

Routledge Studies in Development Economics

TAXATION IN THE DIGITAL ECONOMY

NEW MODELS IN ASIA AND THE PACIFIC

Edited by

Nella Hendriyetty, Chris Evans, Chul Ju Kim,
and Farhad Taghizadeh-Hesary



Taxation in the Digital Economy

A robust and efficient tax administration in a modern tax system requires effective tax policies and legislation. Policy frameworks should cover all aspects of tax administration and include the essential processes of capturing, processing, analyzing, and responding to information provided by taxpayers and others concerning taxpayers' affairs. By far the greatest challenges facing tax administrations in all countries are those posed by the continuing developments in the digital economy. Whereas societies are grappling to come to terms with the transitions from the third industrial or digital revolution, revenue authorities grapple with the consequences for the sustainability of their tax bases and the efficient administration and collection of taxes. This book presents a critical review of the status of tax systems in Asia and the Pacific in the era of the digital economy.

The book suggests how countries can maximize their domestic resource mobilization when confronted by the challenges that digitalization inevitably produces, as well as how they can best harness or take advantage of aspects of digitalization to serve their own needs. The full implications of the COVID-19 crisis are still too uncertain to predict, but it is clear that the crisis will accelerate the trend toward digitalization and also increase pressures on public finances. This, in turn, may shape the preference for, and the nature of, both multilateral and unilateral responses to the tax challenges posed by digitalization and the need to address them.

This book will be a timely reference for those researching taxation in the digital economy and for policymakers.

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Abbreviations

ACA	annual compliance arrangement
ADB	Asian Development Bank
ADR	alternative dispute resolution
ALP	arm's length principle
ANCOVA	analysis of covariance
ATO	Australian Taxation Office
BEPS	base erosion and profit shifting
CBDT	Central Board of Direct Taxes
CIT	corporate income tax
COVID-19	coronavirus disease
CPAF	certified public accounting firm
CRM	compliance risk management
CRS	Cash Receipt System
CTCP	Cooperative Tax Compliance Program
DGT	Directorate General of Taxes
e-BSS	e-Bill of Supply System
e-TIN	electronic tax identification number
ETT	electronic transaction tax
FATCA	Foreign Account Tax Compliance Act
FFS	fully filled service
FIRST	Future Inland Revenue Systems and Technology
G20	Group of 20
GRI	Global Reporting Initiative
GST	goods and services tax
GTP	Golden Tax Project
HTS	Home Tax Service
ICC	International Chamber of Commerce
ICT	information and communication technology
IMF	International Monetary Fund
IPAA	Institute of Public Administration Australia
IRS	Internal Revenue Service
Lao PDR	Lao People's Democratic Republic
MNC	multinational corporation

MNE	multinational enterprise
NBR	National Board of Revenue
NGH	Next-Generation Hometax
NPG	National Payment Getaway
NTA	National Tax Agency
NTCA	Netherlands Tax and Customs Administration
NTIS	Neo Tax Integrated System
NTS	National Tax Service
ODI	Open Data Institute
OECD	Organisation for Economic Co-operation and Development
PIT	personal income tax
PFS	pre-filled service
PRC	People's Republic of China
PwC	PricewaterhouseCoopers
ROK	Republic of Korea
SDG	Sustainable Development Goal
SDS	State Data-Sharing
SEP	significant economic presence
SMEs	small and medium-sized enterprises
SOE	state-owned enterprise
STP	Single Touch Payroll
SYTSS	Simplified Year-End Tax Settlement System
TAL	tax assessment letter
TCF	tax control framework
TCL	tax collection letter
TIS	Tax Integrated System
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States
VAT	value-added tax
VIF	variance inflation factor
WEF	World Economic Forum

Introduction

New Frontiers for Tax in the Digital Age

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Nella Sri Hendriyetty, and Chul Ju Kim*

I.1 Introduction

A robust and efficient tax administration, combined with effective tax policies and legislation, are obviously critical elements of any modern tax system. Without these vital ingredients, governments cannot generate the resources needed to create a sustainable economy. As noted by the Asian Development Bank (ADB),

at the core of tax administration are the essential processes of capturing, processing, analyzing, and responding to information provided by taxpayers and others concerning taxpayers' tax affairs. These processes include the registration of taxpayers, the processing of tax returns, the recording of taxpayer's tax liabilities and payments, risk assessment, and systematic follow-up actions required when some form of intervention is called for (e.g., the collection of a tax debt, enforcement of the filing of overdue returns, or an audit).

(ADB 2020: 45)

Although the coronavirus disease (COVID-19) pandemic undoubtedly poses significant challenges to tax administrations in all countries in the immediate future, by far the greatest challenges in the medium and longer term come from continuing developments in the digital economy. Just as societies are grappling to come to terms with the transition from the third industrial (or digital) revolution (involving the development of computers and information technology from the middle of the 20th century onwards) to the fourth industrial revolution (characterized by extensive digitalization and the explosive and disruptive development of fresh, new, and previously unimaginable technologies), revenue authorities are grappling with the consequences of this shift for the sustainability of their tax bases and the efficient administration and collection of taxes.

These rapidly developing modern technologies pose innumerable challenges and questions for revenue authorities, such as

how to tax a multinational business on sales into a territory where it has little or no physical presence; how to assign a value to user-generated data and content and then build that into the taxation of multinational enterprises;

and how to compensate for the possible reduction in labour tax revenues resulting from the automation of routine tasks.

(PricewaterhouseCoopers and World Bank Group
2020: 5)

While digitalization creates problems for revenue authorities, it also provides opportunities offered by advanced digital solutions. For example, tax administrations can take advantage of developments in artificial intelligence, robotics, blockchain, and big data, as well as many other technological advances to secure better outcomes for governments and taxpayers in the administration of the tax system.

This volume presents a critical review of the status of tax systems in Asia and the Pacific in the era of the digital economy. It suggests how countries can maximize their domestic resource mobilization in the face of the challenges produced by digitalization, as well as how they can best harness or take advantage of aspects of digitalization to serve their own needs. The topic for this book is based on a call for papers intended for presentation at the 14th International Conference on Tax Administration at the University of New South Wales in Sydney, Australia on 3–4 November 2020. The theme of the conference was “New Frontiers in Managing Revenue Systems.” Sadly, the conference was postponed for a year because of the COVID-19 pandemic. The topic of the call for papers was subsequently adjusted to include governmental responses to COVID-19 and its impact on tax administration.

Although the full implications of the COVID-19 crisis are still too uncertain to predict, it is clear—even at this early stage—that the crisis will increase pressures on public finances and accelerate the trend toward digitalization (Organisation for Economic Co-operation and Development [OECD] 2020a: 11). This, in turn, may shape the preference for, as well as the nature of, both multilateral and unilateral responses to the tax challenges posed by digitalization and the need to address them.

I.2 Dynamics of the Digital Economy in Asia and the Pacific

Between 2013 and 2018, Asia and the Pacific achieved the fastest growth in e-commerce sales in the world, and its share in the global market increased from 23% to 37% (OECD 2019a). The outstanding growth in online sales during this period reflects the rapid digitalization that the region has experienced since 2013. Figures I.1 and I.2 show the evolution of internet shoppers in major Asian economies from 2013 to 2017.

These figures not only reflect the increasing share of online shopping, but they also reveal significant disparities among Asian economies, depending on their level of development. While high-income countries such as Australia, Japan, the Republic of Korea (ROK), New Zealand, and Singapore have high shares of online shoppers, these shares were stable over the time period reported

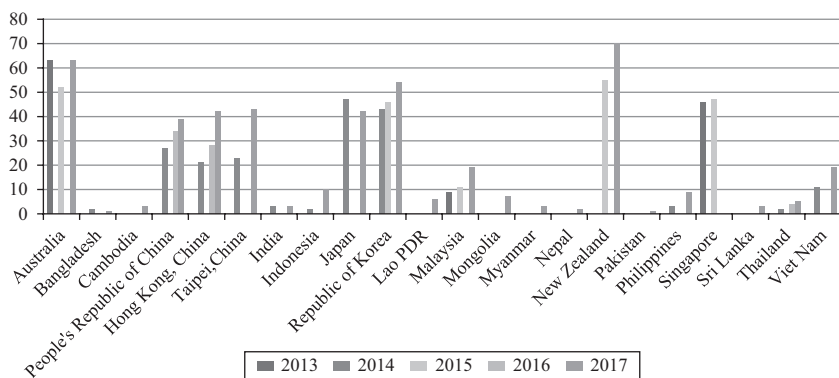


Figure 1.1 Internet Shoppers as a Share of the Population in Asia and the Pacific. Lao PDR=Lao People’s Democratic Republic. Sources: United Nations Conference on Trade and Development (UNCTAD). 2015. *Information Economy Report 2015—Unlocking Potential of E-Commerce for Developing Countries*. Geneva: UNCTAD. https://unctad.org/en/publicationslibrary/ier2015_en.pdf, accessed 14 November 2020; UNCTAD. 2016. *UNCTAD B2C E-Commerce Index 2016*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d07_en.pdf, accessed 14 November 2020; UNCTAD. 2017. *UNCTAD B2C E-Commerce Index 2017*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d09_en.pdf, accessed 14 November 2020; UNCTAD. 2018. *UNCTAD B2C E-Commerce Index 2018—Focus on Africa*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d12_en.pdf, accessed 14 November 2020; UNCTAD. 2019a. *UNCTAD B2C E-Commerce Index 2019*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d14_en.pdf, accessed 14 November 2020.

(2013–2017). On the other hand, the share of online shoppers in developing Asia steadily increased over the same period, although it remained low.

The rate of development of the digital economy reflects the level of development of a given economy. For instance, the rate of internet use is around 80% in Singapore or Malaysia (OECD, 2019a), and only about 20% in the Lao People’s Democratic Republic (Lao PDR), Myanmar, Indonesia, and Cambodia (OECD 2019a). This striking difference can be explained by the fact that developing economies in Asia and the Pacific suffer from a lack of information and communication technology (ICT) infrastructure development, slow internet broadband speed, and shortages of skilled workers in ICT (OECD 2019a).

On the other hand, high-income economies in Asia and the Pacific are front-runners in the digital world. Altogether, Japan; the ROK; Taipei, China; and the People’s Republic of China (PRC) hold 70% of all artificial intelligence–related patents. The region is also likely to become a leader in blockchain development and online banking in the coming years, thanks to favorable regulations

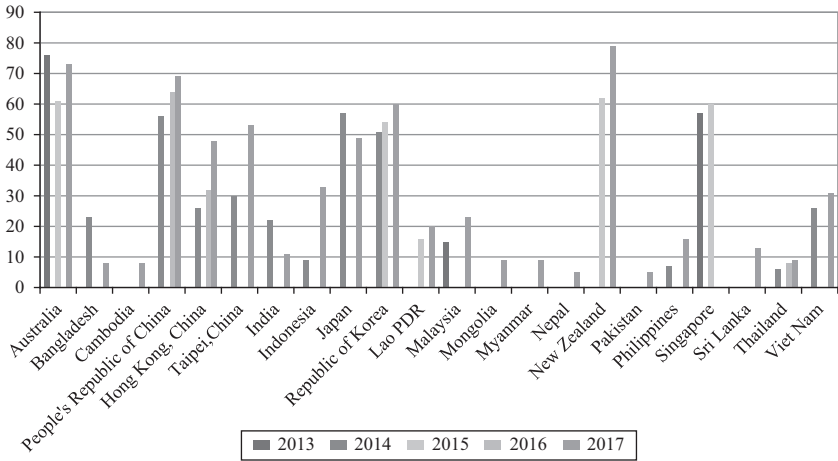


Figure I.2 Internet Shoppers as a Share of Internet Users in Asia and the Pacific. Lao PDR=Lao People’s Democratic Republic. Sources: United Nations Conference on Trade and Development (UNCTAD). 2015. *Information Economy Report 2015—Unlocking Potential of E-Commerce for Developing Countries*. Geneva: UNCTAD. https://unctad.org/en/publicationslibrary/ier2015_en.pdf, accessed 14 November 2020; UNCTAD. 2016. *UNCTAD B2C E-Commerce Index 2016*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d07_en.pdf, accessed 14 November 2020; UNCTAD. 2017. *UNCTAD B2C E-Commerce Index 2017*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d09_en.pdf, accessed 14 November 2020; UNCTAD. 2018. *UNCTAD B2C E-Commerce Index 2018—Focus on Africa*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d12_en.pdf, accessed 14 November 2020; UNCTAD. 2019a. *UNCTAD B2C E-Commerce Index 2019*. Geneva: UNCTAD. https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d14_en.pdf, accessed 14 November 2020.

(OECD 2019a). In addition, East Asia accounted for 70% of value added in ICT manufacturing, with the PRC accounting for 32% of the total (United Nations Conference on Trade and Development [UNCTAD] 2019b). Economies where the ICT sector accounts for the largest share of gross domestic product include the PRC; Japan; India; the ROK; and Taipei,China. Economies that witnessed the fastest growth in the sector worldwide include India; Hong Kong, China; Malaysia; Taipei,China; and the PRC (UNCTAD 2019b).

While the high-income economies of East Asia are present in all aspects of the digital economy, the PRC remains the undisputed leader of digitalization in the region. The PRC and the United States hold 75% of all patents related to blockchain technologies, represent 50% of global spending on the internet of things, and account for 90% of the market capitalization value among the world’s

70 largest platforms (UNCTAD 2019b). Chinese giants in this space include Alibaba, Tencent, Baidu, and Weibo (UNCTAD 2019b).

With respect to the digital economy, Asia and the Pacific is the most dynamic region in the world. The fast pace of development in South and Southeast Asia has contributed to a steady increase in internet access. The region is also a leader in ICT manufacturing, a sector that is continuously expanding, and high-income economies in East Asia are leaders in digital innovation.

Nevertheless, strong disparities exist among economies in the area. While the region's high-income economies are some of the most advanced in the digital world, developing countries in the region are lagging because of poor infrastructure and a shortage of skilled labor. Even among the frontrunners, there remains an enormous gap between the level of digitalization achieved in the PRC and other high-income economies. Since Asia and the Pacific are likely to continue paving the way for the development of the digital economy in the world (OECD 2019a), it is crucial to analyze the challenges and opportunities brought about by digitalization in the region. This is the aim of this book.

1.3 Challenges Posed by Digitalization

There is little doubt that digitalization has had, is having, and will continue to have a transformational and generally positive effect on how people interact, both with each other and with society as a whole. Evidence suggests that this is an important source of entrepreneurship that lowers barriers to entry and affects the business environment more broadly by bringing down transaction costs, increasing price transparency, improving productivity, assisting with job creation, and boosting gross domestic product (OECD 2018: 12–13). As the OECD noted recently, “digital transformation spurs innovation, generates efficiencies, and improves services while boosting more inclusive and sustainable growth and enhancing well-being”.

