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Working Paper 136

# **Should Governments Tax Digital Financial Services? A Research Agenda to Understand Sector-Specific Taxes on DFS**

Laura Munoz, Giulia Mascagni, Wilson Prichard and Fabrizio Santoro

February 2022

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## Summary

Digital financial services (DFS) have rapidly expanded across Africa and other low-income countries. At the same time, low-income countries face strong pressures to increase domestic resource mobilisation, and major challenges in taxing the digital economy. A growing number are therefore advancing or considering new taxes on DFS. These have generated much debate and there are significant disagreements over the rationale for the taxes and their likely impacts.

This paper examines three key questions that could help governments and other stakeholders to better understand the rationale for, and impacts of, different decisions around taxing DFS – and to arrive at policies that best meet competing needs. First, what is the rationale for imposing specific taxes on money transfers or mobile money in particular? Second, and most importantly, what is the likely impact of DFS taxes? Third, how do the policy processes through which taxes on DFS and money transfers are introduced function in practice?

The paper looks at the core principles of good taxation and presents the existing debate around whether taxes on DFS observe them. It explains why understanding the landscape of financial services is essential to designing suitable tax policies and lays out a framework for developing the necessary analysis of the impacts of taxes on DFS. It also highlights the importance of better understanding the processes that give rise to these taxes.

**Keywords:** tax compliance, tax administration, digital financial services, digital IDs.

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# Acronyms

ATM	Automated teller machine
DFS	Digital financial services
FSP	Financial sector providers
LICs	Low-income countries
MMO	Mobile money operator
MTO	Money transfer operator
POS	Point of sale
SACCOs	Savings and credit cooperative societies

# Introduction

Digital financial services (DFS) have rapidly expanded across Africa and other low-income countries. For example, 469 million mobile money accounts had been registered in sub-Saharan Africa by 2019, with over 181 million accounts active on a monthly basis. This is equivalent to over 40 per cent of the region's total population having a mobile money account with over 15 per cent active users.<sup>1</sup> Indeed, much of the growth in financial inclusion rates in many low-income countries over the past decade was due to the increasing penetration of digital financial services, particularly mobile money. The increase in financial inclusion rates, understood as the percentage of the population who have access to and regularly use formal financial services which address their needs, can be relevant in terms of social and economic goals and can have impacts at the individual, household and macro level.

At the same time, low-income countries face strong pressures to increase domestic resource mobilisation and have faced major challenges in effectively taxing the broad digital economy. While imperfect, most estimates suggest average domestic tax collection in low-income countries, excluding resource revenues, is well short of the 15-20 per cent of GDP long advocated by the IMF.<sup>2</sup> Against that background, the rapid growth in DFS has led a number of governments to introduce specific taxes on DFS, including taxes on money transfers and/or specifically on mobile money (Matheson and Petit 2021; Mullins, Gupta and Liu 2020).

These taxes have generated much debate. The DFS industry complains about inequitable treatment as compared to traditional financial service providers, namely banks, while there is concern that new taxes on DFS could also negatively impact progress made in financial inclusion over the past decade. On the other hand, proponents of these taxes argue they are an administratively simple way of raising additional revenue, justified by the complexity of adequately taxing mobile money operators and other financial service providers, via corporate income taxes. This debate has centred primarily on sector-specific taxes on mobile money services provided primarily by multinational telecommunications firms. However, it remains important to situate this discussion within the broader range of digital financial services and financial service providers, in order to understand the impacts of these taxes on revenue, equity and financial inclusion (Ndung'u 2019).

From a policy perspective, governments have a legitimate interest in ensuring adequate revenue raising from a flourishing industry that is potentially hard-to-tax. However, these taxes have been introduced rapidly and in highly diverse ways across countries, and have only been analysed to a very limited extent (Lees and Akol 2021; Clifford 2020). There is a clear opportunity and need for more detailed analysis about the extent to which these new taxes are achieving their goals, consistent with principles of good taxation, coherent with broader economic and social objectives, and attentive to potential impacts on the poor. This points towards a key set of questions that could help governments and other stakeholders to better understand the rationale for, and impacts of, different decisions around the taxation of digital financial services – and, in turn, to arrive at policies that best meet competing needs.

First, what is the rationale for imposing specific taxes on money transfers or mobile money in particular? Does it make sense for governments to impose specific taxes on this sector, while potentially not imposing similar taxes on other financial services or on other financial service providers? Is it necessary to rely on specific taxes on DFS in order to correct eventual under-taxation of these services and firms, or would relying on provisions in the general tax code, as for other firms, be more appropriate? What is the rationale, and what are the implications

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<sup>1</sup> [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA\\_State-of-the-Industry-Report-on-Mobile-Money-2021\\_Full-report.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA_State-of-the-Industry-Report-on-Mobile-Money-2021_Full-report.pdf)

<sup>2</sup> Data from the ICTD/UNU-WIDER Government Revenue Dataset.

for equity, of different design decisions? How well aligned is tax design to other national economic and social objectives? A clear understanding of what kinds of tax problems these new taxes seek to solve, and their broader rationale, can help to define what kinds of taxes and approaches make most sense.

