pay, so true support may be lower (Cavallé and Trump 2015).

⁷ In the conjoint the named donor is USAID, which, at the time, was by far the largest single provider of overseas aid to Malawi. As the survey was fielded in October 2024, it came before the Trump administration's rapid dissolution of USAID in early 2025. Any sudden withdrawal of funding to Malawian projects, which may plausibly affect respondents' trust in the organization's capacity to monitor the tax, had not yet happened and so cannot impact the findings presented in this paper.

telecom companies collect taxes on behalf of the government, usually by automatically adding them to their fees. Other times, payment goes straight to the government and will be seen on a user's statement as a separate charge. In Malawi there is some concern among the public that telecom companies fail to pass on taxes to the government, instead holding onto some of the money from higher fees for themselves (Gondwe 2019; Mlanjira 2021). On the one hand, we might expect respondents to prefer a mobile money tax through which money is sent straight to a government account, rather than being held by their mobile operator (H_{5a}). On the other, if sending money directly to the government makes the tax more immediately visible, we might expect this to be less preferred (H_{5b}).

In addition to the baseline effects of the five attributes, I pre-registered several expected avenues of effect heterogeneity which I examine in Section 6.2. This includes measures of pre-treatment tax morale, mobile money use, and partisanship, alongside whether certain attributes matter more when interacted with others.

Figure 4 summarizes the level and baseline of each attribute, and their respective probability of being included in the contrast presented to the respondent. These were read out to respondents by the enumerator. The final column summarizes the pre-registered expectations of how the attribute level would shape support, relative to the baseline.

Figure 4: Mobile money tax attributes

| Attribute | Levels | Probability | Expectation |
|--|--|-------------|-------------|
| How much tax you will pay | 1) 5% higher rate [baseline] | 0.5 | |
| | 2) 1% lower rate | 0.5 | ↑ |
| Which payments are subject to tax | 1) All payments [baseline] | 0.33 | |
| | 2) All above 5,000 kwacha per day | 0.33 | ↑ |
| | 3) All except those to registered businesses | 0.33 | ↑ |
| Where taxes from your money transfers will go | 1) National budget [baseline] | 0.5 | |
| | 2) Health clinics in your district | 0.5 | ↑ |
| Who monitors how taxes are used | 1) Ministry of Finance [baseline] | 0.33 | |
| | 2) Anti-Corruption Bureau | 0.33 | ↑ |
| | 3) International org (USAID) | 0.33 | ↑ |
| How you pay the tax | 1) Via your mobile operator [baseline] | 0.5 | |
| | 2) Directly to the government | 0.5 | ↑ / ↓ |

Source: Author's compilation.

5.2 Measurement

Before being shown any policy choices, respondents were read a brief vignette introducing them to the idea of mobile money taxes and the ways in which they might vary. The full text of this can be found in supplementary materials Section B. Following this, respondents were presented with randomized pairs of policies and asked: 'Suppose the government was going to introduce one of the

below mobile money tax policies. Which would you prefer they implemented?'. Figure 5 presents one potential contrast, or 'task', which was repeated four times for each individual.

Figure 5: Possible contrast of mobile money tax attributes

| Policy A | Policy B |
|---|--------------------------------|
| How much tax you will pay | |
| 5% (higher rate). | 1% (lower rate) |
| Which payments are subject to tax | |
| All payments | All above 5,000 kwacha per day |
| How taxes from your money transfers will be used | |
| Health clinics in your district | National budget |
| Who monitors how taxes are used | |
| Ministry of Finance | Anti-Corruption Bureau |
| How you pay the tax | |
| Directly to the government | Via your mobile operator |

Source: Author's compilation

Attribute levels are fully randomized between tasks, while the row order in which they are presented is randomized between respondents. This avoids confusion for the individual but means we can still test for row-order effects in the analysis.

Several measures were taken to ensure the realism of the attributes, and thus the substantive meaning of the choices respondents made. First, to try to reduce social desirability bias, the preamble to the conjoint reminded respondents that their choices were anonymous and would only be used in combination with interviews from more than a thousand other Malawians. Second, to encourage respondents to give their real preference, the preamble also (truthfully) stated that 'the overall results will be made public, so that organizations across Malawi, including the government, can use them to inform future decisions'. Collectively, these wordings were designed to encourage respondents to see the intervention as tied to the real world and to give their genuine opinion. This means that, in aggregate, the results offer a more valid measure of preferences in the wider population.

Analysis

Following the pre-analysis plan, I use ordinary least squares to estimate the average marginal component effects (AMCE) of each attribute level. This straightforward approach rests on the simultaneous randomization of all attribute levels, such that the data structure resembles a fully factorized experimental design. I cluster standard errors at the respondent level throughout, to reflect the fact that each respondent completes multiple tasks.

In the figures that follow I present results from a baseline specification, but in the supplementary materials I show that the results are robust under alternatives, including adjusting for demographic covariates and including district fixed effects.

In supplementary materials Section C.3, I provide various technical robustness checks. This includes showing that treatment assignment is balanced across respondent characteristics and comparing effects after subsetting by a) the row order in which attributes were presented, b) the column order in which attribute levels were shown, and c) whether a respondent's choice was part of the first, second, third, or fourth task.

In pre-registered power calculations, I assumed a sample size of 1,100 and used simulation-based techniques designed specifically for conjoint (Lukac and Stefanelli 2020). My design provides 89% power to estimate AMCEs from around 4% upwards, with zero to no chance of type S (0%) or M (exaggeration ratio = 1.15) error. In reality, these estimates are conservative as the survey contains data from 1,243 respondents, more than initially expected. As such, the study is well powered to estimate public preferences over various types of mobile money tax policy.

6 Results

6.1 Main findings

I now turn to the main findings of the experiment. Figure 6 plots the AMCE for each attribute level relative to its baseline, representing the change in probability that a respondent selects a given policy. This should be seen in conjunction with Figure 7, which presents the respective marginal means. These reflect broader support by modelling the probability that a policy is chosen conditional on a specific attribute level. As respondents have two policy options to choose between, the effective null hypothesis is a marginal mean of 0.5, suggesting no preference for one level over the other.

First, respondents prefer a low tax rate. All else equal, respondents are around 7.7% more likely to select a policy with the lower 1% tax rate, relative to its higher 5% alternative. This is driven by a clear dislike of the higher tax rate in the respective marginal means (0.45), and moderate support for its lower alternative (0.53). These effects provide a useful benchmark for the magnitude of other attributes and the financial value voters place upon them, given that a fivefold increase in the tax rate offers a noticeable difference in the cost imposed by the tax.

Second, there is considerable support for earmarking tax revenues. All else equal, respondents are around 12.2% more likely to support a mobile money tax whose revenues are directly earmarked for local health clinics. Substantively, this is the largest AMCE in the study and is even greater than an equivalent 500% increase in the tax rate. In the corresponding marginal means, sending funds to the national budget is the single *least* popular attribute level (0.43), while earmarking them is the single *most* popular (0.55). This strongly aligns with the Afrobarometer data presented in Figure 3, where respondents supported raising taxes to fund healthcare but were deeply uncertain about how tax revenues in the general budget were spent. As I will discuss, this large effect is consistent across various pre-registered subgroups of interest.

Third, tax exemptions exhibit some positive effects but the substantive impact of these is smaller. Against a baseline of no exemptions, respondents prefer tax policies which a) do not target registered businesses (2.7%), and b) give people a 5,000 kwacha (~US\$3) daily limit before taxes are due (3.8%). In the marginal means we see that these effects are driven by a clear distaste for a tax without any exemptions (0.46), and that respondents appear otherwise indifferent as to the specific exemptions provided (0.49 and 0.51 respectively).

Fourth, monitoring of revenues has mixed effects. Against the pre-registered Ministry of Finance baseline, respondents are less supportive of having an external international monitor, in this case USAID (-3.8%). There is no significant impact from the government's internal anti-corruption bureau. In the marginal means we see that these effects are driven by a firm distaste for an international monitor (0.46), with both other monitors closely overlapping 0.5 and thus suggesting respondents are indifferent about them. This runs contrary to the pre-registered expectation that the public would support an international monitor, for reasons of competence and independence, overseeing the collection of revenues.

