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Global Digitalization of Tax Administration: Lessons for Cameroon

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Abstract: Digitalization is an essential tool for the delivery of public services. The emergence of such services has taken the form of electronically mediated services such as e-taxation or e-filing. The process of digitization has equally seen the emergence of better information, better systems, and better policies, which will improve transparency, accountability, and governance whilst boosting tax revenues in Cameroon. Additionally, fiscal policy can be more targeted, achieving specific objectives such as supporting domestic demand, boosting fixed business investment, not least introducing and expanding a social safety net. The paper concludes with recommendations that enhance transparent revenue collection, streamline administrative procedures, and bolster governance. The ultimate findings is that Digitization will facilitate access to the tax base, broaden it and enable more agile fiscal policies designed to bolster incomes, consumption, and investment.

Introduction.

Digital transformation outside the public sector is changing citizens' expectations of governments' ability to deliver high-value real-time digital services across a range of sectors spanning health care, taxation, land registration, and education. In response to changing expectations triggered by a mix of supranational agreements and domestic needs, governments are implementing policies and changing their modes of operation to be more effective and efficient in attaining their objectives. These include but are not limited to transparency, accountability, and enhanced governance.

Digitalization concerns the use of information technology to improve government operations and the delivery of services to their citizens (Lindgren and Jansson, 2013) and relates to organizational change that at once achieves twin objectives of greater efficiency as well as greater transparency, accountability, and governance i.e. Kouam (2020). It is important to note that transformation and digitalization are not mutually exclusive, hence why it is important to make a distinction between the spillovers from digitalization and the implications for the public sector and external stakeholders (Bannister and Connolly (2014); Cordella and Bonina (2012); Coursey and Norris (2008) and Goldfinch and Wallis. (2010)).

Digitalization is indispensable to the delivery of public services, economic development, and improvements in standards of living. Automating processes reduces waste, lessens administrative bottlenecks, and enables data-driven economic and social policies. Developing economies have lagged due to entrenched structural impediments and the lack of vital digital infrastructure to serve as an anchor for the delivery of public services and economic growth on a sustained basis.

The Public Sector is charged with providing basic necessities for its citizens and improving standards of living; the government's *2035 vision* is evidence of this and the renewed push for digitization will enable the attainment of said objectives. In that regard, an effective tax system is indispensable to designing and implementing a credible fiscal policy that achieves socio-economic objectives as well as poverty reduction. Tax collection is central to government spending, social insurance, and fiscal policy more broadly.

Governments across the world are opting for transformational change in an attempt to adapt to changing societal and environmental challenges. Said transformational objectives transcend organized improvements of service delivery to citizens, but equally the creation of public value as well as improvements to the government's responsiveness and openness (Bannister and Connolly (2014); Gil-Garcia, Zhang, and Puron-Cid (2016) and Jansen & Estevez (2013)).

Meanwhile, Klievink, Bharosa, and Tan (2016) and Klijn (2008) find that digitization across taxation reflects a broader shift from bureaucratic forms of government to pluriform and networked forms of governance, which enable greater accountability (Stoker (2006)). Several authors find digital government to be a facilitator or even a driver of transformation (Dunleavy et al; (2006) and Klievink., Bharosa, and Tan (2016)). The effectiveness of fiscal policy hinges on the collection and use of financial resources to stabilize the economy, reduce the negative effects of business cycles, and pursue distributional objectives via public spending.

Similarly, such spending on social safety nets, health and education services, infrastructure, and so on are contingent on better systems, that improve the design and implementation of policies. Digitalization is often seen as the anchor of transformation across the public sector, but it is not clear that the relationship between both can be termed “deterministic”. It is, therefore, logical for one to investigate the implications of digitalization via electronic taxation across the economy.

The aim of this paper is, to first, ascertain the impact of digitization across the public sector, whilst outlining the transformational effects of e-public services. Secondly, it delineates probable transformational outcomes by outlining an integrated approach to the design and delivery of fiscal policy. It concludes with recommendations with proposals to improve revenue collection and the delivery of fiscal policy.

In order to achieve this, the paper first outlines the concept of digital government, followed by global literature implications for the public service and external stakeholders. We then go on to investigate the probable transformational outcomes that result from e-taxation in Cameroon, drawing from a broad-based literature.

This second chapter provides definitions of key terms and frames public sector transformation within the context of public value creation. Chapter three comprises an extensive and broad-based literature review covering key themes around public sector digitization and e-taxation – namely better information, better systems, and better policies. A discussion ensues in chapter five, followed by a recommendations and conclusions section.

Chapter 2: Literature Review

Definition and Dimensions of digital government transformation.

The discourse on digitalization notes that governments are considered to be the drivers if not facilitators of digital transformation (Dunleavy et al. (2006); Nograšek and Vintar. (2014). Drawing from Lindgren and Veenstra (2018) we look at transformation through the lens of public value creation; i.e. Better information, better systems, and better policy. However, such a simplistic approach will capture the medium-term effects of digitalization without recasting the implications on public policy.

As such, the paper equally denotes a framework that elucidates the implications for evidence-based policy, intra as well as inter-agency decisions making across. While the primary objective of this paper is a deep dive into the implications of digitization across the public sector, it equally posits that the process of digitization of public service delivery enables public sector transformation via streamlined processes, data-driven decision-making, and the creation of public value.

2.0: Digitalization of Public Services.