Second, and most importantly, what is the likely impact of DFS taxes? How much revenue will such taxes raise? How much of that revenue will be reflected in reduced firm profits and how much in increases in consumer prices – and which consumers specifically will bear those higher prices? What will be the impact of new taxes on usage of digital financial services by particular groups, and with what broader development implications? What is the likely longer-term impact of taxes on market structure, which may reinforce these various impacts? Critically, any effort to answer these questions meaningfully demands a nuanced understanding of the financial services landscape in particular countries, in order to deliver a granular understanding of the likely impacts of particular taxes on particular uses by particular groups. It equally demands attention to differences in tax design, which have so far varied significantly across countries on multiple dimensions, as summarised in Table 1.

**Table 1 Key dimensions of variation in the design of taxes on DFS**

Characteristics	Key variation
Universality	Does the tax apply only to DFS providers, most often telecommunications firms, or to all firms providing DFS and/or equivalent financial services?
Service types	Which types of DFS are subject to the tax? Are comparable non-digital financial services subject to equivalent taxation?
Point of incidence	To what specific aspects of DFS transactions does the tax apply? For example, does it apply to deposits, withdrawals, transfers, etc....?
Rates	How high is the rate of taxation?
Progressivity	To what extent does the tax design seek to increase progressivity, for example through thresholds below which transactions are not taxed?

Third, how do the policy processes through which taxes on DFS and money transfers are introduced function in practice? Tax policy is, everywhere, a political process. Understanding how to achieve improved outcomes requires not only technical analysis of what is desirable, but also an understanding of the processes that shape outcomes (Lees and Akol 2021). This may be particularly true of DFS taxes, which are emerging quickly against the background of limited data and research, with corresponding challenges for policy makers.

So far, there is still scarce evidence around the impact of existing taxes on DFS, nor much careful research about the specific design of those taxes, how design decisions shape impacts, or about the policy processes driving tax decisions. Without robust evidence, the discussion can easily derail to partisan arguments that hamper an informed dialogue between key policy makers and the private sector. In this context, distrust builds up. In order to understand the answers to these questions it is essential to move beyond aggregated analysis of these taxes, and their impacts, and towards analysis that can capture the diversity of impacts and the diversity of taxes themselves. It is also crucial to avoid assessing the taxes in isolation, without considering the ecosystem of players, services and taxes that comprise the broader financial services landscape.

With these questions in mind, this paper proceeds in four parts. The next section considers core principles of good taxation and presents the existing debate around whether taxes on DFS observe them. Section 2 explains why understanding the landscape of financial services is essential to designing suitable tax policies. Section 3 lays out a general framework for developing the necessary analysis of the impacts of taxes on DFS. Section 4 discusses the importance of better understanding the processes that give rise to taxes on DFS. Section 5 then concludes.



# 1 Debating taxes on DFS

Recent years have seen a rapid expansion of taxes on digital financial services, including taxes on money transfers and/or mobile money, stamp duty on electronic transactions, increases in corporate taxes for DFS providers and so forth (Clifford 2020). Yet these taxes have been a source of fierce political disagreement. Much of that disagreement has centred on whether these taxes are conceptually justified and conform to principles of a 'good' tax system. Most accounts of what makes a 'good tax' focus, in some form, on three core sets of issues:

- **Equity:** Taxes should be horizontally equitable, in that they treat individuals or businesses in similar circumstances, and engaging in the same activities, in the same way, and they should be vertically equitable in that they impose a proportionate burden on all taxpayers ('neutral'), or else collect proportionately more revenue from those who are better off ('progressive').
- **Administrability and convenience:** Taxes should be simple enough to administer effectively – and easy for taxpayers to comply with – as there is otherwise a risk that administrative failures will lead to inequity, unfairness and economic inefficiency.
- **Economic efficiency and certainty:** Taxes should seek in general to support economic efficiency – by avoiding creating economic distortions, ensuring certainty for taxpayers, and, in some cases, seeking to correct market failures (Diamond and Mirrlees 1971).

From a resource mobilisation perspective, the potential benefits of such taxes are relatively straightforward. The key question, however, is whether the revenue benefits of these taxes are outweighed by other respects in which taxes on DFS may be harmful or unjustified. This debate has focused in particular on three interconnected questions about the impacts of these taxes on equity, efficiency and broader development objectives.

1. *Do specific taxes on DFS unfairly target DFS service providers, and thus create horizontal inequity – or, alternatively, do these taxes in fact correct existing under-taxation of DFS providers, and thus improve horizontal equity?*

Critics of new taxes on DFS have contended that in some countries these taxes create horizontal inequity because they treat DFS firms unfairly relative to other firms. There are two versions of this argument. First, a general argument that providers of DFS should not be subject to sector-specific taxes, but that providers of DFS should be taxed under the general tax code like all other firms. From this perspective any sector-specific taxes on DFS are likely to create market distortions and horizontal inequities relative to other sectors and firms. Second, a more specific argument that sector-specific taxes may disadvantage DFS and DFS providers relative to traditional financial services and providers (Ndulu, Joseph and Tryphone 2021; Clifford 2020; Ndung'u 2019). From this perspective, any new tax should treat all financial services equally, irrespective of whether they are digital and irrespective of the provider. In practice this has not always been the case. For example, a money transfer can be offered by different providers: a bank, a money transfer operator (MTO), or a mobile money operator (MMO). In some countries, including Kenya, the Republic of the Congo, and Zimbabwe, taxes are applicable equally to all providers of digital money transfers, including banks, MTOs or MMOs. However, in other countries, such as Uganda, taxes on money withdrawals apply to mobile money transactions, but exclude transactions made through banks. Critics have particularly argued against DFS taxes that treat providers offering broadly equivalent services differently – thus focusing attention both on the general appropriateness of such taxes, and on the value of designing taxes in ways that seek to minimise any such inequities.

