Taxing Times for Development: Tax and Digital Financial Services in Sub-Saharan Africa

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Digital Financial Services (DFS) present a unique opportunity for ensuring sustainable economic growth of Sub-Saharan African (SSA) countries. Arguably, taxing DFS provides SSA countries with additional revenue with which to eliminate extreme poverty and even improve gender balance. Since a DFS regime for SSA countries also has the potential to attract investment this article considers the impact of taxes and tax-like payments imposed on the DFS industry in SSA and the region's economic development. It is argued that the taxation of the mobile sector in SSA which represents the evolution of DFS is heavily disproportionate. This is demonstrated by comparing the sector's earnings in total revenues which are significantly larger than the share the sector contributes to the domestic state's GDP. The article, therefore, examines multiple "small taxes" and tax-like charges affecting providers and consumers of DFS in SSA and analyses such practices from the perspective of specific principles of a good tax policy, such as the principles of equity, neutrality, simplicity and certainty. It explores the utilization of these principles to form part of a DFS tax regime by examining several African states approaches to taxing DFS, questioning whether DFS tax resonates with the taxation principles. The article recommends improvements in DFS tax policy design. The principles of good tax policy, as well as practical experience of some SSA countries, make it possible to crystalize the tax policy recommendations made for enabling the development of DFS and ultimately, sustainable economic growth. The article proposes taxing DFS in a simpler, more convenient and effective manner where possible given the potential positive socio-economic impact the technology might have.

1. INTRODUCTION

As of April 2019, approximately 370 million adults in Africa remained unbanked (Inner Circle, 2019). The term "unbanked" means not having access to any traditional financial services including savings accounts, credit cards, or personal checks. This translates to over 60% of the people living on the continent who do not have access to financial services. The World Bank (2018) considers access to financial services to be a key enabler in reducing extreme poverty and boosting shared prosperity. Arguably, Africans are then amongst those who need accessible financial services the most. This is especially significant for the 33 out of 47 Least Developed Countries of which 33 are located in Africa. Those living under conditions of extreme poverty are unable to meet their basic needs nor any emergency related expenses that may occur, hence their lack of access to finance significantly reduces their quality of life. On top of slowing economic growth, lack of financial inclusion disproportionally hurts women (IFC, 2018), those out of the workforce and other especially vulnerable categories of people,

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causing highly undesirable socio-economic outcomes. This has implications towards the sustainable development of people and the economy.

Borrowing is a highly demanded service in developing countries. Many factors contribute to that: lower quality and higher unpredictability of life, as well as quality of public goods provided, or lack thereof are just some. However, in Africa when in need of money people contact friends and family (WB/IFC, 2018) or informal landers who require high interest rates (Global Findex database, 2014), rather than a formal financial institution. Building a physical bank branch is expensive and requires significant upfront investment in infrastructure, administrative permissions, construction itself, hiring and training people, etc. Besides, in many places in Africa and elsewhere the population is so dispersed that it's very challenging to provide an adequate coverage for all by traditional, brick-and-mortar banking. Another issue is lack of proper credit history for majority of lenders: even in countries where credit bureaus exist, they often only keep information on underperformed loans and not on those repaid on time. Also, the process of obtaining a loan from an official bank can be very burdensome and involves tangible legal fees which reduce its accessibility even further. However, the digitalisation boom of last decades provided us with a convenient alternative: digital financial services.

Pazarbasioglu refers to the World Bank definition of DFS as *"financial services which rely on digital technologies for their delivery and use by consumers"* (Pazarbasioglu et al., 2020). According to the World Bank:

> *"Access to affordable financial services is critical for poverty reduction and economic growth. Countries with deeper, more developed financial systems have higher economic growth and larger reductions in poverty and income inequality. For poor people, access to and use of basic financial services can improve incomes, increase resilience and improve their lives. Women especially benefit. Digital financial services, powered by fintech have the potential to lower costs by maximizing economies of scale, to increase the speed, security and transparency of transactions and to allow for more tailored financial services that serve the poor'' (Pazarbasioglu et al., 2020).*

Indeed, DFS has the potential to assist sustainable economic growth of Sub-Saharan African countries, eliminating extreme poverty, attracting investment and even improving gender balance. However, both providers and consumers of digital financial services in majority of Sub-Saharan Africa countries are facing excessive and complex taxation. This article investigates and compares tax and tax-like payments affecting access to DFS in Sub-Saharan African countries in an attempt to answer the following questions: how does taxation of digital financial services in SSA affect region's economic development and people's wellbeing? Do the tax regimes applicable to DFS in SSA conform to the principles of good tax policy?

After examination of taxes and tax-like payments affecting provision and consumption of DFS in SSA, the article argues that they are taxed disproportionately heavily and in a very complex manner, which is not in line with the principles of good tax policy making. This results in DFS becoming less affordable for consumers and hence, negatively affects region's development and people's daily wellbeing. Against this background, the article frames its arguments as follows: the article begins with a

summary of the taxes and tax-like payments affecting provision and consumption of DFS in sub-Saharan Africa. It then discusses the principles of good tax policy, and whether the policies applicable to DFS in SSA conform to them. Finally, the article provides an overview of some recent cases of tax reforms in SSA countries affecting digital financial services, analysing their broader consequences for a society.

2. TAXING DIGITAL FINANCIAL SERVICES

According to GSMA, an association of mobile network operators, in 2018 unique subscriber penetration rate for Sub-Saharan Africa equaled to 44%, expected to achieve 50% by 2025 (GSMA, 2019, p.2), while 66% of Sub-Saharan Africans were considered unbanked in 2018 (Sesinye, 2016), giving fintech an outstanding opportunity for transformation. Over a half of mobile money services operating worldwide are based in Africa, main providers being telecommunication companies (Chironga et al., 2017). According to GSMA, a number of active mobile money accounts in Africa is over 100 million, making at least every tenth African adult a customer (GSMA Mobile Money Deployment Tracker). Mobile network operators (hereinafter MNOs) were historically first to offer digital financial services to African customers as their unique position gave them several major advantages such as wide distribution networks, market concentration and superior client experience.

The mobile operators retain their leading position even in competition with traditional banks and fintech startups: according to a 2017 McKinsey Company report, M-Pesa and MTN Money, two most successful MNOs offering digital financial services in Africa, have at least five, if not ten, times as many clients as largest bank-led initiatives such as FNB and Equitel. The strength of distributional networks is MNO's main advantage: according to the above-mentioned McKinsey report, 37 African markets have 10 times more registered agents than bank branches. As an example, Safaricom, the leading mobile network operator of Kenya, has over 130,000 agents, while leading banks in Kenya have approximately 15,000 agents only (Chironga et al., 2017).

The number of customers of MNOs is also significantly larger than that of traditional banks: MTN, Africa's largest mobile operator, has 171 million customers, while biggest pan-African banks such as Ecobank, Standard Bank and Barclays Africa only have between 11 and 15 million. This difference is due to two main factors. First, mobile penetration in Africa is about twice the rate of "traditional banking" penetration (80% vs 40% respectively). The second reason is that the mobile industry is much more concentrated than banking: according to McKinsey report, top 5 Africa mobile operators serve 60% of all telecommunication customers in Africa, while top 5 African banks only serve 22% of all African customers. Finally, many MNOs managed to develop an excellent client experience for their clients early on after launching digital financial services, their interfaces being really simple, intuitive and friendly.

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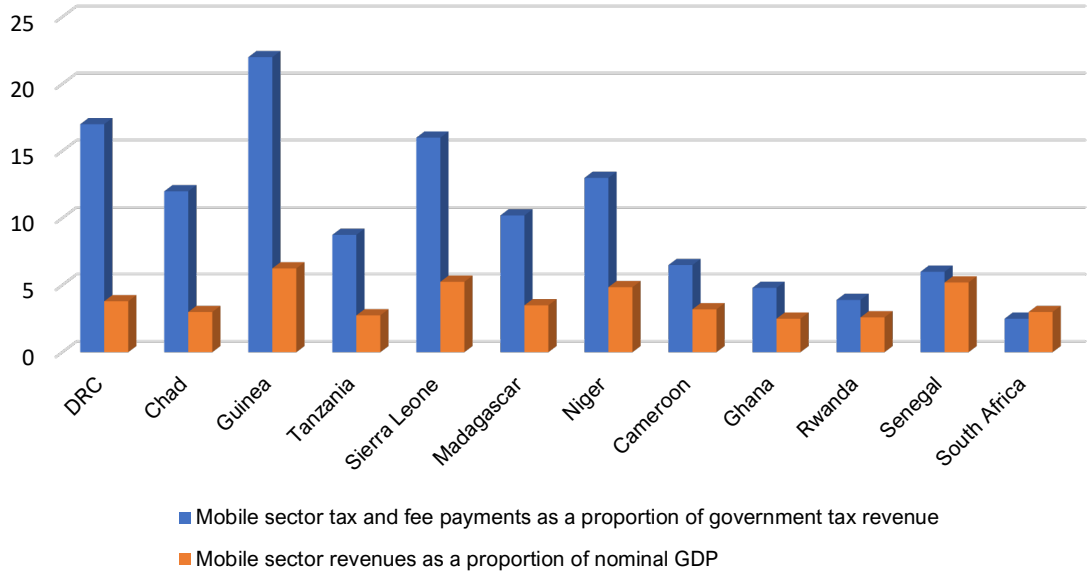
Mobile money penetration rate differs significantly between African countries. While in "matured" markets, where regulation is allowing and traditional banking system is rather fragmented (East Africa and Ghana, for example), it exceeds 1000 mobile money accounts per 1000 adult residents, in other countries such as Morocco or Nigeria it's under 10%. Main factors restraining MNOs' growth in countries with low mobile money penetration include availability of convenient "traditional" alternatives – the banking system in Morocco, for example, is very developed, - and/or unfriendly regulation. However, notwithstanding its great potential, the mobile sector in SSA is taxed disproportionally heavily, sector's share in total revenues collected being significantly larger than its share in total GDP:

Graph 1. Mobile sector tax and fee payments in government tax revenue versus the share of mobile sector revenues in nominal GDP in 2015



Source: GSMA Intelligence, replicated from "Taxing mobile connectivity in Sub-Saharan Africa", 2017

If traditional lending in most cases does not attract any special tax consequences, digital loans are different. Taking up a digital loan, a user needs to buy a mobile phone (subject to VAT and custom duties as these are mostly imported), a service contract (also subject to VAT and in SSA to sector-specific taxes), and users often paying an activation fee. The mobile operators, on the other hand, bear the burden of paying licenses and broadcasting fees, corporate income tax, the rate of which in SSA countries is often higher for the telecom sector, and taxes associated with the equipment that makes up the mobile network. Thus, access to digital financial services is affected not only by the general tax system, but also by sector-specific tax rules applicable to mobile operators and digital financial services per se. See Table 1 for all the sector specific taxes in selected SSA countries.