Digitalization spans the digitization of services and the development of public e-services to include initiatives such as e-participation and open data that have gained eminence in the last decade across emerging and advanced economies. According to Lindgren and Jansson (2013) public e-services can be understood as electronically mediated services, provided by public organizations, through which users (citizens and businesses) and the supplying organization create value through the users’ consumption of the service. As such, public e-services are highly influenced and embedded within specific contexts as digitization goes beyond developing information technology.

Given endeavors to digitalize the delivery of public services affect a multitude of stakeholders within different parts of government and society Axelsson, Melin, and Lindgren (2013); Sæbø, Skiftenes, and Sein (2011), this paper seeks to ascertain the effects on digitization on Cameroon. It is important to look at several aspects of digitization such as the digitization of public services as a means to create public values. Firstly, what comprises value-creation comprises the effectiveness of decision-making for various stakeholders, and the co-creation of novel data sets from existing data (Klijn. (2008); Voorberg, Bekkers, and Tummers. (2015). Finally, the uniformity of interest increases the notion of transparency and enhances the delivery of e-services from the public services.

2.1: Public Value Creation.

Public sector transformation is better illustrated within the context of public sector reform, which includes but is not limited to improving access and the quality of public services, improving the effectiveness of government, and streamlining operations. Furthermore, public sector transformation equally has the inevitable effect of increasing the chances that the policies that are chosen and implemented will be effective (Pollitt and Bouckaert, (2004)), Kouam (2019)). The latter occurs via a mix of open forms of government and digital technologies that respond to changing demographics, whilst simultaneously addressing issues such as climate change over the long run. For Cameroon, a low-middle-income country, digital technologies in public services are indispensable to contributing to societal challenges across health care, education, infrastructure, energy access, doing business (Nkafu Doing Business Report), etc.

Public value is created by improving the working of the public sector and directly serving private citizens. This is expected to occur via greater coordination of departmental actions Perri, (2004); Christensen and Lægreid (2007), enabling collaborations via intentional and structurally determined networks. It becomes increasingly challenging to achieve accountability when decision-making becomes intertwined, but this need not be the case with digitized and data-driven decision-making. Not only does the benefit of better decision-making accrue to citizens via high-quality e-public services, but it also empowers government decisions, that can be at once transformational across different networks spanning urban planning, Ministry of Finance, Education, health, and environment. Digitalization enables governments to conduct more effective fiscal policy, using information to build transparent systems that improve the design and implementation of better policies.

Better Information

The most crucial benefits of the digital revolution span the ability to collect, process, and disseminate timely, easily accessible, and transparent information on economic activity. Greater storage capacity and digital processes mean businesses can now collect more information on taxpayers, and rack and record vast amounts of transactions and interactions in domestic economies (Aker; Roy, and Rai (2017).

Gupta et al. (2017) posit that tax authorities are increasingly gaining access to the vast amount of information held by the private sector—such as data on bank transactions and interest income—through the use of digital systems, standardized reporting formats, and electronic interfaces. Systems for sharing information have also improved. As such single-view online portals and/or digital platforms equally allow authorities across government departments to access valuable data.

In Australia and the United Kingdom, tax authorities are now receiving real-time information on payroll, while Brazil and Russia are using electronic invoicing systems that allow real-time access to data on firm sales (Edicom (2020) and Generix Group (2020)). With the automation of public finance management, several governments can now access high-frequency fiscal data via digitized processes.

Digitalization equally allows for more precise identification of individuals or businesses and their associated activities. In that regard, new technology is effective at monitoring and recording biometric information to provide unique, secure, and less costly alternatives to paper-based documentation systems and decision-making.

Many developing economies are using physical traits such as fingerprints, iris scans, and DN to strengthen digitization across civil registries and national ID card systems. This has made it easier for governments to authenticate the identity of their citizens.

Latin America is the leader in biometric-enhanced national identity systems even as other regions such as Africa (Nigeria, South Africa and Cameroon) are establishing such systems (Gelb and Clark, 2013). In South Asia, Afghanistan, Bangladesh, Nepal, and Pakistan have equally applied such systems. Meanwhile, India equally boasts the largest biometric system with over 1.1 billion registered citizens. The transition towards digital systems has the inevitable effect of improving tax receipts, reducing waste, and streamlining the process of tax collection.

Better Systems

Newer information systems and more advanced capabilities offer emerging possibilities for improving taxation and government spending policies. These range from lowering the cost of tax collection, to greater delivery of adequate public services among others. For developing market economies like Cameroon, the management of public finances and administering social programs are further improved by digitalization (Etoundi et al. (2016)).

Tax Administration as well as electronic filing systems reduce the cost of complaints for governments. According to the OECD (2006), many countries began experimenting with electronic filing of tax returns, for example, as early as 10 to 15 years ago. Furthermore, the government can use third-party information to improve compliance with tax payers simply having to verify this information (*Deloitte 2013*).

Access to additional information sources and capabilities to link existing information in various government systems is helping tax authorities to better detect evasion or avoidance. Digitalization has allowed governments to ensure the electronic monitoring of business activity and electronic invoicing has improved indirect taxation, a common area of fraud and revenue leakage.

Over several decades, governments are increasingly cross-checking value-added tax (VAT) invoices to ensure that the amounts presented are similar to what they have been charged. China appears to show that this can be done (Abass, 2016). This can boost tax administration, and bolster accountability, transparency, and governance while insulating public sector revenues over the long run. The Public System of Digital Bookkeeping or SPED as it is referred to in Brazil allows tax authorities to determine income tax contributions based on what the businesses previously entered into the digital bookkeeping reporting system.