However, while increasing digitalization may have positive economic impacts, it also poses many challenges for policymakers and administrators. In particular, the rise of the digital economy has sparked many debates about appropriate models of taxation to deal with its impact. To put it simply, most countries have found themselves attempting to deal with 21st-century tax sovereignty and jurisdictional issues using early 20th-century tax architecture and concepts. As the OECD noted in 2020,

[t]he integration of national economies and markets has increased substantially in recent years, putting a strain on the international tax rules, which were designed more than a century ago. Weaknesses in the current rules create opportunities for base erosion and profit shifting (BEPS), requiring bold moves by policy makers to restore confidence in the system and ensure that profits are taxed where economic activities take place and value is created.

Digitalization is effectively a major challenge to tax systems since it enables businesses to operate across jurisdictions without any physical presence required. In its 2015 BEPS (base erosion and profit shifting) Action 1 Report, the OECD identified three broad challenges to existing taxation systems raised by digitalization: nexus, data, and characterization. These all relate to the question of how taxing rights on income generated from cross-border activities in the digital age should be allocated among countries (OECD 2015: 18–19). Underpinning these challenges are several salient common characteristics of digitalized businesses, including the ability of digital businesses to scale across borders without mass, the heavy reliance of digital businesses on intangible assets, and the creation of economic value through the provision of data by users (which includes issues of intellectual property) (OECD 2018: 24).

Remote technology and the evolution of global value chains have enabled many digitalized businesses to operate in different locations without a physical presence, with different stages of their production, distribution, and sales processes located in different countries. At the same time, customers of digital businesses are also located in many different countries.

The presence of digital businesses in the economic life of a country therefore poses challenges to the traditional taxation system. Digital businesses cannot easily be taxed on their income in a country where they have no physical presence and, at the same time, cannot be easily taxed by their home country on income generated from sales abroad. Any threat of income taxation may result in digital businesses leaving the jurisdiction, leading to an overall loss in tax revenue. Moreover, the lack of a unified approach toward digital taxation opens the possibility of aggressive tax planning. It therefore becomes essential to consider the nexus rules, which would make it possible to tax firms' income generated in a certain jurisdiction, even if the firms are not physically present in that jurisdiction. To develop a fair and equitable system of taxation for businesses operating across jurisdictions in the digital economy, it is crucial to modify the nexus rules and profit allocation.

Intangible assets are important drivers of business value. The 2018 OECD interim report shows that many digital businesses rely heavily on intangible investments, such as intellectual property assets. In the digital sphere, this reliance manifests most obviously in the development and use of software or algorithms to support business platforms and generate revenue. Digital firms are therefore highly dependent on the price stability of these intangible assets, as this is essential for their activities. Additional taxation that would result in price increases for these assets could lead to shutdowns of digital businesses. Nonetheless, countries are keen to ensure that such intellectual property is not located or exploited in a way that could cause significant tax revenue leakage.

The last challenge identified by the OECD interim report is associated with user participation and user data in relation to some of these intellectual property issues. User participation, network effects, and generated data are often found in digital business models (OECD 2018); and the use, collection, and analysis of data have become an integral part of the business models of most digitalized

firms. In particular, digital businesses have been shown to create value by gathering user data. They also have the capacity to monetize that value through targeted marketing and advertisement (UNCTAD 2019b), and more indirectly through improvements to business operations, product design, or other marketing activities.

However, increasing user participation and growing data collection pose challenges both to digital businesses in terms of how to deal with that personal information, and to taxing authorities in seeking to tax some part of any economic gain that may flow from this value creation, whether to the businesses involved or to their customers. Although these business models primarily raise issues relating to individuals' property rights over their personal information (especially whether such information can be used to create value for firms), there are also significant issues and challenges relating to the taxation of such value that have not yet been resolved.

I.4 Responding to the Challenges of Digitalization

I.4.1 Developing a New Tax Architecture

To date, responses to the taxation challenges posed by digitalization have been diverse and inconclusive. While there has been a spirited and broad-based attempt, under the guidance of the OECD and Group of 20 (G20), to develop a model that member jurisdictions can adopt, consensus around a multilateral approach has proved elusive as of the end of 2020. As a result, many countries have decided or been obliged to adopt more unilateral measures to address the challenges of taxing the digitalized economy. These multilateral and unilateral initiatives are discussed in the following sections in more detail.

I.4.1.1 The Multilateral Approach

To address the challenges resulting from digitalization, many jurisdictions have joined together in a multilateral approach. In 2015, the OECD and G20 drafted the Action 1 Report addressing BEPS that put digital taxation at the top of its 15 action plans. This report identified loopholes in existing legislation that, for example, facilitated transfer pricing abuses (UNCTAD 2019b). Although the report represented significant progress, it did not suggest any concrete solution to tackle these issues, especially in terms of direct taxation (UNCTAD 2019b).

Therefore, as a follow up to the report, the OECD created the Task Force on the Digital Economy, which gathered many countries and jurisdictions (129, initially) into an Inclusive Framework that now embraces 137 member countries, all of which participated in the OECD and G20 BEPS quest for a multilateral solution. The objective of the Inclusive Framework was to strive to reach a consensus and long-term solution regarding digital taxation (UNCTAD 2019b).

An interim report on the tax challenges arising from digitalization was published in 2018 (OECD 2018). This report set out the Inclusive Framework's

agreed direction of work on digitalization and international tax rules, with the aim of developing a consensus-based solution by the end of 2020 based on a comprehensive and coherent review of existing rules. Although it was unable to propose a unified, multilateral solution for taxation, it suggested various approaches for unilateral solutions. As the Inclusive Framework member countries were working toward the eventual achievement of a unified taxation system, the 2018 interim report also highlighted that unilateral measures could only be temporary.

In 2019, the OECD Secretariat released, by means of a policy note, proposals for an approach focusing on two central pillars: (1) The broad challenges of the digitalization of the economy, and the allocation of taxing rights and nexus issues; and (2) the remaining BEPS concerns, in particular, the development of a coordinated set of rules to address ongoing risks from structures viewed as allowing multinational enterprises to shift profits to jurisdictions where they are subject to no, or very low, taxation (OECD 2019b).

The approach under the first pillar proposed a new nexus focused on sales rather than on the physical presence of businesses. In addition, this new nexus would include specific sales thresholds to ensure an appropriate revenue share for smaller jurisdictions (OECD 2019b). The approach also suggested a simplified allocation of profits, regardless of whether foreign businesses were present in the market country or sold their products through unrelated distributors. The new allocation of profits would favor the users' market jurisdiction (OECD 2019b). Finally, it introduced a "three tier mechanism," which increased certainty for taxpayers and tax administrations (OECD 2019b). The mechanism consisted of three profit allocations: (1) A share of deemed residual profit allocated to the market jurisdiction; (2) a fixed remuneration for baseline marketing and distribution functions of the market jurisdiction; and (3) a dispute prevention and resolution mechanism, in case profits exceeded baseline activity compensated for by the first two mechanisms (OECD 2019b).

A flurry of activity in 2019 and 2020 resulted in the publication by the OECD and G20 Inclusive Framework of a package of documents containing the *Reports on the Blueprints of Pillar One and Pillar Two* in October 2020 (OECD 2020a; OECD 2020b), together with a new economic impact analysis showing the combined effect of the two-pillar solutions (OECD 2020c). A consensus solution was intended to have been presented by the end of 2020. However, these documents make it very clear that, although there are convergent views on many key policy features, principles, and parameters of both pillars, there are many remaining technical and administrative issues, as well as policy issues where divergent views among Inclusive Framework members remain to be bridged. The OECD has indicated that it intends to present a consensus solution in mid-2021.

The *Report on the Pillar One Blueprint* is designed to deliver a sustainable taxation framework reflecting today's digitalizing economy, with the potential to achieve a fairer and more efficient allocation of taxing rights. Although no agreement has been reached, the OECD argues that the blueprint nevertheless provides a solid foundation for a future agreement that would adhere to the concept of net taxation of income, avoid double taxation, and be as simple and

administrable as possible (OECD 2020d). It suggests that the blueprint offers a solid basis for future agreement and reflects the following:

- (1) In an increasingly digital age, in-scope businesses can generate profits by participating in a significant, active, and sustained way in the economic life of a jurisdiction, beyond the mere conclusion of sales, with or without the benefit of local physical presence; this would be reflected in the design of nexus rules while being mindful of compliance considerations;
- (2) The solution would follow the policy rationale set out above and allocate a portion of the residual profit of in-scope businesses to market and user jurisdictions (Amount A);
- (3) The solution would be targeted and build in thresholds to minimize compliance costs for taxpayers and keep the administration of the new rules manageable for tax administrations;
- (4) Amount A would be computed using consolidated financial accounts as the starting point, contain a limited number of book-to-tax adjustments, and ensure that losses are appropriately taken into account;
- (5) In determining the tax base, segmentation would be required to target the new taxing right appropriately in certain cases, with broad safe-harbor or exemption rules from segmentation to reduce complexity and minimize burdens for tax administrations and taxpayers alike;
- (6) The solution would contain effective means to eliminate double taxation in a multilateral setting;
- (7) The work on Amount B (a fixed rate of return on baseline marketing and distribution activities intended to approximate results determined under the “arm’s length” principle) will continue to be developed, recognizing both the potentially significant benefits, including for tax administrations with limited capacity, as well as the challenges that agreement on this point will bring;
- (8) The Pillar One solution would contain a new multilateral tax certainty process with respect to Amount A, recognizing the importance of using simplified and coordinated administrative procedures with respect to the administration of Amount A;
- (9) A new multilateral convention would be developed to implement the solution, recognizing that it would offer the best and most efficient way of implementing Pillar One (OECD 2020d).

The OECD suggests that the focus going forward will be on resolving the remaining political and technical issues, including issues around scope, quantum, the choice between mandatory and safe-harbor implementation, and aspects of the new tax certainty procedures with respect to Amount A, as well as the scope and form of new and enhanced tax certainty procedures for issues beyond Amount A.

With respect to the Pillar Two Blueprint, the OECD argues that the 2020 report provides a solid basis for a systemic solution that would address the remaining BEPS challenges, and sets out rules providing jurisdictions with a right

to “tax back” where other jurisdictions have not exercised their primary taxing rights, or where payment is otherwise subject to low levels of effective taxation (OECD 2020d). These rules would ensure that all large internationally operating businesses pay at least a minimum level of tax. The OECD acknowledges that jurisdictions are free to determine their own tax systems, including whether they have a corporate income tax, and the level of their tax rates, but must also consider the right of other jurisdictions to apply an internationally agreed Pillar Two regime where income is taxed below an agreed minimum rate. Although no agreement has been reached, this blueprint arguably provides a solid basis for a future agreement.

Nevertheless, several questions on digital taxation remain, such as the possibility of differentiation for business models and the elimination of double taxation, which still need to be addressed. Further, the proposal leaves undecided the choice of amount and thresholds to be reallocated, which will ultimately require a political agreement between members of the Inclusive Framework.

I.4.1.2 Unilateral Approaches: Examples from Asia and the Pacific

The lack of consensus and slow formulation of solutions in the multilateral approach have left many countries with little or no choice but to consider and implement unilateral changes to their taxation systems in dealing with digital businesses. While such approaches can foster aggressive tax planning responses from affected businesses, these measures may well be temporary until a consensus can be found. Given the central position of Asia and the Pacific in the processes and products of digitalization, it is not surprising that economies in the region are often also pioneers in digital taxation.

While some Asian economies have pledged to follow international consensus without taking interim measures, others have attempted to impose unilateral measures on the digital economy. As noted in Chapter 5 of this book, the PRC has mainly been tackling the challenges of digitalization through its tax reforms of 1994 and 2018. The 1994 reform allowed for the division of tax responsibilities between central and local governments and was also an opportunity to modernize the turnover tax, value-added tax (VAT), and business tax. Since 2018, the PRC has implemented several measures to tax the digital economy; for example, PRC authorities have introduced the concept of “Internet Plus” and e-invoices using blockchain technology (see Chapter 5). The PRC has also formulated an import tax for cross-border e-commerce retailers, taxing e-commerce purchases. While these reforms have certainly increased tax revenue, the country is still lagging in terms of the digitalization of its tax collection processes.

Further regional examples of unilateral action can be found in Malaysia and Singapore, where authorities have introduced a tax rule extension to cover digital supplies from foreign providers (UNCTAD 2019b). In addition, in Chapter 7 of this volume, it is noted that India is considering a reformed tax system in which foreign companies that advertise on Indian internet provider addresses would be taxed. The Government of India has also proposed establishing a framework

based on significant economic presence to tax digital-intensive firms in India, even if these businesses do not have permanent establishment status in the country (see Chapter 7).

1.4.2 Evolution of Digital Administration

Responses to the challenges of digitalization are not restricted simply to tax policy and legislative changes. Revenue authorities throughout the world—particularly in Asia and the Pacific, as illustrated in this volume—have adopted technological changes to improve their own tax administrative processes related to tax collection and compliance, while at the same time reducing compliance costs for the business community. Since the 1990s, digital advances have been providing opportunities to transform traditionally paper-based interactions between businesses and governments into paperless interactions, making it easier to automate tasks such as the collation of information, calculation of taxes, and lodgment of tax reports (OECD 2003). A case study based on the administration of VAT around the world illustrates the processes at work (PricewaterhouseCoopers and World Bank Group 2020: 20–23).

Four broad stages have been identified in the adoption of technology for the administration of VAT. In the first stage, minimal use is made of technology and most recording, reporting, and transactions are paper based. These largely manual processes inevitably lead to relatively inefficient services by revenue authorities and high compliance burdens for businesses in countries at this stage of technological development. Many developing countries in South America (e.g., Venezuela and Bolivia) and Africa (e.g., Gabon) are still at this stage of technological development in terms of the administration of their VAT systems. In Asia and the Pacific, countries such as Cambodia, the Lao PDR, and Myanmar are likely still at this stage.

The second stage of technological development for revenue authorities typically involves some form of online filing and payment, which generally leads to greater administrative efficiency and a reduction in the compliance burden for business taxpayers. Countries at this stage of development include Indonesia, the Ivory Coast, and the Kyrgyz Republic.

The third stage of technological advances in tax administration entails a move to real-time systems, involving the close integration of taxpayers' and the revenue authority's technology solutions. This advance in technology can include real-time or near real-time filing, together with mandated e-invoicing and payment systems. This can offer benefits in the form of enhanced revenue yield, lower administrative costs for revenue authorities, and lower compliance costs for businesses, largely achieved as a result of the high volume of transactions and the removal or reduction of archiving and ancillary reporting requirements. It can also enhance fraud prevention and offer greater control over data for the revenue authority. Notable examples of countries at this stage of development are in Europe, including Spain (with real-time invoicing); Italy (with mandatory business-to-government, business-to-business, and business-to-consumer

invoicing through a government-run portal); and Hungary (with reporting of e-invoice information by way of its KOBAK system). Developed countries in Asia and the Pacific at this stage of development likely include Australia, Japan, the ROK, and New Zealand.