Table 1. VAT and customs payments associates with acquiring a handset in SSA[1]

	Chad	Gabon	DRC	Guinea	Zimbabwe	Niger	Zambia	Madagascar	Cameroon	Congo
VAT	18%	18%	16%	18%	14.5%	19%	16%	20%	17.5%	16%
Customs duty	5-30%	Apart from customs duties, the importation of merchandise in Gabon is subject to the community tax of integration (CCI) at a rate of 0.4% and to the OHADA withholding (duty) at a rate of 0.05% of the customs value of the imported merchandise. The Finance Act for 2018 has introduced, as of 1 January 2018, a contribution to the African Union (CAF) that is due on the importation within the custom territory of products originating from states that are not members of the African Union. The CAF is paid at a single rate of 0.2% of the customs value of the products originating from states that are not members of the African Union.	27.6%	10% for handsets, base stations & network equipment; 20% for SIM cards	25%	14% for handset, 9% for SIM	5% for phones, 15-25% for parts	5% on phones, 20% on stretch & SIM cards	5-30% (30% on finished goods)	5-20%
Sector-specific taxes	1% sales tax on each sim card (up from 0.5% in 2016) +$1.6 activation charge	Mobile telecommunication activities (calls): 5%	10% excise duty, 10% game tax	Excise duty on telephone consumption (taxe sur la consommation téléphonique or "TCT") GNF 1, GNF 10 for SMS, 5% on	US$ 0.05 tax on each m-money transaction	Taxe sur l'Utilisation des Réseaux de Télécommunications (since 2011): fixed XOF 250 (US$ 0.40) per SIM + variable	Airtime excise duty* 17.5%; International calls surcharge* ZMW 0.09 per minute; 30 ngwee (3c) per day	8% on data / messages /voice	Game Tax at 15% of turnover	Excise duty on telecommunication services 10%

[1] See Bibliography section for country specific references on VAT and customs.

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	18% excise duty on mobile services			the price of the internet pass; Surtax on international incoming traffic (SIIT) $0.12		3% on turnover	internet calls fee (Since 2011)			

	Cote d' Ivoire	**Ghana**	**Mozambique**	**Gambia**	**Sierra Leone**	**Angola**	**Tanzania**	**Uganda**	**Malawi**	**Burkina Faso**
VAT	18%	12.5%	17%	15% general, 18% for telecom services	15%	14%	18%	18%. Input VAT cannot be deducted on 10 percent of telephone service charges	17.5% for mobile phones and services; 16.5% for Internet services	18%
Customs duty	0-5-10-20-35%	0-5-10-20%	0-20%	ECOWAS Common Customs Tariff (0-5-10-20 %)	0-5-10-15-20-30%	Ad valorem duty of 2-70% +2% customs fee on imports Customs duty for mobile phones equals 20%	Customs processing fee 0.6%	Withholding Tax 6%, import duty 6% and customs duty of 25%	20%	0-35%+ statistic tax 1%+ Community solidarity tax 1% + community tax 0.5% Additional intellectual property tax of 10% and income tax of 2% apply to imported mobile handsets
Sector-specific taxes	Statistical fee: 1 %; The Community Levy of Solidarity (PCS) of 1%; ECOWAS community levy: 0.5 %; Mobile money tax 0.5% of transaction value; 3% telecom services tax; 7.2% mobile money transfer charge ruled illegal in 2019.	Communications Service Tax (CST), up to 9% from 6% in 2019; 2.5% National Health Levy; 2.5% Education Trust Fund levy	17% tax on telecom services	Telecom services subject to VAT @18% instead of 15%. Excise tax of 10% on mobile phone services.	-	-	Excise tax on usage except for mobile money – 17%, Excise tax on mobile money 10%	1 % tax on mobile money transactions on receiving money, making payments and withdrawals of money	10% excise duty on mobile phone text messages and Internet data transfers	14.5% tax on handsets

	Mauritius	**Ethiopia**	**South Africa**	**Swaziland**	**Lesotho**	**Botswana**	**Rwanda**	**Kenya**	**Senegal**
VAT	15%	15%	15%	15%	15%, 12% for telecommunication services	12%	0% for mobile phones and SIM cards	25%	18%
Customs duty	0-15% additional rate of customs duty of 20% or such other rate as may be prescribed shall apply to all imported goods where the rate of customs duty is 55% or more and the goods arc produced or manufactured in a territory other than a scheduled territory	0-35%, 5% for mobile phones + 3% withholding tax + 10% surtax	9% +10% markup if goods imported from outside of the BLNS countries	VAT + 10% markup if goods imported from outside of the BLNS countries	+5% on VAT for mobile phones	0% for mobile phones	10%	2%	Customs duties: 0%, 5%, 10%, or 20%. Statistical import charge: 1%. Community solidarity levy: 0.8% since 1 July 2017 (1% before July 2017). Economic Community of West African States (ECOWAS) levy: 0.5% (only applicable to products originating from non-ECOWAS countries).

Sector-specific taxes	Environmental Fee on Mobile Phones (Rs 70.00 per unit)	ETC charges for fixed line and mobile phone usage	15% luxury markup	50% of mobile telephone services are prohibited from deduction	Operators are subject to regulatory fees and a requirement to contribute to the UAF. Currently, the LCA imposes an annual regulatory fee of 4% of Net Operating Income on all operators. The USF contribution stands currently at 1.5% of NOI and can be increased to up to 2% as per the LCA Act	Considers introducing a digital tax	10% Telecom services tax	Excise duty on mobile services 21% Excise duty on mobile money 12%	A 17% special tax on financial activities (mainly banking, money transfers, and change operations) is applicable instead of VAT

On top of the payments listed above, in some SSA countries customers have to pay an activation charge to start using their SIM cards. While these payments are becoming rare these days, where they are present, they make digital financial services less affordable by increasing their costs. Besides, as in most cases an activation charge is a fixed amount, it disproportionally hurts the poor who benefit from access to digital financial services the most.

The SIM activation charge in **Chad** is equal to $1.6 (XAF 1000), which according to GSMA Intelligence represents 2.5x daily income of the bottom 20% of country's population (GSMA & Deloitte, 2016). Together with a 1% sector-specific tax on SIM and scratch cards, an activation charge comprises over 2/3 of the final cost of a SIM card. In addition to an activation charge, a numbering fee of XAF165 ($0.3) is payable by customers in Chad. All the SIM cards sold in **Gabon** are subject to 18% excise charge. A numbering fee of up to $0.5 applies in **Ghana**. In **Niger** a tax XOF250 ($0.4) applies to all the SIM cards sold. Finally, in **Nigeria** a numbering fee of NGN10–20 ($0.05–0.10) is in place (GSMA, 2017).

The next level of taxation is associated with mobile usage, including airtime, SMS and data. A summary of these taxes is outlined in table 2. The cost of usage represents the largest element of the total cost of mobile ownership in SSA.

Table 2. Taxes on Mobile Usage in SSA (Source: GSMA 2017)

	Chad	**Gabon**	**DRC**	**Guinea**	**Zimbabwe**	**Niger**	**Zambia**	**Madagascar**	**Cameroon**	**Congo**
VAT on usage	18%	18%	16%	20%	20%	19%	16%	20%	19%	19%
Sector-specific taxes on usage	10%	18%	10%	7%	10%	3%	15%	10%	2%	NA
Total tax on usage	28%	36%	26%	27%	30%	22%	31%	30%	21%	19%

	Cote d' Ivoire	**Ghana**	**Mozambique**	**Gambia**	**Sierra Leone**	**Angola**	**Tanzania**	**Uganda**	**Malawi**	**Burkina Faso**
VAT	18%	17.5%	17%	15%	15%	5%	18%	18%	17%	18%
Sector-specific taxes	3%	6%	NA	NA	NA	NA	17%	12%	10%	NA
Total tax on usage	21%	23.5%	17%	15%	15%	5%	35%	30%	27%	18%

	Mauritius	**Ethiopia**	**South Africa**	**Swaziland**	**Lesotho**	**Botswana**	**Rwanda**	**Kenya**	**Senegal**
VAT	15%	15%	14%	14%	5%	12%	18%	16%	NA
Sector-specific taxes	NA	NA	NA	NA	NA	NA	10%	10%	6%
Total tax on usage	15%	15%	14%	14%	5%	12%	28%	26%	6%

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Some SSA jurisdictions tax international incoming calls heavily, almost doubling their total costs and thus creating additional barriers for international business. Some examples of international incoming traffic surtax are: *Chad: XAF50 ($0.08) per minute; DRC: $0.08 per minute; Ghana: GHS0.13 ($0.03) per minute; Guinea: GNF571 ($0.07) per minute; Niger: XOF88 ($0.15) per minute; and Rwanda: RWF85 ($0.12) per minute* (GSMA, 2017, p.17).

On top of a duty to pay regular corporate tax on profits (a rate of which may be higher than usual for telecom companies in some SSA countries), mobile operators are also often obliged to pay regulatory taxes and fees specific to the industry, which may be one-off or annual. The main fiscal obligations of mobile operators of SSA countries are summarized in table 3 below.

Table 3. Mobile Operator Taxes and Fees[2]

	Chad	**Gabon**	**DRC**	**Guinea**	**Zimbabwe**	**Niger**	**Zambia**	**Madagascar**	**Cameroon**	**Congo**
Corporate tax	CIT 35% WHT on interconnection expenses of mobile companies paid to non-resident companies is 25% 9% mobile operator tax 18% excise duty on mobile services	30%	30%	35% + lump sum tax that is payable by all companies at the rate of 3% on annual revenue+ Tax on access to telecommunications network at the rate of 5% on the net turnover derived by the company	24.72% (includes a base rate of 24% plus a 3% AIDS levy) + 5% levy on all airtime sold	30%	35% standard / 40% for mobile operators	20%	30%	30%
Regulatory Taxes and Fees				Mobile operators are subject to a number of different regulatory fees which must be paid in order to supply telecommunications services (SEE THE REPORT FOR A LIST)		Sector specific taxes include special consumer taxes on SIM cards and mobile usage (TURTEL); and an operator tax on international incoming calls (TATTIE). In addition to spectrum and numbering fees, mobile operators pay several regulatory fees levied on revenue, with a combined rate of 6.5% that is amongst the highest in the region	Numbering fee, License fees (one-off), License fees (annual), Spectrum fees (one-off), Spectrum fees (annual, variable)	One-off license fees, One-off spectrum fees, Annual spectrum fees, Regulation taxes, Tax on pylons, relays, antennas and masts, Copyright fee		
Import duties on network equipment	customs duty rates vary depending on the nature of the imported good, with rates ranging from 2% for radio equipment such as antennas or			Withholding flat tax on import and purchase of goods and services. A tax of 10% is levied		any device imported from outside the UEMOA region is subject to the External Tariff. The		Imports of base stations are levied at a rate of 5% on the customs value.		