Governments and other observers have, however, argued that the dynamics around taxes on DFS are more complex – and that, far from creating horizontal inequity, taxes on DFS have the potential to *improve* horizontal equity by closing gaps in the taxation of DFS providers. These arguments stem from a belief that DFS providers (and financial firms more broadly) may be *under-taxed*, with sector-specific taxes needed to restore horizontal equity and reduce market distortions that benefit financial firms. A variety of studies have highlighted potential under-taxation of the financial sector owing to the fact that financial transactions are often not subject to the VAT, and to broader opportunities for financial firms to engage in tax avoidance strategies (e.g. IMF 2010). Focusing on DFS, telecommunications multinationals are the dominant MMOs in most markets, and some governments and observers see a strong *a priori* case for believing that those firms are under-taxed (Matheson and Petit 2021). In nominal terms, some studies indicate a higher tax burden on MNOs as compared to other industries (Rota-Graziosi and Sawadogo 2020; Rogers and Pedros 2017). However, some policy makers and observers express scepticism that this is the whole story. This reflects two concerns, in addition to those raised above about financial firms generally. First, MMOs may reap super-profits by virtue of a high degree of market concentration and market power, thus justifying sector-specific taxes designed to tax away those excess profits, or rents. Second, telecommunications multinationals may in practice pay less than they should under existing laws by taking advantage of opportunities to reduce their tax liabilities via the weaknesses of international tax rules. Recent international tax reform efforts have focused specifically on the challenges of curbing tax avoidance and evasion among digital firms, with many countries – including in the OECD – introducing targeted, and simplified, new taxes on digital services firms. For some governments, taxes on DFS providers have been understood as part of broader efforts to ensure effective taxation of the digital economy.

Both critics and opponents present plausible arguments about why taxes on DFS may, or may not, be warranted – and about how they might be designed. Both arguments, in turn, suggest the likelihood of significant variation across countries, dependent on tax design and broader market conditions. Yet to date there remains limited research and evidence through which to evaluate these competing positions, and little explicit analysis of how taxes may be designed to maximise benefits and minimise distortions.

- 2. Will specific taxes on DFS generate broader inefficiency by distorting market development and reducing financial inclusion – or, alternatively, are impacts on market development, and usage of financial services, likely to be small relative to the benefits of expanded revenue collection?*

Critics contend that taxes on DFS are likely to distort the market for financial services in ways that will specifically undermine financial inclusion (Ndung'u 2019; Whitehead 2019). The expansion of digital financial services has been the central driver of the expansion of financial inclusions across much of Africa and the low-income world, where lower-income groups have historically lacked effective access to financial services. Critics argue that taxes that target DFS are likely to raise prices, discouraging the development of the DFS market, and thus undermining that expansion of financial inclusion – with important development consequences. Indeed, some critics have argued that, far from taxing digital financial services, government should seek to proactively encourage the growth of these services through a favourable fiscal policy in order to expand financial inclusion and also potentially increase the tax and regulatory capacity of the state (Allen, Demirgüç-Kunt, Klapper and Peria 2016). Critics also argue that tax rules need to be better aligned with national digital inclusion and financial inclusion strategies.

Others, however, are sceptical that taxes on DFS are likely to have such large and problematic impacts – and are doubtful that those costs will outweigh the revenue and administrative arguments in favour of such taxes. This includes questioning whether declines in usage are likely to be long-lasting and damaging in developmental terms (Rukundo and

Magumba 2018; Fuchs, Musuku and Symington 2017). Estimating the medium-term impacts of DFS taxes on usage and on market development – and the broader implications of such changes – is inherently complex and conditioned by many factors, including for example the existence of alternatives, the stickiness of past behaviours, and most importantly, how important the service is to broader development goals. The lack of evidence leaves space for persistent disagreements about the development implications of DFS taxes – and demands a better understanding of their longer-term impacts.

3. *Will taxes on DFS create unduly heavy burdens on, and consequences for, low-income groups – or, alternatively, may tax burdens be more neutrally or progressively distributed, and may corresponding impacts on development outcomes be more muted?*

Critics of taxes on DFS contend that such taxes are vertically inequitable because they are likely to impose a disproportionate burden on lower-income and vulnerable groups (Bierer, Lukolyo, Kvaran and Gillani 2021; Clifford 2020). This reflects their heavier reliance on digital financial services as compared to higher-income groups, and the possibility that DFS taxes may drive higher prices and reduced access. The latter may be particularly significant if lower-income groups have limited access to alternative financial services, whereas higher-income groups may be able to more easily turn to traditional providers. These costs, in turn, assume that reductions in usage of DFS by lower-income groups will have significantly negative development implications. Again, other observers are less convinced, arguing that burdens will not necessarily fall disproportionately on lower-income groups – or at least that the distribution of burdens will be dependent on tax design – and that broader development consequences for lower-income groups of any reduction in usage are likely to be modest. Compelling evidence again remains very limited.