Although the fourth level of cutting-edge technology (including the use of blockchain, artificial intelligence, and big data) is still in its infancy, it is nonetheless being assessed and piloted in many countries; and further benefits in the form of lower compliance costs for businesses and enhanced efficiency and transparency for revenue authorities are anticipated. There are already examples of countries adopting this next level of technology. For example, Kazakhstan is already using blockchain in the administration of some VAT receipts, and the results are promising. In the United Kingdom, Her Majesty's Revenue and Customs is still evaluating this technology as a part of its comprehensive VAT digitization program. The PRC's Tax Administration Information System-3 (currently being piloted) builds on earlier initiatives to digitize VAT invoicing and uses "big data" to integrate VAT enforcement with that of other taxes (Xiao and Shao 2020).

Whatever stage a country finds itself at, there is little doubt that digitalization has the capacity to improve revenue authority processes and productivity significantly, enhance administrative efficiency, and reduce the compliance costs encountered by the business community as a result of the administration of taxation. Indeed, many of the tax reforms that have taken place in Asia and the Pacific in the last two decades have prioritized the digitalization of the tax system to make tax collection more efficient and reduce tax operating costs (that is, administrative costs for revenue authorities and compliance costs for businesses). The chapters in this book, especially those relating to the Republic of Korea (Chapter 9), Bangladesh (Chapter 11), and Japan (Chapter 12), illustrate the profound effect that technological advances brought about by digital change can have on revenue authority operations.

I.5 The Structure of the Book

This book reviews revenue authority responses to the challenges of the digital economy together with cutting-edge tax administrative initiatives in service delivery and compliance, including such concepts as (1) the use of big data, "tap and go" developments, the impact of artificial intelligence, and the use of algorithms; (2) data policy, ethical exploitation, cyber security, and new developments in regulating data platforms; (3) the globalization of revenue administration and tax dispute resolution; and (4) new tax administrative approaches to protect the vulnerable (e.g., the elderly, impaired, and inhabitants of remote locations). The book discusses ideas involved in identifying relevant features of digital markets and business models, as well as the implications of the development of macro databases in the digital economy. It explores viable solutions to the setback created by the COVID-19 pandemic and envisions future security for digital markets. Finally, it tackles the roles of government reform in tax administration and

of international collaboration in delivering services and compliance in a digital economy.

The following chapters are split into two parts. Part I contains four chapters that take a more general perspective and deal with generic challenges and opportunities, while Part II comprises nine chapters with a more country-specific focus. All of the chapters have been peer-reviewed by at least two independent referees in accordance with international best practices.

The first chapter in Part I, by Granger, de Clercq, and Lymer, discusses many of the new technologies that could be used by future tax administrations, including algorithms, blockchain, robotic process automation, predictive analytical tools, data analytics, and cloud computing. Their discussion draws on many concrete examples of innovative tax administration from all over the world, including from Australia, South Africa, and the United Kingdom. The chapter also explores some of the legal, ethical, and capability challenges with respect to data governance that tax administrators face in a world of digitally integrated living and working. Based on a careful review of the literature, the authors propose, *inter alia*, new models for revenue system development that integrate digital technologies in tax payment processes.

Because tax evasion is a pressing issue, particularly in lower- and middle-income countries across Asia and the Pacific, Shakil and Tasnia devote their chapter (Chapter 2) to an investigation of the potential benefits that artificial intelligence and machine learning can bring to tax administration in the region. They note that manual tax audit and investigation is both time-consuming and inefficient, and as a result, many countries have already introduced computer-based methods. Machine learning and artificial intelligence are becoming increasingly popular, and have been used in many countries in the region (including Australia, the PRC, Japan, India, and New Zealand). The chapter details the use of these new technologies in each country and argues that, while artificial intelligence and machine learning can be useful tools in helping to reduce tax fraud, many issues and challenges linked with these technologies remain. Data quality, reluctance to defer important tax decisions fully to machines, and complex and heterogeneous tax laws across countries in Asia and the Pacific are among the reasons cited for the slow spread of these new technologies in tax administration. Nonetheless, the authors highlight the efficiency of artificial intelligence and machine learning in addressing tax fraud and evasion and recommend standardizing approaches and processes in tax jurisdictions across Asia and the Pacific as the way forward.

In Chapter 3, Juswanto and Abiyunus discuss tax reforms and digitalization in emerging market economies, which face many difficulties related to taxation, from tax evasion and fraud to the appropriate taxation of foreign digitalized businesses. While digital taxation can help solve some of these issues, the authors also highlight that digitalizing taxation comes with many challenges. For instance, the traditional VAT and income tax frameworks are inefficient means to tax intangible, cross-border goods and services. The chapter then identifies some examples of successful implementation of digital taxation and good practices, with a

special focus on Southeast Asia, as well as providing a more detailed case study of Indonesia. Generally, the authors recommend that emerging market countries actively participate in multilateral discussions to establish a global framework for digital taxation rather than seeking to implement unilateral measures. If a unilateral approach is considered, the authors highlight that it must only take the form of temporary, short-lived measures until a global consensus is reached.

In the final chapter in Part I (Chapter 4), Vissaro provides a perspective of cooperative compliance as a solution for tackling issues of tax evasion in developing economies. The chapter explores whether cooperative compliance, defined as a trust-based relationship between taxpayers and the tax collection agency, can be justified, and if so, under which conditions. Ultimately, the author recommends pilot programs for tax authorities focused on state-owned and large enterprises. The chapter also highlights the key role of digitalization in the process, as technology can be used both to improve compliance risk management and to provide a more convenient, easily navigable framework for taxpayers, which itself encourages compliance.

Part II moves from the general to the more specific, and its chapters provide a series of case studies of the PRC (Chapters 5 and 6), India (Chapter 7), Australia and New Zealand (Chapter 8), the Republic of Korea (Chapter 9), Indonesia (Chapters 10 and 13), Bangladesh (Chapter 11), and Japan (Chapter 12).

In the opening chapter of Part II (Chapter 5), Li and Liu explore the tax reforms implemented in the PRC. Through a careful review of the literature, the authors describe the challenges of digitalization in the PRC and contrast the tax reforms of 1994 and 2018. The 1994 reform allowed for the division of tax responsibilities between central and local governments and was also an opportunity to modernize the turnover tax, VAT, and business tax. Since 2018 the PRC has implemented several measures to tax the digital economy, for example, by introducing the concept of “Internet Plus” and e-invoices using blockchain technology. The PRC has also formulated an import tax for cross-border e-commerce retail businesses, taxing e-commerce purchases. The authors put forward several suggestions for further reforms based on good practices from other OECD countries. Their study argues for fair taxes, without targeting a particular sector through a digital tax on customer-to-customer transactions. In addition, the authors also recommend accelerating the legislative process to better tackle the challenges brought by taxation of the digital economy, as well as taking advantage of new technologies such as cloud computing, blockchain, or artificial intelligence to improve the current system. Finally, the authors urge policymakers in the PRC to align with international standards to achieve long-term and stable economic development.

The focus on the PRC is continued in Chapter 6 by Xu and Zhang, who review challenges and recent technological advances in the PRC and examine their current and potential impact on tax administration. Special attention is paid to the rise of blockchain as a technology with the capacity to enhance transparency, efficiency, accountability, and inclusiveness for tax officials. The study explores existing pilot projects, where some regions of the PRC have introduced

blockchain and electronic invoices, which show promising results for tackling information asymmetry and inadequate information exchange. While the authors highlight that the characteristics of blockchain may improve tax compliance and help increase the efficiency of administration, they also note that this technology has several limitations and disadvantages. Uneven economic development between regions in the PRC and the lack of a country-wide legal framework for implementation may impede its use for tax administrative purposes. Finally, the authors point out that blockchain itself cannot solve capacity building-related issues, which remain key challenges in Chinese tax administration.

In Chapter 7, Subramanian presents a case study of the reforms that have been implemented in India, focusing on the challenges brought about by digital taxation. The chapter discusses the importance of international collaboration in providing digital services that can enhance tax compliance. The chapter notes that India has made some progress in determining how to tax the digital economy, including the introduction of changes taxing foreign companies that advertise on Indian internet provider addresses, but observes that more needs to be done. For example, the Government of India has proposed unilateral action in the form of establishing a framework based on significant economic presence to tax digital-intensive firms in India, even if those businesses do not have a permanent establishment in the country. The Indian tax administration also has ambitious plans as to how to best use new technologies such as artificial intelligence, cloud computing, and analytics. Generally, however, the author highlights the importance of international cooperation to tax digital businesses and services more effectively, avoiding where possible any increase in the tax burden imposed on small and medium-sized enterprises. The author also suggests revisiting and updating traditional tax systems such as VAT to enable them to respond more effectively to challenges brought about by the digitalization of the Indian economy.

The focus turns to Australasia in Chapter 8, where Granger and Sawyer provide a comparative analysis of the development of tax revenue digitalization in Australia and New Zealand. The authors note that the geographical isolation of the two countries has meant that both have willingly embraced digitalization and technological innovation in the age of globalization. Digitalization of services and the use of smart data have brought opportunities but also created challenges for their tax administrations. However, in both countries digital services have helped bring tax collecting agencies and taxpayers closer to one another, allowing for wider engagement and interaction between the two. On the other hand, digitalization has also posed compliance risk management issues and general implementation challenges. Overall, the chapter provides an interesting analysis of the evolution of tax administration digitalization in developed economies, as well as a useful discussion of the future of tax administration after COVID-19.

In Chapter 9, Kim provides a case study on the digitalization of the tax administration in the ROK. To increase efficient tax collection, the Korean tax system has rapidly evolved and adapted to challenges brought about by the digital age. Digitalization of the tax administration was initiated largely as a response to taxpayers' demands for better service. Before 1997, all tax officers handled tasks

manually, a source of great inefficiency in the public service. Digital reforms, detailed in the chapter, have increased transparency and eliminated redundant tasks, contributing to enhanced revenue collection and an improved taxpayer experience. Since the implementation of the measures detailed in the chapter, total tax revenue increased fivefold from 1997 to 2018. In addition, the operating costs of the tax system (compliance costs for taxpayers and administrative costs for the revenue authority) have declined dramatically over the period. As a result, the author argues that these reforms have been successful and that the ROK's success with digitalization could serve as an inspiration for the digital transformation of tax administrations in other developed economies.

In Chapter 10, Andikara, Astuti, and Hanum address the issue of cross-border digital taxation by looking at the specific experience of Indonesia. The chapter provides details of the relevant legislation and government regulations on direct and indirect taxation and identifies implementation challenges. The authors highlight initial VAT legislation that adequately addressed business-to-business digital transactions but failed to capture business-to-consumer transactions. However, more recent provisions in the VAT legislation provide a basis for taxing all digital-based transactions, including through the appointment of overseas sellers as VAT collectors. Nevertheless, several challenges remain for the implementation of a comprehensive system, including taxation of non-resident sellers, appropriate data management, and adequate law enforcement.

In Chapter 11, Sarker and Ahmed's case study clearly analyzes the role of government reforms in the digitalization and automation of the tax system in Bangladesh. To enhance voluntary tax compliance and tackle tax evasion, the National Board of Revenue has introduced systems and processes that gather and verify electronic information for tax credits and refunds and that have enabled taxpayers to use online registration, filing, payment, and withholding since 2014. Using a two-stage online key-informants survey, the study described in the chapter identifies the strengths, weaknesses, and challenges inherent in the implementation of these reforms. The results of this study reveal participants' generally positive attitude toward the reforms, as most respondents believe that digitalizing tax administration can aid tax collection, especially during the COVID-19 pandemic. Participants also perceived such reforms as useful for enhancing inclusive and sustained economic growth in the country. In general, the study provides insightful perspectives on future tax policy reforms in emerging economies, especially those in Asia and the Pacific.

In Chapter 12, Kosugi provides a detailed case study of the digitalization of the Japanese tax administration. In 2017, the National Tax Agency revealed its Future Vision of Tax Administration, which aims to enable efficient and advanced taxation and collection through digitization and the use of ICT. The Future Vision of Tax Administration relies on advanced technologies such as artificial intelligence and automated tax consultation and verification through the use of chatbots. The author also highlights the efforts of the National Tax Agency to improve convenience for taxpayers engaging with the tax system by introducing new websites such as MyNa, online tax filing through smartphones or tablets, the

digitalization of tax procedures for corporations, and the simplification of procedures such as the Year-End Adjustment process.

Indonesia is again the setting for the final chapter (Chapter 13) in the volume. Misra, Kurniawan, and Yonnedi discuss the issue of disputes between taxpayers and the tax administration, which are usually solved through arbitration and negotiation. By analyzing the partner objectives and communication style of taxpayers, the study aims to examine influences on the negotiation outcome, using concepts drawn from social identity theory and dual social concern. The authors use a web-based approach to interview 59 practicing tax professionals to observe variations in negotiation outcomes for taxpayers who negotiate with a computer-simulated tax official. Using a predominantly social-psychological approach, the study shows how critical the communication style of the tax official is for the negotiation outcome, and their results suggest that online negotiations with computer-simulated officials have little effect on taxpayers.

Overall, the chapters in this volume provide an insightful analysis of the tax administrative challenges faced by countries in Asia and the Pacific, which are coming to terms with the onset of the fourth industrial revolution and its digitalized manifestations. The book also identifies the opportunities presented by the digital economy and the successful reforms that can be realized through the judicious use of these technological advances.

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Part I

Introduction and Overview



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1 Tapping Taxes

Digital Disruption and Revenue Administration Responses

*Jennie Granger, Bernadene de Clercq,
and Andy Lymer*

1.1 Introduction

Tapping taxes is a metaphor for exploring whether the next wave of digital disruption will have as dramatic an impact on the future management of revenue systems as it continues to have on business. In the future, digital integration of revenue systems could involve seamlessly tapping into the digital footprints of people and businesses. This chapter discusses some of the current technological innovations and trends that would make seamless integration possible. Examples are used to illustrate their potential as stepping-stones toward a future in which people tap to transact, their tax returns are seamlessly and automatically prepared, and their tax is calculated and paid. Indeed, depending on the policy options that governments choose, tax returns themselves could disappear. This chapter explores the capability implications of such a significant digital disruption for revenue administrations, practitioners, and taxpayers. Lastly, the chapter discusses some of the legal, ethical, and capability challenges with respect to data governance that tax administrators face operating in a world of digitally integrated living and working.

Although this chapter focuses on intra-country analysis, many of the issues arising have broader inter-country implications, given the varying pace of change in different tax jurisdictions and their increasing interconnectedness. While it is beyond the scope of this chapter to explore these, it is acknowledged that these are key issues with which many taxpayers, tax authorities, and tax advisors need to engage.

1.2 Digital Innovations and Trends

1.2.1 Transforming the World of Business

Technological innovations—particularly the rise of online business via internet platforms, social media, and (the now largely ubiquitous) smartphones—have rapidly changed how people work and live and how businesses operate. This looks set to continue. According to Deloitte Insights (2019), digital transformation over the past decade has been fueled by three big game-changers, as follows:

- (i) The development of digital experiences, not only as services to customers, but also in how organizations interact with their employees, stakeholders, and others. These are supported by algorithms, robotic process automation, and predictive analytical tools;
- (ii) Data analytics and its ability to generate customer and organizational insights and, increasingly, the power to predict. Accompanying these opportunities are significant challenges in ensuring the quality of data, determining how to integrate data across various systems and divisions within the organization, and identifying the external data to obtain and match. Governing all these issues legally and ethically is becoming central to the reputation of organizations;
- (iii) Cloud computing, initially used to shift workloads and improve capacity, is increasingly yielding new ways of gathering and making use of more data more quickly, and using cloud-native services to create new products and services.