[2] See Bibliography section for country specific references

	software to 30% for battery equipment. Mobile towers are subject to an additional charge (taxe sur les pylônes) which is based on 10% of the annualized capital value during the asset's life			on local purchases of goods and services made by public establishments, mining companies, telephone companies, banks, insurance companies, microfinance institutions, oil companies and semipublic companies		External Tariff comprises a custom duty between 5% and 20%, depending on the type of equipment, and additional charges of 4%.15 The total charges therefore range between 9% and 24%. The standard VAT rate of 19% is levied on the value of the equipment and on the payments of the UEMOA External Tariff		Furthermore, a customs duty of 10% is applied to equipment parts. A tariff of 20% applies on the customs value of other network equipment		

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	Cote d' Ivoire	Ghana	Mozambique	Gambia	Sierra Leone	Angola	Tanzania	Uganda	Malawi	Burkina Faso
Corporate tax	25% general, 30% for telecom companies since Jan 2014 + a compulsory lump-sum tax even if the company makes losses	25% + National Fiscal Stabilisation Levy @5% charged quarterly on accounting profit before tax (2013 - 2019) + Payments received by a person who carries on a business of transmitting or receiving messages by cable, radio, optical fibre or satellite or electronic communicatio n from an apparatus located in Ghana are liable to a withholding tax rate of 15%	32% CIT+10-20% WHT	based on the higher of 31% of chargeable profit or 1.5% of total revenue for the tax year. if for any reason a company is not audited, tax on its total revenue will be 2.5%	CIT + Corporate Social Responsibili ties	30%	CIT 30% Local Service Levy 0.3% Municipal Advertising Tax – depends SIIT 48%	CIT 30%, different rules if turnover less than UGX 150 million	CIT 30%	CIT 30%
Regulator y Taxes and Fees					taxes on local and international interconnec tion revenues; Spectrum fees; GSM license; International Gateway fees; On-net and Off-net charges; interconnec tion charges etc.		operators subject to 10 different taxes, along with regulatory fees and charges Universal Service Obligation 0.3% Variable License Fee 0.8%			A statistic tax of 1%, a communit y solidarity tax of 1% and a communit y tax of 0.5% apply to imported mobile handsets • In addition, intellectua l property tax of 10% and income tax of 2% also apply to imported mobile handsets in Burkina Faso. 2% of revenue paid as a universal service fee • 1% of revenue is paid to the governme nt in regulatory fees • 0.5% of revenue is paid to the governme nt's Research and

										Training Fund
		imported telecommunications network equipment is subject to customs duty (e.g. base stations are subject to import duties of 10%), while the government of Ghana has granted customs and VAT exemptions for machinery and apparatus used in other sectors such as agriculture, mining and transport+ECOWAS levy (0.5%) + 0.75% EXIM levy + 0.4-3.45% admin charges	0-20% duty fees		Import duty + sales taxes collected on national, state and local levels (informal economy = 53%)	ad valorem customs duty rates varying from 2% to 70%	0-25% customs duty. 25%+0.6% for airtime vouchers 10%+0.6% for SIM cards Customs duty exemption for equipment (2002-2014) was terminated.			

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	Mauritius	Ethiopia	South Africa	Swaziland	Lesotho	Botswana	Rwanda	Kenya	Senegal
Corporate tax	15%. Providers of public fixed or mobile telecommunications networks and services are required to pay a solidarity levy calculated by reference to their book profit and turnover at specific rates provided in the Act as follows – • 5% of book profit, and • 1.5% of turnover	30% (since 2017)	28%	27.5%	10/25% depending on nature of income	22% residents / 30% non-residents	30%	30%	30%
Regulatory Taxes and Fees							The levies imposed on mobile consumers and operators include corporation tax, turnover tax and revenue tax, together with the one-off license fee, the one-off spectrum fee, universal service obligation, the variable license fee and the variable spectrum fee… +consumption tax on telecommunication services has risen from 8 per cent to 10 per cent of service revenues .	• Universal service fund (USF) 0.5% on annual gross revenue • Annual operating license (AOL) 0.4% on annual gross revenue • County deployment fees • Branding and Market Activities Various rates • Business Permits Various rates • Business Permits Various rates Spectrum license fees: • One-off Varies per auction • Annual Based on transmitters/ bandwidth/ coverage	Tax on telecom services increased to 5% in 2019
Import duties on network equipment	Environmental levy of Rs 70.00 per unit for mobile phones	mobile phone handsets are subject to taxation when they are imported but not taxed when sold in the domestic market. The tax rate levied on the value of mobile handsets is 36.82%, including custom duty (5%), value added tax (15%), withholding tax (3%) and surtax (10%). The black market for mobile phone handsets is a serious concern to ETC as the government loses the revenue that ought to be generated from the taxation of handsets. ETC charges for fixed line and mobile phone usage in addition to the 15% value-added tax.					Withholding tax of 5% of the value of goods imported for commercial use shall be paid at Customs on the CIF {cost insurance and freight) value before the goods are released by Customs	Base stations and network equipment - 0%	

As we can see from the tables above, both provision and consumption of digital financial services in countries of Sub-Saharan Africa is associated with payment of multiple taxes and tax-like payments which are quite significant for both corporations providing the services, but especially the customers for whom such taxes might represent a large proportion of their income. The multiple taxes and charges related to digital financial services make them less accessible by increasing their price, and in the long-term excessive taxes applicable to DFS results in slower reduction of the number of SSA residents having no access to financial services which could have been a great enabler of economic growth and poverty reduction. To address the issue, one could turn to legal theory and the principles of good tax policy.

3. THE PRINCIPLES OF GOOD TAXATION

What constitutes a good fiscal policy is still passionately debated by policy practitioners and academics alike, however, a general consensus on principles underlying such policy does exist. In his 1776's "*Wealth of Nations*" Adam Smith named four: fairness, certainty, convenience and efficiency (Smith, 1994, pages 887 to 890). "Fairness" is broadly understood as a need to take taxpayer's ability to pay and personal circumstances into account when defining their tax burden. Responsibility to pay taxes should never result in one group of taxpayers being clearly disproportionately better- or worse-off than the other due to tax system design. "Certainty" means that the taxpayers should be informed an appropriate time in advance about the cause and size of any tax levied, and that the rules of taxation should not be subject to a frequent change. According to a principle of "convenience", collection and payment of taxes should be as simple and cheap as possible, not presenting a significant burden to either taxpayers or tax administrations. Finally, "efficiency" means that we should aim to maximize economic benefits of taxation by minimizing costs of collecting taxes and economic distortions associated with it. Since the 1998 Ottawa Ministerial Conference (OECD, 2003) these principles were widely believed to include:

- ***Neutrality***

No tax should discriminate between different forms of business activities, and its effect on economic choices should be minimal. Aiming for neutrality means minimizing economic distortions associated with tax and, hence, allowing for most efficient allocation of resources, minimizing economy's deadweight loss. As can be seen from the above, it is often the case in SSA that providers of digital financial services are facing higher effective tax rates than businesses active in other sectors of the economy.

- ***Efficiency***

The principle of efficiency tells us that good tax design aims to minimize both compliance costs of taxpayers and tax administration costs of governments. Analysis

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shows that both providers and customers of digital financial services in SSA are facing multiple “small taxes” and tax-like payments, which results in higher costs of compliance and tax administration.

- ***Certainty and simplicity***

Tax legislation should be clear and simple enough for taxpayers with no technical knowledge of tax to understand what their obligations are and how and when they should be met. The simpler the rules, the less the number of honest mistakes made by taxpayers, while complex legislation may provide opportunities for manipulation and tax avoidance/evasion. The tax rules applicable to providers and consumers of digital financial services in SSA are very complex and at times confusing, which is undesirable and not effective.

- ***Effectiveness and fairness***

Effectiveness is understood as availability of effective mechanisms of enforcing tax rules and bringing evaders to responsibility. Fairness is a widely arguable concept, but in this particular context should be understood as avoiding double taxation and double non-taxation alike. Due to complexity of some tax rules applicable to digital financial services, effectiveness of relevant enforcement mechanisms might be hard to measure. As of fairness, disproportionate taxation of crucially important service is perceived as unfair by many, even when due to practical reasons such as relative ease of revenue collection.

- ***Flexibility***

As our reality, including economic reality, is changing rapidly due to technological progress, globalization and other factors, the tax systems should possess some flexibility to allow for a change and to stay adequate for a longer period of time (OECD, 2014). Obviously, some of negative social consequences of excessive taxing of SSA telecom sector are unintended and occurred due to regulators not expecting telecom companies becoming de-facto leaders of financial services industry. However, now it is possible to re-assess the situation more realistically and understand potential consequences excessive taxing financial services might have, and the problematic policies might and should be redesigned, allowing for more flexibility where possible. The “Guiding Principles of Good Tax Policy: A Framework for Evaluating Tax Proposals” report of the Association of International Certified Professional Accountants (2017) has also suggested an updated list of 12 fundamental principles on which every good tax policy should be based, supplementing them with the U.S. Joint Committee on Taxation (JCT) analysis criteria and the U.S. Government Accountability Office (GAO) criteria for a good tax policy where these were available. Taken together the 12 principles with the US JCT and GAO criteria, these tax principles imply that DST design should aim at simplicity, certainty, neutrality and convenience of payment, among other things, if it is to support country’s economic growth. On the contrary, a complex system of multiple charges applicable to both users and providers of DFS hinders technology’s penetration and precludes society from benefiting from it

in full. The principles of tax policy design suggested by JCT and GAO are discussed in more detail below.

- ***Equity & Fairness***

Equity has two aspects: horizontal equity, meaning that two taxpayers whose ability to pay is similar should pay similar amounts of tax, and vertical equity, meaning that as ability to pay increases, so should do a rate of tax. U.S. Joint Committee on Taxation (JCT) analysis criteria: Is "the tax system fair? Does the tax system treat similarly situated individuals similarly? Does the tax system account for individuals' different capacities to bear the burden of taxation?" U.S. Government Accountability Office (GAO) criteria: Equity includes two principles: (1) ability to pay (horizontal and vertical equity), and (2) benefits received. "When making judgments about the overall equity of government policy, it is important to consider both how individuals are taxed and how the benefits of government spending are distributed".

- ***Certainty***

The principle of certainty assumes that the taxpayers understand when and how much they should pay in tax, meaning that the filing deadline, the tax base and the tax rate should be clear and well communicated in advance for every tax due.

- ***Convenience of Payment***

Simplicity and convenience of tax payment directly correlate with tax compliance rate, while a complex, inconvenient procedure will present an obstacle for benevolent taxpayers and possibly even provoke tax avoidance / evasion.

- ***Effective Tax Administration***

Economic theory tells us that greater costs of tax compliance and administration result in smaller benefits ("profits") received by the government. To maximize efficiency of tax administration, such costs should be minimized. U.S. Joint Committee on Taxation (JCT) analysis criteria: "Can the tax system be easily administered by the government and can it induce compliance by all individuals? Is enforcement costly? Can some individuals successfully avoid their legal liabilities?" U.S. Government Accountability Office (GAO) criteria: Administrability including "processing returns, enforcement, and taxpayer assistance".

- ***Information Security***

Information provided by taxpayers to tax authorities is very sensitive, and breaches in tax administration's information security can present significant risks to the taxpayers. Perception of technologies used by tax authorities as "insecure" might result in taxpayers not providing information they see as especially sensitive and,

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hence, in under-collection of tax revenues. To avoid such threats information security - i.e., control over how, for how long and what taxpayers' information is stored - must be made a priority.