The central challenge for policy makers is to understand which of these claims and perspectives are supported by evidence, in order to develop policies that are most likely to strengthen development outcomes, including stronger domestic resource mobilisation. As important will be to bring additional nuance to these debates: there are substantial differences across countries in the design of taxes on DFS, with potentially important implications on the extent to which they do, or do not, generate horizontal inequities, reduced usage or heavy burdens on low-income groups. With more evidence the debate may shift from *whether* taxes on DFS are justified to *what kinds* of taxes may be more or less appropriate and in what circumstances.

## 2 Understanding the financial services landscape

In seeking to provide evidence to inform these debates there is a need for research to be grounded in nuanced understanding of the landscape of financial services in a given jurisdiction. Appropriate policies demand an understanding of the financial service providers operating in a given country, the services they offer, and the reach of those services, along with an understanding of which population segments use which financial services, what they use them for, and how important the use of these services is to the achievement of broader development objectives. Some of the most important elements to consider when designing or reviewing taxes on digital financial services (or any financial services) include the following.

## 2.1 Understanding the supply side landscape

In order to understand the likely impact of taxes on DFS a necessary starting point is an understanding of the supply side landscape – that is, of what services are being offered, by whom and how the industry is evolving over time. This is the starting point for discerning what kinds of services will, and will not, be impacted by particular taxes, what alternatives are available and how taxes may impact the broader evolution of the sector.

The landscape of financial services in low-income countries has been deeply transformed over the past decade. In most countries, banks traditionally dominated a limited and underdeveloped market. Other formal financial sector providers (FSPs) included savings and credit cooperative societies (SACCOs) and microfinance institutions. These FSPs offered credit, savings, and sometimes also payment services, particularly in the case of banks. Other traditional FSPs include money transfer operators (MTOs), which facilitate remittance products by allowing individuals to send money to distant places.

The past 10-15 years have seen the spread of DFS, a broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances and insurance. Digital channels refer to the internet, mobile phones, automated teller machines (ATMs), point of sale (POS) terminals, etc. With the advent of digital, new types of players entered the market (Fintech, mobile network operators), while traditional FSPs have also progressively introduced digital channels to their offer. DFS also require an underlying supporting infrastructure that enables the provision of digital services and conditions their accessibility and affordability, which can also be subject to taxation. This is the case of agents' networks, mobile phone ownership, cost of airtime and data, cell towers, etc. Critically, the landscape of such services varies significantly across countries, meaning that the same taxes may have different implications in different places – or, alternatively, that different settings may demand different strategies.

From a policy perspective, there is a need to understand and assess whether the existing regulation accommodates the new landscape of financial services and their business models.

## 2.2 Understanding who uses digital and traditional financial services

Just as it is important to know the landscape of the services which are available, and from whom, it is essential to understand who uses particular financial services and from which providers. This informs an understanding of who would bear the burden of a particular tax, which alternatives they could potentially switch to and the broader distribution of impacts from new taxes. This understanding is instrumental to making sure taxation aligns with the government's broader policy objectives.

In most low-income countries, traditional banks have usually targeted wealthier individuals and formal employees, and their customer share represents up to 30 per cent of the population. Bank customers usually use DFS as well, and therefore are the ones with greater capacity to shift from one provider to another to avoid an eventual tax.

In many low-income countries, mobile money in particular has grown exponentially. In terms of penetration, for example in sub-Saharan Africa, in 2019 over 40 per cent of the region's population had a mobile money account with over 15 per cent active users, although with great disparities across countries.<sup>3</sup> In those countries where mobile money has quickly spread, financial inclusion has increased substantially. For example, in Uganda, the

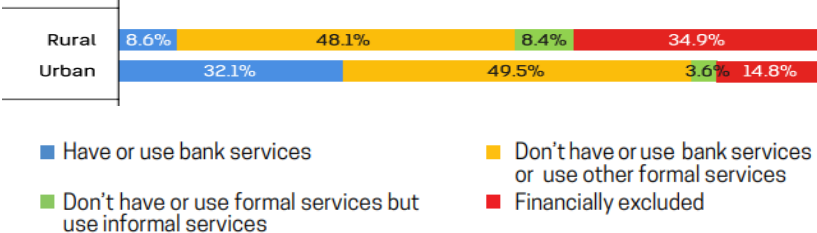
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<sup>3</sup> [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA\\_State-of-the-Industry-Report-on-Mobile-Money-2021\\_Full-report.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2021/03/GSMA_State-of-the-Industry-Report-on-Mobile-Money-2021_Full-report.pdf)

percentage of the poor population who have an account increased from 10 per cent in 2011 to 50 per cent in 2017,<sup>4</sup> mostly due to the growth in mobile money accounts. This means that certain segments of the population only rely on mobile money to access formal financial services and their alternative behaviour could imply reverting to informal financial services and cash.

This analysis also requires a more granular understanding of the usage of financial services by population segment, such as urban/rural, income level, gender or age, as some groups may have greater reliance on specific services. For example, in rural Tanzania, as compared to urban areas, there are greater levels of financial exclusion, many people use mobile money, but very few people use banks. This suggests that only a relatively small share of the rural population may have access to banks, with any reduction in use of DFS likely to imply a return to reliance on informal services and cash.