These game-changing innovations have enabled businesses to speed up their processes, rapidly develop and adapt their products and services, and reach more customers, both in their neighborhoods and across the world. It has also led to new digital products and services, as well as the rise of new digital businesses such as Amazon, Uber, and Airbnb, which have disrupted industries and transformed business models.

However, the impact of these innovations has been broader than simply affecting individual businesses and disrupting certain channels and industries. A new digital-based economy is developing, enabled by digital platforms that are transforming a wide variety of markets and work arrangements (Kenney and Zysman 2016). Moreover, innovations are arriving on the scene at an increasingly fast pace: Driverless cars are already being tested in major cities, drones are delivering parcels, and three-dimensional printing is turning manufacturing and production on its head. Beyond business, ways of working and engaging with the world have also been transformed. The gig economy is redefining working relationships, and the social isolation requirements during the pandemic have proven that many employees can work remotely, at least for a short time.

Mobile technology enables constant communication, consumption of news, shopping, and entertainment, regardless of the consumer's location. Finances can be managed anywhere, at any time, and there is no need to carry cash or collect receipts with tap-and-go cards. Their use has become ubiquitous, with cash transactions being discouraged as a health risk during the pandemic. This break with the old is also evident from the discontinuation of checks in many countries; for example, South Africa recently announced that checks will not be accepted from 1 January 2021. Apple's Apple Pay (Apple 2019) goes further, being more akin to a virtual currency, storing currency in digital wallets in the cloud, and allowing payments from an iPhone. This is opening up the world of digital currencies for everyday transactions.

Smart homes are also on the way, with voice activation of security and music systems via smartphones becoming commonplace. Everyday appliances are

increasingly being transformed into devices capable of being connected to and controlled via the internet, resulting in an immense focus on “the internet of things” (IBM 2019). Disruptive financial trends, emerging new business models, and dramatic changes in the very functioning of businesses and their staffing have driven revenue administrations to adapt to remain effective and efficient.

1.2.2 Transforming the World of Tax Administration

Revenue systems and their administrators have proven to be resilient adaptors over years of rapid change. They have had to be, to keep up with taxpayers! Services needed, risk responses, and the collection of data and revenue changed significantly. It is now commonplace for routine data processing to be largely automated, and machine learning is used to respond automatically to routine inquiries. Data exploitation has gone from simple matching of third-party data to detect undisclosed income, to smart data analysis personalizing digital tax returns and identifying risks for intelligence-led compliance activities.

The coronavirus disease (COVID-19) has tested the resilience and adaptability of people and technology, as businesses have worked to maintain continuity during lockdowns that forced them rapidly to equip most of their staff to work remotely to protect their health. Revenue authorities proved their flexibility by significantly scaling back their compliance and debt collection activities in recognition of widespread financial distress while increasing taxpayer interactions and communications to support their governments’ responses to the pandemic. They have had the unenviable challenge of balancing empathy while still protecting revenue and safeguarding tax compliance (International Monetary Fund 2020). Their ability to flex their systems, redeploy staff, and implement rapidly at scale has made them the key agencies for delivering government economic stimulus and business support measures.

The heart of today’s revenue administrations is their huge databases, and the flow of data continuously replenishing them is their lifeblood. Data is not just a valuable tool for revenue administrations; revenue administrations have the largest and most comprehensive datasets in their nation, capable of providing insights into their people and businesses. Revenue administrations’ data exploitation is increasingly personalized to taxpayers. Prefilling data helps taxpayers file accurate returns. Contact center officers and debt collectors can access personalized taxpayer profiles to provide personalized advice or tailor a debt repayment arrangement. This also helps identify compliance risks and develop counteracting strategies; and provides vital modeling for treasuries and governments in developing and implementing policy. For example, the ability of some administrations to analyze payroll data collected fortnightly or monthly provided invaluable intelligence for their governments in assessing the pandemic’s impacts on businesses and the labor force, and the effectiveness of the government response. Increasingly, data is also at the heart of international collaboration on multi-jurisdictional compliance risks, and cross-agency and law-enforcement collaboration aimed at combating serious crime and other grave risks that require rapid, multiagency responses, including terrorism.

While engagement with revenue systems has become increasingly digital, they have fundamentally remained separate. Their core asset, their databases, are enhanced by combining data with third-party reported data and increasingly scraping publicly available information, but this process continues to be carried out predominantly in-house and is controlled by revenue authorities. However, it is unclear whether this is a sustainable model or is facing digital disruption.

The next wave of technological innovations (particularly artificial intelligence) (Hall and Pesenti 2017), combined with robotic automation and blockchain's ability to offer new levels of trusted transactions (Deloitte Insights 2019), could be a game-changer that creates a new level of personalized services, making it feasible for tax services to be offered securely and cheaply as a by-product of digital transactions. Such a development would profoundly impact the operating models of tax administrations. In this future model, instead of reporting data to revenue authorities, revenue systems would connect to customers' personalized profiles, allowing those customers' tax obligations to be managed as part of a bundle of services. In other words, the population of returns, calculation of tax or refunds, collection of tax, risk assessment, and compliance may all be integrated and managed seamlessly within a taxpayer's digital footprint. Based on current capabilities, online financial institutions are most likely to be able to provide these services seamlessly as part of the institution's personalized, automated services (see Section 1.4.1).

There are already examples of businesses working with artificial intelligence. Its ability to self-learn, combined with machine-learning robotic processes, is making it possible to move beyond automating straightforward services to create sophisticated, personally tailored, digital experiences. Netflix is a leading example of how to unlock personalized digital experiences, with its uniquely tailored streaming services that learn your tastes and adapt their offerings accordingly. Similarly, working examples are already in operation around the world using blockchain's ability to provide secure and trusted transactions. This includes "keyless," but secure, signature systems for accessing health records in Estonia, fraud-combating tools developed by Barclays Bank, and smart contracting that enables the automation of condition-based payment settlement between parties (Marr 2018). The public sector is also exploring its potential; for example, the Department of Work and Pensions of the United Kingdom (UK) is piloting the use of blockchain to manage benefit payments, using (with claimant approval) mobile phones to track applications and monitor benefits spending (Krishna, Fleming, and Assefa 2018). The use of this technology is also being explored to collect taxes at the same point where transactions are recorded (Krishna, Fleming, and Assefa 2018).

Some organizations are already developing services that could replace those provided by revenue authorities. For example, Australia's Commonwealth Bank offers its online banking customers the option of analyzing their transactions at any time to identify potential claims for various government payments. Another example is Wise Tech Global, a logistics software and supply chain execution business that is developing automated calculation and payment of value-added

tax (VAT) for 120 countries. This firm is engaging with the UK's Her Majesty's Revenue and Customs (HMRC) on the Making Tax Digital (MTD) program (see Section 1.4.2).

An important consequence of this model is that private sector service providers collect and analyze taxpayer data. There are many potential implications of the collection and exploitation of data as a commercial asset by the private sector, including using it for public purposes. Academics are currently exploring the potential for private sector capabilities to be used to monitor compliance with laws; for example, vehicle manufacturers could digitally analyze car performance to monitor if recidivist drivers are sticking to personalized speed limits (see Section 5.2.1).

1.3 Stepping-Stones to Digitally Resilient Revenue Administrations

This section looks at the developments that could be stepping-stones on the path to a digitally integrated revenue system.

1.3.1 *Is Transformation in Financial Services the Pathway to Tap-and-Go Personal Tax?*

The significant digital transformation underway in the financial services industry is the most likely stepping-stone for individual taxpayers to become tap-and-go clients. Financial services or institutions are already an important source of tax-related data for revenue authorities, but this data is becoming much richer as people increasingly transact digitally, particularly if they choose one provider for all their financial dealings. They could potentially offer a service analyzing customer transactions and identifying and collating tax-related data. The leading edge of financial services is at the forefront of innovation, but the industry is being digitally disrupted by new competitors such as Apple and is struggling with its bricks-and-mortar legacy.

The World Economic Forum (WEF), in conjunction with Deloitte Consulting LLP, conducted a large-scale review of the future of the financial services sector (WEF 2015), involving significant consultation with established institutions, financial services start-ups, academic scholars, and industry observers. A key conclusion was that retail banking must comprehensively change from physical branches to a digital platform. They also foreshadowed that “banking as a platform” would require banks to broaden their offerings, by bundling (or even integrating) services offered by third-party financial service providers such as financial managers. The complex, disruptive impact of digital innovations on every aspect of retail banking is modeled in Figure 1.1.

The impacts of digital disruption are already evident. Customers have rapidly embraced the convenience of digital banking for transferring funds, automating bill payments, and applying for loans from tablets or smartphones. Access to these services is expected to be 24/7 via easy-to-use and glitch-free applications, with

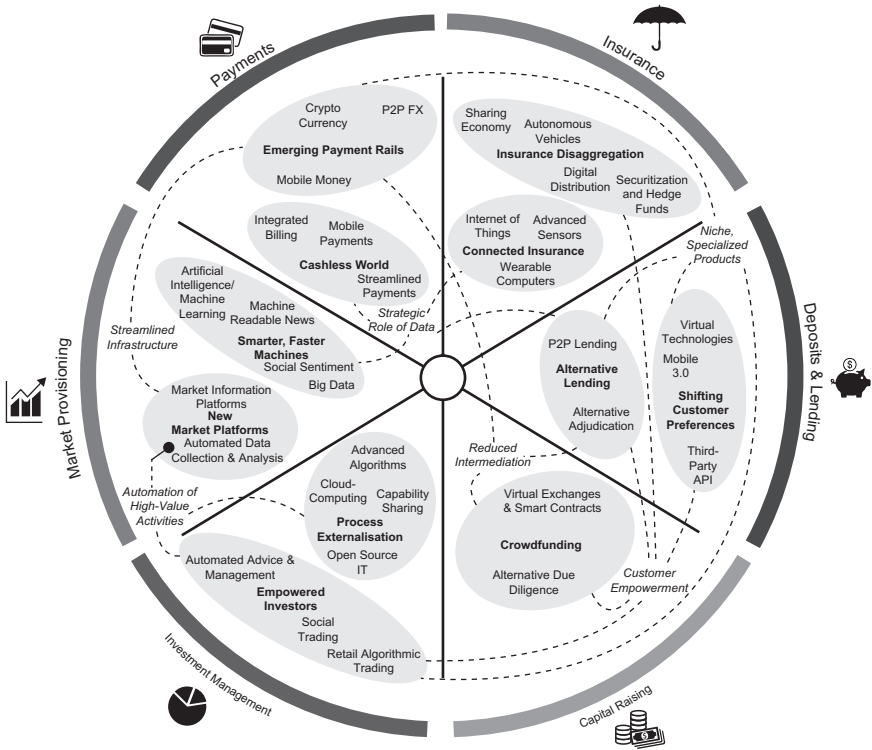


Figure 1.1 World Economic Forum's Impact of Disruptive Innovation on Retail Banking. Source: World Economic Forum. 2015. *The Future of Financial Services: How Disruptive Innovations Are Reshaping the Way Financial Services Are Structured, Provisioned and Consumed*. Vienna: World Economic Forum. www2.deloitte.com/global/en/pages/financial-services/articles/the-future-of-financial-services.html (accessed 17 September 2019).

as little paper use and human contact as possible. Many customers have access through their banking platforms to related services, such as buying, selling, and monitoring shares; buying and renewing insurance; and other financial products. More customer-centric services are becoming available, as the ability to pay by mobile phone becomes a part of normal retail transactions. This trend has accelerated during COVID-19, with cashless transactions becoming the norm even for small businesses.

As banks' artificial intelligence functions and robotics become increasingly sophisticated, they may exclude other service providers from their platforms and replace them with automated services, such as wealth management, based on customers' unique profiles. These services will be able to calculate the best investment opportunities and interest rates and identify the best loan providers

available for a specific customer. Given regulated advice requirements to know their clients' financial affairs comprehensively, it will not be a large step to add new tax-related services, such as seamlessly compiling tax returns.

Future banking experiences will be characterized by shifting customer preferences. There is already evidence of virtual channels providing broader functionality. This will become increasingly customer driven, based on their value propositions and experiences. Providing seamless customer experiences, with both internal and external service providers delivering real-time online and mobile solutions, will become the new norm. The development of "open banking" standards is key to growing this functionality, enabling financial data to be shared across multiple platforms.¹ Such standards are being rolled out around the world.

Virtual interaction is becoming increasingly embedded in customers' daily lives. A (largely) cashless society is likely in the not-too-distant future, although not ideal for all (Prabhakar 2020). eWallets and M-Pesa are but two of many examples where mobility and connectivity create an opportunity to interact on a mobile platform (Ndung'u 2018). Confidence in interaction is increasing as advances in geotagging, biometrics, and tokens improve the protection of parties to transactions from fraudsters. A cashless environment could lead to consolidation of the payment market, providing visibility into most of a customer's payment activities, valuable data on their lifestyle and preferences, and their wealth creation and management.

It will be a challenge to connect revenue systems to this disaggregated yet consolidated digital world. If revenue administrators want to follow their current model of third-party reporting data to be ingested and compared to direct reporting by taxpayers, the model is likely to be more challenging in the future. It will need to be gathered from a complex digital footprint. Platforms will include giants such as Google and Amazon, as well as a myriad of other sources such as local financial technology start-ups. Alternatively, data gathering and analysis could be outsourced; and tax return prefilling, calculation, and payment could become a fully integrated service, as part of the bundle of services offered on financial services platforms.

To illustrate the challenge and opportunity of interconnectedness, Parkinson et al. (2018) developed a "digitally extended self" model that illustrates the complexity and scale of the data generated by an individual's digital interactions. Their model consists of five concepts:

- (1) A digital footprint, that is data descriptive of an individual laid down as a result of his/her using, or being observed by, computing devices;
- (2) A third-party digital footprint, that is, digital footprints created by an individual or computer system that are descriptive of another individual (the data subject);
- (3) A digital mosaic, that is, a collection of digital footprints that can be used to create a picture of a person (a simple digital mosaic consists of a person's own digital footprints, whereas a full digital mosaic includes the collection of both an individual's own and third-party digital footprints);

- (4) A digital persona, that is, a model of an individual created by analyzing his/her digital footprints and/or other digital personas, and (optionally) additional second-level data; and
- (5) A digitally extended self, that is, the combination of the foregoing elements, to provide the fullest possible digital representation of an individual.

Today, revenue authorities routinely collect data at levels (1) and (2). Figure 1.2 portrays the various data sources generated in the financial services of the digitally extended self from a wealth management perspective. It is a much richer picture, and of greatest relevance to revenue administrations is its ability to generate most of what is needed for preparing and calculating personal tax.