- ***Simplicity***

Tax laws in some jurisdictions are so voluminous, complex and/or ambiguous that their meaning can be difficult to absorb even for university-educated, qualified lawyers. Complex tax legislation leads to more honest mistakes and less ability (as well as desire) of taxpayers to comply with it, and hence is undesirable. Other side effect of complex tax legislation is that it provides opportunities for manipulations and, thus, tax avoidance/evasion. U.S. Joint Committee on Taxation (JCT) analysis criteria: "Is the tax system simple? Is it costly for taxpayers to determine their tax liability and file their taxes?" U.S. Government Accountability Office (GAO) criteria: Simplicity in terms of the "compliance burden (record keeping, planning, return preparation, and responding to audits)".

- ***Neutrality***

Significant costs added by taxes can distort economic agents' decisions, drawing market away from equilibrium. The principle of neutrality tells us to try to avoid such effects where possible (except for taxes aimed at changing agents' behavior such as excise duties). U.S. Government Accountability Office (GAO) criteria: The system should not distort economic decisions.

- ***Economic Growth & Efficiency***

Even though taxes unavoidably hinder economic growth and efficiency, these effects should be minimized, and the tax system should not discriminate one group of taxpayers against the other. U.S. Joint Committee on Taxation (JCT) analysis criteria: "Does the tax system promote or hinder economic efficiency? That is, to what extent does the tax system distort taxpayer behavior by imposing high marginal tax rates on labor, saving, or other activities? Does the tax system create a bias against the domestic production of goods and services? To what extent does it promote economic growth?" U.S. Government Accountability Office (GAO) criteria: Economic efficiency of tax changes should be considered.

- ***Transparency & Visibility***

The taxpayers must be informed about the taxes due before they have to pay them and should be able to make their economic decisions taking taxation into account. U.S. Government Accountability Office (GAO) criteria: Transparency of "tax calculations, logic behind tax laws, tax burden and compliance".

- ***Minimum Tax Gap***

When designing tax laws, potential effects on compliance need to be kept in mind, such as Laffer curve and unnecessary complexity that can result in more unintentional underreporting due to inability to understand legislator's intention. U.S. Joint Committee on Taxation (JCT) analysis criteria: "Can some individuals successfully avoid their legal liabilities?"

- ***Accountability to Taxpayers***

The general public should be well informed about public finance, sources and uses of revenues and any current and potential tax reforms. U.S. Government Accountability Office (GAO) criteria: "Taxpayers understand the extent to which the tax laws are enforced".

- ***Appropriate Government Revenues***

While the tax system should be predictable, stable and reliable, it also should have an appropriate degree of flexibility to be able to adopt to the changing reality in the most effective way.

Finally, when discussing the principles of good tax policy, mention should be made of a Report of the High-Level Panel on International Financial Accountability, Transparency and Integrity for Achieving the 2030 Agenda (UN FACTI Panel Report) published in February 2021. The report advocated for financial integrity for sustainable development, and highlighted principles of accountability, legitimacy, transparency and fairness (UN, 2020). It reflected an important shift in priorities of tax policy making and values of the international tax community, however, these principles per se are of little help when shaping tax policies as they are subject to interpretation.

As can be seen, the tax policies applied to digital financial services in SSA are hardly satisfying the principles listed above. The telecom sector is taxed significantly heavier than most other sectors of economy, which is not compliant with principles of equity and neutrality. A disproportionately heavy tax burden slows down industry's development, discourages investment and decreases DFS penetration. The multiple small sector-specific taxes paid by both consumers and operators are not compliant with simplicity and increase the cost of compliance. Heavy taxation of telecom sector is clearly deteriorating for economic growth and efficiency, and disallowing development of DFS. Compliance considerations are sometimes ignored by Sub-Saharan Africa governments, for example in case with import duties where compliance rate is often quite low due to corruption and other informal practices, indicating that the costs associated with compliance are likely to be higher than the informal taxes. Informing the general public about the upcoming policy changes is often untimely, and their opinions are often not taken into account. Frequent changes of tax legislation are challenging a principle of certainty. Effectiveness of tax administration is also often less

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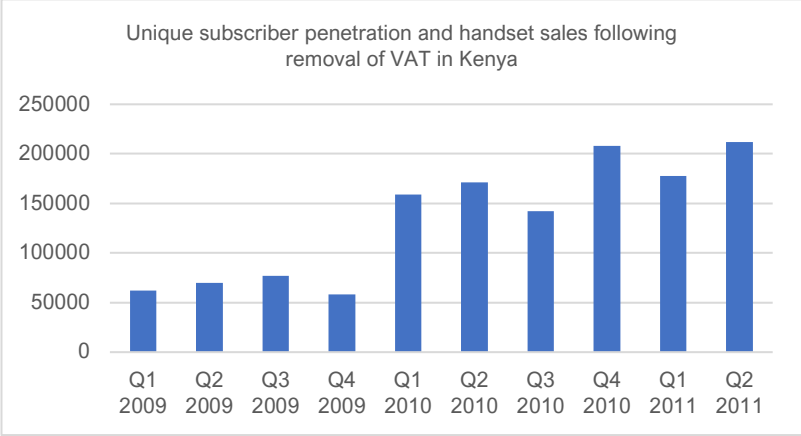
than perfect. The scope for improvement in tax policy design for the telecommunication sector is evident. One way to learn is by analysis of successes and failures of tax policy reforms experienced by the SSA telecom sector in recent years.

4. CASE STUDIES

This section presents a brief coverage of several reforms of tax treatment of the telecom sectors in Kenya, Benin, Zimbabwe, Chad, Rwanda, Ethiopia and Malawi that took place within the past decade, and their effects on digital and financial inclusion, revenues collection and countries' GDP.

4.1. Kenya

Being a center of Africa's digital revolution, Kenya was also one of first jurisdictions to decide on tax treatment of digital tax services. In 2007, just two years after the first ever mobile money service was made available in Philippines, Safaricom, a subsidiary of a Britain-based telecom giant Vodafone, launched M-Pesa, a mobile money service in Kenya that became an impossible-to-reproduce success story (Rice, 2007). Outstanding scalability and sustainability allowed M-Pesa to drive financial inclusion in Kenya from 17% in 2006 to impressive 67% in 2013 (European Investment Bank, UN CDF, 2014. P.3.) Several unique factors contributed to enterprise's success, from enabling regulation and Bank of Kenya demonstrating unheard-of flexibility by providing "no objection" letter allowing M-Pesa freely pilot the product and "watch and learn", to a political crisis paralyzing traditional banking institutions and leaving Kenyans with little alternative to using mobile money. Back in 2009 the Kenyan government exempted handsets from the value added tax, bringing their price down by 16%. In the next three years, this policy resulted in tripling mobile phones' sales and an increase in mobile penetration from 29% to 39% (GSMA, 2017). In the same period mobile-related employment went up by 67%, while the share of national GDP generated by the sector increased by 3.5 times (Deloitte & GSMA, 2011). The below graph based on GSMA 2017 data (GSMA, 2017. P. 36) illustrates an effect of introducing VAT exemption for handsets in Kenya on country's mobile penetration in 2009-2011.



Source: Taxing mobile connectivity in Sub-Saharan Africa A review of mobile sector taxation and its impact on digital inclusion (GSMA, 2017, p. 36)

However, when the Kenyan government started taxing mobile money and some other financial transactions at 10% in 2012, such transactions dropped by 5% in just three following months (The Economist, 2013). More detailed information on reforms' effects can be seen in table 4. The numbers indicate that a simpler, and more convenient taxation of the digital finance industry increases technology's penetration, while heavier taxation hinders it. Allowing, encouraging regulation and the innovative "no objection letter" was another key factor which made DFS success in Kenya possible.

Table 4: DFS taxation and mobile penetration in Kenya

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Tax Revenue in billion out of which:	485441.81	540163.623	641468.615	716766.389	811896.401	976913.527	1085219.396	1231771.102	1399657.644
VAT (taxes on good and services), billion	126877.712	141040.946	171679.063	174787.553	183218.51	233557.527	264871.669	290843.417	336572.343
GDP (Real, $, million)	36,899	40,000	42,443	44,380	46,989	49,506	52,337	55,409	58,110
Customs & Import duty (taxes on international trade)	51183.887	57046.917	66349.245	76877.556	82742.951	113700.859	120612.133	125024.982	131577.374
Mobile penetration (%)	47.34	59.41	65.03	69.3	69.93	72.02	78.77	79.47	85.25

4.2. Benin

The Decree N341 dated 35 July 2018 and supposed to be effected 3 August of the same year introduced an additional 5% tax on "the value of all voice, SMS and internet services", as well as a fixed charge of XOF5 (USD0.0089) per megabyte of data used 'for access to the internet to provide a bypass service (OTT [over-the-top] platform) or a social network platform', which meant driving up the cost of a single gigabyte of data by nearly 250% (CommsUpdate, 2018). However, taxpayers' protests were heard by the government, and the Decree, the additional costs associated with which were considered by many taxpayers as prohibitive, never entered into force. Similar initiatives in Uganda and Zambia, however, did not receive this kind of resistance from the general public, and were enacted in law (Internet Health Report, 2019).

The initial motivation behind the decree was helping out mobile operators. According to a statement of the ARCEP, a regulator of digital communication, "between 2016 and 2018, operators lost around 30 billion [CFA] of turnover due to the invasion of OTTs, which do not contribute to the turnover of the operators they use, infrastructure or national tax revenues" (Stork et al, 2020). When providing official reasons for deciding to not enact the decree, the government outlined the following concerns: negative impact on consumption; technical difficulties in implementing the tax; insufficient warning to consumers and collusion between operators on pricing (Communiqué of the Council of Ministers on Decree No. 2018-341 of 25 July 2018).

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Statistics demonstrates that in between 2016 and 2018, when mobile internet prices declined due to OTTs, traffic of the mobile network and a number of mobile Internet subscribers actually increased (Stork and Esselaar 2019). Potential losses due to introduction of extra tax are conservatively estimated as forgone GDP growth of USD 260 million and forgone revenue of USD 40 million (Alliance for Affordable Internet, 2019).

The proposed tax policy design cannot be called broad-based, fair or equitable: it only concerned one particular sector of the economy and would cause economic distortions if enacted. It was not simple or enforceable and the main reason it was withdrawn was the difficulty of implementation. The bill did not take externalities into account and would negatively affect the competition as taxing airtime and mobile data consumption favors fixed broadband and Wi-Fi at the expense of mobile broadband. After all, the tax design was regressive (Stork and Esselaar 2019).