**Figure 1 Access to financial services strands in Tanzania**



Source: FinScope Tanzania 2017 April-July

Indeed, though only a small share of the population relies exclusively on informal financial services, a large share of the population continues to rely on informal financial services alongside formal services. While informal financial services may exhibit inefficiencies, they are also often convenient,<sup>5</sup> and in many cases it is the only available alternative for the most vulnerable segments. In terms of policy making, it is important to consider informal financial services, as they represent an alternative people can switch to when formal services become too cumbersome or expensive.

**2.3 Understanding existing use cases for financial services and their development impacts**

Another important policy consideration is what financial services are used for, and the developmental importance of those different uses. Different taxes are likely to impact different 'use cases' (the use of specific types of financial services) differently and to affect market development in distinctive ways. At the same time, different uses may be viewed as more or less important within the context of national development strategies. It is only with a view of those different use cases that policy makers can assess how the design of new taxes is likely to shape market development and other policy objectives.

For example, remittances or peer-to-peer transfers are the most digitised use case. In 2017, 51 per cent of the population in LICs (low-income countries) affirmed sending or receiving peer-to-peer remittances from a bank or mobile money account (Demirgüç-Kunt, Klapper, Singer, Ansar and Hess 2018). Over time, DFS providers started offering other financial services through their platforms, including credit, savings, insurance, etc, and more recently, they have also launched more sophisticated services, including merchant payment solutions, payment of government services (person to person (P2G) and government to person (G2P)), etc. These use cases are not so widely spread, and each has their own characteristics in

<sup>4</sup> Findex 2011 and 2017. 'Poor population' is defined by Findex as the 40 per cent of the population with lower income.  
<sup>5</sup> <http://gdrc.org/icm/formal-informal.html>

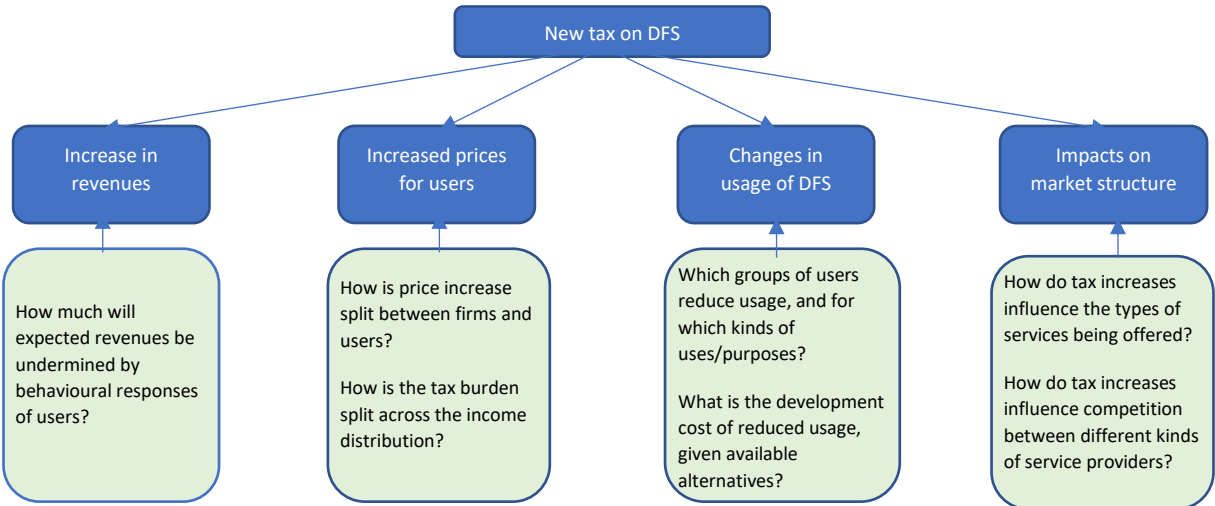
terms of values transacted and frequency of use. Besides digital payments, other financial services generally have low penetration. Most low-income countries have shallow insurance or long-term savings markets, with penetration rates below 5 per cent. Meanwhile, cash has remained a dominant factor, its primacy dented now by COVID-19, but it is still preferred for most types of transactions.

Because the prominence of different uses differs across contexts, as do broader strategies for expanding financial inclusion, designing appropriate tax policies demands an understanding of those different use cases, their broader development role and how they are likely to be affected by taxation.

### 3 Assessing the impacts of taxes on DFS

Given a strong understanding of the broader financial landscape the central question of interest is: what are the likely impacts of particular types of taxes on revenue, on users and on the broader evolution of the market for financial services? Figure 2, below, provides a simple framework for thinking about the most important kinds of impacts that such taxes may have which may, in turn, guide future analysis. What follows discusses each of these categories of impacts in greater detail.

**Figure 2 Development impact of taxes on DFS**



#### 3.1 Impacts on government revenues and tax equity

Fundamental to arguments for taxes on DFS is a belief that they can raise revenue at low administrative cost, in the context of pressing internal revenue needs – which have in most cases been significantly exacerbated by COVID-19. In broad terms, there is no question that taxes on DFS will generate revenue. Nonetheless, precisely how much revenue will depend critically on the details of policy design, and on the behavioural response of users; that is, to what extent do taxes lead to reduced usage as users shift towards alternatives? Understanding this question is also useful for thinking about policy processes around the introduction of such taxes: are policy debates around these taxes reflecting accurate estimates of how much revenue will be raised, or are they overestimating revenue potential because of an inattention to these potential behavioural responses?