The tax authority in the United Kingdom - *Her Majesty's Revenue and Customs (HMRC)* **connects computers** using broad resources as well as digital means to create a unique profile for each taxpayer. This level of analytical tools can be used to assess the behavior of consumers when new tax and spending policies are enacted. It draws on information from a wide range of government and corporate sources, as well as individual digital footprints, to create a profile of each taxpayer's total income. Such analytical capability could even be used to assess the behavioral impact of new tax and spending policies.

Digitization equally presents new roles for third parties and facilitates compliance in the emerging peer-to-peer economy. Where digital platforms intermediate transactions between buyers and sellers can sometimes allow undocumented activities.

These platforms record large volumes of data that are accessible by tax authorities and could play an important role in tax administration (Aslam and Shah, 2017). Meanwhile, in Estonia, the use of platform technology by companies such as Uber is linked to the tax office to ensure they collect taxes effectively. Meanwhile, in the Nota Fiscal Paulista program in São Paulo, Brazil, the government uses digital payment systems to encourage the enforcement of VAT at the final consumer stage by allowing a 30% tax rebate and lottery prizes to consumers who ask for receipts (GSMA, 2013).

Public Spending, Service Delivery, and Administration

Digitalization can help improve public service delivery by sharing information through texts about diseases and agricultural practices. For example, Cameroon & Estonia use digital platforms to deliver information from government agencies. In Estonia, citizens can vote online and consult their medical records, which are just a few of the 600 electronic services offered by their government (Cangiano, Gelb, and Goodwin-Groen, 2017).

Electronic payment systems equally reduce bureaucratic inefficiencies, improve fiscal savings, and facilitate the delivery of benefits (Aker, Roy, and Rai (2017); Cangiano, Gelb, and Goodwin-Groen (2017), respectively). In Haiti and the Philippines, digitization reduced the cost of social assistance programs by 50% according to Zimmerman, Bohling, and Rotman Parker (2014). This is evidence that governments are increasingly using biometric technology to improve the coverage and execution of social benefits. Some governments rely on biometric systems to execute public policy while managing tax administration.

In 2013, India's government's *Direct Benefit Transfer program* transferred cash grants directly to beneficiaries, reducing corruption and improving traceability (Roy and Rai (2017) Cangiano, Gelb, and Goodwin-Groen (2017)). Meanwhile, digitizing government payments will reduce fraud and corruption (Lund, White, and Lamb (2017)) as we saw in Sierra Leone during the Ebola crisis where healthcare workers were paid properly without their wages stolen by corrupt officials (Bangura 2016).

In Côte d'Ivoire, most secondary school students pay their school fees digitally, virtually eliminating the high levels of theft and bribery that were commonplace after the country's civil war (Frydrych, Scharwatt, and Vonthron 2015). As such, the fiscal benefits of digitalization equally span other sectors spanning education and health care.

Better Policies

Better access to information and improved digital systems as well as processing capacity can lead to new policy options. Not only does the digitization of the tax systems improve tax receipts and boost governance over the long run, but unified user information also allows the greater scope to rethink the design of tax policy. Furthermore, such outcomes are deemed more equitable and potentially more effective. This can enable better implementation of the income and capital gains tax, whilst equally reducing corporate credit fraud (*Kingsly, 2018*). Furthermore, global governance and information sharing will reduce financial crimes such as tax evasion and corporate tax fraud.

According to Kingsley (2020) technology that allows electronic tracking and tagging of individual consumer purchases could pave the way to more innovative and progressive systems of consumption tax over the lifetime of the consumer. Additionally, high-frequency fiscal data enables policymakers to better forecast tax revenues and prepare credible budgets. Daily fiscal data can equally enable the government's smooth business cycles and make informed decisions on macroeconomic outcomes. Governments will equally be able to better monitor cash balances and assess liquidity as well as borrowing needs (*Misch, Olden, Poplawski-Ribeiro (2017), Keiji (2017)*). For a country like Cameroon at risk of high debt distress, it is imperative to accelerate the adoption of transparent and fully serviced digital taxation systems for both citizens and households.

In many countries digitization is enabling better transparency, improved governance, and accountability whilst improving tax receipts and the delivery of fiscal policy. As outlined in the literature, countries spanning Ghana, Sierra Leone, India, Estonia, and the United Kingdom use digitized open systems to improve tax administration and the execution of public policy.

Chapter Three: Methodology

This paper seeks to answer the research question by employing a qualitative observation of global literature on the effects of digitization across the public sector. Furthermore, we find a diachronic analysis to be most appropriate as this will enable a cross-sectional approach to contextualizing the literature.

Conceptual Framework

The Digitization of public services has a broad set of aims and objectives that have not been clearly defined in any official documents. However, this paper investigates the positive spillovers from such an approach via broad-based international literature across both advanced, emerging, and developing market economies to determine the impact of e-public services across Cameroon.

The objectives can be broken down into three parts;

- *The transformational effects of e-taxation and implications of the design and implantation of fiscal policy in Cameroon.*
- *The implications of e-filing for transparency, accountability, and governance.*
- *Policy recommendations to streamline taxation over the long term and integrate decision-making to achieve broader socioeconomic objectives.*

Chapter Five: Analysis and Discussions:

Taxation in Cameroon.