Finally, respondents do not exhibit a clear preference as to how tax is collected. In the pre-analysis plan I discussed two competing channels by which direct payment might increase or decrease support, based on perceptions of corruption in telecom companies vs raising the visibility of the tax burden. Relative to the baseline case, in which money is collected by telecom operators, respondents are no more likely to choose a policy in which revenues are sent directly to the government. This may be driven by a true null effect, or the estimated AMCE is too small to be detected. Given that both attribute levels are close to 0.5 in the marginal means, it is plausibly the former. In either case the public does not have a substantively meaningful preference for the mode of payment collection, in contrast to the effects observed for several other attributes.

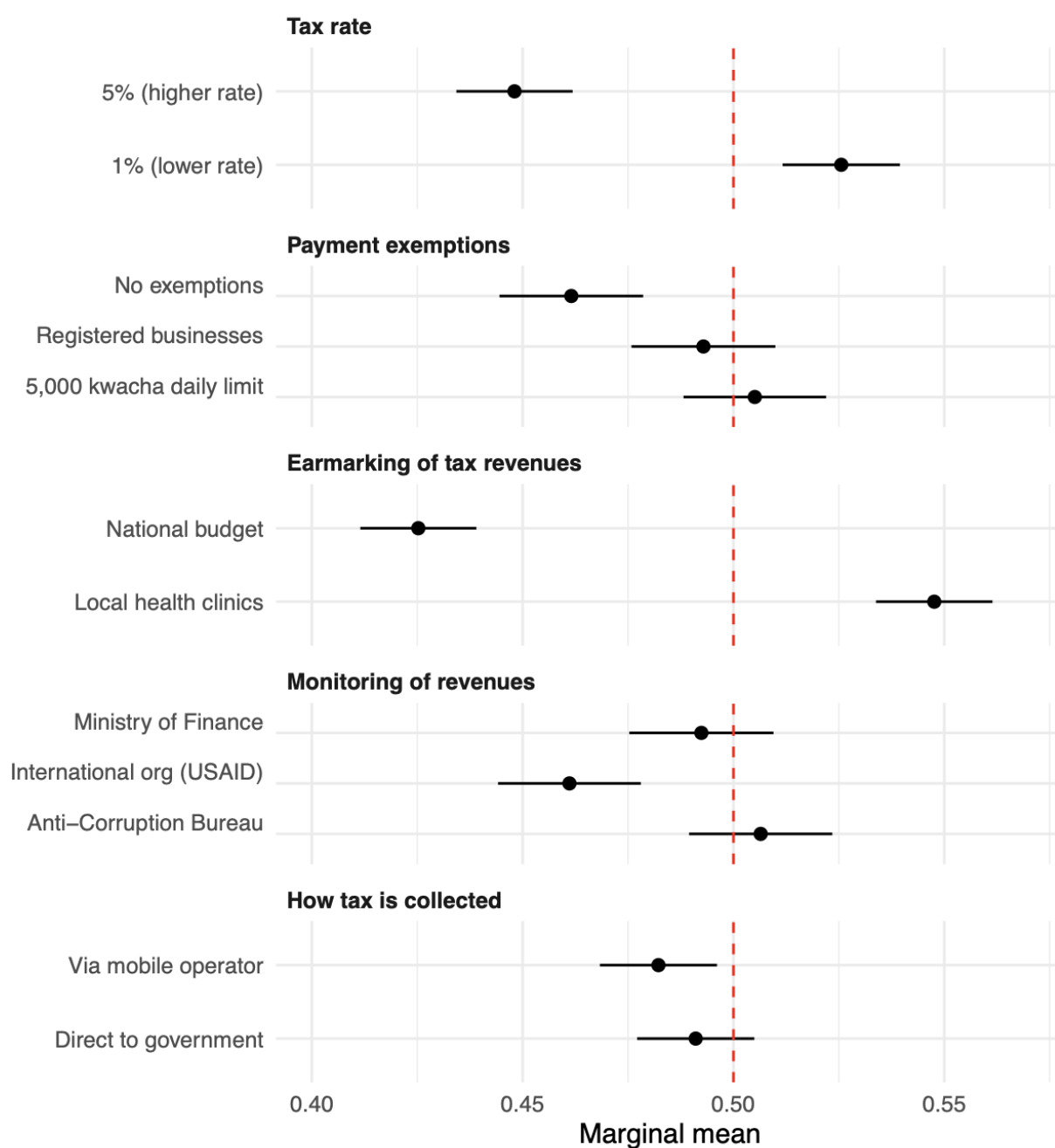
Figure 6: Baseline results of the experiment (AMCEs)



Note: Dots represent the AMCE of each attribute level, relative to its respective baseline. Bars represent 95% confidence intervals, with standard errors clustered on respondent. Full results in Section C.2 of the supplementary materials.

Source: Analysis of author survey.

Figure 7: Baseline results of the experiment (marginal means)



Note: Dots represent the marginal mean of each attribute level, calculated following Leeper et al. (2020). Bars represent 95% confidence intervals, with standard errors clustered on respondent. Full results in Section C.2 of the supplementary materials.

Source: Analysis of author survey.

6.2 Heterogeneity

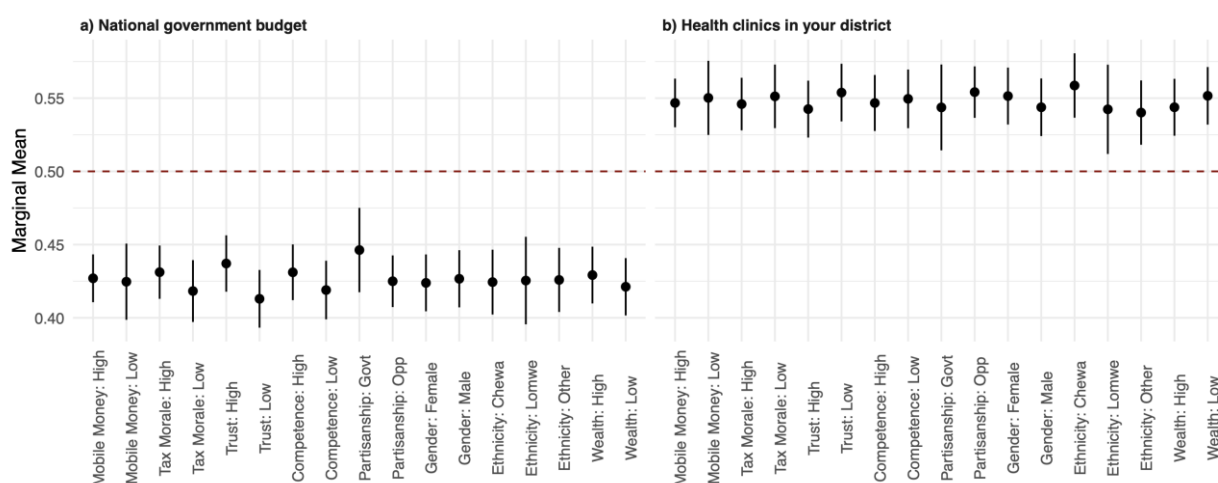
Building on the main results I turn to pre-registered analysis of effect heterogeneity. I present results across various subgroups where we might expect the impact of each attribute to vary, with further information on group composition and complete results in supplementary materials Section D. To

avoid making misleading comparisons driven by changes in support for the baseline category, I focus only on marginal means for this part of the analysis (Leeper et al. 2020).

I focus on a wide range of subgroups which cover various political and demographic differences between respondents. This includes mobile money use, tax morale, trust in and performance of the government, voting intention, gender, ethnicity, and access to basic goods. These, in turn, aim to capture how financial exposure to the tax, general trust in government, and partisan divides may moderate one's preferences.