### **3.2 Impacts on prices and distribution of the tax burden**

The most straightforward impact of new taxes on welfare occurs through their impact on prices – and therefore on the economic well-being of users and firms. However, understanding the impact of new taxes on prices is not straightforward as it depends on how the increase in taxes is shared between service providers and users. At one extreme, prices may remain unchanged, with the tax borne entirely by financial service providers in the form of reduced profits. At the other extreme, prices may increase by the entire value of the tax, with the cost of the tax borne entirely by users. Generally speaking, economic theory predicts that the distribution of the tax burden will depend to an important extent on the degree of price-based competition in the market: where there is more price-based competition – or viable substitutes exist – firms are more likely to absorb part of the tax burden, whereas where there is less competition, they will be more able to pass tax increases on to consumers. Because DFS markets are relatively concentrated there is concern that taxes will largely be passed on to consumers, though this remains an important empirical question.

Where taxes result in significant increases in prices this will imply a welfare cost to users of the service. Critically, that welfare impact is best understood not in aggregate, but by understanding the distribution of the costs of higher prices across different groups of users – and, in particular, the impact of higher prices on economic well-being among lower-income and more vulnerable groups. Meanwhile, where taxes result in reduced profits for firms this could lead to reduced investment or may represent a successful effort by governments to close gaps in other forms of tax enforcement among those firms. Yet in practice there has been relatively limited systematic and independent analysis of the long-term impact of taxes on prices – bearing in mind that any such analysis needs to take a medium-term view, rather than looking only at any immediate change in prices when taxes are first introduced.

### **3.3 Impacts on usage**

Changes in prices are important not only because of their direct impact on economic well-being, but because they may, in turn, induce changes in usage of a given service. In some cases, such changes in usage may be relatively unimportant from a welfare perspective. This may be true if the service in question has little direct impact on broader well-being, or if users have access to adequate alternatives. In other cases, changes in usage could have significant welfare implications if the service in question has important impacts on medium and long-term development prospects but becomes unaffordable as a result of increases in taxes. Critics of taxes on DFS have argued that they will lead to significant reductions in the use of digital financial services which will, in turn, entail significant negative impacts on medium and long-term economic prospects for those affected owing to reduced financial inclusion.

Yet, again, we have relatively limited evidence about the impact of such taxes on financial inclusion, understood as access to, and usage of, adequate financial services. The studies conducted so far generally assess the impact of taxes using aggregate volumes and values of mobile money transactions over a short period of time. This is a first step, but is insufficient, as it does not allow a granular understanding of how the impact of taxes is felt by different population segments, especially those with low incomes, women or other more vulnerable groups. In the same vein, there is little disaggregated evidence about how specific taxes may influence the use of specific types of financial services ('use cases'), especially those uses which are still at a nascent stage, such as merchant payments, value chain payments, insurance or long-term savings. Different kinds of uses have different economic purposes, present different kinds of alternatives, and may have very different implications for longer-term development prospects. For example, a tax structure that falls heavily on larger but infrequent payments, or payments which are immediately withdrawn in cash, is likely to place a heavy burden on those using DFS for remittances. By contrast, a tax structure that

effectively creates a heavier burden on regular but smaller transactions, irrespective of whether they are withdrawn, will impose a heavier burden on those using DFS for smaller daily merchant payments, and may reinforce the pervasive use of cash for this type of transactions.

Reflecting the depth of concerns about the potential negative impacts of new taxes on usage and financial inclusion, many industry stakeholders – and some researchers and policy makers – have argued not only for eliminating taxes on DFS, but for actively incentivising expanded usage. Supporters of such a strategy argue that the market for financial services in many lower-income countries is subject to important market failures, which well-designed incentives could help to address. Some studies highlight a positive correlation between fiscal incentives and financial inclusion (Klapper, Ansar, Hess and Singer 2021; Demirgüç-Kunt, Klapper, Singer, Ansar and Hess 2020; BTCA 2015), but the body of evidence is still very limited – with important questions about whether a change in tax policy would be sufficient to generate significant increases in use of DFS given that costs and limitations of access may instead be rooted in structural causes, such as poor regulation or infrastructure. More complex still is understanding the extent to which any increase in usage resulting from incentives generates substantial development benefits – in savings, in transfers to lower-income groups, in a smaller shadow economy, and so forth – that are sufficient to justify the revenue costs.

### **3.4 Impacts on market structure**

Finally, taxes on DFS could result in broader medium and longer-term shifts in the structure of the market for digital financial services specifically, and financial services more broadly. Most obviously, where taxes are imposed on DFS specifically, but similar taxes do not apply to competing financial services, taxes could create some shift towards those alternative providers. More broadly, new taxes on financial services may slow the growth of financial services more generally. Whether such shifts are perceived as problematic will hinge on broader perceptions of existing market dynamics, and on the long-term development implications of a shift away from, or slowed growth of, DFS. Would a relative shift away from digital financial services represent a warranted correction in light of historical under-taxation of mobile money providers, with minimal long-term development implications for low-income users? Or would it represent the use of public policy to slow the growth of a nascent sector, with potentially significant negative consequences for low-income users of DFS? Where taxes are specifically on DFS providers, rather than traditional financial services providers, does this mark a levelling of the playing field – or the use of public policy to advantage traditional providers at the expense of DFS providers? Alternatively, could the careful design of taxes on DFS be used to encourage developmentally beneficial shifts in market structure, like a shift towards greater interoperability across networks? These broader questions are enormously difficult to answer with precision, but highlight the need to consider not only the immediate impacts of taxes on DFS prices and usages, but also their potential impacts on broader market dynamics.