According to the Cameroon Tax Directorate, a range of previous paper-based processes has been digitized spanning tax returns, tax clearance, property tax, Audit, Disputes, and taxpayer index (MINFI, DGT 2020). The directorate provides information salient to tax payments, training, and capacity-building events to improve the adoption of e-taxation across the private sector. The 2011 White Paper from the government has the aim of modernizing the administration by fostering results-oriented management based on new information and communications technologies. The delivery of public services via e-filing is a major step towards digitalizing tax-centric and revenue-based aspects of the public sector.

Internet Access and the e-public services

The delivery of e-filing is contingent on improved internet access in Cameroon. The deployment of fiber optics throughout the country will increase internet access, connectivity, and the adoption of e-public services across the country.

In 2016, a government paper (*CC_PRC, 2016*) noted a project spanning 6,000 km. The backbone network currently stands at 12,000 km, and the deployment of a strategic telecom network is essential to improving access to e-public services. In the April Issue of “Doing Business in Cameroon”, it is noted that barely 25% of Cameroon’s 360 main departmental townships have an optical transmission post, with a strong disparity in rural areas. Such impediments could lessen the transmissions from the process of digitalization, entrenching regional imbalances and occasioning digital divides on a less-than-transient basis.

Meanwhile, *Etoundi et al. (2016)* find that the deployment of a national backbone network (NBN) will boost connectivity and exacerbate digital linkages across Cameroon’s cities and beyond its borders.

Analysis: impact of E-taxation on public administration

While sufficient data are not available to quantify the impact of these digitalization efforts on tax collections, we argue that the digitalization of the tax system has reduced direct interaction between citizens and tax authorities, reducing opportunities for bribery and fraud. This has allowed the tax revenue authority to lower the cost of tax collection allowing many undocumented businesses to use phones for paying their tax.

In a world where databases are linked across government agencies and relevant third parties, this offers opportunities to expand the coverage of benefits, attempts to fight poverty through redistribution are often thwarted by the failure of many eligible citizens to register for benefits. Non-take-up rates can be high: a 2016 study for the French National Assembly estimated that one-third of eligible citizens failed to take up guaranteed minimum income benefits (*Before its 2016 reform*) (*Banerjee, 2017*). The non-take-up rate for in-work benefits was higher, at two-thirds of eligible citizens. If data from taxpayers are synchronized in all public agencies employers can have bank data obtained through biometric information to ensure greater compliance with tax authorities. This can equally be used to drive coverage and benefit payment without requiring lengthy

and possibly stigmatizing procedures for proving eligibility that involve filling in forms and standing in queues. Coverage inclusion as the default—rather than exclusion—would more closely align with the original policy objective and reduce poverty, though possibly at a higher fiscal cost.

Digitalization may improve tax enforcement technology by collecting more and more reliable information on the economic outcomes of taxpayers, and improve the equity-efficiency trade-off by implementing more complex tax systems to better target income redistribution. In doing so, digitalization potentially allows governments to improve tax administration and ensure fairer redistribution effects via public policy.

E-tax will equally improve the effectiveness of measures designed to broaden the non-oil tax base by the Direction General des Impôts (DGI)

The revised 2020 budget incorporates new measures that broaden the non-oil tax base to mitigate SONARA's impact (Prior Action). The 2020 budget incorporates 14 new measures that broaden the non-oil tax base and reduce the scope for exemptions. New tax measures

- i. Broaden the scope of VAT-taxable transactions to sales of goods and services provided through foreign or local electronic commerce platforms.*
- ii. Extend the scope of application of excise duties to digital audio-visual programs and content.*
- iii. Reduce the tax deductibility of provisions for bad debts.*
- iv. Strengthen the regime for forestry taxation.*
- v. Reform the process of registration of judicial documents.*

In addition, DGI plans to improve the recovery of tax arrears with a special new program that will tackle disputed taxes.

- i. New customs measures broaden the scope of export duties to semi-finished products, timber, rice, and crude palm oil, among others.*
- ii. New import duties are levied on cosmetics, tobacco, video and board games, certain types of motorcycles, confectionery, and chocolates.*

The new revenue measures are projected to increase total revenue by about CFAF 60 billion or 0.25% of GDP. Without them, the overall deficit would have been 2.3% of GDP. Furthermore, efforts to mobilize revenue would help build contingency buffers against elevated risks, particularly potential SONARA-related costs. As such, e-filing or the streamlining of tax procedures using electronic means will support the implementation of reforms designed to boost tax revenues. As policymakers build additional buffers, this will improve their ability to respond to periods of stress by better targeting public spending towards priority areas, sectors, and individuals.

Implications of E-filing across Cameroon

Digitalization may provide the government with greater information on individual consumption, such as due to the increased use of digital payment methods and the phasing out of cash payments. Whilst cash is unlikely to be phased out of Cameroon due to a persistent digital divide and poor connectivity, e-filing will enable governments to make informed decisions about how to adjust tax rates on various goods and services to

reflect consumption patterns. This will be useful in smoothing cyclical fluctuations in macroeconomic outcomes as policymakers can reduce the value-added tax to support purchases of domestically-produced goods and services and generate economic activity. Experience from both advanced and developing market economies.

Over the short run, better data collection will lead to evidence-based policies that are tailored to reflect domestic economic and social outcomes. As COVID-19 spread across the globe, Britain reduced VAT on restaurants to support the service sector (KPMG (2020) and GOV.UK (2020)). As e-filing is adopted and the data generated from online payments are included in policy consultations, fiscal policy can be adjusted on a sector and firm level to reflect changes in income levels and poverty. Such outcomes will improve the effectiveness of fiscal policy and remove impediments to issue-specific outcomes in the enactment of national and regional budgets spanning priority investments in health care, education, and renewable energy.

