

Key Points

- Globally, mobile phone subscriptions and internet usage have increased dramatically. This reflects the rapid growth of many developing economies to levels close to that of advanced economies.
- As technology merges with the economy, the rise of the digital economy will create challenges for international taxation as well as domestic tax revenue mobilization, including determining where tax must be paid, collecting value-added-tax (VAT), and clarifying the treatment of workers in the new economy.
- The first major attempt to align tax policy with today's contemporary economy was the Action Plan on Base Erosion and Profit Shifting. It stresses the need for change to the traditional jurisdictional approach and identifies 4 vital focus areas: treaty shopping, country-by-country reporting, dispute resolution, and harmful tax practices.
- Drawing support for international tax issues is difficult due to their highly technical nature. With only a few large players dominating the digital economy, however, simplifying compliance for them could capture a majority of the market.
- Asia and the Pacific region needs to pull together and push forward the necessary reforms, innovate tax structures and administration, and continue to learn from each other's experiences.

Fair Taxation in the Digital Economy

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We are living in a technology-driven era in which new developments and innovations are happening at a rate we have never seen before. As technology merges with the economy, we have witnessed the rise of the digital economy, which is growing day by day. The international community—and developing economies particularly—can greatly benefit from these innovations. Policy makers, however, must ensure they are harnessed in a way that ensures the benefits are shared as equitably as possible. With any new development come new challenges. In particular, the spread of the digital economy creates challenges for international taxation as well as domestic tax revenue mobilization. As taxes are the main sources of revenue for the government to fund its various public services and projects, tax authorities must learn to adjust their capability to catch up with the fast change of digital economy activities. However, capacity in governance remains weak in many developing countries in Asia and the Pacific.

The Rise of the Digital Economy

The Fourth Industrial Revolution: From Industrialization to Digitalization

The rise of the digital economy must be seen in relation to the Fourth Industrial Revolution. The First Industrial Revolution used mechanization, water power, and steam power; the Second Industrial Revolution used mass production through assembly lines and electricity; the Third Industrial Revolution focused on electronics, computers, and automation. And now the Fourth Industrial Revolution is using physical cybersystems, focusing on end-to-end digitization of all physical assets, fusing technologies, and in the process blurring the lines between the physical, digital, and biological spheres (WEF 2016a; pwc 2016; Tungboriboonrat 2017). This shift has resulted in the rise of the digital economy in which data and information have become the new oil. The OECD (2015a) describes the digital economy as:

[T]he result of a transformative process brought by information and communication technology (ICT), which has made technologies cheaper, more powerful, and widely standardized, improving business processes and bolstering innovation across all sectors of the economy.



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The key word in this definition is “transformative,” as the digital economy is evolving at an unprecedented speed, growing exponentially, and disrupting every industry across the globe.

The digital economy comprises e-commerce, app stores, online advertising, online payment services, cloud computing, and participative networked platforms, amongst others.

In 1986, only 1% of global information was stored in digital form and the rest in analog, but the beginning of the digital age began in 2002 when 50% was stored digitally (Hilbert and López 2011). The rapid transformation is further demonstrated by remarkable improvements in downloading speed: in 2001, it took on average 26 hours to download an average movie, but in 2009 this took 6 minutes and in 2020 it is expected to take 3.6 seconds. Looking ahead, by 2020, there will be an expected 60 billion internet devices, which is about five devices per person (Tungboriboonrat 2017). All of this provides evidence of the major changes that are both a catalyst and product of the digital economy.

This new economy is resulting in innovative financial services, improved ways of transacting business, as well as new knowledge transfer services and business models (Highfield 2017). These data-driven companies are increasing and look set to dominate businesses of the present and future. In 2006, of the most valuable

