

*This article was prepared for publication by the Iberoamerican Association of Local Finance (AIFIL), in tribute to Luiz Villela, who recently died as a result of COVID-19.*

## **COVID-19 INCREASES THE IMPORTANCE OF DIGITALISATION FOR SUBNATIONAL GOVERNMENTS: OPPORTUNITIES AND CHALLENGES**

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### **Introduction**

Recent decades have seen a rapid growth of advanced digital technologies, including high-speed computing, big data, artificial intelligence, the internet-of-things and blockchain. This “digital revolution” creates significant opportunities for all levels of government to improve the delivery of public goods and services, and to raise more and better revenue.

This is particularly important in the context of the COVID-19 crisis. Fighting a pandemic while minimizing the associated economic costs calls for appropriate digital infrastructure for the design and enforcement of containment measures, as well as to ensure access by the population and enterprises to critical government services. After all, subnational governments (SNGs) account for about 40% of government spending on average in OECD countries; they also play an important role in the delivery of key services that are at the heart of the policy actions being taken to slow the spread of the pandemic, including on health care and social protection.

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The literature has so far focused on the determinants of the take-up of digital technologies by firms (Andrews et al, 2018) and at the central/federal government level (Gupta et al, 2017; OECD, 2019). In a recent OECD paper, de Mello and Ter-Minassian (2020) focus on the opportunities and challenges that digitalisation creates for SNGs.

The magnitude of the challenge is considerable. Recent data collected by the OECD shows that less than 60 percent of individuals visit, or interact with, government websites, a share that is much lower than the 72 percent of individuals who use the Internet regularly for e-mail on average in OECD countries (OECD, 2019). This is due in part to gaps in levels of education and skills required for people to thrive in a digital world, which vary substantially both across and within countries, but also to unequal access among firms to digital technologies, as well as a lack of focus on user needs in government digital strategies. The challenge is obviously likely to be even greater in less advanced economies.

### **Digitalisation and revenue mobilisation**

SNGs collect over 40 percent of total government revenue on average in OECD countries, including revenue from their own tax bases and shared revenue collected by the national government. Digitalisation can help improve both types of revenue. It can enhance national revenues that are shared with SNGs by strengthening tax administration and compliance, in areas such as the personal income tax, business taxes and the VAT. Digitalisation allows tax administrations to track activities by individuals and businesses more effectively and at lower cost through electronic access to bank data and invoices.

The on-line exchange of information between national and subnational tax administrations – including the use of nationwide unique taxpayer identification numbers – can facilitate the levying of subnational personal income taxes or of surcharges on the national personal income tax. These are appropriate tax handles, especially for regional governments.

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Retail sales taxes are generally regarded as an appropriate revenue source for SNGs. However, such taxes may be difficult to enforce in countries with highly fragmented retail systems, with many small or micro-establishments. The mandatory use by retail outlets of cash registries linked to the relevant tax administration can remove an important obstacle to the adoption of such taxes. The rapid diffusion of electronic payments systems – including electronic transfers of funds, credit and debit cards, and electronic wallets – has also helped the enforcement of consumption taxes, even though digitalisation has created new challenges related especially to e-commerce in goods, and particularly services, and to the emergence of electronic platforms for peer-to-peer transactions.

Moreover, there is much scope for SNGs to use digital technologies to introduce user fees for services provided locally, and to make the administration of local property taxes more efficient and equitable. For example, digital tools, such as Google Maps and big data, are being used by local governments to identify unregistered properties, and to update property cadasters and property values for tax assessments through access to, and the analysis of, large datasets from real estate transactions.

### **Digitalisation and service delivery**

Advanced digital technologies can help improve the quality and efficiency of subnational spending, in particular through the use of: sensors to control road and railway traffic, and maintain regional or local infrastructure, water and sanitation usage, etc.; geographic information systems to pinpoint potential environmental and health risks; and well-designed information systems to strengthen subnational public financial management and facilitate transparency and accountability.