In general, however, there is no significant variation in effects between any of the pre-registered subgroups of interest. The full suite of subgroup marginal means is presented and discussed in supplementary materials (D.1). However, this homogeneity is particularly striking for the largest effect of the experiment—earmarking revenues for local health services rather than their going into the general national government budget. Figure 8 plots the means for this attribute, where support for earmarking remains consistent at around 0.55, and for not earmarking at around 0.43. This reflects a continued difference of 10%–15%, consistent with the aggregate AMCE. This suggests that strong support for earmarking comes from individuals across the sample and is not driven disproportionately by any of the pre-registered subgroups.

Figure 8: Heterogeneity in marginal means (earmarking attribute)



Note: Dots represent the marginal mean for each level of the earmarking attribute, for each pre-registered subgroup. Bars represent 95% confidence intervals, clustered on respondent. Full results in Section D.1 of the supplementary materials.

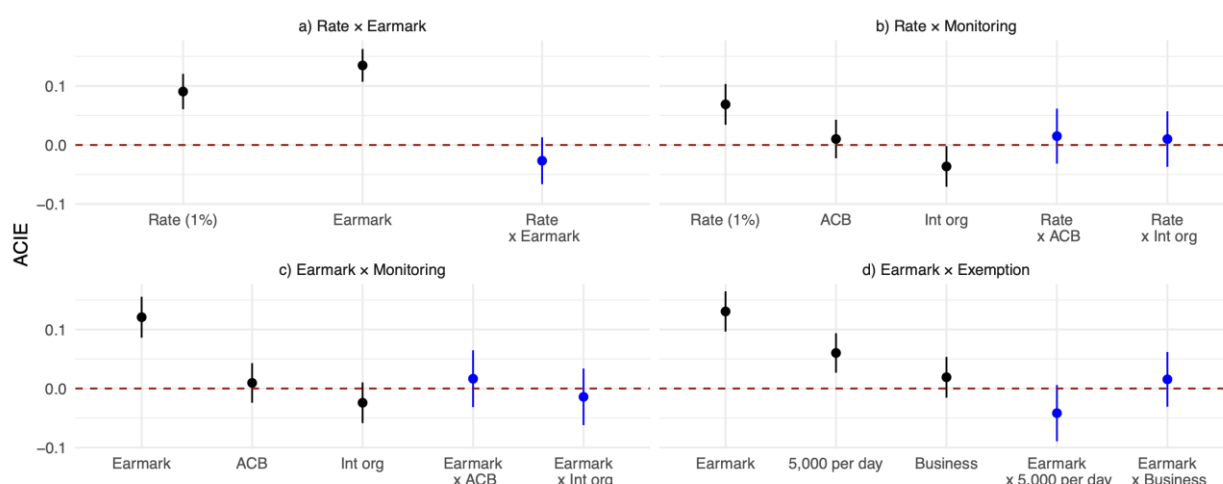
Source: Analysis of author survey.

Alongside comparing subgroups I pre-registered three attribute-by-attribute interactions. These focused on the tax rate, earmarking, and monitoring ($H_{6a}-H_{6c}$), testing whether the effects of each attribute is conditional on the level of the other. None of these interactions, however, are statistically significant at conventional thresholds. The interaction of monitoring attributes with rate or earmarking exhibits a sharp null, though there is some indication that, with a larger sample size, earmarking may reduce the substantive importance of the tax rate. At present there is a negative interaction of 2.7% ($p=0.19$), which matches theoretical expectations but falls below the magnitude required to meet pre-registered power calculations. Testing this hypothesis with greater precision remains a task for future work.

In addition to these three tests, I also find a negative interaction of earmarking on the 5,000 kwacha daily payment exemption ($p=0.08$). This was not explicitly pre-registered but aligns with several theoretical arguments that were made in the pre-analysis plan. If funds are earmarked, they are more likely to deliver tangible returns for taxpayers and so willingness to pay rises. In turn respondents become less concerned about exemptions, which, by reducing revenues, will ultimately reduce the number of health facilities that can be supported.

Figure 9 presents the results of the interactive specifications, with the baseline coefficients in black and the interaction coefficients in blue.

Figure 9: Attribute interactions



Note: Points represent the baseline and average component interaction effect (ACIE) coefficients of the relevant policy combinations. ACB refers to Anti-Corruption Bureau. Bars represent 95% confidence intervals, clustered on respondent. Full results in Section D.2 of the supplementary materials.

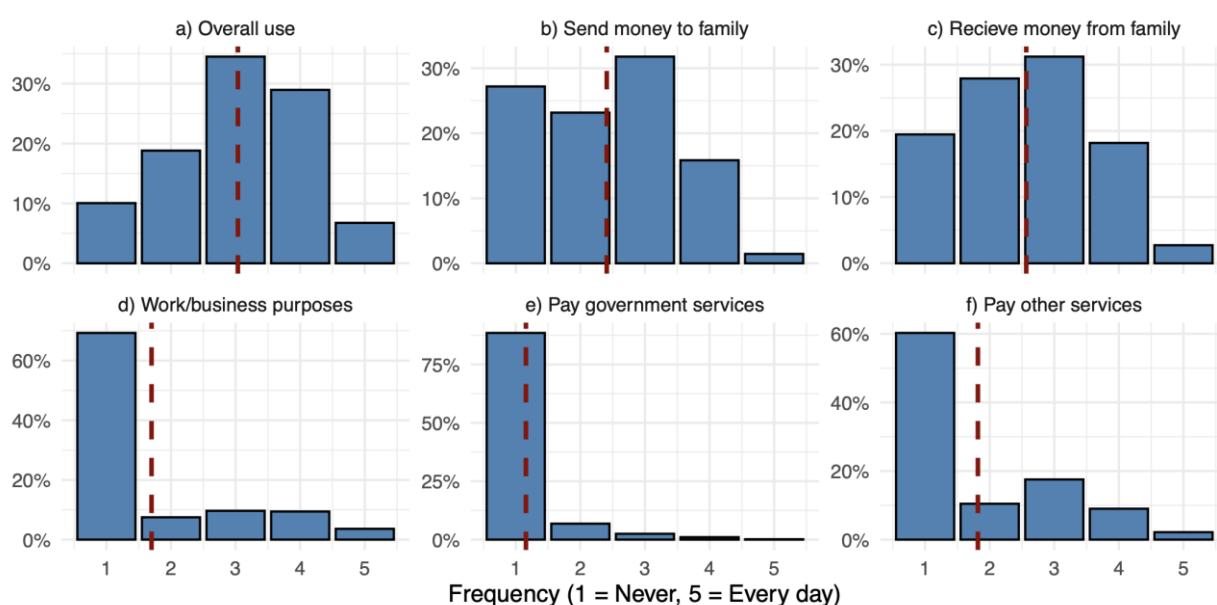
Source: Analysis of author survey.

7 Explaining the findings

Building on the experimental results, in this final empirical section, I turn to descriptive data from the wider survey to try to explain these patterns and their wider implications.

First, Figure 10 shows how often respondents use mobile money to send and receive payments in general, alongside more specific prompts about what they use it for. Most respondents use mobile money at least once per week or more (equivalent to 3 on the 5-point scale), with the vast majority of that use being for sending or receiving money from family, likely to facilitate financial remittances over large geographic distances (Yeandle forthcoming). This suggests that a great many people would be exposed to a mobile money tax and that few could credibly substitute to cash payments, while exemptions targeting small payments, or commercial activities, would directly benefit few users. This may help explain why preferences for a lower tax rate are so stable across subgroups, and why support for exemptions is smaller and less consistent.