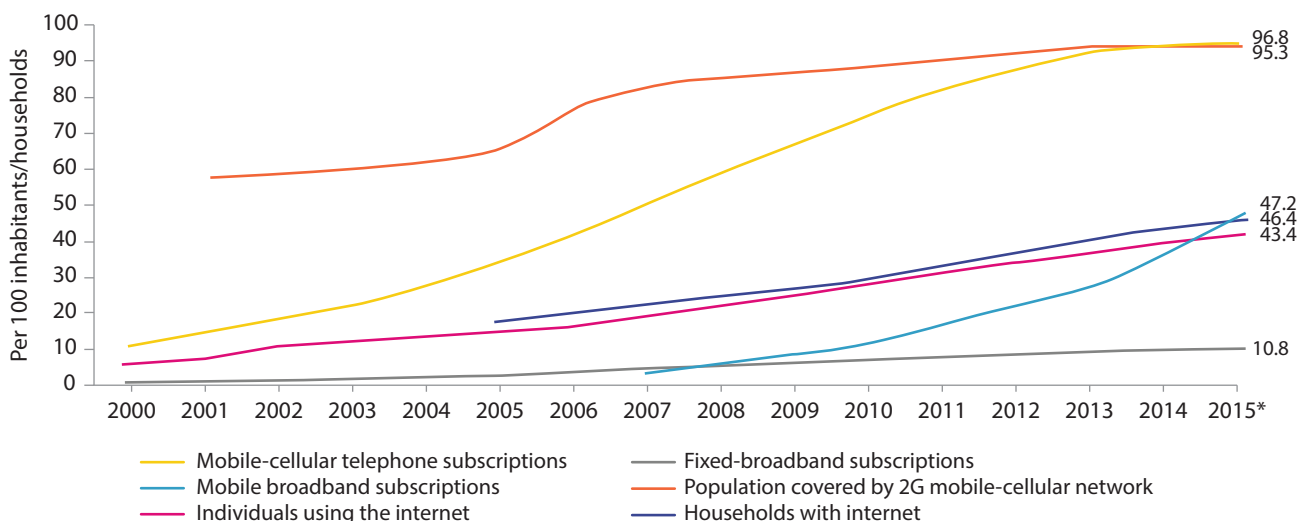
companies worldwide, only one was data driven. Now in 2017, there are many household names at the top of the list (Tungboriboonrat 2017). Many of these new activities have been described using a range of names—peer-to-peer economy, the sharing economy, and the gig economy—but what they all share is their use of the digital economy as their platform.

Measuring Digitization

As we have seen over the last few years, the digital economy can and will make a difference to many areas, and monitoring and measuring these changes are vital. In terms of measurement, many international bodies measure trends in digitization by using indicators such as the rates of mobile phone, fixed telephone line, and broadband subscriptions as well as access to modern banking services. As the data from the International Telecommunication Union (ITU 2015) demonstrate, digitization has increased at an unparalleled rate across the globe (Figure 1).

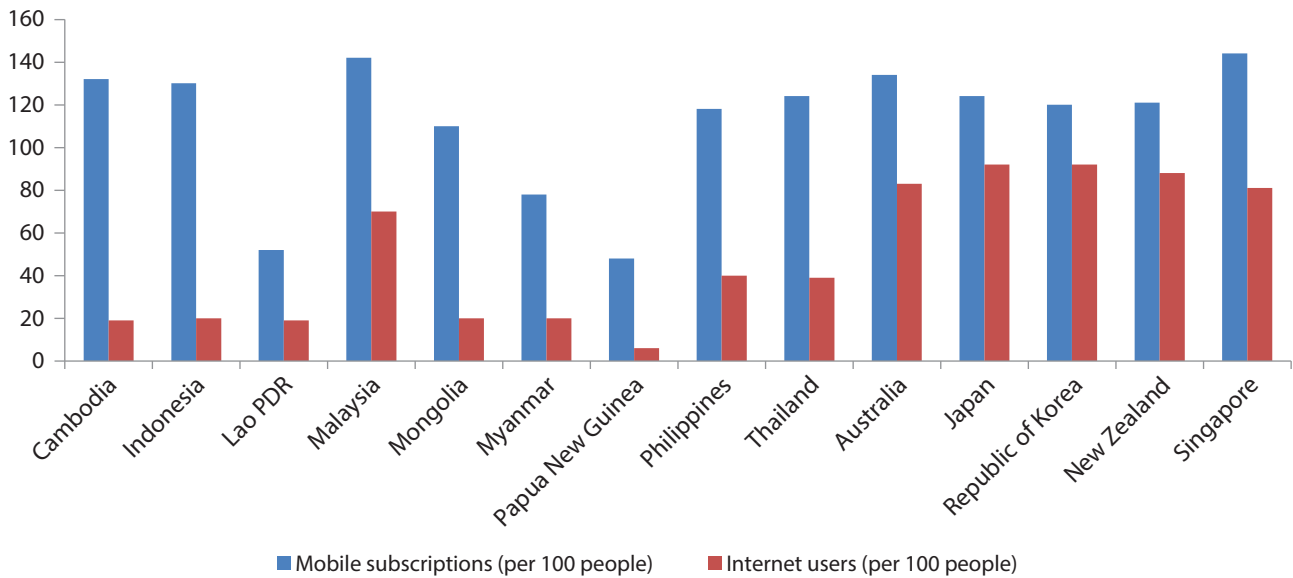
In many countries, there are more mobile phone subscribers than there are citizens (Figure 2). This reflects the rapid growth of many developing economies having become close to advanced economy levels. Within Asia and the Pacific, Cambodia, Indonesia, and Myanmar experienced significant growth, in particular between 2010 and 2015 (Highfield 2017).