The Covid-19 crisis is a case in point, given the need for appropriate digital infrastructure for the design and enforcement of containment measures, as well as for access to critical government services by individuals and enterprises. This includes the sharp increase in the provision of e-learning by schools at all levels during lockdowns.

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Furthermore, regional and local governments are having to adapt their own internal operations to function digitally in periods of confinement (Baldwin and Weder di Mauro, 2020).

Digital portals – a very visible digital tool – are increasingly used by SNGs to facilitate access by the population to relevant public services, such as on-line licensing, building permits, downloading of official documents, and culture and sports-related services. Across OECD countries, access to government services through digital portals has tripled since 2006, with around 36% of OECD citizens submitting forms via public authorities' websites in 2016 (OECD, 2017).

### **Main challenges**

However, digitalisation also poses significant challenges for SNGs, whose capacities to deal with such challenges can be expected to vary widely both across and within countries. The most important constraint in many SNGs is likely to be the scarcity of requisite skills, not only in government leadership and bureaucracy, but also among the population at large. Lack of skills breeds, in turn, distrust and resistance to digitalisation.

In particular, the human resource constraint can manifest itself in different ways. First, and possibly most importantly, a limited understanding by local leaderships of digitalisation options and their potential benefits and costs, which can result in a lack of strategic vision for the digitalisation process. Second, SNGs are likely to be even less competitive than national administrations in recruiting and retaining workers with the appropriate IT skills, especially in countries where such skills are scarce. Finally, SNGs need to adapt their digitalisation strategies to the degree of IT readiness in their population at large, to avoid the risk of deepening existing inequalities in citizens' access to public services.

Other significant constraints can be posed by inadequate physical infrastructure and financial resources to improve it. Less recognized, but also important, can be legal or

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regulatory constraints. Tackling cyber security risks, and adequately addressing citizen's data protection concerns constitute further significant challenges.

### **What is needed to address these challenges? A three-pronged strategy**

Effective digitalisation of SNGs calls for a three-pronged strategy. First, SNGs need to take stock of the initial state of, and main obstacles to, digitalisation, given their specific circumstances and those of the population they serve. Second, once this stock-taking exercise is completed, SNGs need to define priorities (e.g. which public services should be digitalised first); identify needs for legal and organisational supporting changes; define responsibilities for different tasks; set up realistic timetables for implementation; appropriate the necessary budgetary resources, and procure any needed skills and materials; and closely monitor the implementation of the strategy. Finally, SNGs need to involve early on the main stakeholders and communicate clearly to the public at large the objectives and expected outcomes of their digital strategy. This is an essential element to secure the support of citizens for the digitalisation effort.

### **The role of intergovernmental cooperation**

Co-operation among and within the different levels of government can play a significant role in supporting effective and efficient digitalisation of SNGs. The case for support by national government is made more compelling by the fact that different SNGs are differently equipped to meet the challenges of digitalisation. Smaller and poorer urban, and especially rural, communities are more likely to suffer from skill shortages, limited connectivity and scarcity of budgetary resources.

National governments can support subnational digitalisation efforts through appropriate reforms in the intergovernmental fiscal relation system, including to improve clarity in the assignment of own tax bases and expenditure functions to SNGs, and in the implementation of equalisation transfers; by giving adequate weight to regional digital inclusion in their public investment choices; by defining appropriate nationwide standards

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to facilitate seamless interfaces among the national and subnational digital systems; and through technical assistance and training of subnational officials.

There is also significant scope for horizontal cooperation among SNGs in the digitalisation area. Peer support can include demonstration effects, technical assistance and cross-training of officials, as well as effective interfaces among subnational digital systems in areas of common interest. Dedicated forums for interregional and intermunicipal dialogue on digitalisation, possibly under the umbrella of broader horizontal co-operation forums, can be instrumental in facilitating both the exchange of experiences and the formation of consensus on common digitalisation challenges. The above-mentioned de Mello and Ter-Minassian paper discusses a number of relevant international experiences with intergovernmental cooperation on digitalisation.

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