Figure 1.2 illustrates the various digital persona that can be created based on an individual's interactions and participation in wealth management. The advances discussed above, such as open banking, will result in data (currently generated predominantly by traditional financial institutions) expanding through the multitude of new entrants to the platform environment. Even under the current model of third-party data reporting, tax authorities will benefit, as they will receive more accurate and real-time information from a variety of sources. Compliance costs regarding data capturing and analysis might decrease, given the potential for seamless, standardized reporting.

1.3.2 Will Transformation in Business-to-Government Tax Services Make Business Tax Seamless?

The leading edge of innovation in business-to-government digital services is to embed tax and other requirements into commercial software that makes business reporting and transactions a by-product of their normal business and accounting processes. To achieve this revenue, authorities are developing an ecosystem of application programming interfaces in partnership with software developers. For example, in Australia, Single Touch Payroll-enabled accounting software automatically reports payroll information such as salaries and wages, pay-as-you-go withholding, and superannuation when employees are paid.

The MTD initiative in the UK is a state-of-the-art example of digital business-to-government tax service changes. This scheme, which commenced in 2019, compelled businesses to switch to digital to manage accounting practices, thereby automating e-filing for VAT, and has even greater ambitions with respect to other aspects of tax service digitalization. The scheme builds on a process that began with the creation of online filing at the turn of the millennium (Lymer, Hansford, and Pilkington 2006). Online filing is now available for all major UK taxes for business taxpayers as well as individuals, and 93.95% of all taxpayers who filed a 2018–2019 personal tax return used this service in the latest tax year (by 31 January 2020 for the 2018–2019 tax year) (HMRC 2020a).

More recent changes have included the creation of online business “accounts” that enable any business (or its suitably authorized advisors) to view the status of their tax affairs at any point. However, the MTD, as the newest branding for

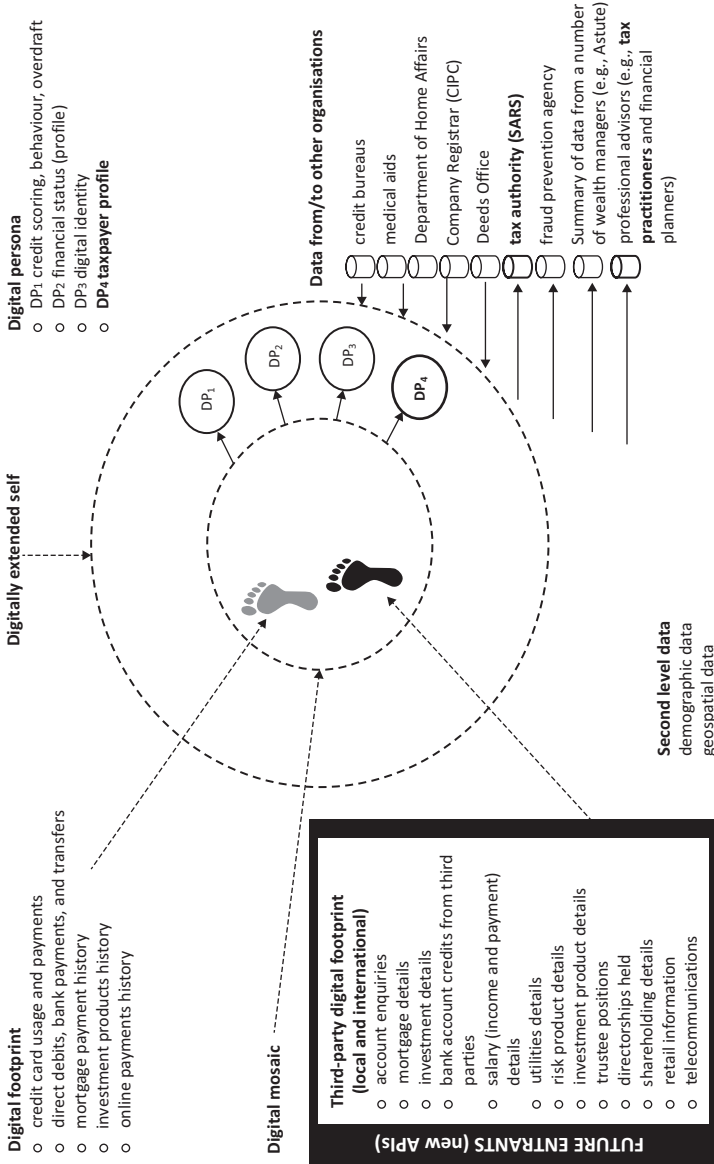


Figure 1.2 Digitally Extended Self from a Wealth Management Perspective. API= application programming interface, CIPC=Companies and Intellectual Property Commission, SARS= South African Revenue Service. Note: Although this figure refers to South African institutions, their functions are globally applicable and relevant. Source: adapted from Parkinson, B., D.E. Millard, K. O’Hara, and R. Giordano. 2018. “The Digitally Extended Self: A Lexicological Analysis of Personal Data.” *Journal of Information Science* 44(4): 552–565.

the development of tax-related e-services, marks a major change to the scope of service developments. It requires business customers to use approved software to generate and send their quarterly VAT return from their digital records, rather than logging in to the HMRC portal and typing in the information. In a departure from previous practice and common international practice, in April 2019 it was made compulsory for all businesses with a taxable turnover above the VAT threshold (£85,000). This is a good example of the potential for innovative tax solutions that are digitally mediated. The various implementation delays experienced also illustrate the policy and operational development challenges to be faced. This illustrates how difficult it is to progress such schemes in practice, even when technological challenges have been overcome and the political will to proceed has been secured.

The UK government announced the MTD scheme in 2015 (in Budget 2015) and formally launched it in December 2015, running a consultation on the proposals from August 2016 (HMRC 2017). It envisaged that this integrated system would become a key platform for its plans to be one of the most digitally enabled tax services in the world. The scheme (or, more accurately, series of schemes under a headline banner) addresses several different aspects of creating a digital interface with the UK tax authorities. The key focus of this work narrowed in scope after initial public consultations, moving businesses engaging with VAT to a digital-only solution from April 2019. While this may not sound that radical, since many UK businesses were already e-filing their tax returns (as is the case in many other jurisdictions), this was only digitalized at the point of entry into the HMRC system. In contrast, the new rules have created “end-to-end” digitalizing from the underlying electronic accounting system onto which automated filing is “attached” via an application programming interface platform (HMRC 2018). Under MTD rules, files once digitalized must remain in digital format through whatever processes the business (or advisors) undertakes on its records to produce the content from which VAT filing is performed.

This has created key challenges for the accounting software industry, that is, to bring to market products enabling all firms that file VAT accounts to do so electronically. Although businesses below the VAT threshold need not switch to digital accounting, many are doing so. This has created a significant shift from paper-based or simple spreadsheet record-keeping (as the mainstay of many smaller [and even some larger] businesses) to electronic accounts. This means that most businesses turning over more than £85,000 per year will now account entirely digitally. Although this currently equates to 44% of UK businesses at most (Department for Business, Energy, and Industrial Strategy 2020), those not included will mostly be very small businesses with no employees. Importantly, it provides a platform from which other e-services can be launched across tax interactions and other areas of government if the implementation challenges of such provision can be overcome and suitably managed.

By March 2020 (HMRC 2020b), 1.4 million out of 5.94 million UK businesses had engaged with the MTD program (Department for Business, Energy, and Industrial Strategy 2020: Table A), including 280,000 businesses operating

below the VAT threshold who voluntarily joined this scheme earlier than required. The scheme was credited with collecting an additional £223.5 million in tax revenue, largely because of the accuracy gains achieved by end-to-end digital record keeping. This will grow significantly from April 2023 when income tax assessments for businesses and landlords (for all businesses turning over more than £10,000) will be added.

This UK innovation provides possible benefits to revenue authorities in terms of data access and integrity, inbuilt audit capability (particularly if eventually used in combination with blockchain technologies), and settlement process streamlining. However, it also creates challenges in maximizing this potential with respect to the skills base needed both by the revenue authorities and within the advisor community. With respect to compliance, in particular, it requires a significant change in the mix of skills needed by advisors to cater to smaller clients. While the MTD entails significant extra costs for all parties involved, it is hoped that, over time, these investments will be outweighed by the benefits offered to all parties by the move to digital record-keeping and tax payment compliance (e.g., better data availability at lower cost and lower regulatory “friction” for the taxpayer, increased data integrity and availability for the revenue authority, and a shift to higher-value support provision and enhanced services from advisors to their clients) (HMRC 2017). It will also bring tax affairs ever closer to real time, both for tax reporting and the settlement of tax liabilities (HMRC 2020b).

1.4 Capability Challenges: The Robots Are Here

Technology innovations are enabling the development of new digital businesses and the reinvention of incumbent businesses, which must adapt if they are to compete. The story is no different for government agencies. Innovations for revenue authorities, like many organizations, started with the automation of routine, repetitive tasks, such as processing returns. The second wave of innovation saw the development of digital services (e.g., electronic tax returns) and re-engineered processes to support multichannel working (e.g., client relationship management, interactive voice recording, virtual assistants, and live chat), as call centers evolve into contact centers. With respect to compliance, smart data analytics and case management systems support expert tax inspectors. The third wave is already underway, with the potential applications of artificial intelligence and machine learning combining to replace many roles and reshape others, including those of professionals, with intelligent robotic capabilities that complement or even lead the work of humans (e.g., smart analytics predicting compliance risks for tax inspectors).

These trends are escalating. The McKinsey Global Institute (2019) has been studying the future of work, and in particular, the impact of automation. They estimate that, in the United States, technology may eliminate 22–27% of jobs, and up to 33% in some places. McKinsey also predicts significant workforce churn, with notable transitional unemployment, which can be partially offset if those displaced can be upskilled with skills needed for new roles being developed.

Furthermore, it is predicted that human work in the future will skew even more toward requiring socio-emotional skills and adding value through the ability to think creatively and laterally. The development of intelligent robotics will be significant for the tax profession and revenue administrators because of its ability to replace (or at least complement) knowledge work. Even bigger impacts are in store as revenue administrations move toward integrating tax record-keeping, calculations, and payments into taxpayers' digital footprints. This has significant implications for the capabilities of tax authorities and the tax profession.

1.4.1 New Capabilities: Revenue Authorities

Arendsen, Wittberg, and Goslinga (2019) envisage a fundamental shift in revenue administrations' business model (Table 1.1).

In moving into a digital future of seamless tax administration, revenue authorities will face three key capability challenges: (1) Developing and managing networked software and hardware, (2) managing data rights and governance of data where much of it is held and exploited by others in the network, and (3) developing professionals who are also digitally savvy and collaborative. Administrations' ability to develop their professional skills and culture is just as important as the first two capabilities.

Integration into digital footprints fundamentally shifts the role of administrations to one of designing and managing a system that is engaged in the world of taxpayers, rather than its own, standalone process. The infrastructure, software, and people capabilities required for the revenue administration of the future will need to focus much more on technology and collaboration. There are many current examples of collaboration, including where key technology skills are needed for change programs or consultation processes around implementing

Table 1.1 Rethinking Tax Administrations' Business Model

<i>Present</i>	<i>Future</i>
Focus on the tax return	Focus on tax services
Tax administration as a "stand-alone" organization	Tax administration as part of a network
Focus on case level	Focus on system level
Focus on pre-filing services and post-filing verification	Focus on "tax-inclusive" processes and seamless interaction
Bringing data to rules	Bringing rules to data
Tax law and audit competencies are key assets	Knowledge and information management are key assets
Interaction with taxpayers focuses on the taxation process	Interaction with taxpayers focuses on providing enablers

Source: Arendsen, R., L. Wittberg, and S. Goslinga. 2019. *Towards a New Business Model for Tax Administration—Exploring Paradigm Shifts*. Tax Administration Research Centre 7th Annual Conference, 11–12 April. Exeter: University of Exeter Business School.

new policy. However, these are fundamentally different from designs aimed at fitting seamlessly into someone else's platform and depending on someone else's software to produce tax outcomes as a by-product of other processes.

The cultural and workforce implications are significant. Until recently, technological change mainly affected the routine processes of administration. The wave of change happening now is a game-changer for knowledge (expert) workers. Tax professionals' roles may change fundamentally as intelligent robotics become capable of producing much of the research, analysis, and (ultimately) advice previously provided by tax experts. There is already evidence that smart analytics can automate many risk assessment and case selection processes. Audit processes are increasingly becoming complementary activities, with data gathered and analyzed using taxpayers' systems and other sources fed to tax professionals through automated case management systems. Tax experts in such a world will not necessarily add value through their tax-related knowledge (although they will certainly still need it) but could add value to what intelligent robots produce by embracing complexity and thinking laterally and creatively. Tax experts' people skills, which enable them to personalize their engagement with taxpayers and the myriad partners and stakeholders in a world of digital footprints, will be invaluable.

The challenges do not stop here. These days, work and borders are fluid. Businesses, large and small, are as present online as they are on the street. They collaborate with suppliers and logistics firms and do business wherever in the world it is best and most cost-effective to do so. Threats such as identity theft and cyberattacks can manifest anywhere, and often do so simultaneously. Tax professionals need to understand this world to understand their taxpayers, and must adapt to this way of working. They should also be able to connect just as easily across the globe as across the workplace. Flexible and adaptive working with multi-expert teams that form and reform will become commonplace, and will often occur virtually. COVID-19 has both highlighted the need for greater virtual working and accelerated the development of such practices for all forms of businesses, both private and public.

1.4.2 New Capabilities: Tax Practitioners

The days when tax professionals prepared returns are disappearing quickly. Increasingly, revenue administrations are embracing prefilling and making the same service available to agents for their clients. Their software automates much of the tax return preparation process, and their value increasingly lies in tax advice and tax compliance assurance. Continuous investments in hardware, software, and skills will be as important for tax practitioners as for tax authorities.

As knowledge workers, tax practitioners face a future similar to that of other professions where intelligent robotics are making inroads into their work. Such practitioners will require similar, complementary capabilities to work seamlessly with robotics. How they engage with their business clients is already changing, as their clients embrace electronic business management and record-keeping, which is linked to accounting software that enables the flow of tax return information

reporting directly to revenue administrations (see MTD Section 1.3.2). As discussed in Section 1.4.1, tax professionals' individual clients' data may be generated seamlessly, requiring no intervention or capturing on the part of the tax professional. Thus, they will need to add value by offering tax advice and planning, or other similar services.

Tax professionals must also ensure that their clients consent to them accessing their information from a variety of business platforms to ensure that they have the same view of their clients as the tax authority does. Any disparity in information could result in ill-informed or incomplete advice, which could present a risk for the tax professional.

1.4.3 New Capabilities: Taxpayers

Going forward, taxpayers will need to become much more technologically, legally, and financially competent. As revenue administrations increasingly move online, taxpayers will need relevant digital literacy to engage fully. However, revenue authorities must be careful not to create a digital divide and should continue to provide appropriate alternate channels. Not all taxpayers, particularly in developing countries, will be able to afford and/or have the capability to access financial platforms and fully engage with digitally enhanced revenue administration.