4.3. Zimbabwe

After facing increasing inflation and currency shortages for a while (Karombo, 2018), in Autumn 2018 the Zimbabwean Ministry of Finance announced an increase in tax on mobile wallets and electronic transactions from a flat five cents per transaction to two cents per each dollar transacted[3]. Thus, for anyone spending over one dollar in such transactions, an increase in tax represented a significant additional cost of using digital financial services. The rationale behind the tax policy change was collecting additional revenues to address the fiscal deficit faced by the government and to stabilize the economy. However, in his statement a newly appointed minister of finance Mthuli Ncube also stressed that the change in taxation rules was a response to "the huge increase in electronic and mobile phone based financial transactions" (Donkin, 2018). Some believe the real reason behind the new tax design was "intense lobbying from the Bankers Association of Zimbabwe (BAZ) for the Zimbabwean central bank to regulate mobile money services "to create a level playing field" in the financial services sector" after refusal of Econet Wireless, country's biggest telecoms firm, to make its EcoCash mobile money platform available for integration with Zimbabwe's official banks. However, Patrick Chinamasa assured the public that the tax was introduced due to commitment to the principle of fairness: in his statement he mentioned that "Notwithstanding the positive impact of mobile banking services on the welfare of the then financially excluded members of our society, this product should, however, conform to the tax principle of fairness, hence, the current tax on similar products such as ATM and PoS should apply"(Karombo, 2014).

After declaring the intention to redesign the tax, the Zimbabwean government received significant amounts of criticism, in particular from the Confederation of Zimbabwe Industries which was arguing that "this tax will compound through the value chain" as the 2% charge will apply at each value chain stage, thus putting Zimbabwean producers in a disadvantaged position compared to international competition. However, the Government decided to keep the tax in place, but with some increase in

[3] Statutory Instrument 205 of 2018

a tax-free threshold (MobileMoneyAfrica, 2019). As the tax is still new, available information on its effects is still rather fragmentary. The table below provides some general tax statistics for Zimbabwe for 2009-2017 for the background. What is important, the mobile penetration in the country is at about 100%, which is when governments are more ready to tax digital connectivity hoping that tax increases would not affect nation's digital access.

Experience of Zimbabwe is an important reminder that different actors might have different understanding of what principles such as "fairness" mean, and sometimes what is believed by many to be fair might be considered as not the most effective policy. Taking the local context into account, such as the digital access rate and maturity of DFS market, is crucial for assessing potential consequences of a policy change.

Table 5: Selected macroeconomic data on Zimbabwe (Source: World Bank, Statista)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Tax Revenue in billion out of which:	0.888952604	2.099	2.528	3.053	Data not available	Data not available	3.605	3.237	3.603
VAT (taxes on good and services), billion	0.288277183	0.676763987	0.977896012	1.25	Data not available	Data not available	1.823	1.714	1.843
GDP (constant LCU, billion)	10.735	12.847	14.67	17.115	17.455	17.87	18.188	18.326	19.188
Customs & Import duty (taxes on international trade)	394.132.647	722.006.674	649.588.069	680.401.709	Data not available	Data not available	344.897.173	272.855.002	259.088.115
Mobile penetration (%)	31.86	60.64	71.35	96.18	102.12	86.84	92.35	91.79	98.99

4.4. Chad

For a long time, taxation of digital financial services, as well as mobile sector in general, remained very complex and comprised of multiple charges, taxes and fees payable by both consumers and operators (see the table below for more detail). As can be seen, consumers were liable for SIM activation tax, sales tax on both SIM and scratch cards, and international termination tax, while the operators were subject to **Autorité De Régulation Des Communications Électroniques Et Des Postes** (ARCEP) administration fee charged on revenues and not profits, and something called "USF contribution". The Universal Service Fund (USF) fee was introduced in 2014, is charged on revenues at 2.5% and is paid to the ICT development agency (GSMA, 2019). Recent changes to taxes and regulatory fees on the mobile sector in Chad are shown in table 6.

Table 6: Mobile sector taxation in Chad

Tax or fee	Previous rate	New rate	Year of change
Consumers:			
SIM activation tax	n/a	XAF 1,000	2013

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Sales tax on SIM and scratch cards	0.5%	1%	2016
International termination tax	n/a	XAF 50/minute	2014
Operators:			
ARCEP administration fee	3%	3.5%	2014
USF contribution	n/a	2.5%	2014

Source: Digital inclusion and mobile sector taxation in Chad (GSMA, 2016)

Later the Chadian government got concerned about such policies' potential to discourage innovation as well as investment, and decided to simplify the tax treatment of digital finance and the entire mobile sector. In December 2019 the Chadian Parliament approved the 2020 Finance Act (Law 043/PR/2019, 2019) Article 28 of which excluded fixed communications and internet services from an 18% tax on the monthly revenue reported by mobile operators. The document also changed taxation of towers (Article 826) so that sites in areas targeted by the universal service fund (USF) are no longer subject to fees, which range up to XAF 2.5 million (USD 4,240) per year, depending on the location (CommsUpdate, 2020). As the tax reform is still new, the data on its effects is still scarce.

4.5. Rwanda

Until 2012, a customs duty applied to headsets in Rwanda equaled to 30%, which was one of the highest in the world (GSMA, 2017). However, in 2012 country scrapped import duty on mobile phones, and in 2015 it liberalized taxation of telecom even further (TRTWorld, 2020) by removing import tax and VAT (Law n° 37/2012, 2012). An increase in mobile penetration was quick to follow, as can be seen from the table below.

Table 7: Selected macroeconomic data on Rwanda (World Bank, Statista)

	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Total Tax Revenue, out of which:	389939	440724	537439	645448	760158	865554	997232	1115647	1212540
VAT	125055	131665	156082	186015	219501	279275	305544	329331	350995
GDP (constant LCU, trillion)	3.097	3.411	3.99	4.564	4.929	5.466	5.968	6.672	7.6
Customs & Import duty	47700	43313	50044	67770	72280	85241	105472	128620	141838
Mobile penetration (%)	24.83	35.35	43.19	53.94	61.87	69.9	77.05	76.46	73.61

4.6. Ethiopia

Back in 2010, taxation of mobile phones in Ethiopia was one of the heaviest on the continent, with an unprecedented 38% levy applied to all handsets, keeping Ethiopia's mobile penetration rate well below African average. In 2010 the task force formed from representatives of the ETC, ETA, Revenue and Customs Authority, Glorious, Bravocom, Sima and Reem, main players of Ethiopian telecom market, which

argued that low per capita income, cost of ownership, and customs duty were keeping the penetration rate down, and advocated for exempting mobile phones from custom duty as they were the main way to access internet for Ethiopians and thus couldn't any longer be considered as luxury (Ezega.com, 2010). The effects of the granted tax exemption on mobile penetration can be observed from the following data.

Table 8: Selected macroeconomic data on Ethiopia (World Bank, Statista)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Tax Revenue, out of which:	22.241	31.501	47.435	70.081	75.983	93.478	108.397	126.813	139.364
VAT (taxes on good and services)	5.2	5.582	12.049	18.982	19.246	43.707	50.16	57.298	62.648
GDP (constant LCU, trillion)	0.783071	0.881351	0.979871	1.065	1.177	1.298	1.433	1.568	1.717
Customs & Import duty (taxes on international trade)	11.849	17.564	22.973	33.556	36.83	24.306	27.234	33.839	35.303
Mobile penetration (%)	4.75	7.82	15.67	22.13	26.89	31.08	41.96	49.44	37.22

4.7. Malawi

In May 2018 the Malawian Government exempted the mobile phones from a 25% custom duty and introduced a 10% airtime domestic excise tax effective from June 2018 (Gondwe, 2008). The reason behind the change was the customs duty not being very effective due to smuggling and evasion, as well as desire to increase connectivity and make mobile phones more affordable for general public. Chimango Chirwa, a Senior Marketing Executive for Celtel, called access to effective telecom services "a fundamental human right", supporting Government's policy. To stimulate an increase in mobile penetration even further, Celtel and TNM, two Malawi's main mobile operators, introduced subsidized mobile phones to the market. As a result, mobile penetration in the country increased from 17.59% in 2009 to 43.77% in 2017.

Table 9: Selected macroeconomic data on Malawi (World Bank, Statista)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Tax Revenue (current LCU, billion), out of which:	126.429	161.006	193.573	203.591	284.152	409.458	485.326	604.221	795.784
VAT (taxes on good and services), current LCU, billion	61.143	78.134	93.006	94.52	119.101	184.626	202.407	258.361	338.22
GDP (constant LCU, trillion)	0.979972	1.047	1.098	1.119	1.177	1.244	1.279	1.311	1.363
Customs & Import duty (taxes on	13.57	14.993	17.487	17.948	32.769	41.061	46.238	52.562	69.83

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international trade), current LCU, billion									
Mobile penetration (%)	17.59	21.44	26.41	30.18	33.4	34.58	39.22	41.72	43.77

5. CONCLUSION

After decades of relying on foreign help, most SSA countries only started to rely on tax revenues as main source of finance relatively recently, while significant part of economy remains informal still (International Labour Office, 2018). Relatively big and always formal, telecom companies are an easy target for tax authorities. Taxes on mobile phones and associated services are indeed quite easy to collect, but they might come at significant economic, social and political costs. On the contrary, favorable tax treatment of digital financial services and telecom industry as a whole in the long run is likely to result in economic benefits by far outweighing the revenues lost. Having analyzed the principles of good tax policy described above, as well as practical experience of some sub-Saharan countries, it possible to crystalize some tax policy recommendations for enabling development of DFS and, ultimately, economic growth in SSA countries. These recommendations are proposed next.

5.1. Minimise heavy sector-specific taxation

The heavy taxes imposed on the telecom sector in Sub-Saharan Africa is not in line with principles of good tax policy, and it does not facilitate region's economic development. Gradually bringing tax conditions of telecom in line with taxation of other industries can be recommended. As decrease of sector-specific taxation will unavoidably make mobile internet and digital financial services more affordable and will increase a number of users, the tax revenues in middle-and long-term will not be hurt.

5.2. Simplification

Tax obligations of the telecommunication sector should be simplified. Having to pay multiple relatively small taxes and fees, Sub-Saharan mobile operators are facing significant compliance costs affecting their business. Eliminating such taxes or fees or unifying them can have a positive impact on the economy, but such changes need to be designed carefully.

5.3. Reduce uncertainty

Uncertainty regarding the tax rules applicable needs to be eliminated where possible. Tax legislation in Sub-Saharan Africa is changing constantly, and the unpredictability of the tax changes increases the costs of doing business and affects the business climate and investors' expectations negatively. Unnecessary changes of tax legislation should be avoided, and stability of tax rules seen as a goal.

5.4. Eliminate classification of handsets as luxury for purposes of taxation and exempt handsets from customs duty

Consumer taxes based on handsets being classified as "**luxury**" should be eliminated, and mobile phones should be treated as any other good or even as a necessity. For most Africans they are the only way to access digital financial services, as well as internet which is used for providing health services, security and humanitarian help among other things. **Exemption** of handsets **from customs duty**, even temporary, also seems to be the most effective tax policy tool in improving access to mobile internet and, hence, digital financial services.

5.5. Eliminate fees imposed for international calls

Eliminating **international calls fees** would significantly (almost twice) decrease cost of international communication and stimulate international trade and foreign investment.