Digitalizing taxation will improve transparency, accountability, and governance.

Admittedly, e-filing and a digitalized taxation system will improve transparency, accountability, and governance. Before enacting a digitized system, there was a significant difference between forecasted and actual revenues. Following years of forecasting mishaps, which nonetheless reflected poorly on the public sector, multilateral institutions such as the IMF called for credible forecasts to guide decision-making (IMF, (2020)).

It would be unwise to speculate that poor governance adversely affected tax revenues, but Cameroon is indeed corrupt. According to Transparency International, Cameroon ranks **153** out of **180** countries. By digitalizing the prices of tax collection, not only will a digital trail eliminate incentives for corrupt practices, but the transparent nature of the digital process will undoubtedly cause governance to accrue to the public sector. Over the short run, the implications will be more readily felt on tax outcomes, but the longer run will see a lower divergence between forecasted and actual revenues.

The ability of digitized systems to leave a digital trail will create a disincentive for fraud, improve tax collection, and ensure effective monitoring of the taxation system. Findings from **Kingsley (2017)** show that digitalization has the inevitable effect of improving transparency by ensuring greater accountability of processes. As outlined by **Fambon (2006)**, developing market economies such as Cameroon will reduce the constraints posed by paper-based systems, human error, and poor governance. It will equally support evidence-based, not least targeted fiscal policy that achieves domestic economic objectives.

Furthermore, digitalization can help to generate information on and improve existing links between wealth (traded and non-traded assets, homeownership, pensions) and capital incomes (interest, dividends, capital gains, property income, pension accrual). This will have to be done in conjunction with other agencies such as land registry and urban planning to facilitate multi-agency cooperation that ensures evidence-based decision-making concerning wealth and capital gains tax are not only fair but can be distributed based on citizens' e-filing information. According to the IMF (2020) countries such as China expanded unemployment insurance following COVID-19 while Iran reduced its tax rate for its corporate sector.

Digitalization will allow financial institutions to act better as third-party reporters on capital incomes and wealth for the government and equally make it possible for consumers to act as third-party reporters for the VAT or sales tax, for example, by using electronic payment information (such as debit and credit card payments).

Such an outcome will boost transparency and improve governance across the public sector. In India, the government has combined the use of unique biometric identifiers (the Aadhaar program) and financial inclusion for both efficiency and effectiveness in social benefits and to reduce the number of illegitimate beneficiaries under welfare programs.

In Mexico, aligning the policy objectives of digitalization and centralization of payments through a “single treasury account” has improved the efficiency and effectiveness of both and contributed to financial inclusion. By creating X-Road—a data exchange layer that enables secure internet-based data exchange between information systems—and an advanced digital identity system, Estonia has significantly enhanced the effectiveness of its government. Ghana’s efforts to standardize digital identification and shift away from a cash-based economy are still facing challenges, but have contributed to reducing ghost workers included in public payrolls.

Frontiers for Tax Policy for Cameroon

Constraints in information are at the heart of economic analysis when it comes to taxation. Optimal tax theorists tend to regard governments can verifying all information or characteristics of the tax-payer. However, with 90% of the workforce employed in the informal sector, it is difficult to have such information about citizens. In such a world information is perfect and tax can be redistributed most effectively and tax avoidance is not possible. In reality, governments - even in advanced economies - do not have such perfect information about individual citizens as people may under-represent their income, wealth, or bequests to avoid paying any taxes. Governments use audits to ensure citizens comply and may impose penalties for citizens who don’t.

Digitalization increases the ability of governments to verify tax information and improve compliance. For instance, governments may use digital tools to verify whether individual consumption is at levels that are consistent with reported labor and capital income as well as other wealth holdings. Digitalization can assist governments with improving compliance by creating and linking emerging wealth and capital income registers by working with financial institutions. This is happening to a very limited extent.

Secondly, digitalization allows governments to leverage more sophisticated tax systems currently in place. For example, tax liabilities can be conditioned by the taxpayers’ annual income or income earned at various periods as well as spouses’ assets’ holdings. Governments can better target income distribution based on tax schedules. Of course, whether governments implement such tax reforms is driven by a mix of economic benefits and better tax enforcement, leading to more efficient systems.

However, there are concerns about horizontal equity, privacy, and potential abuse of power by the state. While these concerns are legitimate, there are not sufficient reason to slow the pace of digitalization. However, including these in the design of effective digital systems are necessary and indispensable.

Complementing institutional reforms

Taking full advantage of the opportunities availed by electronic taxation or e-filing will cause governments to reorganize themselves differently. Whilst Cameroon does not currently have a social safety net, digitalization will ease the integration of tax and social benefits systems over the long run recognizing that social support systems are simply negative taxes. While sorting out complex tax issues can be lengthy, it is not always easy to postpone rapidly changing personal circumstances. This paper is, of course, cognizant of the challenges that currently plague the Cameroon social security system.

However, as the country attempts to digitize and transition to emerging country status, it is nonetheless vital to elucidate the implications of electronic taxes on a probable social safety net. Not only does such an outcome reflect pragmatism in the policy-making process, but it equally provides a roadmap for policymakers to integrate e-filing into the social safety net, when this eventually occurs. Furthermore, linking information across government agencies such as health services and tax administration can allow a better budget formulation process that at once reflects credible forecasts and outcomes based on real-time tax payments.