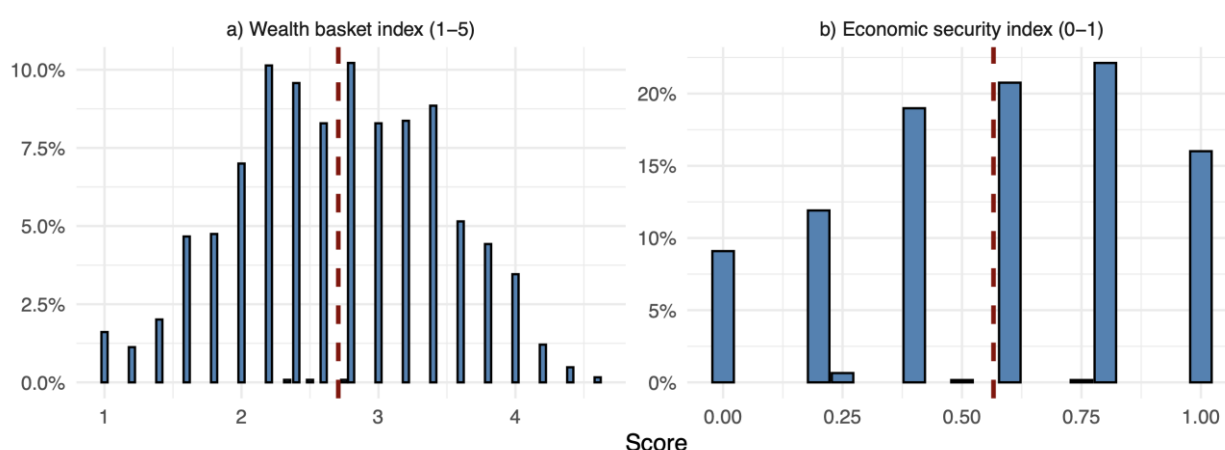
Figure 10: Patterns of mobile money use



Source: Author survey.

Another explanation for the homogeneity of the results could be the high levels of poverty in Malawi. Figure 11 shows the distribution of two indices: one that measures how often respondents go without access to basic goods and services, such as food, water, or cash income, and the other that sums the options available in a financial emergency, like receiving gifts or loans from family or selling assets. The graphs reveal that the median person in Malawi regularly lacks basic necessities and has limited options in an emergency. This high baseline level of poverty suggests that small changes in the tax rate, or the introduction of health clinics, can have a tangible impact on most people in the sample and not just those at the lower end of the distribution. It also suggests that these impacts affect a very large *number* of people, with this large constituency highlighting the potential electoral costs for politicians that these taxes bring. This is an important caveat when considering the distributional consequences of digital taxation and implies these might look different at different phases of economic development as this group gets smaller over time. For example, in Ghana, a wealthier democracy with a larger middle class and formal sector tax base, there is some evidence that support for mobile money taxes varies more by partisanship and personal financial exposure (Yeandle and Doyle 2024).

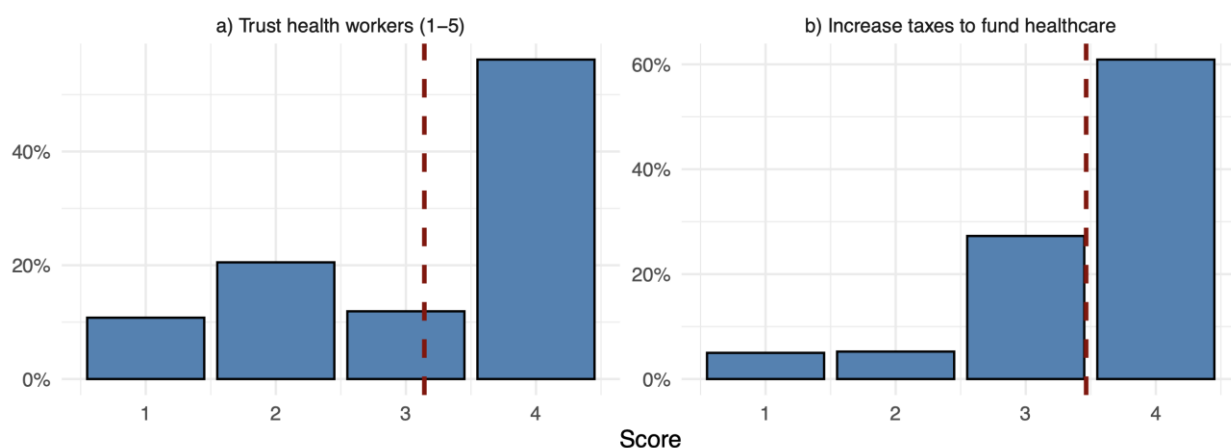
Figure 11: Patterns of poverty and economic security



Source: Author survey.

Building on the importance of public services to ordinary citizens, another explanation for respondents' strong support for earmarking is the high value placed on healthcare. Figure 12 shows that respondents express very high levels of trust in healthcare workers and strongly support increasing taxes to raise health spending. This likely explains the enthusiasm for a mobile money tax that contributes to health facilities, highlighting the significance of earmarking in general but its particular appeal when linked to a contextually relevant and popular policy domain.

Figure 12: Health-related attitudes



Source: Author survey.

8 Discussion

As digital payment platforms have become widespread in low-income countries around the world, amid a broader trend toward economic digitalization, so too have efforts by governments to tax them. Digital payments represent a substantive new source of domestic revenue, worth a significant portion of government spending, that is readily legible and easy for the state to collect. These funds can help

expand fiscal capacity, with potential to significantly improve the provision of public services and help address unprecedented policy challenges. But efforts to realize these gains have been constrained by domestic politics, with digital taxes prompting widespread backlash from voters that have seen many watered down or withdrawn by governments.

In this paper I argue that backlash to digital taxation stems from its visibly high costs, low benefits, and opaque administration. Focusing on mobile transaction levies, I provide some of the first evidence of public preferences for digital tax design, pointing to the types of policies that might garner broader and more durable support. This framework helps us understand why gains in the state's *capacity* to raise tax do not always translate into increased revenues on the ground.

I use a conjoint choice experiment in Malawi to measure support for a hypothetical mobile money tax. The results show that respondents significantly prefer revenues to be earmarked for a visible, local public service, more so than for a fivefold reduction in the tax rate. There is also support for targeted payment exemptions, protecting tax-registered businesses, and providing a nominal tax-free daily allowance. Respondents are indifferent as to how the tax is collected and whether it is audited by the Ministry of Finance or the Anti-Corruption Bureau. Against expectations, involving an international donor in the auditing process reduces support. Moreover, effects are generally consistent across various pre-registered subgroups, which capture potential financial exposure to the tax alongside more general political and demographic divides.

Taken together, these findings provide a series of contributions to existing literature. This includes nascent work on the political consequences of digitalization across the low-income world (e.g., Donati 2023; Manacorda and Tesei 2020; Yeandle 2025; Yeandle forthcoming), with a specific focus on the adoption of digital payment systems and their relation to how states expand capacity more generally (Levi 1988; Tilly 1993) and the structural and political constraints for doing so (Holland 2018; Martin 2023; Scott 1998; Suryanarayan 2024). The results also suggest that public attitudes towards digital taxes are shaped by many of the same concerns that influence support for their conventional counterparts, speaking to a wider literature on the microfoundations of tax morale. This includes concerns about how revenues are used, the reciprocal benefits that taxpayers receive, and the fairness of who pays (Castañeda et al. 2020; Khan et al. 2022; Krause 2020; Meltzer and Richard 1981), which highlight how the economic gains of digitalization are conditional on the political dynamics that underpin them.

While the experiment centres on Malawi, its findings are likely to be relevant across a broader set of country cases. Malawi's rapid adoption of mobile payment systems and growing digitalization of economic activity are far from unique across sub-Saharan Africa and low-income states more widely (Ndulu et al. 2023). The country's experiences with digital taxes provide a useful lens through which to examine their political challenges, with the government having attempted, and ultimately failed, to introduce a mobile transactions levy in 2019 (Jomo 2019). But Malawi is by no means the only country that has struggled to exploit its newfound tax-collecting capacity, with countries across the region, from Ghana to Uganda to Nigeria, seeing similar dynamics play out (Lees and Akol 2021; Yeandle and Doyle 2024).