5.6. Favourable tax treatment for DFS

Finally, digital financial services themselves should receive favorable tax treatment. Their potential for ending extreme poverty, supporting sustainable economic growth, women's rights and even democracy is significant, and extra tax revenues received from taxing such services heavily are incomparable with potential benefits.

BIBLIOGRAPHY

Overview of Financial Inclusion in Africa – Startup Perspective / Inner Circle, 2019. Available at https://gomedici.com/overview-financial-inclusion-africa-startups-perspective;

World Bank Topics – Financial Inclusion. Available at https://www.worldbank.org/en/topic/financialinclusion;

Least developed countries / Wikipedia. Available at https://en.wikipedia.org/wiki/Least_developed_countries#Africa;

Women and Digital Financial Services in Sub-Saharan Africa: Understanding the Challenges and Harnessing the Opportunities. // International Finance Corporation, World Bank Group, 2018. Available at https://www.ifc.org/wps/wcm/connect/a230350b-4610-4d68-a008-7af5b58639d6/IFC_MCF_Field+Note+10_DFS+and+Gender+in+Africa.pdf?MOD=AJPERES&CVID=mvb-zJp;

DIGITAL ACCESS: THE FUTURE OF FINANCIAL INCLUSION IN AFRICA, WB/IFC, Mastercard foundation, 2018 Available at https://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/sub-saharan+africa/resources/201805_report_digital-access-africa;

Global Findex database 2014. Available at https://thedocs.worldbank.org/en/doc/681361466184854434-0050022016/original/2014GlobalFindexReportDKSV.pdf;

Digital Financial Services. A report of the World Bank authored by Ceyla Pazarbasioglu, Alfonso Garcia Mora, Mahesh Uttamchandani, Harish Natarajan, Erik Feyen, and Mathew Saal. April 2020. Available at https://pubdocs.worldbank.org/en/230281588169110691/Digital-Financial-Services.pdf;

The Mobile Economy. Sub-Saharan Africa, 2019/ GSMA. P.2. Available at https://www.gsma.com/subsaharanafrica/resources/the-mobile-economy-sub-saharan-africa-

ISSN 2664-1968 (print)
ISSN 2789-1836 (online)

2019#:~:text=Sub%2DSaharan%20Africa%20will%20remain,representing%20around%20half%20the%20population;
Neo Sesinye (2016), 66 percent of sub-Saharan Africans are listed as “unbanked” – World Bank // IT News Africa. https://www.itnewsafrica.com/2018/12/66-percent-of-sub-saharan-africans-are-listed-as-unbanked-world-bank/;
Mutsa Chironga, Hilary De Grandis, and Yassir Zouaoui (2017), Mobile financial services in Africa: Winning the battle for the customer/ https://www.mckinsey.com/industries/financial-services/our-insights/mobile-financial-services-in-africa-winning-the-battle-for-the-customer;
GSMA Mobile Money Deployment Tracker. Available at https://www.gsma.com/mobilefordevelopment/m4d-tracker/mobile-money-deployment-tracker/?utm_source=homepage&utm_medium=button;
GSMA Intelligence, replicated from “Taxing mobile connectivity in Sub-Saharan Africa”, 2017;
Kieron Monk (2019), “Rwanda opens 'first entirely homemade' smartphone factory in Africa”, available at https://edition.cnn.com/2019/10/08/africa/rwanda-smartphone-factory/index.html;
Chad General Tax Code (Code général des impôts), 2016. Available at https://www.a-mla.org/images/acts/cgi_2016_Tchad.pdf.pdf;
Gabonese Tax Code (CODE GENERAL DES IMPOTS DIRECTS ET INDIRECTS), https://s3.amazonaws.com/rgi-documents/f9e8e4efcdcdad84d9d0843374fd3c061b2738bc.pdf;
ORDONNANCE-LOI N° 10/001 DU 20 AOUT 2010 PORTANT INSTITUTION DE LA TAXE SUR LA VALEUR AJOUTEE. Available at https://www.leganet.cd/Legislation/Dfiscal/TVA/OL.10.001.20.2010.htm;
Richard Asquith (2019), Zimbabwe cuts VAT to 14.5%. Available at https://www.avalara.com/vatlive/en/vat-news/zimbabwe-cuts-vat-to-14-5-.html;
Zimbabwe Revenue Authorities, “Change of VAT rate on Imports”. Available at https://www.zimra.co.zw/news/22-taxmans-corner/2064-change-of-vat-rate-on-imports;
CODE GENERAL DES IMPOTS de la Republique du Niger. Available at https://niger.eregulations.org/media/Code%20générale%20des%20Impôts.pdf;
Tax Information: VAT / Zambia Revenue Authority. Available at https://www.zra.org.zm/tax-information/#VAT;
CODE GENERAL DES IMPÔTS, REPOBLIKAN’I MADAGASIKARA. Available at http://www.impots.mg/public/upload/pdf/CGI-LFI-2018_314.pdf ;
Cameroon Tax Code. Available at https://www.impots.cm/sites/default/files/documents/General%20Tax%20Code%202021.pdf;
CODE DES IMPOTS Congolaise. Available at https://www.droitcongolais.info/files/les_impots_en_rdc.pdf;
Code des douanes de la CEMAC / Tax Code of Economic and Monetary Community of Central Africa / WTO / Chadian authorities;
GSMA (2016), Digital Inclusion in the Democratic Republic of the Congo: Taxation to support mobile affordability, growth and investment. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/gsma-digital-inclusion-in-the-democratic-republic-of-the-congo-summary.pdf;
L.S.M Kabweza (2014), Zimbabwe introduces 25% customs duty on mobile phones / TechZim. Available at https://www.techzim.co.zw/2014/09/zimbabwe-introduces-25-customs-duty-mobile-phones/;
GSMA (2017), Digital inclusion and mobile sector taxation in Niger. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/01/Digital-inclusion-and-mobile-sector-taxation-in-Niger_English_report.pdf;
THE CUSTOMS AND EXCISE ACT of Republic of Zambia. Available at https://zambialii.org/zm/legislation/act/1955//customs-and-excise-act.pdf;
GSMA (2019), Reforming mobile sector taxation in Madagascar. Available at https://www.gsma.com/publicpolicy/resources/reforming-mobile-sector-taxation-in-madagascar;
CEMAC Customs Code. Available at https://www.nationsencyclopedia.com/Africa/Cameroon-CUSTOMS-AND-DUTIES.html;
GSMA (2016), Digital Inclusion in the Democratic Republic of the Congo: Taxation to support mobile affordability, growth and investment. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/gsma-digital-inclusion-in-the-democratic-republic-of-the-congo-summary.pdf;
THE CUSTOMS AND EXCISE ACT of Republic of Zambia. Available at https://zambialii.org/zm/legislation/act/1955//customs-and-excise-act.pdf;
GSMA (2019), Reforming mobile sector taxation in Madagascar. Available at https://www.gsma.com/publicpolicy/resources/reforming-mobile-sector-taxation-in-madagascar;

CEMAC Customs Code. Available at https://www.nationsencyclopedia.com/Africa/Cameroon-CUSTOMS-AND-DUTIES.html;

GSMA (2016), Digital Inclusion in the Democratic Republic of the Congo: Taxation to support mobile affordability, growth and investment. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/01/gsma-digital-inclusion-in-the-democratic-republic-of-the-congo-summary.pdf;

GSMA/Deloitte (2015). 'Digital inclusion and mobile sector taxation 2015'. p. 14. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/06/Digital-Inclusion-Mobile-Sector-Taxation-2015.pdf ;

Henry Lancaster and Peter Lange (2020), Chad - Telecoms, Mobile and Broadband - Statistics and Analyses. Available at https://www.budde.com.au/Research/Chad-Telecoms-Mobile-and-Broadband-Statistics-and-Analyses;

Gabon Finance Act 2018;

GSMA, Digital Inclusion and Mobile Sector Taxation, 2016

Zambia to tax internet calls to protect telecoms firms. Available at https://www.businesslive.co.za/bd/world/africa/2018-08-20-zambia-to-tax-internet-calls-to-protect-telecoms-firms/;

Congo Finance Act 2018

Zambia to tax internet calls to protect telecoms firms. Available at https://www.businesslive.co.za/bd/world/africa/2018-08-20-zambia-to-tax-internet-calls-to-protect-telecoms-firms/;

Cameroon Tax Code

Cote d'Ivoire Code General des Impots. Available at http://www.dgi.cgici.com/indexs.htm;

Ghana VAT Act, available at https://gra.gov.gh/acts/ ;

KPMG Mozambique Fiscal Guide 2017/18. Available at https://home.kpmg/content/dam/kpmg/za/pdf/2018/Mozambique_%20Fiscal%20Guide_%202017_-%202018_New.pdf;

Mozambique Law 13/2016 of 30/12/2016. https://assets.kpmg/content/dam/kpmg/xx/pdf/2017/05/tnf-mozambique-may23-2017.pdf;

The Income and Value Added Tax Act 2012 / Crowe Africa VAT/GST Guide 2018-19. Available at https://www.crowe.com/sc/-/media/Crowe/Firms/Middle-East-and-Africa/sc/CroweHorwathSC/PDF-and-Brochures/Africa-VAT-guide-2018-19.pdf?la=en-US&modified=20181018171111&hash=E177B90934BEA258C1CEA99353552173AE197F47;

PwC (2013), A quick guide to Taxation in Gambia. Available at https://www.pwc.com/gh/en/assets/pdf/a-quick-guide-to-taxation-in-gambia-september-2013.pdf;

Sierra Leone Goods and Services Tax Act, 2009. Available at http://www.sierra-leone.org/Laws/2009-06.pdf;

Angola VAT Code as approved by Law No. 7/19 of April 24 2019, replacing Consumption Tax. Available at http://www.ucm.minfin.gov.ao/cs/groups/public/documents/document/zmlu/otux/~edisp/minfin951421.pdf;

Uganda Value Added Tax (VAT Amendment) Act, 2018. Available at https://www.parliament.go.ug › cmis › views ;

Uganda Revenue Authority (2015), Taxation Handbook: A Guide To Taxation In Uganda. Available at https://www.ura.go.ug/Resources/webuploads/INLB/TAXATION%20HANDBOOK%20.pdf ;

Deloitte (2018), Guide to fiscal information: Key economies in Africa 2018. Available at https://www2.deloitte.com/content/dam/Deloitte/za/Documents/tax/za_Key_Fiscal_Guide_2018_17518.pdf;

Cote d'Ivoire - Import Tariffs (2019). Available at https://www.export.gov/apex/article2?id=Cote-d-Ivoire-Import-Tariffs;

Ghana Import Duty – The Only Guide You Need. Available at https://ghanatrade.org/ghana-import-duty/ ;

National Revenue Authority: Customs Duty. Available at https://www.nra.gov.sl/import-and-export/customs-duty;

PwC (2021), Angola: Corporate - Other taxes. Value-added tax (VAT). Available at https://taxsummaries.pwc.com/angola/corporate/other-taxes;

ISSN 2664-1968 (print)
ISSN 2789-1836 (online)