Figure 1 Information and Communication Technology Growth, 2000–2015



Source: ITU (2015).

Figure 2: Mobile Phone Subscriptions and Internet Users, 2015



Lao PDR = Lao People’s Democratic Republic.
 Source: Highfield (2017).

Globally, between 2000 and 2015, internet usage has increased almost sevenfold from 6.5% to 43% of the global population (Figure 1). However, growth has been much slower in developing economies as internet penetration stands at 35% compared to 82.2% for developed countries (Figure 3). In Asia and the Pacific, internet usage remains noticeably low with only 2 in 5 people using the internet. This is one of the lowest regional rates (ITU 2015), although there is much variation across countries. For example, in Papua New Guinea less than 49% of the population has access to the internet and most online activity is social media based rather than economic activity (Jonathan and Paisi 2017). This is in contrast to Malaysia and Singapore where internet penetration rates are very high (Highfield 2017) and Viet Nam where the number of online shoppers is expected to reach 65% of internet users by 2020, thereby increasing business-to-consumer (B2C) and consumer-to-consumer (C2C) e-commerce revenue sevenfold compared to 2015 (Mai, Tran, and Phuong 2017).

In terms of measuring access to modern banking services, three indicators are commonly used: access to branches, ATM penetration, and the percentage of adults with a bank account. Progress in Asia and the Pacific has been mixed, although Mongolia has performed well across all those measures. Besides Mongolia, looking at branch access, growth has been only moderate in a

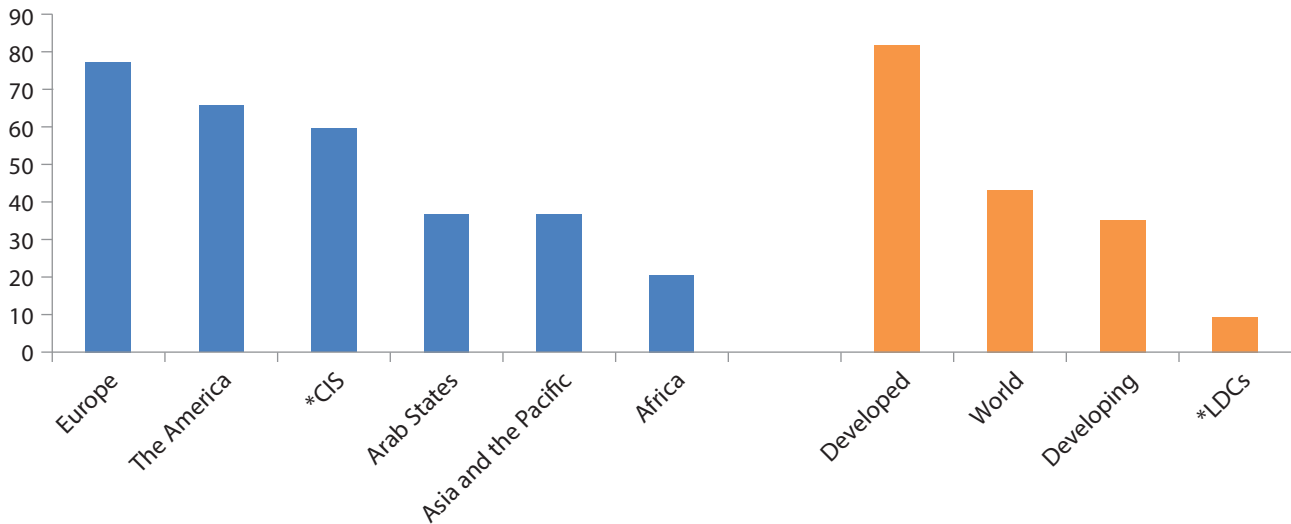
few economies, whereas in advanced economies the number of people using a physical bank branch is declining. Thailand, Indonesia, and Viet Nam, among other countries, have shown high levels and/or good growth of ATM penetration and account ownership.