Given the movement to share data in and across platforms, taxpayers should be fully informed of their rights and responsibilities for their own personal data. They must understand their digitally extended self (Parkinson et al. 2018), which is created through their engagements with myriad platforms, and be aware of who accesses their data, and to what end.

More holistic financial and tax planning is possible since taxpayers will have easy and cheap access to personalized information as part of their bundled services. HMRC is currently trialing the real-time view of taxpayers' tax positions and their obligations regarding their income and investments, linked to their individual tax accounts. Taxpayers will need to be educated on the interrelatedness of financial and tax planning, which, although currently not very prominent in the financial literacy field, is slowly gaining traction.

1.5 Data Governance

1.5.1 Legal and Ethical Challenges

Online services, net-connected devices (from smartwatches to smart cars), and increasingly smart infrastructure and cities are creating a new world of personalized experience, fueled by unprecedented levels of data about people and businesses being harvested, exploited, and shared. Technological innovations make it possible for government entities not only to utilize these developments but also to become part of the ecosystem. The clever exploitation of data by the developing digital world is yielding much new information and new opportunities. This borderless world also creates new legal challenges and responsibilities,

especially around the right to privacy, consent, and data security for consumers and taxpayers.

Revenue authorities must consider their rights to capture information in this environment, and how to balance that with businesses' and individuals' rights to privacy. In a digitally integrated world, data security is even more challenging and the impacts of tax data hacking even more significant.

One example of how things could go horribly wrong is the hacking of the tax data of the entire Bulgarian population. This had implications far beyond Bulgaria's borders and led the Organisation for Economic Co-operation and Development (OECD) to admit that the information stolen included data transferred between revenue authorities under a system derived from the United States Foreign Account Tax Compliance Act (FATCA) (Burggraf 2019).

The development of the multilateral exchange of information has been an important testbed for revenue administrations to develop their data gathering and sharing capabilities while testing their legal rights to gather and share information. Great strides have been made since the introduction of the Automatic Exchange of Information, which has resulted in higher levels of compliance and better data quality. Traditionally, the Exchange of Information consisted of three components: Spontaneous exchange, exchange on request, and automatic exchange. Dupuis and Sturbois (2018) identify a fourth type of exchange: The extraterritorial tax audit (as per the FATCA). However, as discussed, this type of data exchange can give rise to several unintended consequences. To address some of these issues, the OECD (2014) developed the Common Reporting Standard, which established international guidelines and standards on data sharing.

It cannot be overemphasized that taxpayers' rights must be sufficiently considered in this multilateral approach. Some legal challenges have already been identified, such as the pending UK lawsuit challenging the legality of data-sharing by the Government of the UK under the FATCA (Burggraf 2019).² The drive to achieve global transparency and sharing of information (e.g., base erosion and profit shifting) creates the prospect of revenue authorities gaining more access to information from around the world. The development of the open banking initiative, which could provide a holistic view of a taxpayer's financial transactions through several integrated platforms, provides a further such opportunity. This initiative provides the opportunity to transact and share information across various platforms. One of its underlying principles is that consumers must provide informed consent (PricewaterhouseCoopers 2018).

Much of the regulatory focus on legal and ethical challenges in the use of personal data is on the private sector, with questions around consent, inappropriate exploitation, and data sharing for profit (e.g., Facebook). Events such as the Facebook-Cambridge Analytica saga have caused institutions such as the WEF, International Monetary Fund, and World Bank Group to call for the development of global principles guiding the use, collection, and sharing of data.

The implementation of legislation such as the General Data Protection Regulation in Europe or the Protection of Personal Information in South Africa are examples of the measures governing the use of personal data. Yet, it must

be asked whether revenue administrations will be required to obtain informed consent. For example, in the South African constitution, the Promotion of Administrative Justice Act and the Tax Administration Act allow the tax authority to obtain information from third parties on medical aid and retirement fund contributions without obtaining consent. Going forward, this mandate could be expanded to all relevant sources as required, but care should be taken not to infringe on the ambit of the law.

In the South African context, Goldswain (2017) discusses the concept of “clean hands,” which focuses on tax authorities’ power and mandate to gather certain information through tax audits, inquiries, and search-and-seizure procedures. Under this concept, the authorities must ensure that their actions are reasonable and rational, and “keep their hands clean” to ensure they do not violate a taxpayer’s right to administrative justice. Such activities might appear to contradict the right to privacy, as per section 14 of the constitution. It is important to note that section 33(1) of the constitution (Republic of South Africa 1996) states that “everyone has the right to administrative action that is lawful, reasonable and procedurally fair”; section 33(2) provides that “everyone whose rights have been adversely affected by administrative action has the right to be given written reasons”; and section 33(3) requires that “[n]ational legislation must be enacted to give effect to these rights.” The Promotion of Administrative Justice Act (3 of 2000), promulgated to give effect to section 33(3) of the constitution, sets out the scope and ambit of the right to just administrative action. These rights are highly relevant to taxpayers experiencing lifestyle audits.

As time progresses and digital presences increase, it will become clearer how far the boundaries of data capture are allowed to expand. An interesting battle worth following is the pending court case between the Public Protector and the President of the Republic of South Africa. Media reports describing the points of contention reveal that the president’s attorney is arguing that the public protector violated the Financial Intelligence Centre Act, by using intelligence provided to her office as evidence in a report on the president’s election campaign. The crux of the argument is the difference between “intelligence” and “evidence”—the public protector is being accused of “misusing” Financial Intelligence Centre information. If this case goes to court, more explicit principles will be developed for the sharing and use of sensitive information, including personal financial information.

It is unclear if the same principles and legal constraints apply to governments’ tapping into private data profiles or if they will be less restrictive, if considered in the national interest, for example. There is already unease and challenges in several countries over how tax data shared with government welfare agencies in particular are being used. Some examples of this include the Australian Senate inquiry into Australia’s Centrelink Robodebt collection activities, and the UK debates about how data could reasonably be shared between the Department of Work and Pensions, which manages the UK benefits system, and HMRC, which manages the tax system.

Questions that may arise include the following: What should be the legal and ethical boundaries of public or private organizations in combining data from other public sources to profile businesses and citizens? Should this be allowed without explicit consent, and how transparent should it be? What limits should be placed on its use and the length of time held, among other things?

In the case of revenue administrations, there are already quite strict limits on data collection, sharing, and confidentiality. However, it is less clear how taxpayers can be made comfortable, and whether these limits are adequate in a world of digital interconnection.

1.5.2 *The Future of Data Governance*

As technological innovations continue to facilitate the dramatic reshaping of businesses, markets, and communities, academics and other thought leaders are considering how citizens' behavior could be regulated and rights protected in future. For governments and regulators, the challenges are twofold: (1) How to offer contemporary services needed to tap into the ecosystem, and (2) how to build the capability to regulate it. It must also be asked, how far should governments and regulators integrate with digital footprints should they become co-dependent? The section below outlines some of the policy and regulatory challenges, as well as some of the more radical ideas being developed in the debate on how far to go and what to do to protect privacy. While some of these ideas seem as unlikely as tap-and-go taxes, all are possible.

1.5.2.1 *Governance-by-Data, or Personalized Law*

Academics are already discussing the potential for regulators to tap into commercially collected data to personalize laws and regulations for individuals. For example, data collected by vehicle manufacturers monitoring performance could be used to personalize speed limits for drivers previously caught speeding (Elkin-Koren and Gal 2019). While this scenario may seem unlikely to be applicable in a tax context, related data could be relevant, such as validating travel allowance claims. Such data may also be relevant to the ability to monitor and limit the financial transactions of serial “phoenix-ers,” bankrupt individuals, or white-collar criminals.

From a policy perspective, governments will need to determine whether the advantages of streamlining risk targeting, personalizing compliance, and increasing the efficiency of law enforcement justify the constant monitoring and curtailing of people's reasonable expectation of privacy. Most people will voluntarily consent to companies such as Google collecting, analyzing, and sharing their data in exchange for free profiles, email, and search tools, among other things. However, a growing body of case law shows that people do not assume when signing up that they are agreeing to near-constant monitoring by the service provider (see *Carpenter v. United States*, 138 S Ct 2206 2018). The reactions of Facebook users to revelations about the company collecting and sharing their

data clearly illustrate that most people fail to grasp the many ways in which data is being collected or the extent to which it is being shared. This is likely to be even more controversial if the collector is the government, as it is not possible in this circumstance to switch off or switch providers (Elkin-Koren and Gal 2019).

A counter-argument can also be made. For example, in the area of utility service switching, automation could change for the better market dynamics between suppliers, who previously dominated by controlling terms of access and rates of pay, and consumers, whom technology will enable to become more dynamic in negotiating in the marketplace for their needs to be met. This may well lead to shorter-term contracting and more dynamic pricing, due to the ability to automate a switching process that currently involves significant friction. Many consumers do not currently engage in this process and are not reaping the financial benefits (e.g., staying on higher cost tariffs for the same service or product provision, when switching suppliers would be to their benefit).

1.5.2.2 *Data Trusts*

Developed by Rinik (2019), the idea of data trusts aims to strengthen the protection of people's data and its usage. Borrowing from trust law principles, customers consent to their data being provided to the data controller, but not as a gift, and limited *only* to use for pre-agreed purposes. Customers can sign up with as many data controllers as they wish, and with specific limitations relevant to the situation. The key point is that the data controller has a trustee (fiduciary) responsibility to monitor and ensure that the data under its control is properly protected, and only used within the limits of the consent provided by each individual customer. An important benefit of this approach is that there is an identifiable person whose role is to represent the interests of and protect customers' data rights. Rinik observes,

If the data subject is treated as a beneficiary of the data trust this may give them more of a voice in the processing of their data and address the power imbalance that has been created in the market for data.

(2019)

Critics see this as unnecessarily complex and likely to be bogged down in legal debate about who (companies or individuals) owns personal information in the myriad circumstances in which data can be generated. Kerry and Morris (2019) argue that a better approach is to bolster privacy legislation, which should empower individuals through more layered and meaningful transparency and individual rights to know, correct, and delete personal information in databases held by others (Kerry and Morris 2019).

The Open Data Institute (ODI) and the State Data-Sharing (SDS) Initiative are also leading contributors to develop approaches to protect sensitive information while encouraging data sharing. The ODI was established as a non-profit, non-partisan company in 2012, and it works with companies and governments

alike to build open, trustworthy data ecosystems to increase the trustworthiness of the data collected based on ethical considerations of data collection and usage (ODI 2019). The SDS initiative has similar goals, aiming to provide administrative records containing personally identifiable information for the efficient operation of government programs. One project in which they engaged was a study of

federal and state corporate tax and unemployment insurance data confidentiality laws and regulations to increase understanding of the different legal approaches states apply to protect sensitive information and allow for data sharing to support analysis and evaluation of economic and workforce development programs.

(SDS 2019)

1.5.2.3 *Reconceptualizing Security and Safety*

Cybersecurity models are based on real-world experience. People tend to consider protecting digital perimeters against unauthorized access with firewalls and passwords, similar to locking doors. Elish (2019) argues that with artificial intelligence and machine learning it is necessary to think beyond the perimeters:

[T]he vulnerabilities of AI and ML aren't just touch-points where an attacker may gain entry; the vulnerabilities exist in the interactions within and between the social, cultural, political, and technical elements of a system. The unique vulnerabilities of "intelligent" systems are the very mechanisms through which they become "intelligent" and interact with the world. That is, attackers leverage the intelligence of a system by redirecting and manipulating the capacity to learn or to act on what has been learned, undeterred by security practices focused solely on access.

For example, researchers have demonstrated that a computer vision system could be tricked into seeing a stop sign as a speed limit sign reading "45 MPH." The authors of that paper described how they altered a stop sign in a way that would fool the system, but also be dismissed as graffiti by a human observer. Elish (2019) argues that artificial intelligence and machine learning must be understood as socio-technical systems, where the "technology" is not separate from the actors and social processes that make up the system. To achieve safe and secure artificial intelligence, it is necessary to move beyond the traditional concerns of safety and security research and carry out more sociologically oriented research into its vulnerabilities. Traditional research reports are only one way of conducting such research. Elish (2019) suggests additional methods could include "abusability testing," white hat hacker or "bug bounty" programs, and "red teaming" scenarios, or even employing science-fiction writers to flesh out potential future vulnerabilities.

1.6 Conclusion and Policy Recommendations

This chapter discussed the technological innovations transforming how businesses operate and how people work and live. It considered the concurrent digital

journey of revenue administrations and their resilience as they have made significant adaptations to their business models. It also discussed the next wave of digital innovations and identified some likely developments that are leading to a fundamental rethink of people's digital footprints as a complex and rich "digitally extended self." It explored the potential of these innovations to digitally disrupt how revenue systems are managed.

The chapter used changes in retail banking to illustrate deeper changes that could take digital disruption to a more fundamental level, where managing individual taxpayers' tax obligations is a by-product of tapping to transact. Examples of changes taking place in revenue system interactions, such as the MTD scheme in the UK, illustrated how business tax obligations may also become a seamless by-product of their business management processes.

The chapter concludes that the rise of financial platforms and their ability to provide a range of virtual personalized services is a potential disrupter. In the future, these platforms might seamlessly integrate individual taxpayers' returns and payments into their digital footprint. For businesses, the best opportunity to integrate reporting and payment obligations seamlessly is by embedding these requirements in their business software, as seen in the MTD scheme in the UK.

This chapter discussed these and other examples of capabilities being developed as potential stepping-stones and demonstrated that this alternative model is not far-fetched and its development is not necessarily far in the future. COVID-19 is accelerating the shift to digital, spurring more digital innovation, and creating expectations of seamless convenient digital interaction as communities become more digitally confident and literate.

The chapter explored the implications and potential of this alternative business model. The shift in skills, culture, and technology capabilities is significant. New skills that are needed go beyond mastering digital interaction and working complementarily with artificial intelligence. A significant shift in how the system and stakeholder relationships are managed, from consulting to collaborative partnering, will be required in a world where revenue administrations no longer own the data or the services. The chapter also explored capability implications for practitioners and taxpayers. For governments, there are also important policy implications as to how to gather, exploit, and govern data, and how to protect citizens' rights to the privacy of their digitally extended self. There is also a new ethical dilemma as to whether governments should use the capability of private sector providers to monitor their customers' interactions to ensure compliance with legal obligations.