## **4 Policy processes for taxes on DFS – from theory to practice**

The kinds of analysis described so far seek to guide policy makers in understanding the likely impacts of particular types of DFS taxes and support them in weighing competing priorities and concerns. This type of technical analysis can support more effective and informed policy making. However, understanding DFS taxation equally demands an understanding of the



policy processes through which DFS taxes are created. Tax policies are not simply a product of technical analysis of what might be 'best', but are equally the product of policy processes that are shaped by political interests and administrative needs and priorities.

Tax policies in practice may diverge from what a purely technical analysis suggests is 'best' in three key ways. Each figures centrally in debates around the taxation of DFS, and research can add significant value by better understanding these policy processes, how they shape outcomes and how outcomes may be strengthened.

First, decisions about tax policy and administration are often highly political, influenced by competing interests and political priorities. Taxes on DFS create winners and losers, which can depend on specific features of tax design. For example, traditional financial firms stand to benefit from taxes that only affect DFS providers, while dedicated DFS providers may favour taxes with broader coverage. Likewise, different DFS providers may favour different tax designs depending on the services that they offer, and the relative burdens that will result. Meanwhile, the COVID-19 pandemic has created new urgency around the need for revenue raising – with DFS taxes a potentially easy to access revenue source – while concerns about taxing the digital economy broadly may also create a political impetus to tax DFS. Understanding the intersection of political interests and tax design can shed important light on existing policies, and their future evolution.

Second, policy processes may depend in important ways on *who* is making policy, and *who* is included in policy processes. For example, tax policy departments within the Ministry of Finance generally have a leading role in developing new taxes, but often lack financial sector experts in their teams. By contrast, central banks and financial sector departments may be well placed to contribute to aligning tax design with issues of financial sector development but may have limited appreciation for the concerns of tax agencies. Likewise, opening up the process to consultation with key stakeholders, including civil society organisations and industry players, can broaden understanding of potential impacts on customers and market development. Central to addressing the complexity and interconnectedness of the financial sector is adopting a comprehensive sectoral approach and leveraging coordination with key stakeholders inside and outside the government. However, tax agencies have often been wary of too much inclusion amidst fears – at least sometimes justified (Prichard 2015; Fairfield 2010) – that the formal and informal lobbying power of business actors may undermine their ability to make and enforce policy. In practice, industry groups and parts of civil society have argued that policy processes around the introduction of DFS taxes have often been comparatively rushed and coordination difficult to achieve, particularly in the context of pressure to meet urgent revenue needs. How can governments strike an effective balance between the need to move quickly and the importance of ensuring that policy processes have a broad view of the potential impacts of new taxes, while avoiding undue corporate influence?

Third, tax policy decisions are often also shaped by the interests and needs of tax administrations, whose preferences may be shaped by operational constraints – in terms of costs, access to information, their legal powers and professional skills – that impact on their ability to tax particular activities. Taxes on DFS are an administratively simple and convenient way of raising new revenues in contexts of significant resource constraints. While sector-specific taxes of this kind may not be theoretically best, in contexts of limited administrative capacity and major resource constraints tax measures that can raise revenue consistently, and in ways that are resistant to evasion and avoidance, can bring significant and positive social value (Kleven, Khan and Kaul 2016). Simplified taxes may also be an effective way of taxing 'hard-to-tax' firms that are otherwise able to engage in significant tax avoidance, often through the international tax system (Prichard and Moore 2018; Best, Brockmeyer, Kleven, Spinnewijn and Waseem 2015). In this context, what is the character

of the operational constraints revenue authorities face in particular countries, and how might that shape both the justification for, and design of, such taxes?

Ideally, policy processes seek to make clear the trade-offs between different policy options and bring evidence to bear in shaping choices among those options. In practice, and for a host of reasons, policy processes may leave more limited space for such deliberation – and there is some evidence that this may have been particularly true of the sometimes rapid introduction of DFS taxes (Lees and Akol 2021). Moving forward, there is an opportunity for stronger evidence, as well as proactive efforts to use that evidence to support policy processes across countries (Wales and Wales 2012).

## Conclusions

A growing number of governments in LICs are advancing or considering the introduction of new taxes on DFS. At the time of writing this paper, Tanzania has just passed a new tax on money transfers, on top of the 15 per cent excise duty on fees already in force. The government of Bangladesh announced an increase in corporate taxation of mobile financial services from 30 per cent to 40 per cent, to equal the tax paid by banks and other financial institutions – only for that proposal to be reversed after an uproar among industry and civil society.

Intense debate around these taxes reflects the high stakes, as well as significant disagreements over the rationale for these taxes and their likely impacts. Governments are seeking new revenue sources amidst significant fiscal pressures, underpinned by a belief that existing service providers are under-taxed. By contrast, service providers and users argue that these taxes impose an undue burden on DFS services and providers, with the risk of imposing heavy burdens on lower-income groups via higher prices or reduced access to financial services.