Networked Readiness Index

Whether countries are sufficiently prepared to take advantage of the growing digital economy and benefit from it is captured by the World Economic Forum’s Networked Readiness Index (NRI). It uses a composite indicator that reflects a series of 53 subindicators. Looking at the data from the 2016 NRI, of the 139 countries measured, the leader in technology “readiness” and “usage” is Singapore. Within the Asia and Pacific region, however, there is a lot of variation, with Myanmar coming in at 133. This is a single snapshot, but it gives an overall perspective.

The future impact of the digital economy on individuals, businesses, and countries largely depends on a country’s level of digitization and the degree to which it is equipped to make the most of these new changes. It is important for countries to understand where they fare to ensure they do not fall behind on ensuring they have appropriate policies and regulation.

Figure 3: Internet Usage, 2015 (% of population)



CIS = Commonwealth of Independent States, LDC = least developed country.
Source: ITU (2015).

Benefits and Risks of the Digital Economy

The rise of the digital economy comes with great potential, alongside great risks. As the World Economic Forum (2016a, 2016b) points out, knowledge is becoming more accessible to more people than ever before. If the technology that is allowing this is appropriately managed, it could drive innovation, which could subsequently propel growth and social impact by raising global income levels and improving people’s quality of life. In fact, new disruptive technologies could unleash between \$220 million and \$625 million in annual economic impact in the Association of Southeast Asian Nations (ASEAN) region by 2030, the equivalent of 4%–12% of gross domestic product (GDP). There are tremendous benefits for individual economies that can execute and reduce the risk in the right way (Highfield 2017).

Nonetheless, there are also numerous challenges. To date, most countries that could potentially gain most from these developments are not yet connected and much of the gains remain in the hands of consumers who can afford and access the digital world. Other noteworthy challenges focus on privacy, cyber security, and the potential of technologies polarizing labor markets. Another major challenge is around fair taxation.

Digitalization’s Implications for Taxation

The digital economy has a range of impacts that tax authorities should be aware of. The perception that it is less regulated and taxed than other sectors of the economy is becoming commonplace. This is only increasing with some scandals such as the Panama Papers and investigations by the European Union of some digital companies. An environment that allows companies operating in the digital economy to get away with paying minimal tax can be seen to distort competition and create an unlevel playing field in which such companies have an unfair advantage. It also puts government tax revenue at risk, especially if “tax-rich” activities that used to operate in the traditional economy are being pushed out by new digital activities. On the other hand, the digital economy holds the potential to interact with the informal economy and serve as a tool to formalize certain activities, thereby creating new sources of tax revenue (Aslam and Shah 2017).

The first major issue concerning the taxation of the digital economy has to do with the mobile and intangible nature of digital goods and services. Over the last century, the traditional economy and the existing tax policies attached to it have been rooted in clear-cut jurisdictional

barriers. This is directly linked to the assumption that brick-and-mortar physical locations where goods and services are produced could signify physical presence (also known as a permanent establishment), and they could be used to determine where tax must be paid. In the digital economy, the same thought process cannot be applied. Almost all commerce along the supply chain is done virtually without a significant physical presence in one or any jurisdiction, although a company may still have physical stores, factories, or warehouses. The very nature of the digital economy means that a fixed place of residence within a national boundary is no longer required to generate income, especially for new business models based on subscription, access or advertisement, and new technologies such as 3D printing. Yet, global tax policy is still lagging behind this innovation (Harpaz 2014; Hadzhieva 2016).