Privacy concerns and centralized storage and processing systems

While increased information provides vital opportunities for a more targeted design and implementation of tax and spending policy in Cameroon, there are issues with the collection and storage of sensitive information. The real-time recording of digital information and the use of such data for marketing efforts have raised concerns about how such information should be collected, processed, and stored. While digital footprints are inevitable as consumers buy and make payments via digital means, there is usually unease about how governments collect and store data.

As outlined in the literature, some countries are beginning to transition to a single-platform approach, connecting information held by different government institutions and ministries, with centralized processing and storage of data. Admittedly, such systems will ensure more targeted taxation and spending, but they could upend the system in the event of a cyber-attack.

In the end, the nature and extent of possible data collection is a function of institutional and socio-political factors and may be limited in some contexts. However, this paper recommends sufficient oversight of citizens and business data as well as a credible response to attacks from malware. This should encompass response time, automated backups, and repellent software to protect any such centralized database.

Chapter Six: Recommendations:

While Cameroon is currently in the early stages of e-filing and/or e-taxation, we propose the following recommendations in order to improve the equity-efficiency trade-off by designing more efficient tax systems—where revenue can be raised with lower costs for governments.

- 1). Registers of asset ownership and shareholders in Cameroon allow for the taxation of capital income on residence rather than on a source basis. The corporate income tax could be used as a withholding tax on dividend income or abolished altogether. This should, however, be done in conjunction with a rising tax base that reflects an increase in the number of people employed in the formal sector across manufacturing, renewable energy, transportation, construction, and health care.

2. By combining information on all assets and capital incomes, a dual-income-tax system could be introduced, under which all capital incomes and wealth are linked and taxed under a single tax schedule: a synthetic capital income tax. This will further reduce bureaucracy and improve evidence-based policy as well as distributional programs.
3. Biometric identification and electronic transaction systems could allow progressive consumption taxes, reducing the need for low VAT rates on necessities for income redistribution. Over the long run, biometric information that considers metrics outside income could be used to design better consumption tax systems that reflect lower prices from the African Free Continental Free Trade Area
4. Nonlinear consumption taxes could be levied on goods that are perishable, non-storable, and non-transportable.
5. Tax schedules could jointly tax labor and capital income or wealth.
6. Tax schedules could jointly tax individual and household income. Citizens should be able to pay their taxes without bureaucratic procedures. For example, to register a business or non-profit, one must still go to the Directorate General of Taxation.
7. Separate tax schedules could be introduced based on individual or household characteristics, such as gender, age, disability, health, or children (“tagging”; Akerlof 1978).
- 8). Blockchain can be used for revenue collection, linking separate parts of consumer data and information. For example, we can link commercial transactions to tax declarations and allow for automatic settlement. This could equally prevent accidental reporting and bring about cognitive systems that spot underreporting.

Whether governments would like to implement such tax reforms is determined not only by the economic benefits of having better tax enforcement or more efficient tax systems, but also by horizontal equity, privacy concerns, and avoiding abuse of state powers. Indeed, these concerns might be the reason many of the suggested tax reforms have not been implemented so far, such as age-dependent or gender-based tax schedules. Moreover, political-economy constraints can prevent moving to the second-best frontier but a multi-sector and inter-agency approach will reduce the adverse distributional effects that could otherwise result from an imbalanced tax system.

However, information on the second-best frontier is important for policymakers, irrespective of whether political constraints prevent reaching this frontier.

Political distortions are important in real-world policymaking, but the literature does not provide crystallized ideas on how political constraints interact with tax distortions. The government can use the information provided by digitalization for both good and bad. Digitalization raises issues about the quality of government institutions and the protection of the privacy of citizens. Digitalization can improve tax systems, increase economic efficiency, and promote equity in countries with good institutions, well-functioning democracies, enforcement of the rule of law, and strict protection of the privacy of citizens. However, more digitalization may well prove counterproductive in countries with bad institutions, greater corruption, more authoritarian regimes, little or no rule of law, and no protection of the privacy of its citizens. Indeed, greater use of information can also enable bad governments to better realize bad policy objectives.

Conclusion.

The digital revolution is well underway and governments must adapt or be left behind, at grave social and economic costs. Each country's path to digitalization is contingent on its circumstances. This is particularly salient for taxation in developing economies such as Cameroon, where the process of taxing and spending is indispensable to the attainment of socio-economic objectives, transparent and evidence-based fiscal policy, and poverty reduction. This paper draws from global broad-based literature to show how digitization, e-filing, and interaction across various agencies can achieve credible policy outcomes that enhance the delivery of public services, reduce waste, and improve governance.

E-filing in Cameroon will occasion a "TAG" approach, whereby transparency, accountability, and governance will support the enactment, design, and implementation of data-driven fiscal policy. The paper finds that automated processes will improve transparency, accountability, and governance, which is indispensable to evidence-based design and implementation of fiscal policy.

Furthermore, e-filing or the digitalization of taxation will improve the enforcement capacity of tax authorities as well as compliance over the long run by linking data registries. Furthermore, e-filing will complement other institutional reforms that will eventually link the social safety net to tax receipts. Not only will streamlined liability payments, budget allocations, and social security provide greater clarity on the sustainability of Cameroon's external balances, it will equally enable policymakers to make credible spending decisions and adjust to exogenous macroeconomic shocks such as COVID-19.