Beyond the academy, the results of the experiment point to tangible ways in which policy makers might design digital taxes to secure broader public backing. If voters across the population strongly prefer revenues to be earmarked for local services, for instance, incorporating earmarking into both the design and communication of new digital taxes might help secure public buy-in for a key revenue-raising tool in low-income states (Khan et al. 2022). Likewise, tax exemptions, which mitigate the

distributional consequences of who pays the tax, also have the potential to raise support and should be clearly communicated to voters. But other policy features appear more nuanced. For example, the finding that the involvement of foreign entities, such as USAID, reduces support is particularly notable. It suggests that voters may perceive external involvement in the tax process as undermining national sovereignty or that external actors are themselves a source of malfeasance in the system, either of which could erode trust (Doces and Meyer 2022). While these measures might still increase the efficiency with which taxes are collected (Hjort and Tian 2025), their primary role should be seen as part of capacity building rather than necessarily helping to build public support. This is an important consideration for policy makers in low-income countries where external actors play a significant role in governance structures and, by extension, domestic politics (Briggs 2012, 2019; Jablonski 2014).

The findings no doubt open several avenues for future research. Using the conjoint results as a baseline, for instance, scholars might test how different communication strategies map onto the features of tax policy that the public say they prefer. This would add to work on the impact of civic education campaigns, both specific to tax and more broadly (Cohen 2024; Gottlieb 2016; Harris et al. 2021; Mvukiyehe and Samii 2017), alongside the ways in which new taxes can promote political participation (Weigel 2020). Relatedly, research should look beyond stated, survey-based preferences to revealed, behavioural responses. If mobile transaction levies are better aligned with public preferences, do they reduce the likelihood of users shifting back to cash as documented in other African contexts (Anyidoho et al. 2023)? Finally, more work is needed to understand how political elites perceive and respond to public opinion. As many digital tax reforms are withdrawn before implementation, mapping how policy makers anticipate backlash and the trade-offs they are or are not willing to make to expand fiscal capacity remains an important gap (Martin 2023).

As digitalization rewires economies across the developing world, it is important not to overlook the inherent political dynamics that underpin this transition. This paper helps explain why existing attempts to tax digital activity have drawn such ire from voters, highlighting several ways in which policy makers might build wider public support going forward.

References

- Acemoglu, D., J. Moscona, and J.A. Robinson (2016). 'State Capacity and American Technology: Evidence from the Nineteenth Century'. *American Economic Review*, 106(5): 61–67. <https://doi.org/10.1257/aer.p20161071>
- Afrobarometer (2021). 'Afrobarometer Data (Malawi) Round 8'. Available at: <https://www.afrobarometer.org/survey-resource/malawi-round-8-dataset-2020/> (accessed 3 March 2025).
- Afrobarometer (2025a). 'Afrobarometer Data (Malawi) Round 10'. Available at: <https://www.afrobarometer.org/online-data-analysis/> (accessed 3 March 2025).
- Afrobarometer (2025b). 'Round 10 Survey Manual'. Available at: <https://www.afrobarometer.org/survey-resource/round-10-survey-manual/> (accessed 13 October 2025)
- Ahlbäck, J., and A. Yeandle (2025). 'What Drives Public Trust in Elections? Experimental Evidence from Malawi'. Unpublished Working Paper.
- Aker, J.C., and I.M. Mbiti (2010). 'Mobile Phones and Economic Development in Africa'. *Journal of Economic Perspectives*, 24(3): 207–32. <https://doi.org/10.1257/jep.24.3.207>
- Akitoby, B., J. Honda, and K. Primus (2020). 'Tax Revenues in Fragile and Conflict-Affected States—Why Are They Low and How Can We Raise Them?'. IMF Working Paper 2020/143. Washington, DC: International Monetary Fund. <https://doi.org/10.5089/9781513550848.001>

- Anyidoho, N.A., M. Gallien, M. Rogan, and V. van den Boogaard (2023). 'Mobile Money Taxation and Informal Workers: Evidence from Ghana's E-levy'. *Development Policy Review* 41(5): e12704. <https://doi.org/10.1111/dpr.12704>
- Apeti, A.E., and E.D. Edo (2023). 'Tax Revenue and Mobile Money in Developing Countries'. *Journal of Development Economics*, 161(March): 103014. <https://doi.org/10.1016/j.jdeveco.2022.103014>
- Aron, J. (2018). 'Mobile Money and the Economy: A Review of the Evidence'. *The World Bank Research Observer*, 33(2): 135–88. <https://doi.org/10.1093/wbro/lky001>
- Bachas, F.Kondylis, and J. Loeser (2025). 'Increasing Tax Revenue in Developing Countries'. World Bank Blogs. Available at: <https://blogs.worldbank.org/en/impactevaluations/increasing-tax-revenue-developing-countries> (accessed 9 October 2025).
- Barasa, L. (2025). 'Mobile Money an Antidote to Petty Corruption? A Matched Difference-in-Differences Analysis'. *Information Technology for Development*, 0(0): 1–26. <https://doi.org/10.1080/02681102.2025.2525340>
- Bastiaens, I., and N. Rudra (2018). *Democracies in Peril: Taxation and Redistribution in Globalizing Economies*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108556668>
- Besley, T., and T. Persson (2014). 'Why Do Developing Countries Tax So Little?'. *Journal of Economic Perspectives*, 28(4): 99–120. <https://doi.org/10.1257/jep.28.4.99>
- Bleck, J., and N. Van De Walle (2013). 'Valence Issues in African Elections: Navigating Uncertainty and the Weight of the Past'. *Comparative Political Studies*, 46(11): 1394–421. <https://doi.org/10.1177/0010414012453448>
- Branch, A., and Z. Mampilly (2015). *Africa Uprising: Popular Protest and Political Change*. London: Bloomsbury Publishing.
- Brierley, S., and M.M. Pereira (2023). 'Women Bureaucrats and Petty Corruption. Experimental Evidence from Ghana'. *Research & Politics*, 10(1): 20531680231161161. <https://doi.org/10.1177/20531680231161161>
- Briggs, R.C. (2012). 'Electrifying the Base? Aid and Incumbent Advantage in Ghana'. *The Journal of Modern African Studies*, 50(4): 603–24. <https://doi.org/10.1017/S0022278X12000365>
- Briggs, R.C. (2019). 'Receiving Foreign Aid Can Reduce Support for Incumbent Presidents'. *Political Research Quarterly*, 72(3): 610–22. <https://doi.org/10.1177/1065912918798489>
- Burgess, R., R. Jedwab, E. Miguel, A. Morjaria, and G.P. i Miguel (2015). 'The Value of Democracy: Evidence from Road Building in Kenya'. *American Economic Review*, 105(6): 1817–51. <https://doi.org/10.1257/aer.20131031>
- Carlson, E. (2015). 'Ethnic Voting and Accountability in Africa: A Choice Experiment in Uganda'. *World Politics*, 67(2): 353–85. <https://doi.org/10.1017/S0043887115000015>
- Castañeda, N., D. Doyle, and C. Schwartz (2020). 'Opting Out of the Social Contract: Tax Morale and Evasion'. *Comparative Political Studies*, 53(7): 1175–219. <https://doi.org/10.1177/0010414019879956>
- Cavallé, C., and K.-S. Trump (2015). 'The Two Facets of Social Policy Preferences'. *The Journal of Politics*, 77(1): 146–60. <https://doi.org/10.1086/678312>
- Chavula, H.K. (2024). 'Digital Technologies and Economic Development in Malawi'. In H.K. Chavular, H.P.E. Ngalawa, T.C. Munthali, and B. Dulani (eds), *The Oxford Handbook of the Malawi Economy*. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198890164.013.31>
- Cheeseman, N., J. Fisher, I. Hassan, and J. Hitchen (2020). 'Social Media Disruption: Nigeria's WhatsApp Politics'. *Journal of Democracy*, 31(3): 145–59.
- Chetty, R., A. Looney, and K. Kroft (2009). 'Salience and Taxation: Theory and Evidence'. *American Economic Review*, 99(4): 1145–77. <https://doi.org/10.1257/aer.99.4.1145>
- Chibwana, A., C. Mhango, Y. Mkandawire, J. Thunde, N. Srivastava, and B. Siddiqi (2025). 'Scaling Digital Delivery in Malawi's Social Cash Transfer Program'. IDinsight Report. Available at: C:/Users/lesle/Downloads/Report%20-%20Malawi%20SCTP%20E-Payment%20Study_26072024.pdf (accessed 9 October 2025).
- Christensen, D., and F. Garfias (2018). 'Can You Hear Me Now? How Communication Technology Affects Protest and Repression'. *Quarterly Journal of Political Science*, 13(1): 89–117. <https://doi.org/10.1561/100.00016129>
- Clifford, K. (2020). 'The Causes and Consequences of Mobile Money Taxation: An Examination of Mobile Money Transaction Taxes in sub-Saharan Africa'. GSMA. Available at: https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2020/06/GSMA_The-causes-and-consequences-of-mobile-money-taxation.pdf (accessed 9 October 2025)