Yet while the stakes are high, many of these taxes are being introduced at a time when there remains limited evidence about their impacts. There is a corresponding need for more detailed evidence around the impact of DFS on revenues and horizontal equity, end prices for users, users' behaviours and livelihoods (particularly those vulnerable segments with fewer financial options to choose from), and on broader market structure and development. With more evidence it will be possible to better understand the implications of new taxes across distinct groups and distinct financial services, assess the broader rationale for specific taxes on DFS, facilitate dialogue among different stakeholders and support evidence-based policy making more broadly.

# References

- Allen, F., Demirgüç-Kunt, A., Klapper, L. and Peria, M.S.M. (2016) 'The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts', *Journal of Financial Intermediation* 27: 1-30
- Best, M., Brockmeyer, A., Kleven, H., Spinnewijn, J. and Waseem, M. (2015) 'Production Versus Revenue Efficiency with Limited Tax Capacity: Theory and Evidence from Pakistan', *Journal of Political Economy* 123.6: 1311–1355
- Bierer, L., Lukolyo, C., Kvaran, P. and Gillani, S. (2021) 'Impact of Mobile Money Taxation in Uganda', webinar, 28 July, PHB and UNCDF
- BTCA (2015) *An Inclusive Approach to Digital Payments Ecosystems: Accelerating the Transition from Cash Requires an Ecosystem Approach*, Working Paper, Better Than Cash Alliance, <https://www.betterthancash.org/explore-resources/an-inclusive-approach-to-digital-payments-ecosystems-accelerating-the-transition-from-cash-requires-an-ecosystem-approach>.
- Clifford, K. (2020) *The Causes and Consequences of Mobile Money Taxation: An Examination of Mobile Money Transaction Taxes in Sub-Saharan Africa*, GSMA, <https://www.gsma.com/mobilefordevelopment/resources/the-causes-and-consequences-of-mobile-money-taxation-an-examination-of-mobile-money-transaction-taxes-in-sub-saharan-africa/>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S. and Hess, J. (2020) 'The Global Findex Database 2017: Measuring Financial Inclusion and Opportunities to Expand Access to and Use of Financial Services', *The World Bank Economic Review* 34 (Supplement 1): S2–S8
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S. and Hess, J. (2018) *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*, Washington, DC: World Bank
- Diamond, P.A. and Mirrlees, J.A. (1971) 'Optimal Taxation and Public Production I: Production Efficiency', *The American Economic Review* 61.1: 8–27
- Fairfield, T. (2010) 'Business Power and Tax Reform: Taxing Income and Profits in Chile and Argentina', *Latin American Politics and Society* 52.2: 37–71
- Fuchs, M., Musuku, T.B. and Symington, D. (2017) *Mobile Money Taxation: Policy Issues and Considerations for Pakistan and Tanzania*, Washington, DC: World Bank Group and Oxford Policy Management
- IMF (2010) *A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20*, Washington, DC: International Monetary Fund
- Klapper, L., Ansar, S., Hess, J. and Singer, D. (2021) *Findex Note 8, Global Series: Financial Inclusion and Financial Regulation*, World Bank
- Kleven, H., Khan, A. and Kaul, U. (2016) *Taxing to Develop: When Third Best is Best*, IGC Growth Brief Series 005, International Growth Center

- Lees, A. and Akol, D. (2021) *There and Back Again: The Making of Uganda's Mobile Money Tax*, ICTD Working Paper 123, Brighton: Institute of Development Studies
- Matheson, T. and Petit, P. (2021) 'Taxing Telecommunications in Developing Countries', *International Tax and Public Finance* 28: 248–280
- Mullins, P., Gupta, S. and Liu, J. (2020) *Domestic Revenue Mobilization in Low Income Countries: Where to From Here?* CGD Policy Paper 195, Washington, DC: Center for Global Development
- Ndulu, B., Joseph, C. and Tryphone, K. (2021) *Fiscal Regimes and Digital Transformation in Sub-Saharan Africa*, Digital Pathways at Oxford Paper Series 11, Oxford: Blavatnik School of Government
- Ndung'u, N. (2019) *Taxing Mobile Phone Transactions in Africa: Lessons from Kenya*, Brookings Policy Brief, Washington, DC: Brookings Institution
- Prichard, W. (2015) *Taxation, Responsiveness and Accountability in Sub-Saharan Africa*, Cambridge: Cambridge University Press
- Prichard, W. and Moore, M. (2018) *Tax Reform for Low-Income Countries: Five Ideas for Simplifying Tax Systems to Fit Local Realities*, ICTD Summary Brief 17, Brighton: Institute for Development Studies
- Rogers, M. and Pedros, X. (2017) *Taxing Mobile Connectivity in Sub-Saharan Africa: A Review of Mobile Sector Taxation and its Impact on Digital Inclusion*, GSMA, <https://www.gsma.com/mobilefordevelopment/wp-content>
- Rota-Graziosi, G. and Sawadogo F. (2020) *The Tax Burden on Mobile Network Operators in Africa*, FERDI Working paper P278
- Rukundo, S. and Magumba, M. (2018) *Taxation of the Telecommunications Sector: A Focus on Policy Issues and Considerations in Taxation of Mobile Money in Uganda*, Working Paper, Uganda Revenue Authority
- Wales, C. and Wales, C. (2012) *Structures, Processes and Governance in Tax Policy Making*, Oxford: Oxford University, Centre for Business Taxation
- Whitehead, A. (2019) *Uganda Social Media and Mobile Money Taxes Survey Report*, Whitehead Communications