The second issue relates to the difficulty for tax administrations to collect value-added-tax (VAT) on cross-border trade in services and intangibles. This issue stems from challenges to do with anonymity and difficulty of identifying companies in the digital economy, the absence of a paper trail, determining the amount of tax, and the increased ability to conceal incomes and assets offshore using tax havens (Hadzhieva 2016).

Another issue relates to domestic enforcement in the peer-to-peer economy. Questions are raised about the nature of tax implications, for example whether workers of an online taxi, car transportation, or food delivery mobile app, in which drivers use their own cars, are considered employees or self-employed independent contractors (Highfield 2017). How tax officials should treat these workers is unclear. Other relevant issues include the digital economy's reliance on data, network effects, the spread of multisided business models, a tendency toward monopoly or oligopoly, and volatility (OECD 2015a).

There are also logistical challenges as the digital economy has increased cross-border movements of people, goods, and services as well as the number of economic agents operating in the system. Such an increase in numbers presents a greater workload for tax administrators and raises questions about their ability to administer tax law effectively. This is particularly relevant for Asia and the Pacific region as it receives the most foreign direct investment (\$660 billion across member countries of

the Asian Development Bank) and saw a more than 150% increase in tourist arrivals between 2000 and 2015 (Highfield 2017).

It is clear that the rise of the digital economy is creating many challenges for policy makers, and they must be attentive to these changes and understand what they are regulating. A focus on adapting and reinventing policies to stay ahead of the game is necessary to ensure they are regulating an economy that exists today—and not one more reminiscent of the past (WEF 2016a).

Action Plan on Base Erosion and Profit Shifting

The first major attempt to renovate and align tax policy with today's contemporary economy was spearheaded by the Organisation for Economic Co-operation and Development (OECD) at the request of the Group of Twenty (G20). The OECD published a plan, called the Action Plan on Base Erosion and Profit Shifting (also referred to as BEPS). The overarching objective of BEPS is to level the playing field for tomorrow's economy by ensuring that all businesses are taxed equally and gaps in international tax rules that allow multinational enterprises to legally but artificially shift profits to low or no-tax jurisdictions are eliminated (OECD 2015a). The plan consists of 15 action points, four of which have been identified as a minimum standard respectively focused on treaty shopping, country-by-country reporting, dispute resolution, and harmful tax practices. These are areas where no action by some countries would have created negative spillovers on other countries (OECD 2015a; McIntosh-Watt 2017; Robert 2017). These four minimum standards have changed the global taxation landscape from one based on competition to one based on collaboration to help level the playing field.

The OECD does not “ring-fence” the digital economy for special tax treatment within BEPS, instead asserting the overall global economy to be digital. As a result, it does not highlight any specific BEPS risks in the digital economy as all the BEPS recommendations relate to the digital economy. Some of the digital economy's features do nonetheless “exacerbate” existing BEPS problems.¹ In turn, some BEPS actions are found to be particularly relevant for the digital economy. These include modification of definition of permanent

¹ See OECD BEPS Frequently Asked Questions (<http://www.oecd.org/ctp/beps-frequentlyaskedquestions.htm>).

establishment (Action 7), revised transfer pricing guidance (Actions 8–10), and recommendations on the design of effective controlled foreign corporation (CFC) rules to ensure digital activities do not unfairly benefit from them (Action 3) (OECD 2015a; McIntosh-Watt 2017; Robert 2017).² BEPS stresses that the traditional jurisdictional approach to taxation must change to make it suitable for digital commerce.

The OECD also highlights that the digital economy raises not only BEPS issues, but also broader tax challenges. Some of these relate to direct tax such as nexus, data, and characterization; others relate to indirect tax such as the collection of VAT and exception for low-value imports, which may no longer be appropriate in the digital era (OECD 2015a; Robert 2017).

The potential solutions face numerous challenges. One comes from a lack of data from country-by-country reporting, VAT returns, and cross-border transactions which are needed to understand the broader tax challenges. Beyond this, some of the findings in the report could quickly change or evolve as the digitalization of the economy progresses.