Additionally, privacy concerns will emerge as a majority of tax payer's information is stored remotely. This paper argues for centralized information storage and decentralized processing centers across different regions to ensure that budgets or directives are better implemented and monitored. Meanwhile, such systems will not be prone to cyber-attacks; it is, therefore, imperative for a credible crisis response to be enacted to wade off risks from non-state actors.

The paper concludes with recommendations for both domestic and international e-filing, whilst proposing a dual approach to both the income and capital gains tax to reduce digital bureaucracy over the long run. It remains cognizant of the need to digitize the land tenure system, whilst creating incentives for individuals and corporations to report capital investments that are otherwise absent from the current system. Meanwhile, it equally illustrates how a single-use integrated blockchain system will automate the tax settlements as Vat and business rates could be merged into a single account and managed seamlessly.

Reference List.

1. Abhijit, B., Duflo, E., Goldberg, N., Karlan, D., Osei, R., Parienté, W., Shapiro, J., Thuysbaert, B. & Udry, C. (2015). A Multifaceted Program Causes Lasting Progress for the Very Poor: Evidence from Six Countries, *Science* 348 (6236).
2. Van Veenstra, A. F., Klievink, B. & Janssen, M. (2011). Barriers and impediments to transformational government: insights from literature and practice. *Electronic Government, An International Journal* 8(2-3), 226–241.
3. Cresswell, A. M., Burke, G. B. & Pardo, T. (2006). Advancing return on investment, analysis for government IT: a public value framework. Center for Technology in Government, University at Albany, SUNY.
4. Cordella, A. & Bonina, C. M. (2012). A public value perspective for ICT enabled public sector reforms: A theoretical reflection. *Government Information Quarterly* 29(4), 512–520.
5. Jansen, A. & Ølne, S. (2016). The nature of public e-services and their quality dimensions. *Government Information Quarterly* 33(4), 647–657.
6. Aslam, A. & Shah, A. (2017). *Taxation and the Peer-to-Peer Economy*. International Monetary Fund, Washington DC.
7. Axelsson, K., Melin, U. & Lindgren, L. (2013). Public e-services for agency efficiency and citizen benefit. Findings from a stakeholder-centered analysis. *Government Information Quarterly* 30(1), 10–22.
8. Bannister, F & Connolly, R. (2014). ICT, public values and transformative government: A framework and program for research. *Government Information Quarterly* 31(1), 119–128.
9. Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry* 12(2), 219–245.
10. Bram Klievink, Nitesh Bharosa, and Yao-Hua Tan. 2016. The collaborative realization of public values and business goals: Governance and infrastructure of public-private information platforms. *Government Information Quarterly* 33, 1 (2016), 67–79.
11. Brinkmann, S. & Kvale, S. (2009). *Interviews: an introduction to qualitative research interviewing*.
12. Bryson, J. M., Crosby, B. C. & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review* 74(4), 445–456.
13. Chapter 11. Roy, R. & Rai, S. (2017). *Fiscal Policy Consequences of Digitalization and Demonetization*. International Monetary Fund, Washington DC.
14. Chapter 12. Cangiano, M. & Gelb, A. & Goodwin-Groen, R. (2017). *Integration of Government Digitization and Public Financial Management – Initial Evidence*. International Monetary Fund, Washington DC.
15. Aker, J. C. (2017). *Using Digital Technology for Public Service Provision in Developing Countries: Potentials and Pitfalls*. International Monetary Fund, Washington DC.

16. Pollitt, C. & Bouckaert, G. (2004). *Public management reform: A comparative analysis*. Oxford University Press, USA.
17. Rigby, D. K., Sutherland, J. & Takeuchi, H. (2016). Embracing agile. *Harvard Business Review* 94(5), 40–50.
18. Coursey, D. & Norris, D. F. (2008). Models of e-government: Are they correct? An empirical assessment. *Public Administration Review* 68, (3), 523–536.
19. Tilson, D., Lyytinen, K. & Sørensen, C. (2010). Research commentary - Digital infrastructures: The missing IS research agenda. *Information Systems Research* 21(4), 748–759.
20. Deloitte. (2013). *Comparative Study of the Personal Income Tax Return Process in Belgium and 33 Other Countries*. London.
21. Digitizing Payments to Ebola Response Workers in Sierra Leone. Better Than Cash Alliance, New York.
22. Mua, K. K. (2018). *Financial Crime Investigation*. Christian Faith Publishing.
23. Mua, K. K. (2017). *Corporate Fraud Risk Management*. Christian Faith Publishing.
24. Klijn, E-H. (2008). Governance and governance networks in Europe: An assessment of ten years of research on the theme. *Public Management Review* 10(4), 505–525.
25. Etoundi, R. A., Onana, F. S. M., Olle, G. D. & Eteme, A. A. (2020). Development of the Digital Economy in Cameroon: Challenges and Perspectives. *EJISDC*. 76(7). 1 – 24.
26. Fambon. S. (2006). *Taxation in Developing Countries: Case Study of Cameroon*. Ideas Repec
27. Frydrych, J., Scharwatt, C. & Vonthron, N. (2015). *Paying School Fees with Mobile Money in Côte d'Ivoire: A Public-Private Partnership to Achieve Greater Efficiency*. GSMA, London.
28. John, G & Olden, B. (2013). *Cash Management and Debt Management: Two Sides of the Same Coin*. In *Public Financial Management and Its Emerging Architecture*, edited by Marco Cangiano, Teresa Curristine, and Michel Lazare. Washington, DC: International Monetary Fund.
29. Alan, G. & Clark, J. (2013). *Identification for Development: The Biometrics Revolution*. Working Paper 315, Center for Global Development, Washington, DC.
30. Stoker, G. (2006). Public value management: A new narrative for networked governance? *The American review of public administration* 36(1), 41–57.
31. GSMA. (2013). *The Mobile Economy 2013*. London.
32. H.E. Mr. Paul Biya. (2011). *The Public Finance Reform of Cameroon*.
33. Klein, H. K. & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 67–93.