- Cohen, I. (2024). 'Technology and the State: Building Capacity to Tax via Text'. *Journal of Public Economics*, 236(August): 105154. <https://doi.org/10.1016/j.jpubeco.2024.105154>
- Doces, J.A, and M.J. Meyer (2022). 'Do People Want Democracy Aid? Survey Experimental Evidence from Africa'. *International Studies Perspectives*, 23(4): 375–97. <https://doi.org/10.1093/isp/ekac002>
- Donati, D. (2023). 'Mobile Internet Access and Political Outcomes: Evidence from South Africa'. *Journal of Development Economics*, 162(May): 103073. <https://doi.org/10.1016/j.jdeveco.2023.103073>
- Economides, N., and P. Jeziorski (2017). 'Mobile Money in Tanzania'. *Marketing Science*, 36(6): 815–37. <https://doi.org/10.1287/mksc.2017.1027>
- Elischer, S. (2012). 'Measuring and Comparing Party Ideology in Nonindustrialized Societies: Taking Party Manifesto Research to Africa'. *Democratization*, 19(4): 642–67. <https://doi.org/10.1080/13510347.2011.605997>
- Fairfield, T. (2015). *Private Wealth and Public Revenue in Latin America: Business Power and Tax Politics*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781316104767>
- Fisher, J., E. Gadjanova, and J. Hitchen (2023). 'WhatsApp and Political Communication in West Africa: Accounting for Differences in Parties' Organization and Message Discipline Online'. *Party Politics*, July: 13540688231188690. <https://doi.org/10.1177/13540688231188690>
- Fjeldstad, O.-H . (2004). 'What's Trust Got to Do with It? Non-payment of Service Charges in Local Authorities in South Africa'. *The Journal of Modern African Studies*, 42(4): 539–62. <https://doi.org/10.1017/S0022278X04000394>
- Garbe, L., N. McMurry, A. Scacco, and K. Zhang (2024). 'Who Wants to Be Legible? Digitalization and Intergroup Inequality in Kenya'. *Comparative Political Studies*, September: 00104140241276971. <https://doi.org/10.1177/00104140241276971>
- Garbiras-Díaz, N., and M. Montenegro (2022). 'All Eyes on Them: A Field Experiment on Citizen Oversight and Electoral Integrity'. *American Economic Review*, 112(8): 2631–68. <https://doi.org/10.1257/aer.20210778>
- Gondwe, G. (2019). 'MRA Fights Airtel over Taxes'. Malawi 24, 17 January. Available at: <https://malawi24.com/2019/01/17/mra-fights-airtel-over-taxes/> (accessed 9 October 2025).
- Gonzalez, R. (2021). 'Cell Phone Access and Election Fraud: Evidence from a Spatial Regression Discontinuity Design in Afghanistan'. *American Economic Journal: Applied Economics*, 13(2): 1–51. <https://doi.org/10.1257/app.20190443>
- Gottlieb, J. (2016). 'Greater Expectations: A Field Experiment to Improve Accountability in Mali'. *American Journal of Political Science*, 60(1): 143–57. <https://doi.org/10.1111/ajps.12186>
- Government of Malawi (2022). 'Report on Employment for the First Six Months of the 2022–23 Fiscal Year'. November 2022. Available at: <https://www.malawi.gov.mw/index.php/resources/publications/reports?download=84:26-november-report-on-employment-for-the-first-six-months-of-2022-23-fiscal-year-november-2022> (accessed 3 October 2024).
- Grindle, M.S. (2004). 'Good Enough Governance: Poverty Reduction and Reform in Developing Countries'. *Governance*, 17(4): 525–48. <https://doi.org/10.1111/j.0952-1895.2004.00256.x>
- GSMA (2023). 'State of the Industry Report on Mobile Money'. Mobile for Development, 20 April. Available at: https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/gsma_resources/state-of-the-industry-report-on-mobile-money-2023-2/ (accessed 9 October 2025).
- Gupta, S., M. Keen, A. Shah, and G. Verdier (2017). *Digital Revolutions in Public Finance*. Washington, DC: International Monetary Fund. <https://doi.org/10.5089/9781484315224.071>
- Gutiérrez-Romero, R., and A. LeBas (2020). 'Does Electoral Violence Affect Vote Choice and Willingness to Vote? Conjoint Analysis of a Vignette Experiment'. *Journal of Peace Research*, 57(1): 77–92. <https://doi.org/10.1177/0022343319892677>
- Hainmueller, J., D.J. Hopkins, and T. Yamamoto (2014). 'Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments'. *Political Analysis*, 22(1): 1–30. <https://doi.org/10.1093/pan/mpt024>
- Harding, R. (2015). 'Attribution and Accountability: Voting for Roads in Ghana'. *World Politics*, 67(4): 656–89. <https://doi.org/10.1017/S0043887115000209>
- Harding, R. (2020). *Rural Democracy: Elections and Development in Africa*. Oxford: Oxford University Press.