Shipping to Angola: The Definitive eCommerce Guide. Available at https://www.easyship.com/countries/shipping-to-angola;
Customs & Excise Department under the East African Customs Union ASYCUDA ++ TRADE MANUAL, Edition: ASY 12.05/5. Available at https://www.ura.go.ug/openFile.do?path=//webupload//upload//download//staticContent//RGTMENU//307//620_asycuda_trade_manual.pdf;
Shipping to Malawi: The Definitive eCommerce Guide. Available at https://www.easyship.com/countries/shipping-to-malawi;
Saidou YANOG (2011), OVERVIEW OF TELECOMMUNICATIONS SECTOR TAXATION IN BURKINA FASO. Available at https://www.itu.int/ITU-D/finance/work-cost-tariffs/events/tariff-seminars/Geneva_Taxation/pdf/Yanogo-BurkinaFaso-en.pdf;
Shipping to Angola: The Definitive eCommerce Guide. Available at https://www.easyship.com/countries/shipping-to-angola;
Customs & Excise Department under the East African Customs Union ASYCUDA ++ TRADE MANUAL, Edition: ASY 12.05/5. Available at https://www.ura.go.ug/openFile.do?path=//webupload//upload//download//staticContent//RGTMENU//307//620_asycuda_trade_manual.pdf;
Global Mobile tax Review, GSMA / Deloitte, 2011. Available at https://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/gsmaglobaltaxreviewnovember2011.pdf;
Cote d'Ivoire: Raising Mobile Money Rates By Adding Taxes Is Killing the Golden Goose (2019). Available at https://allafrica.com/stories/201902240072.html;
Ordinance No. 2012-293 of 21 March 2012. Available at https://itweb.africa/content/Gb3BwMW8QOPq2k6V;
Communications Service Tax (Amendment) Act, 2019 (Act 998). Available at https://www.nca.org.gh/assets/Uploads/COMMUNICATION_SERVICE_TAX_AMENDMENT-_ACT_2019.pdf;
Ghana Mid-year Budget 2018. Available at https://www.mofep.gov.gh/sites/default/files/budget-statements/2018-Mid-Year-Budget-Statement-and-Economic-Policy_0.pdf;
ALLIANCE FOR AFFORDABLE INTERNET – MOZAMBIQUE COALITION (2015), DRIVING ECONOMIC GROWTH IN MOZAMBIQUE: RECOMMENDATION FOR STRATEGIC TAXATION FOR TELECOMMUNICATIONS. Available at https://1e8q3q16vyc81g8l3h3md6q5f5e-wpengine.netdna-ssl.com/wp-content/uploads/2015/07/A4AI-Mozambique-Rationale-for-Customs-Duty-Reduction_Full-Analysis_English_FINAL.pdf ;
The Gambia Trade Information Portal, Ministry of Trade, Industry, Regional Integration and Employment. Available at http://www.gambiatradeinfo.org/market-access/barriers/tariffs-and-quotas;
Digital inclusion and mobile sector taxation in Tanzania // GSMA / Deloitte, 2015. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Digital-inclusion-mobile-sector-tax-Tanzania.pdf;
Excise Duty (Amendment) Act 2018;
Freedomhouse. Freedom on the Net 2018. The Rise of Digital Authoritarianism. Available at https://freedomhouse.org/report/freedom-net/2018/rise-digital-authoritarianism;
Ordinance No. 2012-293 of 21 March 2012. Available at https://itweb.africa/content/Gb3BwMW8QOPq2k6V;
Communications Service Tax (Amendment) Act, 2019 (Act 998). Available at https://www.nca.org.gh/assets/Uploads/COMMUNICATION_SERVICE_TAX_AMENDMENT-_ACT_2019.pdf;
Ghana Mid-year Budget 2018. Available at https://www.mofep.gov.gh/sites/default/files/budget-statements/2018-Mid-Year-Budget-Statement-and-Economic-Policy_0.pdf;
ALLIANCE FOR AFFORDABLE INTERNET – MOZAMBIQUE COALITION (2015), DRIVING ECONOMIC GROWTH IN MOZAMBIQUE: RECOMMENDATION FOR STRATEGIC TAXATION FOR TELECOMMUNICATIONS. Available at https://1e8q3q16vyc81g8l3h3md6q5f5e-wpengine.netdna-ssl.com/wp-content/uploads/2015/07/A4AI-Mozambique-Rationale-for-Customs-Duty-Reduction_Full-Analysis_English_FINAL.pdf ;
The Gambia Trade Information Portal, Ministry of Trade, Industry, Regional Integration and Employment. Available at http://www.gambiatradeinfo.org/market-access/barriers/tariffs-and-quotas;
Digital inclusion and mobile sector taxation in Tanzania // GSMA / Deloitte, 2015. Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/01/Digital-inclusion-mobile-sector-tax-Tanzania.pdf;

Excise Duty (Amendment) Act 2018. Available at The Excise Duty (Amendment) - Parliament of Uganda. Available at https://www.parliament.go.ug › cmis › views;

Mauritius Value Added Tax Act. Available at https://www.mra.mu/download/VATAct.pdf;

PROCLAMATION NO. 285/2002 VALUE ADDED TAX PROCLAMATION. Available at https://dfsobservatory.com/content/value-added-tax-amendment-proclamation-no1157-2019;

South African Revenue Service. Available at https://www.sars.gov.za/TaxTypes/VAT/Pages/default.aspx;

Eswatini Revenue Authority FAQ. Available at http://www.sra.org.sz/resources/faqs.php?category=VAT;

Legal Notice No 27, Government Gazette No 24 of 23 March 2018. Available at http://www.lra.org.ls/tax-rates;

Botswana Unified revenue Service VAT FAQ. Available at http://www.burs.org.bw/index.php/tax/value-added-tax;

A guide to taxation in Rwanda// PwC, 2015. Available at https://www.pwc.com/rw/en/assets/pdf/taxguide2015-rwanda.pdf;

PwC Tax Summaries: Senegal. Available at https://taxsummaries.pwc.com/senegal;

Mauritus Revenue Authority: Custom Charges. Available at https://www.mra.mu/index.php/customs1/travellers/13-customs/147-customs-charges;

Australian Trade and Investment Commission: Tarrifs and Regulations. Available at https://www.austrade.gov.au/Australian/Export/Export-markets/Countries/Mauritius/Doing-business/Tariffs-and-regulations;

Mauritius Customs Tariff Act, Schedule 2. Available at https://www.mra.mu/download/CustomsTariffAct.pdf;

Ethiopian Customs Guide // Ethiopian Revenues and Customs Authority, March 2017. Available at http://admin.theiguides.org/Media/Documents/Ethiopia_Customs_Guide.pdf;

SCHEDULE 1 / PART 2B TO THE CUSTOMS AND EXCISE ACT, 1964 (TARIFF BOOK), up from 7% since 1 April 2018. Available at https://www.sars.gov.za/legal-counsel/primary-legislation/schedules-to-the-customs-and-excise-act-1964/ ;

Eswatini Revenue Authority: Swaziland Customs. Available at http://www.sra.org.sz/customs/swaziland-customs.php;

Lesotho Trade Information Portal: Customs Duty and VAT. Available at https://www.lesothotradeportal.org.ls/?r=site/display&id=82;

Shipping to Botswana: The Definitive eCommerce Guide. https://www.easyship.com/countries/shipping-to-botswana;

Customs or Import duty for Mobile phones to Rwanda (2014). Available at https://customsdutyfree.com/customs-or-import-duty-for-mobile-phones-to-rwanda/;

PwC Tax Summaries: Chad. Available at https://taxsummaries.pwc.com/chad;

PwC Tax Summaries: Chad. Withholding taxes. https://taxsummaries.pwc.com/chad/corporate/withholding-taxes;

BuddleCom. Chad - Telecoms, Mobile and Broadband - Statistics and Analyse https://www.budde.com.au/Research/Chad-Telecoms-Mobile-and-Broadband-Statistics-and-Analyses;

PwC Tax Summaries: Gabon, Tax on corporate income https://taxsummaries.pwc.com/gabon/corporate/taxes-on-corporate-income;

PwC Summaries: Republic of Congo, Tax on corporate oncome https://taxsummaries.pwc.com/republic-of-congo/corporate/taxes-on-corporate-income;

Reforming mobile sector taxation in Guinea: Unlocking socio-economic gains from mobile connectivity. GSMA & EY, 2018;

Nigel Gambanga (2017), Zimbabwe's mobile operators saddled with huge tax burden – Government takes 27.5 cents off every $1, another 5 cents to be added https://www.techzim.co.zw/2017/02/zimbabwes-mobile-operators-saddled-huge-tax-burden-government-takes-27-5-cents-off-every-1-another-5-cents-added/ ;

PwC Tax Summaries: Nigeria, Tax on corporate income https://taxsummaries.pwc.com/nigeria/corporate/taxes-on-corporate-income ;

PwC Tax Summaries: Zambia, Tax on corporate income https://taxsummaries.pwc.com/zambia/corporate/taxes-on-corporate-income ;

ISSN 2664-1968 (print)
ISSN 2789-1836 (online)

Reforming mobile sector taxation in Madagascar: Unlocking economic and social benefits through tax reform in the mobile sector. GSMA & EY, 2019. https://www.gsma.com/publicpolicy/wp-content/uploads/2019/03/GSMA_Madagascar-report_76pp_WEB.pdf;
Deloitte (2021), Corporate Tax Rates https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-corporate-tax-rates.pdf ;
PwC Summaries: Republic of Congo, Tax on corporate oncome https://taxsummaries.pwc.com/republic-of-congo/corporate/taxes-on-corporate-income ;
GSMA (2017), Digital inclusion and mobile sector taxation in Niger. P. 5;
GSMA (2018), Promoting economic and social development through a more efficient tax system. P. 27;
GSMA & EY (2017), Taxation in Madagascar: Unlocking economic and social benefits through tax reform in the mobile sector. P. 27;
GSMA (2017), Digital inclusion and mobile sector taxation in Niger. P. 5;
GSMA (2018), Promoting economic and social development through a more efficient tax system. P. 27;
GSMA & EY (2017), Taxation in Madagascar: Unlocking economic and social benefits through tax reform in the mobile sector. P. 27;
Digital inclusion and mobile sector taxation in Chad, GSMA and Deloitte, November 2016;
GSMA & EY (2018), Reforming mobile sector taxation in Guinea: Unlocking socio-economic gains from mobile connectivity. Available at https://www.gsma.com/publicpolicy/wp-content/uploads/2018/05/GSMA-Guinea-taxation-report-EN.pdf ;
Digital inclusion and mobile sector taxation in Niger, GSMA and Deloitte, January 2017;
KPMG Fiscal Guide 2015/16: Ivory Coast;
Navigating taxation 2019. Ghana Tax Facts and Figures. PwC, August 2019;
Mozambique Fiscal Guide 2017/18, KPMG;
PKF Gambia Tax Guide 2016-17;
Mary Genda -National Telecommunications Commission (NATCOM) Sierra Leone, September 2019;
Deloitte: Corporate Tax Rates https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-corporate-tax-rates.pdf ;
Digital inclusion and mobile sector taxation in Tanzania // GSMA, 2015;
PwC Tax Summaries: Uganda, Taxes in Corporate Income https://taxsummaries.pwc.com/uganda/corporate/taxes-on-corporate-income ;
Trading Economics: Malawi Corporate Tax Rate https://tradingeconomics.com/malawi/corporate-tax-rate;
Navigating taxation 2019. Ghana Tax Facts and Figures. PwC, August 2019;
Mozambique Fiscal Guide 2017/18, KPMG;
PKF Gambia Tax Guide 2016-17;
Mary Genda -National Telecommunications Commission (NATCOM) Sierra Leone, September 2019;
Deloitte: Corporate Tax Rates https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-corporate-tax-rates.pdf ;
Digital inclusion and mobile sector taxation in Tanzania // GSMA, 2015;
PwC Tax Summaries: Uganda, Taxes in Corporate Income https://taxsummaries.pwc.com/uganda/corporate/taxes-on-corporate-income;
Global Mobile Tax Review 2011, GSMA & Deloitte;
Mauritius Income Tax Act, 1995, available at https://www.mra.mu/download/ITAConsolidated.pdf ;
KPMG Corporate Tax Rate Table https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html;
South African Revenue Serivise: Corporate income Tax https://www.sars.gov.za/TaxTypes/CIT/Pages/default.aspx;
Eswatini Revenue Authority: Rates and Thresholds http://www.sra.org.sz/incometax/rates-and-threshholds.php;
Lesotho Income tax Act, 1993, http://www.lra.org.ls/taxes#collapseThree;
Botswana Unified Revenue Service. Income Tax: Companies http://www.burs.org.bw/index.php/tax/income-tax/companies;
Rwanda Revenue Authority: Corporate Income Tax https://www.rra.gov.rw/index.php?id=30;
Mobile taxation in Kenya: Accelerating digital development. GSMA, March 2020;
PwC Tax Summaries. Senegal: Corporate Income Tax https://taxsummaries.pwc.com/senegal/corporate/taxes-on-corporate-income;