1.6.1 Recommendations

- (1) Revenue administrations should urgently consider the efficacy of continuing to operate on a standalone basis, and at minimum plan to have much higher connectivity and touchpoints with external data sources that better integrate their systems into taxpayers' digital footprints;

- (2) Revenue authorities should assess their digital capability gap (systems, skills, and culture). This should include exploring the potential of artificial intelligence and machine learning to change how professional work is done and consider the implications for redesigning knowledge work and workforce skills;
- (3) Governments and revenue administrations should consider whether seamless integration of services and obligations into people's digitally extended selves should be the future model for personal taxpayer interactions. The broader implications for government service delivery should be considered;
- (4) Rights to privacy, requirements for consent, access to personal data, and rights to amend it should be reviewed to ensure they provide adequate protection for developing digitally extended selves. This should include data governance arrangements and the designation of accountable parties where data is shared and exploited by co-providers who contribute to the development of digital profiles and together deliver seamless digital experiences;
- (5) Governments should review their policies on how to gather, exploit, and share data in the context of new disruptive technologies;
- (6) Revenue administrations' powers to access data and rely on reporting should be reviewed in the context of third parties capturing and exploiting data seamlessly for tax responsibility fulfillment. The accountability of third parties for the accuracy of outcomes in relation to their taxpayer customers should also be considered;
- (7) Governments should consider the potential of utilizing the capability of private sector providers who digitally track customer interactions as a public compliance tool to monitor whether personalized legal obligations are met;
- (8) Policies on data governance for the exploitation of private sector data for public use should be developed. The roles and responsibilities of all parties in an ecosystem where data is not owned or controlled by one party should be considered, including how trust is maintained across the whole system. The need for whole-government solutions for creating and building trust and exemplary data-handling reputations should be explored. This should include core principles of data security and privacy developed at national levels, and how they can be rigorously enforced to engender confidence in national capabilities to act responsibly and prevent abuse.

Notes

- 1 For details on these standards in the UK, see www.moneysavingexpert.com/banking/open-banking/.
- 2 An American who has resided in Britain since 2000 is challenging the forwarding of her data to the Internal Revenue Service by the British tax authority, claiming that her data protection and privacy rights are being infringed.

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2 Artificial Intelligence and Tax Administration in Asia and the Pacific

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2.1 Introduction

Tax administration is a combination of management, supervision, and the execution of taxation law and related statutes. In both national and regional jurisdictions, tax revenue collection is considered a top priority (Sikka 2010; Ferrantino, Liu, and Wang 2012; Hasseldine and Morris 2013; Tian et al. 2016). The process of tax administration is complicated and requires proper infrastructure and a sizable efficient workforce to supervise the process (Carnahan 2015). Individuals and multinational corporations frequently misuse country-specific tax administration loopholes and evade tax payments (Lenz 2020). Tax is crucial for a country to achieve its sustainable development goals. Tax is used in development projects such as infrastructure, fighting climate change, and reducing poverty. Every year, global losses to tax evasion amount to \$500 billion, a significant share of which occurs in South Asian countries and other low- and lower-middle-income countries in sub-Saharan Africa, Latin America, and the Caribbean (Cobham and Janský 2018). Tax is a complex process, and it is difficult to identify tax fraud because of the time and costs required to monitor and check the tax returns of individuals and multinational companies. Moreover, the fact that multinational companies operate in different countries makes it difficult to identify tax fraud, as such companies generally dodge taxes by shifting their profits to low-tax jurisdictions. Digitalization can help taxpayers register and submit tax returns online. It can also help tax practitioners audit and assess tax returns on a digital platform, reducing tax fraud and errors (Ernst and Young 2016; Kashyap 2017).

Furthermore, artificial intelligence, which is validated by machines without the presence of human intelligence, can monitor tax administration through blockchain. The tax information of individuals and corporations can be stored on a blockchain platform, where tax authorities can monitor the tax process. Artificial intelligence helps reduce human involvement in taxation and accelerates the tax collection process. Introducing an artificial intelligence tool, such as machine learning, in tax administration can help countries in Asia and the Pacific increase tax collection and reduce tax evasion, boosting their average revenue. In developed countries, tax administration is highly regulated, and

sophisticated techniques are used to administer tax collection and distribution. Despite a dearth of theoretical and empirical research on artificial intelligence in the tax administration process in Asia and the Pacific, several studies have been published that focus on artificial intelligence, digitalization, and machine learning in the context of Latin American, emerging, and other developed countries (González and Velásquez 2013; Faúndez-Ugalde, Mellado-Silva, and Aldunate-Lizana 2020). Studies that focus on artificial intelligence and machine learning in countries in Asia and the Pacific mostly do so in the context of the People's Republic of China (PRC) (Zheng, Zheng, and Ye 2016; Huang 2018; Zhang 2020). This gap in the research of artificial intelligence and tax administration in countries in Asia and the Pacific is crucial to investigate. This study therefore explores the issues and challenges faced by countries in this region looking to incorporate artificial intelligence in tax administration.

Every country has a different tax jurisdiction, and the tax collection process varies across borders. Countries in Asia and the Pacific can follow the newly developed Global Reporting Initiative (GRI) disclosure 207-4, which requires companies to report economic, financial, and tax information to the jurisdiction in which the company operates (GRI 2019). This would simplify and accelerate the tax administration process, help tax authorities crosscheck the tax information of multinational corporations operating in countries in Asia and the Pacific, and penalize such corporations for any tax dodging. This study provides a holistic model for countries in Asia and the Pacific to incorporate machine learning techniques in their tax administrations and proposes comprehensive tax disclosure following GRI disclosure 207-4. The findings of this study are useful for regulators and policymakers in Asia and the Pacific to revise the tax administration and incorporate artificial intelligence to reduce costs and increase the efficiency and transparency of their tax administrations. Further, the findings can help governments monitor tax evasion and penalize the individuals and corporations involved.

2.2 Background of Artificial Intelligence in Tax Administration in Asia and the Pacific

Tax administration involves managing tax compliance to identify and prevent unlawful activities in the taxation process (Khwaja, Awasthi, and Loeprick 2011; Faúndez-Ugalde, Mellado-Silva, and Aldunate-Lizana 2020). Tax administration also provides education and services to help taxpayers meet their tax obligations with minimal complexity (Khwaja, Awasthi, and Loeprick 2011). In line with their mandate to manage tax compliance, tax authorities should acquire and adopt new technologies to improve tax administration. New technologies are significantly changing international politics, helping expand the global market, and reducing the costs of collecting information in bulk (Bardopoulos 2015). Tax administrations are focusing on digitalization, blockchain, and robotization in particular (Vishnevsky and Chekina 2018). To automate the tax administration process, tax authorities should digitalize their tax ecosystems; this will help

tax authorities detect tax fraud more quickly by using sophisticated artificial intelligence techniques.

Some countries in Asia and the Pacific have already begun digitalizing their tax administrations. For example, Fiji and Samoa have adopted the Automated System for Customs Data for customs administration, and New Zealand has adopted the GenTax software to process tax (Asian Development Bank 2020). Countries in Asia and the Pacific are also applying other tools in their tax administrations, such as big data, biometric identification, blockchain, chatbots, and robotic process automation.

Biometric identification is the automatic identification of individuals using an individual's biometric characteristics, such as face, voice, retina, and fingerprint recognition. Tax authorities use biometric identification extensively to authenticate an individual's identity. Notable countries in Asia and the Pacific that have adopted biometric identification in their tax administrations include Bangladesh, Cambodia, Fiji, Japan, and New Zealand (Asian Development Bank 2020). Biometric identification reduces fraud and saves time. For example, since 2011, when the New Zealand Inland Revenue Department introduced voice biometrics, eight million calls have been verified, and clients have saved 40 seconds on average per call when they use voice identification (Organisation for Economic Co-operation and Development [OECD] 2016; Inland Revenue New Zealand 2018).

The PRC is also about to introduce blockchain in tax administration. Other countries in Asia and the Pacific that are planning to introduce blockchain in their tax administrations include Azerbaijan, Kazakhstan, the Kyrgyz Republic, Indonesia, Malaysia, Singapore, and Viet Nam (Asian Development Bank 2020). Australia, Singapore, India, and the PRC are actively using chatbot applications in their tax administrations, while other economies, such as Indonesia; Hong Kong, China; the Republic of Korea; the Maldives; New Zealand; and Viet Nam are planning to introduce chatbots (Asian Development Bank 2020). India has also introduced robotic process automation in tax administration, and Australia, Malaysia, and Singapore are implementing robotic process automation (Asian Development Bank 2020).

The PRC has also introduced tax robots in taxation. These are the first “face-to-face tax” intelligent robots that can collect scanned taxpayer information and authenticate and verify taxpayer information, thereby improving the efficiency of the tax administration process (Feng 2017). The robots also reduce the burden on the tax authority and people associated with the tax administration process (Huang 2018). Taxpayers can also check related tax regulations in the system and ask the robot any tax questions (Feng 2017).

Moreover, artificial intelligence in tax administration is growing increasingly popular in many countries. Notable countries in Asia and the Pacific that have already included artificial intelligence in taxation include Malaysia and Singapore. Australia, the PRC, Indonesia, the Republic of Korea, the Maldives, and New Zealand have introduced or are planning to introduce artificial intelligence in tax administration (Asian Development Bank 2020).

2.3 Literature Review

New technologies are changing international policies, minimizing the cost of information collection, bridging the gap between countries, and expanding the global market (Bardopoulos 2015). In tax administration, the use of digitalization, machine learning, blockchain, and robotization is gaining huge momentum due to their significant ability to accelerate the tax administration process and reduce costs (Vishnevsky and Chekina 2018). However, the use of new technologies in tax administration incurs an additional cost at the time the digitalization process is initiated (Faúndez-Ugalde, Mellado-Silva, and Aldunate-Lizana 2020).

Previous studies focus on a variety of data analytics and machine learning techniques to identify tax fraud (Faúndez-Ugalde, Mellado-Silva, and Aldunate-Lizana 2020), such as cluster analysis (Liu, Pan, and Chen 2010; González and Velásquez 2013; Assylbekov et al. 2016), simulation (Llàcer et al. 2013; Noguera et al. 2014), association analysis (Wu et al. 2012a; Matos, de Macedo, and Monteiro 2015), classification (Chen and Cheng 2010; Hsu et al. 2015; Kim, Baik, and Cho 2016), and reinforcement learning (Abe et al. 2010; Goumagias, Hristu-Varsakelis, and Saraidaris 2012). Researchers generally use clustering algorithms, self-organizing maps, and hierarchical clustering to identify tax anomalies (Williams and Christen 2007; Liu, Pan, and Chen 2010; González and Velásquez 2013; Assylbekov et al. 2016). González and Velásquez (2013) apply clustering algorithms to cluster taxpayers with identical behavior.

Other studies use self-organizing maps to recognize anomalous groups with suspicious behavior that may indicate tax fraud (Williams and Christen 2007; Assylbekov et al. 2016). Researchers also use simulation to identify the reason for tax fraud (Antunes, Balsa, and Coelho 2007; Noguera et al. 2014). Since 2010, researchers have used graph-based methods to identify tax evasion (Tian et al. 2016; Tselykh et al. 2016).

The machine learning and graph-based methods help tax authorities detect tax evasion. However, these models can only differentiate between tax-evading and non-evading groups (Ruan et al. 2019) and fail to recognize organizational constructions (Ruan et al. 2019). It is therefore crucial to identify the network of tax dodgers and uncover their roles in tax evasion when using machine learning and graph-based models (Dreżewski, Sepielak, and Filipkowski 2015).

2.4 Advantages of Artificial Intelligence in Tax Administration

Tax returns of individuals and corporations contain bulk information regarding tax payments (Rahimikia et al. 2017). It is difficult for tax authorities to audit and monitor this much information. However, tax returns also contain loopholes that enable tax evasion. Tax administrators should therefore use artificial intelligence to identify corporations and individuals involved in tax evasion. Artificial intelligence can help tax administrators reduce the risk of taxpayer insolvency, tax avoidance, and non-compliance (Rahimikia et al. 2017).

In general, tax inspection comprises three categories: Manual, computer-based, and whistleblowing (Wu et al. 2012b; González and Velásquez 2013; Tian et al. 2016). In contrast to manual case selection and whistleblowing—the most time-consuming tax inspection methods—the computer-based method based on data mining is the most efficient and least time-consuming way to detect tax evasion and is therefore preferred by tax administrators for tax inspection (González and Velásquez 2013; Tian et al. 2016). Neural networks, multilayer perceptron neural networks, harmony search optimization algorithms, genetic algorithms, support vector machines, logistic regressions, and decision trees are some forms of artificial intelligence used by researchers to detect tax evasion (Goumagias, Hristu-Varsakelis, and Saraidaris 2012; González and Velásquez 2013; Warner et al. 2015; Rahimikia et al. 2017).

Introducing artificial intelligence in tax administration will also help governments monitor multinational companies' tax practices more carefully. Countries in Asia and the Pacific should adopt the GRI 207-4 disclosure on country-by-country tax reporting regulations and record tax details on the online platforms of the respective organizations to improve the accuracy and speed of tax administration (GRI 2019). Aggregated tax data will help regulators crosscheck the tax information of multinational companies, and find mismatches and anomalies in tax payments. With the help of artificial intelligence, tax authorities can compare tax data of all companies in real time, identify tax loopholes quickly, and take the necessary steps to combat illegal tax evasion (Huang 2018). To accelerate this process, more than 100 countries have agreed to the Organisation for Economic Co-operation and Development's base erosion and profit-shifting initiative to reduce tax evasion by international businesses (Viglione and Deputy 2017).

2.5 Can Artificial Intelligence Help Control Tax Fraud?

Artificial intelligence is a tool that can process data from different clusters and make judgments without precise commands (Milner and Berg 2017). Digitalization and artificial intelligence have gradually begun to transform the entire tax administration process. Artificial intelligence now helps tax auditors detect errors, classify accounts based on individual and company characteristics, compare tax laws in different jurisdictions with a click, and guide individuals and corporations to select the right laws for tax filing (Huang 2018). Artificial intelligence is helping tax auditors save time by enabling them to carry out repetitive and time-consuming processes with a click.

The big accounting firms are taking strategic actions to adopt artificial intelligence in tax administration. PricewaterhouseCoopers (PwC), Deloitte, and KPMG are leading the way to adopt artificial intelligence in tax. PwC has proposed an integrated model that gathers finance and tax data from multiple sources and spreadsheets onto a common platform (PwC 2015). This reduces the time needed to collect and assemble data manually, provides more clarity regarding the data, and reduces the data manipulation that can occur when traditional spreadsheets are used (PwC 2015). PwC has also proposed a model for a future

tax ecosystem that enhances productivity, improves data quality, and reduces risk by maintaining the flow of information among tax, finance, and third parties (PwC 2015).

KPMG has introduced a new Technology Enabled Compliance Solution for Tax, known as the KPMG solution. This is a fully automated tax process that allows corporations in the PRC to manage their tax obligations (KPMG 2018). In the PRC tax system, the policy is complex and changes frequently (Huang 2018). The manual tax process is time consuming, and traditional ways of filing taxes can give rise to diverse risks. Artificial intelligence helps tax auditors monitor the tax collection process and reduces the risk of tax fraud and evasion. It also increases the efficiency of tax collection and increases government revenue. In addition, Deloitte United States has developed a supervised machine learning tool that can extract clauses in contracts, using natural language processing and machine learning tools (Deloitte 2019). This helps reduce bias and fraud in tax administration.