Tax Policy Options Considered by the Task Force on the Digital Economy

Several tax policy options have been developed and analyzed by the Task Force on the Digital Economy (TFDE), which monitors developments in the digital economy and evaluates the impact of the BEPS measures. These include modifications to the exemptions from permanent establishment status, introducing an equalization levy/excise tax, withholding tax on certain types of digital transactions, revising the destination principle in VAT, and ensuring compliance and collection.

The TFDE creates a platform where countries can share experiences across the globe in terms of tax challenges. As it uses a consensus-based approach, coming to policy agreements is challenging. This is highlighted by the proposal of a new nexus focused on how to determine “significant economy presence” of a company operating in the digital economy. Although everyone agrees that identifying an organization with digital presence is necessary in order to appropriately tax them, there is not

yet consensus on how to identify digital presence, which is still very much subject to discussion.

There is a discussion around using supply-based factors to determine “significant economy presence” that could be identified as representing a deliberate intention to penetrate a specific jurisdiction and make a sustainable presence. Examples include the local domain name of a website, factors that indicate the localization of a platform such as the language of the platform, and the availability of local payment options. Alternatively, demand- or user-based factors could be used. One example of this is the notion of monthly active users or a significant user base, which shows an organization’s capacity to derive significant profits from, for instance, people who are paying for goods or services from the platform as well as people who are engaging and using the platform.

These factors are aimed at reflecting the digital presence of an organization in a given country. However, all these factors combined are still not considered robust enough to differentiate between an intended or unintended sustainable interaction with the market of a jurisdiction and therefore are not enough to trigger taxability. As such, there is not yet consensus on how to determine “significant economy presence” of a company operating in the digital economy.

Next Steps

Many of the conclusions and recommendations of BEPS will certainly evolve alongside the developments of the digital economy. Nonetheless, the framework it provides will allow the measures that have been implemented to be monitored and their impact evaluated. While the OECD recommends that policy makers implement the BEPS measures, it also recognizes that some are directly applicable, such as changes to transfer pricing, and others may be more time-consuming if they require implementation by national lawmakers. It is an organic process and requires input from as many jurisdictions as possible. This is especially the case concerning the development of multilateral instruments related the treaty-focused BEPS measures. The OECD (2015b) provides numerous toolkits to support developing countries which can be found on its website (www.oecd.org/tax/beps.htm).

² For more detailed information, refer to OECD (2015a).

Conclusion

It is becoming increasingly clear that the digital economy cannot be ring-fenced as it is becoming the economy itself. As such, policy makers must move in step with this rapidly evolving landscape. A revolution in the mindset of policy makers is necessary and in response, a “digital mindset” is needed when considering these challenges.

As the digital economy brings us into new territory, is fair taxation fiction or reality? Although overcoming the numerous challenges will be a difficult task for policy makers, fair taxation of the digital economy is a reality. A prerequisite to making real sustainable change is enthusiastic country commitment and international cooperation. Asia and the Pacific region needs to pull together and push forward the necessary reforms, innovate tax structures and administration, and continue to learn from each other’s experiences. Other key enablers include a coherent strategy and strong evidence-based communication and knowledge.

The good news is that innovative work is already being carried out and there are numerous opportunities for collaborating globally, including the inclusive framework

for BEPS. Drawing strong political attention and support for international tax issues is difficult due to their highly technical nature; however, BEPS has changed that. As the digital economy is only dominated by a few large players, simplifying compliance for those large players, for example through BEPS recommendations, could potentially capture 60%–70% of the market. As many small and medium-sized enterprises (SMEs) are using these large platforms to operate, pursuing compliance of the big players will have a knock-on effect on the compliance of SMEs (Koulouri 2017).

Engagement with the business sector is extremely essential, so it is important to give adequate time to these big players to adapt their systems to ensure tax compliance. Although 100% compliance is unlikely, by simplifying compliance, policy makers can at least ensure the big players that dominate the digital economy will be in a position to comply. The initiative must be taken by each country to engage with the business sector and promote compliance of the big players operating in their jurisdiction. It is about raising awareness, while also understanding that when you are trying to change the pillars of a tax system that has existed and evolved over centuries, any changes will take considerable time.

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