34. Mintzberg, H. (1993). *Structure in fives: Designing effective organizations*. Prentice-Hall, Inc. [31] Mark Harrison Moore. 1995. *Creating public value: Strategic management in government*. Harvard University Press.
35. Lindgren, I & Jansson, G. (2013). Electronic services in the public sector: A conceptual framework. *Government Information Quarterly* 30(2), 163–172.
36. IMF. (2020). Cameroon: Fifth Review under the Extended Credit Facility Arrangement and Request for a Waiver of Non-observance of a Performance Criterion and Modification of Performance Criteria. IMF Country Report No. 20/48
37. Mergel, I. (2016). Agile innovation management in government: A research agenda. *Government Information Quarterly* 33, 3 (2016), 516–523. [29] Jeremy Millard. 2015. Open governance systems: doing more with more. *Government Information Quarterly* (2015).
38. J Ramón Gil-García and Theresa A Pardo. 2005. E-government success factors: Mapping practical tools to theoretical foundations. *Government Information Quarterly* 22, 2 (2005), 187–216.
39. J Ramon Gil-Garcia, Jing Zhang, and Gabriel Puron-Cid. 2016. Conceptualizing smartness in government: An integrative and multi-dimensional view. *Government Information Quarterly* 33, 3 (2016), 524–534.
40. Janine O’Flynn. 2007. From new public management to public value: Paradigmatic change and managerial implications. *Australian journal of public administration* 66, 3 (2007), 353–366.
41. Janja Nograšek and Mirko Vintar. 2014. E-government and organizational transformation of government: Black box revisited? *Government Information Quarterly* 31, 1 (2014), 108–118.
42. Jeremy Lonsdale. 2007. Helping government to be responsive, responsible, and respected: a reaction to Jocelyne Bourgon. *International Review of Administrative Sciences* 73, 1 (2007), 31–36.
43. Jesper Holgersson and Fredrik Karlsson. 2014. Public e-service development: Understanding citizens’ conditions for participation. *Government Information Quarterly* 31, 3 (2014), 396–410.
44. Kouam. H. (2020). Understated Issues Could Drive the BRI’s Success. Medium. Available [here](#)
45. Lindgren, I. & van Veenstra, A. F., (2018), Digital government transformation: a case illustrating public e-service development as part of public sector transformation, Pg. '18 Proceedings of the 19th Annual International Conference on Digital Government Research. <https://doi.org/10.1145/3209281.3209302>
46. Lund, S., White, O. & Lamb, J. (2017). The Value of Digitalizing Government Payments in Developing Economies.
47. Janssen, M & Estevez, E. (2013). Lean government and platform-based governance—Doing more with less. *Government Information Quarterly* 30, S1–S8.

48. Lipsky, M. (2010). *Street-level bureaucracy*, 30th ann. Ed.: dilemmas of the individual in public service. Russell Sage Foundation.
49. Ministry of Finance, Directorate General of Taxation. (2020)
50. Organization for Economic Co-operation and Development (OECD). (2006). *Using Third Party Information Reports to Assist Taxpayers Meet Their Return Filing Obligations— Country Experiences with the Use of Pre-Populated Personal Tax Returns*. Information Note, Forum on Tax Administration Taxpayer Sub-Group, Paris.
51. Øystein Sæbø, Leif Skiftenes Flak, and Maung K Sein. 2011. Understanding the dynamics in e-Participation initiatives: Looking through the genre and stakeholder lenses. *Government Information Quarterly* 28, 3 (2011), 416–425.
52. McDermott, P. (2010). Building open government. *Government Information Quarterly* 27(4), 401–413.
53. Dunleavy, P., Margetts, H., Bastow, S. & Tinkler, J. (2006). New public management is dead - long live digital-era governance. *Journal of public administration research and theory* 16(3), 467–494.
54. Foley, P & Alfonso, X. (2009). eGovernment and the transformation agenda. *Public Administration* 87(2), 371–396.
55. Jaeger, P. T & Bertot, J. C. (2010). Transparency and technological change: Ensuring equal and sustained public access to government information. *Government Information Quarterly* 27(4), 371–376.
56. Perri. (2004). Joined-up government in the Western world in comparative perspective: A preliminary literature review and exploration. *Journal of Public Administration Research and Theory: J-PART*, 103–138.
57. Goldfinch, S. & Wallis, J. (2010). Two myths of convergence in public management reform. *Public Administration* 88(4), 1099–1115.
58. Osborne, S. P., Radnor, Z. & Strokosch, K. (2016). Co-Production and the Co-Creation of Value in Public Services: A suitable case for treatment? *Public Management Review* 18(5), 639–653.
59. Christensen, T & Lægreid, P. (2007). The whole-of-government approach to public sector reform. *Public Administration Review* 67(6), 1059–1066.
60. Jørgensen, T. B. & Bozeman, B. (2007). Public values: An inventory. *Administration & Society* 39(3), 354–381.
61. Voorberg, W. H., Bekkers, V. J. J. M. & Tummers, L. G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public Management Review* 17(9) (2015), 1333–1357.