Institute of Development Economics. Ethiopian Telecommunication Corporation (ETC) https://www.ide.go.jp/English/Data/Africa_file/Company/ethiopia04.html;
Rwanda Tac Guide 2016-17. https://www.pkf.com/media/10028466/rwanda-tax-guide-2016-17.pdf ;
Adam Smith, The Wealth of Nations, edited by Edwin Cannan, New York, The Modern Library, 1994, pages 887 to 890;
Implementation of the Ottawa Taxation Framework Conditions: the 2003 Report. // OECD;
"Fundamental Principles of Taxation" chapter of the OECD 2014 "Addressing the Tax Challenges of the Digital Economy" report, pp. 30-31;
UN Report of the High Level Panel on International Financial Accountability, Transparency and Integrity for Achieving the 2030 Agenda, 2020, available at: https://www.factipanel.org/;
Xan Rice (2007) Kenya sets world first with money transfers by mobile http://www.theguardian.com/money/2007/mar/20/kenya.mobilephones;
Digital Financial Services in Africa: Beyond the Kenyan Success Story. // European Investment Bank, UN CDF, 2014. P.3;
Deloitte/GSMA, "Mobile telephony and taxation in Kenya", 2011;
Taxing mobile connectivity in Sub-Saharan Africa A review of mobile sector taxation and its impact on digital inclusion. // GSMA, 2017. P. 36;
Latif, L. (2020). The Evolving Thunder: The Challenges around Imposing the Digital Tax in Developing African Countries. International Journal of Digital Technology and Economy, Vol 4, No 1, DOI: 10.31785/ijdte.4.1.4
Latif, L. (2019). The challenges in imposing the digital tax in developing African countries. Journal of Legal Studies and Research, Vol 5, Issue 3.
"Charging the mobile", The Economist, June 2013;
Details of Public Revenues – Kenya / OECD.Stat https://stats.oecd.org/Index.aspx?DataSetCode=REVKEN;
Worldometer. GDP by Country: Kenya https://www.worldometers.info/gdp/kenya-gdp/;
Details of Public Revenues – Kenya / OECD.Stat https://stats.oecd.org/Index.aspx?DataSetCode=REVKEN;
S. O'Dea (2021) Number of mobile cellular subscriptions per 100 inhabitants in Kenya from 2000 to 2019 https://www.statista.com/statistics/509516/mobile-cellular-subscriptions-per-100-inhabitants-in-kenya/;
Carolyne Tanui (2018), Kenya's Mobile Phone Penetration Surpasses 100% Mark. https://kenyanwallstreet.com/kenyas-mobile-phone-penetration-surpasses-100-mark/;
Benin introduces new service tax / CommsUpdate. Available at https://www.commsupdate.com/articles/2018/08/28/benin-introduces-new-service-tax/;
Internet Health Report: Taxing social media in Africa, 2019 https://internethealthreport.org/2019/taxing-social-media-in-africa/ ;
Christoph Stork and Steve Esselaar. Regulatory and tax treatment of OTTs in Africa, 2019.
Christoph Stork, H. Sama Nwana, Steve Esselaar and Martin Koyabe (2020), Over The Top (OTT) Applications & the Internet Value Chain Recommendations to Regulators, Policy Makers and Tax Authorities. Available at https://cto.int/wp-content/uploads/2020/05/CTO-OTT-REPORT-2020.pdf;
Communiqué of the Council of Ministers on Decree No. 2018-341 of 25 July 2018, available at https://www.presidence.bj/actualites/comptes-rendus/117/Communique-du-Conseil-des-Ministres-a-propos-du-decretn%C2%B0-2018-341-du-25-juillet-2018 ;
Alliance for Affordable Internet (2019), WHEN THE PEOPLE TALK: Understanding the impact of taxation in the ICT sector in Benin. Available at https://1e8q3q16vyc81g8l3h3md6q5f5e-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/A4AI_Benin-Tax-Report_Screen_AW.pdf;
Tawanda Karombo (2018), Zimbabwe is hiking mobile money taxes to plug its fiscal deficit but it could backfire
https://qz.com/africa/1416072/zimbabwe-mobile-money-tax-hike-will-hurt-the-economy/;
Chris Donkin. Zimbabwe unveils new mobile money tax, 2018 https://www.mobileworldlive.com/money/news-money/zimbabwe-unveils-new-mobile-money-tax/;
Tawanda Karombo (2014), Zimbabwe imposes mobile money tax https://itweb.africa/content/KjlyrvwdWOL7k6am;
MobileMoneyAfrica (2019), ZIMBABWE: 2% transactional tax stays https://mobilemoneyafrica.com/blog/zimbabwe-2-transactional-tax-stays;
World Bank. Tax revenue (current LCU) – Zimbabwe. https://data.worldbank.org/indicator/GC.TAX.TOTL.CN?locations=ZW ;

ISSN 2664-1968 (print)
ISSN 2789-1836 (online)

World Bank. Taxes on goods and services (current LCU) - Zimbabwe https://data.worldbank.org/indicator/GC.TAX.GSRV.CN?locations=ZW;
WorldBank. GDP (constant LCU) - Chad https://data.worldbank.org/indicator/NY.GDP.MKTP.KN?locations=TD ;
Taxes on international trade (current LCU) - Zimbabwe https://data.worldbank.org/indicator/GC.TAX.INTT.CN?locations=ZW ;
Statista. Number of mobile cellular subscriptions per 100 inhabitants in Zimbabwe from 2000 to 2019. https://www.statista.com/statistics/510660/mobile-cellular-subscriptions-per-100-inhabitants-in-zimbabwe/;
Digital inclusion and mobile sector taxation in Chad. // GSMA, 2016 https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/01/Digital-Inclusion-and-Mobile-Sector-Taxation-in-Chad_English_report.pdf ;
Chadian Law 043/PR/2019;
CommsUpdate. Chad exempts internet services from cellco tax https://www.commsupdate.com/articles/2020/01/13/chad-exempts-internet-services-from-cellco-tax/ ;
Tech firm pits African-made smartphones against Chinese mobiles in Rwanda // TRTWorld, 2020 https://www.trtworld.com/africa/tech-firm-pits-african-made-smartphones-against-chinese-mobiles-in-rwanda-32664;
Law n° 37/2012 of 09/11/2012 on the code of Value Added Tax // COMPILATION OF FISCAL LAWS AND REGULATIONS IN USE IN RWANDA, RWANDA REVENUE AUTHORITY + THE EAST AFRICAN COMMUNITY CUSTOMS MANAGEMENT (AMENDMENT) ACT;
OECD.Stat: Details of Public Revenues – Rwanda. https://stats.oecd.org/Index.aspx?DataSetCode=REVRWA;
WorldBank: https://data.worldbank.org/indicator/NY.GDP.MKTP.CN?locations=RW ;
Statista. Number of mobile cellular subscriptions per 100 inhabitants in Rwanda from 2000 to 2019. https://www.statista.com/statistics/510562/mobile-cellular-subscriptions-per-100-inhabitants-in-rwanda/ ;
Ezega.com, 2010. Task Force Recommends Elimination of Mobile Phone Taxes. https://www.ezega.com/News/NewsDetails?Page=heads&NewsID=2238;
WorldBank: Tax revenue (current LCU) - Ethiopia https://data.worldbank.org/indicator/GC.TAX.TOTL.CN?locations=ET ;
WorldBank: Taxes on goods and services (current LCU) - Ethiopia https://data.worldbank.org/indicator/GC.TAX.GSRV.CN?locations=ET;
WorldBank: GDP (constant LCU) - Ethiopia https://data.worldbank.org/indicator/NY.GDP.MKTP.KN?locations=ET;
WorldBank: Taxes on international trade (current LCU) - Ethiopia https://data.worldbank.org/indicator/GC.TAX.INTT.CN?locations=ET;
Statista.com: Number of mobile cellular subscriptions per 100 inhabitants in Ethiopia from 2000 to 2017 https://www.statista.com/statistics/502058/mobile-cellular-subscriptions-per-100-inhabitants-in-ethiopia/;
GREGORY GONDWE (2008), Malawi introduces new tax measures on mobile phone services https://www.bizcommunity.com/Article/415/78/25031.html;
World Bank. Tax revenue (current LCU) - Malawi https://data.worldbank.org/indicator/GC.TAX.TOTL.CN?locations=MW&view=chart;
World Bank. Taxes on goods and services (current LCU) - Malawi https://data.worldbank.org/indicator/GC.TAX.GSRV.CN?locations=MW&view=chart;
WorldBank: GDP (constant LCU) - Malawi https://data.worldbank.org/indicator/NY.GDP.MKTP.KN?locations=MW;
World Bank. Taxes on international trade (current LCU) https://data.worldbank.org/indicator/GC.TAX.INTT.CN?view=chart;
Statista. Number of mobile cellular subscriptions per 100 inhabitants in Malawi from 2000 to 2019. https://www.statista.com/statistics/509554/mobile-cellular-subscriptions-per-100-inhabitants-in-malawi/ ;
Women and men in the informal economy: a statistical picture (third edition) / International Labour Office – Geneva: ILO, 2018. Available at https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_626831.pdf .