- Harding, R., and D. Stasavage (2013). 'What Democracy Does (and Doesn't Do) for Basic Services: School Fees, School Inputs, and African Elections'. *The Journal of Politics*, 76(1): 229–45. <https://doi.org/10.1017/s0022381613001254>
- Harris, J.A., C. Kamindo, and P. van der Windt (2021). 'Electoral Administration in Fledgling Democracies: Experimental Evidence from Kenya'. *The Journal of Politics*, 83(3): 947–60. <https://doi.org/10.1086/710785>
- Herbst, J. (2014). *States and Power in Africa: Comparative Lessons in Authority and Control—Second Edition*. Princeton, NJ: Princeton University Press.
- Hjort, J., and L. Tian (2025). 'The Economic Impact of Internet Connectivity in Developing Countries'. *Annual Review of Economics*, 17: 99–124. <https://doi.org/10.1146/annurev-economics-081224-102352>
- Holland, A.C. (2016). 'Forbearance'. *American Political Science Review*, 110(2): 232–46. <https://doi.org/10.1017/S0003055416000083>
- Holland, A.C. (2018). 'Diminished Expectations: Redistributive Preferences in Truncated Welfare States'. *World Politics*, 70(4): 555–94. <https://doi.org/10.1017/S0043887118000096>
- Humphreys, M., J.D. Sachs, and J.E. Stiglitz (2007). *Escaping the Resource Curse*. New York, NY: Columbia University Press.
- Jablonski, R. (2014). 'How Aid Targets Votes: The Impact of Electoral Incentives on Foreign Aid Distribution'. *World Politics*, 66(2): 293–330. <https://doi.org/10.1017/S0043887114000045>
- Jablonski, R., and B. Seim (2024). 'What Politicians Do Not Know Can Hurt You: The Effects of Information on Politicians' Spending Decisions'. *American Political Science Review*, 118(3): 1497–517. <https://doi.org/10.1017/S0003055423001132>
- Jablonski, R., B. Seim, M.C. Barbosa, and C. Gibson (2023). 'Using Remote Tracking Technologies to Audit and Understand Medicine Theft'. WIDER Working Paper 126/2023. Helsinki: UNU-WIDER. <https://doi.org/10.35188/UNU-WIDER/2023/434-2>
- Jomo, F. (2019). 'Malawi Scraps 1% Withholding Tax on Mobile-Money Transactions'. *Bloomberg.com*, 8 October. Available at: <https://www.bloomberg.com/news/articles/2019-10-08/malawi-scraps-1-withholding-tax-on-mobile-money-transactions> (accessed 9 October 2025).
- Joshi, A., Prichard, W., Heady, C. (2018). 'Taxing the Informal Economy: Challenges, Possibilities and Remaining Questions'. Brighton: ICTD.
- Kasara, K. (2007). 'Tax Me If You Can: Ethnic Geography, Democracy, and the Taxation of Agriculture in Africa'. *American Political Science Review*, 101(1): 159–72. <https://doi.org/10.1017/S0003055407070050>
- Khan, A., A. Khwaja, B. Olken, and M. Shaikat (2022). 'Rebuilding the Social Compact: Urban Service Delivery and Property Taxes in Pakistan'. Final Report for International Growth Centre. Available at: <https://www.theigc.org/sites/default/files/2022/10/Khan-et-al-Final-Report-August-2022.pdf> (accessed 09 October 2025).
- Krause, B. (2020). 'Balancing Purse and Peace: Tax Collection, Public Goods and Protests'. Available at: <https://eml.berkeley.edu/~saez/course/krause2020haiti.pdf> (accessed 9 October 2025).
- Lee, M.M., and N. Zhang (2017). 'Legibility and the Informational Foundations of State Capacity'. *The Journal of Politics*, 79(1): 118–32. <https://doi.org/10.1086/688053>
- Leeper, T.J., S.B. Hobolt, and J. Tilley (2020). 'Measuring Subgroup Preferences in Conjoint Experiments'. *Political Analysis*, 28(2): 207–21. <https://doi.org/10.1017/pan.2019.30>
- Lees, A., and D. Akol (2021). 'There and Back Again: The Making of Uganda's Mobile Money Tax'. ICTD Research in Brief 72. Brighton: Institute of Development Studies and Partner Organisations.
- Levi, M. (1988). *Of Rule and Revenue*. Oakland, CA: University of California Press.
- Lukac, M., and A. Stefanelli (2020). 'Conjoint Experiments: Power Analysis Tool'. Available at: <https://mblukac.shinyapps.io/conjoints-power-shiny/> (accessed 7 October 2024).
- Mader, P., M. Duvendack, and K. Macdonald (2022). 'Fintech and Tax in Sub-Saharan Africa: Taxation Versus Financial Inclusion'. *Journal of Cultural Economy*, 15(4): 488–507. <https://doi.org/10.1080/17530350.2022.2087718>
- Malakata, M. (2019). 'Malawi Backtracks on 1% Mobile Money Tax'. *ITWeb Africa*, 14 October. Available at: <https://itweb.africa/content/KBpdg7pz3BrqLEew> (accessed 9 October 2025).
- Manacorda, M., and A. Tesei (2020). 'Liberation Technology: Mobile Phones and Political Mobilization in Africa'. *Econometrica*, 88(2): 533–67. <https://doi.org/10.3982/ECTA14392>

- Malawi Ministry of Finance and Economic Affairs (2019). '2019 Budget Statement'. Available at: <https://www.finance.gov.mw/index.php/our-documents/budget-statements?download=39:2019-2020-budget-statement> (accessed 3 March 2025)
- Mann, L. (2018). 'Left to Other Peoples' Devices? A Political Economy Perspective on the Big Data Revolution in Development'. *Development and Change*, 49(1): 3–36. <https://doi.org/10.1111/dech.12347>
- Martin, L. (2023). *Strategic Taxation: Fiscal Capacity and Accountability in African States*. Oxford: Oxford University Press.
- Martin, L., B. Seim, S. Hoellerbauer, and L. Camacho (2024). 'Marketing Taxation? Experimental Evidence on Enforcement and Bargaining in Malawian Markets'. Unpublished Working Paper.
- Marwa, C. (2023). 'Scaling up the Use of Electronic Payments in Malawi'. Alliance for Financial Inclusion, 15 November. Available at: <https://www.afi-global.org/opinion/scaling-up-the-use-of-electronic-payments-in-malawi/> (accessed 9 October 2025).
- Mbiti, I.M., and J. Blumenstock (2015). 'The Economic Impacts of New Technologies in Africa'. In C. Monga and J. Lin (eds), *The Oxford Handbook of Africa and Economics, Vol 2: Policies and Practices*. Oxford: Oxford University Press.
- Meltzer, A.H., and S.F. Richard (1981). 'A Rational Theory of the Size of Government'. *Journal of Political Economy*, 89(5): 914–27. <https://www.jstor.org/stable/1830813>
- Mlanjira, D. (2021). 'Airtel Malawi Accused of "Theft" for Keeping Fees of Failed Money Transfers'. *Malawi Nyasa Times*, 9 December. Available at: <https://www.nyasatimes.com/airtel-malawi-accused-of-theft-for-keeping-fees-of-failed-money-transfers/> (accessed 9 October 2025).
- Moore, M. (2004). 'Revenues, State Formation, and the Quality of Governance in Developing Countries'. *International Political Science Review*, 25(3): 297–319. <https://doi.org/10.1177/0192512104043018>
- Mueller, L. (2018). *Political Protest in Contemporary Africa*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108529143>
- Mvukiyehe, E., and C. Samii (2017). 'Promoting Democracy in Fragile States: Field Experimental Evidence from Liberia'. *World Development*, 95(July): 254–67. <https://doi.org/10.1016/j.worlddev.2017.02.014>
- Naadi, T. (2021). 'Ghana MPs Brawl in Parliament over Mobile Money Tax'. *BBC News*, 21 December. Available at: <https://www.bbc.co.uk/news/world-africa-59740528> (accessed 9 October 2025).
- Nathan, N.L. (2019). *Electoral Politics and Africa's Urban Transition: Class and Ethnicity in Ghana*. Cambridge: Cambridge University Press.
- Nation Online (2019). 'TNM Protests 1% Mobile Money Tax'. *Nation Online*, 8 October. Available at: <https://mwnation.com/tnm-protests-1-mobile-money-tax/> (accessed 9 October 2025).
- Ndulu, B., E. Stuart, S. Dercon, and P. Knaack (2023). *Driving Digital Transformation: Lessons from Seven Developing Countries*. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780192872845.001.0001>
- Nkhata, M.J., A.W. Mwenifumbo, and A. Majamanda (2021). 'The Nullification of the 2019 Presidential Election in Malawi'. *Journal of African Elections*, 20(2): 57–80. <https://doi.org/10.20940/JAE/2021/v20i2a4>
- North, D.C., J.J. Wallis, and B.R. Weingast (2009). *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511575839>
- Nose, M., and A. Mengistu (2023). 'Exploring the Adoption of Selected Digital Technologies in Tax Administration: A Cross-Country Perspective'. *IMF Notes*, 2023(008). <https://doi.org/10.5089/9798400258183.068.A001>
- Ofosu, G. (2024). 'What Do Voters Want from Their Legislators? Evidence from Ghana'. *African Affairs*, 123(491): 165–92. <https://doi.org/10.1093/afraf/adae013>
- Ofosu, G., M.B. Seeberg, and M. Wahman (2024). 'Messages Matter: How Voter Education Campaigns Affect Citizens' Willingness to Vote for Women'. *The Journal of Politics*, 87(4). <https://doi.org/10.1086/734252>
- Okunogbe, O., and F. Santoro (2023). 'The Promise and Limitations of Information Technology for Tax Mobilization'. *The World Bank Research Observer*, 38(2): 295–324. <https://doi.org/10.1093/wbro/lkac008>
- Olson, M. (1993). 'Dictatorship, Democracy, and Development'. *American Political Science Review*, 87(3): 567–76. <https://doi.org/10.2307/2938736>
- Osaekwapong, J. (2022). 'Ghanaians and the E-Levy—Insights from Afrobarometer Survey Round 9'. Ghana Center for Democratic Development Blog, 29 July. Available at: <https://cddgh.org/2022/07/29/ghanaians-and-the-e-levy-insights-from-afrobarometer-survey-round-9/> (accessed 9 October 2025).

- Our World in Data (2024). 'Active Mobile Money Accounts' dataset based on original data from the GSM Association 'Global Mobile Money' dataset. Available at: <https://archive.ourworldindata.org/20250909-093708/grapher/active-mobile-money-accounts.html> (accessed 9 September 2025).
- Peiffer, C., and R. Rose (2018). 'Why Are the Poor More Vulnerable to Bribery in Africa? The Institutional Effects of Services'. *The Journal of Development Studies*, 54(1): 18–29. <https://doi.org/10.1080/00220388.2016.1257121>
- Prichard, W. (2015). *Taxation, Responsiveness and Accountability in Sub-Saharan Africa: The Dynamics of Tax Bargaining*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781316275511>
- Raithatha, R., and G. Storchi (2025). *The State of the Industry Report on Mobile Money 2025*. London: GSMA.
- Reserve Bank of Malawi (2018). 'National Payment Systems (NPS) Report—Fourth Quarter 2018'. Available at: <https://www.rbm.mw/PaymentSystems/> (accessed 11 July 2025).
- Reserve Bank of Malawi (2019). 'National Payment Systems (NPS) Report—Second Quarter 2019'. Available at: <https://www.rbm.mw/PaymentSystems/> (accessed 11 July 2025).
- Reserve Bank of Malawi (2025). '2024 National Payment System (NPS) Report'. Available at: <https://www.rbm.mw/PaymentSystems/> (accessed 11 July 2025).
- Riley, E. (2018). 'Mobile Money and Risk Sharing Against Village Shocks'. *Journal of Development Economics*, 135(November): 43–58. <https://doi.org/10.1016/j.jdevco.2018.06.015>
- Robinson, A.L., and B. Seim (2018). 'Who Is Targeted in Corruption? Disentangling the Effects of Wealth and Power on Exposure to Bribery'. *Quarterly Journal of Political Science*, 13(3): 313–31. <https://doi.org/10.1561/100.00017067>
- Ross, M.L. (1999). 'The Political Economy of the Resource Curse'. *World Politics*, 51(2): 297–322. <https://doi.org/10.1017/S0043887100008200>
- Sahgal, G. (2025). 'Unpacking Tax Relations in Contexts of Fragility: A Case Study of Somalia'. ICTD Working Paper 217. Brighton: Institute of Development Studies. <https://doi.org/10.19088/ICTD.2024.119>.
- Sánchez de la Sierra, R. (2020). 'On the Origins of the State: Stationary Bandits and Taxation in Eastern Congo'. *Journal of Political Economy*, 128(1): 32–74. <https://doi.org/10.1086/703989>
- Scott, J.C. (1998). *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- Seim, B., and A.L. Robinson (2020). 'Coethnicity and Corruption: Field Experimental Evidence from Public Officials in Malawi'. *Journal of Experimental Political Science*, 7(1): 61–66. <https://doi.org/10.1017/XPS.2019.8>
- Stokes, S.C., T. Dunning, M. Nazareno, and V. Brusco (2013). *Brokers, Voters, and Clientelism: The Puzzle of Distributive Politics*. *Cambridge Studies in Comparative Politics*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781107324909>
- Suri, T., T. Ghani, W. Jack, L. Klapper, E. Riley, S. Schaner, S. Sukhtankar, J.C. Aker, C. Batista, and M. Callen (2023). 'Mobile Money'. *VoxDevLit*, 2(2). Available at: https://voxdev.org/sites/default/files/2023-09/Mobile_Money_2.pdf (accessed 9 October 2025).
- Suri, T., and W. Jack (2016). 'The Long-Run Poverty and Gender Impacts of Mobile Money'. *Science*, 354(6317): 1288–92. <https://doi.org/10.1126/science.aah5309>
- Suryanarayan, P. (2024). 'Endogenous State Capacity'. *Annual Review of Political Science*, 27: 223–43. <https://doi.org/10.1146/annurev-polisci-061621-084709>.
- Tilly, C. (1993). *Coercion, Capital and European States: AD 990 - 1992*. Hoboken, NJ: Wiley.
- Nyasa Times (2019). 'Cama Challenges 1% Mobile Money Tax: "Insult in Malawi Budget!"'. *Nyasa Times*, 25 September. Available at: <https://www.nyasatimes.com/cama-challenges-1-mobile-money-tax-insult-in-malawi-budget/> (accessed 9 October 2025).
- UNICEF (n.d.). '2019/20 Health Budget Brief'. Available at: <https://www.unicef.org/esa/media/6186/file/UNICEF-Malawi-2019-2020-Health-Budget-Brief.pdf> (accessed 11 July 2025).
- UNU-WIDER (2023). 'UNU-WIDER Government Revenue Dataset'. Version 2023. <https://doi.org/10.35188/UNU-WIDER/GRD-2023>
- Wahman, M. (2023). *Controlling Territory, Controlling Voters: The Electoral Geography of African Campaign Violence*. Oxford: Oxford University Press.

- Wandaogo, A.-A., F. Sawadogo, and J. Lastunen (2022). 'Does the Adoption of Peer-to-Government Mobile Payments Improve Tax Revenue Mobilization in Developing Countries?'. WIDER Working Paper 2022/18. Helsinki: UNU-WIDER. <https://doi.org/10.35188/UNU-WIDER/2022/149-5>
- Weigel, J. (2020). 'The Participation Dividend of Taxation: How Citizens in Congo Engage More with the State When It Tries to Tax Them'. *The Quarterly Journal of Economics*, 135(4): 1849–903. <https://doi.org/10.1093/qje/qjaa019>
- Weigel, J., A. Bergeron, P.B. Tepedino, J.K. Kabeya, and G. Tourek (2021). 'Optimal Assignment of Bureaucrats: Evidence from Randomly Assigned Tax Collectors in the DRC'. CEPR Discussion Paper 16771. Paris and London: CEPR Press.
- Weigel, J., and E.K. Ngindu (2023). 'The Taxman Cometh: Pathways Out of a Low-Capacity Trap in the Democratic Republic of the Congo'. *Economica*, 90(360): 1362–96.
- Whitehouse, D. (2021). 'Ghana's Mobile-Money Tax Risks Killing the Golden Goose, Analysts Say'. *The Africa Report*, 30 August. Available at: <https://www.theafricareport.com/122698/ghana-cellulant-aims-to-introduce-digital-payments-for-utility-and-other-services/> (accessed 9 October 2025).
- Wietzke, F.-B. (2024). 'Perceptions of Social Class in Africa. Results from a Conjoint Experiment'. *World Development*, 178(June): 106576. <https://doi.org/10.1016/j.worlddev.2024.106576>
- World Bank (2025). 'Countries with Tax Revenues-to-GDP Ratio at or Below 15% (Including Social Security Contributions) that Have Increased Collections, Considering Equity'. Available at: https://scorecard.worldbank.org/en/data/result-details/CSC_RES_TAX_REV_GDP?orgCode=ALL&refareatype=REGION&refareacode=ACW&age=_T&disability=_T&sex=_T (accessed 9 July 2025).
- Yeandle, A. (forthcoming). 'The Political Consequences of Africa's Mobile Revolution'. *American Journal of Political Science*, early view. <https://doi.org/10.1111/ajps.12991>.
- Yeandle, A. (2025). 'Mobile Internet and the Quality of Elections in Low-Income Democracies'. *British Journal of Political Science*, 55(January): e43. <https://doi.org/10.1017/S0007123424000814>
- Yeandle, A., and D. Doyle (2024). 'Mobile Money and the Social Contract: Experimental Evidence from Ghana'. <https://doi.org/10.31219/osf.io/mzrfc>.
- Zeitlin, A., and N. Eissa (2016). 'Evaluation of Electronic Billing Machines: Effectiveness of Tax Administration' Project Memo. London: International Growth Centre.
- ZimEye (2019). 'Malawi Heavily Resists Mthw% Replica Tax, Declare It As War Against The Poor'. *ZimEye*, 24 September. Available at: <https://www.zimeye.net/2019/09/24/malawi-heavily-resists-mthu-replica-tax-declare-it-as-war-against-the-poor> (accessed 9 October 2025).