As tax fraud is one of the most significant issues faced by many countries, causing billions of dollars in losses every year, the tax authorities of affected countries are continuously trying to detect it (Pérez López, Delgado Rodríguez, and de Lucas Santos 2019). Spain is one of the developed countries most profoundly affected by tax fraud, which exceeds 20% of Spain's total gross domestic product (Herwartz, Sardà, and Theilen 2016). As tax is crucial for a country's economy, detecting tax fraud is a vital goal of tax authorities (Pérez López, Delgado Rodríguez, and de Lucas Santos 2019). Many countries in Asia and the Pacific are introducing artificial intelligence in tax administration to lessen costs and prevent tax evasion. Artificial intelligence helps tax authorities detect fraud and efficiently analyze tax reporting. Machine learning tools, such as multilayer perceptron neural networks, support vector machines, and logistic regressions with harmony search using optimization algorithms, are the most efficient estimates of fraud detection (Phua et al. 2010). Tax authorities should develop a strong artificial intelligence base and implement the most relevant artificial intelligence and machine learning tools to detect tax fraud and evasion.

2.6 Issues and Challenges to Adopt Artificial Intelligence in Tax Administration

As the tax world is diverse, a specific set of rules is followed to solve complex problems. Analytical and complex problem-solving skills are essential in the tax field. Those involved in the process use multilevel skills to solve tax-related issues. On the other hand, artificial intelligence relies more on probabilistic models, where decisions are made based on taxpayer data (Deloitte 2019). Tax practitioners are reluctant to rely on machines because of the possibility that a machine will make a wrong decision, given the lack of skills to interpret machine-generated results. Additionally, artificial intelligence requires an expert workforce that understands both coding and tax administration to build machine-readable algorithms. The high establishment costs of adopting artificial intelligence in tax administration

may affect tax revenue in developing and low-income countries in Asia and the Pacific like Afghanistan, Bangladesh, Nepal, and Pakistan.

High data quality is essential for data-generated tax decisions. If the data are not reliable and valid, the machine may misinterpret the results. Thus, the data should be authentic to generate a reliable result. When reliable data are available, the next step is to code the machine, instructing it as to what to do with the data. The main challenge arises when instructing the machine in the right direction. Analysts face challenges in developing the right model to provide excellent performance. Few tax practitioners have the requisite expertise to coach machines, make sense of the data, and resolve the challenges that arise from the process (Deloitte 2019).

In addition, tax law in countries in Asia and the Pacific is versatile and changes frequently. Regulations should be updated so that artificial intelligence applications can perform tax administration efficiently (Huang 2018); otherwise, the tax administration process may provide misleading tax information, delaying tax collection. As artificial intelligence is still in the development stage, it cannot update the tax administration information itself (Huang 2018). Individuals must manually enter the tax information into the artificial intelligence system. Thus, knowledge of machine learning is essential for handling tax data. A lack of knowledge and training on the part of tax practitioners may lead to problems in tax administration. Therefore, tax authorities should focus on assigning the right candidates to perform these tasks and provide necessary training to improve their efficiency.

Another challenge the tax world faces is the reluctance of clients and tax professionals to embrace the new technology. Although machines can generate reliable results, clients still want subject matter experts to review work done by machines (Deloitte 2019). Moreover, tax professionals are concerned that the presence of such machines in the tax process will devalue their existence and increase the engagement risk. This perception is hindering the tax administration process, incurring additional costs, and consuming more time. Machines can do a bulk amount of repetitive work, saving time and costs in tax administration.

2.7 Conclusion and Policy Recommendations

This study explores artificial intelligence in tax administration in the context of countries in Asia and the Pacific. In this region, the PRC, Malaysia, and Singapore are the forerunners in adopting artificial intelligence in their tax administrations. Artificial intelligence helps countries track tax anomalies and detect fraud. Artificial intelligence can help countries in Asia and the Pacific control revenue leakage, process tax returns faster, reduce tax evasion, and avoid additional costs associated with tax fraud. India and Malaysia recently employed artificial intelligence in processing goods and services tax and e-audits. Other countries in Asia and the Pacific should introduce artificial intelligence for the greater good. Although this technology may initially increase costs for countries,

in time, countries will benefit from it by saving time and eliminating tax fraud and evasion. Tackling tax evasion in countries with weak governance and rule of law can save millions of dollars and boost tax revenue for the country's development projects.

Countries in Asia and the Pacific should also follow the same tax jurisdiction to reduce complexity and differences in tax regulations. Countries in Asia and the Pacific can adapt the newly developed GRI disclosure 207-4 on country-by-country reporting to simplify and accelerate the tax administration process. This will also help tax authorities crosscheck the tax information of multinational corporations operating in Asia and the Pacific, and punish such corporations for any tax dodging.

The findings of this study are relevant for tax authorities, regulators, and corporations. Tax authorities can effectively monitor the tax administration process using machine learning tools. Data analytics and machine learning models help tax authorities detect tax evasion and take necessary actions to impede tax dodging by local and multinational corporations. Artificial intelligence can help tax authorities lessen the costs associated with traditional taxation processes, as the tax collection and filing processes are lengthy and involve complicated paperwork. The findings also help corporations monitor activities in real time and instantly adjust to changes in the blockchain platform. Any anomalies in the process can be detected by looking at the blockchain platform, which updates tax information in real time. Thus, tax fraud can be easily identified.

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3 Taxing the Digitalized Economy

An Emerging Markets Perspective

Wawan Juswanto and Yanuar Falak Abiyunus

3.1 Introduction

Asia is a considerable market for digital goods and services. In 2019, more than half of the Asian population accessed the internet (Internet World Stats 2019), and the internet economy in Southeast Asia had grown to \$100 billion; it is expected to increase further to \$300 billion by 2025. In Indonesia, the largest economy in this region, the internet market grew rapidly (by 49%) from 2015 to 2019, and its internet economy reached \$40 billion (Google, Temasek, and Bain & Company 2019).

Digitalization contributes significantly to economic growth in global and emerging markets. In terms of growth of per capita gross domestic product (GDP), each additional 10% of internet penetration adds 0.77% in developed countries and 1.12% in emerging markets (Qiang, Rossotto, and Kimura 2009). It also influences how consumers obtain goods and services, whether from physical or online stores. In 2020, 74% of global internet users purchased a product online. The total value of the global business-to-consumer e-commerce market is \$3.43 trillion, with an annual growth rate of 18% (Kemp 2020a). In terms of e-commerce adoption, the top 20 economies in the world include ten Asian economies, and those with the very highest rates include Indonesia with 88%, Thailand with 82%, and Malaysia with 82%, far beyond the global average of 74% (see Figure 3.1).

A primary characteristic of digitalized business is cross-jurisdictional scale without mass. Digitalization allows companies to reach customers in market countries without any physical presence. It also challenges the current taxation system in terms of consumption¹ and income taxes. Although consumption tax does not involve fundamental issues regarding the allocation of taxing rights, market countries still face challenges in collecting it, especially for services and intangible goods. Meanwhile, the current income tax system does not give market countries the right to tax foreign enterprises if they have no physical presence in a given country. In the absence of a globally accepted solution, some countries have chosen to implement temporary measures to tax digitalized businesses.

Governments' inability to tax foreign digital businesses creates problems on two sides. On the taxpayer side, there is an issue of fairness. While local companies are taxed on their income and supplies, foreign businesses in market countries are

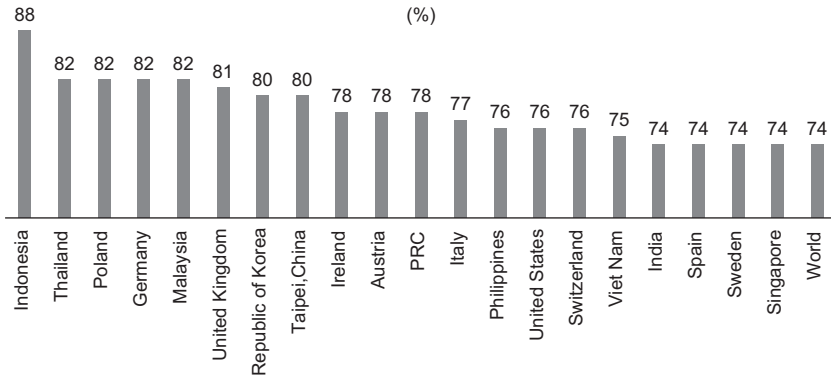


Figure 3.1 E-Commerce Adoption. PRC = People's Republic of China. Source: Kemp, S. 2020. Digital 2020: Global Digital Overview. *We Are Social*. <https://wearesocial-net.s3-eu-west-1.amazonaws.com/wp-content/uploads/common/reports/digital-2020/digital-2020-global.pdf> (accessed 3 March 2020).

not taxed. On the government side, countries with large digital economic markets cannot derive tax revenue from them.

The coronavirus disease (COVID-19) pandemic emphasizes the importance of digital economy taxation. On the one hand, the pandemic has increased the consumption of digital goods and services. On the other hand, governments, especially in developing countries, are struggling to fulfill their budgets. Social distancing and limiting activities outside the home have boosted media consumption by 60% (Nielsen 2020). Compared to before the pandemic, consumption of digital content such as movies, music, games, and social media has increased significantly. Show and movie streaming increased by more than 50% (see Figure 3.2).

Compared to developed countries, emerging countries have limited fiscal space to finance their health budgets and stimulus packages. The total discretionary budgetary response to the shock in emerging markets and low-income economies is lower than in advanced economies. Extra spending and tax reductions were limited in emerging markets (with 2.8% of GDP) and low-income economies (1.4% of GDP), compared to 8.6% in advanced economies (Mühlisen, Klyuev, and Sanya 2020). One reason for this is the poor performance of taxation in developing countries (see Figure 3.3). Thus, taxation of digital business is expected to support tax revenue as a primary budget source in developing countries.

The Organisation for Economic Co-operation and Development (OECD) identified challenges faced by tax systems in its Action 1 Report of Base Erosion and Profit Shifting (BEPS) Action Plan (OECD 2015); however, this report does not mention any concrete solution. The OECD delivered an interim report (OECD 2018b) describing the latest developments in approaches taken in the absence of a global consensus. In 2019, the OECD published a framework for a

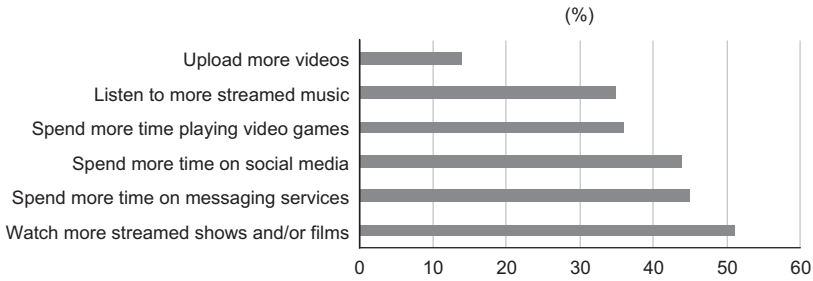


Figure 3.2 Increased Media Consumption at Home Because of the Worldwide Coronavirus Disease Pandemic. Source: Watson, A. 2020. Consuming Media at Home Due to the Coronavirus Worldwide 2020, by Country. *Statista*. www.statista.com/statistics/1106498/home-media-consumption-coronavirus-worldwide-by-country/ (accessed 18 August 2020).

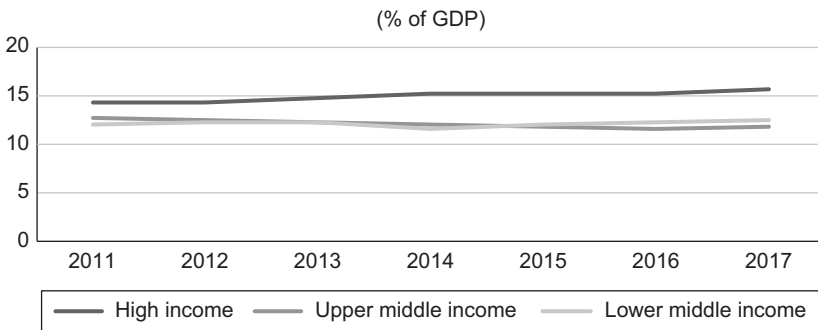


Figure 3.3 Tax Revenue. GDP = gross domestic product. Source: World Bank Open Data. <https://data.worldbank.org/> (accessed 30 March 2020).

global solution, formulating new nexus and profit allocation rules for taxing the digital economy (OECD 2019b). In terms of value-added tax (VAT) or goods and services tax (GST), the OECD published guidelines presenting a set of internationally agreed VAT standards for international trade, focused on services and intangibles (OECD 2017a). The latest developments in digital taxation around the world are described by Bunn, Asen, and Enache (2020); KPMG (2020); and Grondona, Chowdhary, and Uribe (2020). This chapter describes the latest developments in digital economy taxation around the world and analyzes lessons learned and policy considerations by focusing on emerging market countries. In particular, this chapter discusses the current policy of digital economy taxation in Indonesia, the largest country in Southeast Asia.

This chapter concluded that VAT or GST should be applied immediately by implementing a simplified registration and collection regime according to the OECD standard. On the other hand, developing countries must actively discuss

global solutions to fight for more taxation rights. Further, temporary measures to provide fairness and revenue sources must be applied carefully.

3.2 Taxation Challenges of Digitalization

The scope of the digital economy is divided into (1) a core digital sector (information and communication technology infrastructure), (2) a narrow digital sector (information and communication technology-producing, as well as digital and platform-based services), and (3) a broader scope (referring to the use of various digital technologies for performing different economic activities) (Bukht and Heeks 2017). As a share of global GDP, the digital economy comprises 4.5% when narrowly defined, and 15.5% when broadly defined (United Nations Conference on Trade and Development 2019).

The OECD (2018b) identified the main characteristics of the digitalized economy as (1) cross-jurisdictional scale without mass, (2) reliance on intangible assets, and (3) the importance of user participation in building the value of a business's intellectual property. Digitalization allows enterprises to participate in the economic life of a country without any physical presence.

3.2.1 Value-Added Tax and Goods and Services Tax

The consumer bears the burden of consumption tax when they purchase goods or services. VAT or GST revenue is only payable to the country where final consumption occurs; this is called the destination principle. The supply of goods is free from VAT or GST when goods are moved out of a country, but imports of those goods are subject to VAT or GST in the destination country. This achieves neutrality in international trade, a principle that is an international norm and is sanctioned by World Trade Organization rules (OECD 2017a).

VAT or GST collection for the cross-border supply of tangible goods is generally done through a customs mechanism. When goods cross a border, customs assesses all related requirements at the border, including import duties and VAT or GST, before releasing them to the domestic market. For the remote supply of services or intangible goods, VAT or GST is generally collected by the consumer in the market country under the “reverse charge mechanism.” Under this mechanism, customers can collect, deposit, and report the VAT or GST to the tax authority. However, the reverse charge mechanism is ineffective when cross-border supplies of services and intangible goods are made to a non-VAT- or GST-registered business. Unlike registered companies, such businesses are not liable to remit and report the consumption tax. They are also unable to treat consumption tax paid as their input tax (Lamensch 2012).

3.2.2 Income Tax

Generally, countries have two options in imposing an income tax. The first option is to impose income tax on worldwide income, regardless of the source of the

income. The second option is to levy income tax only on income derived from their territory, regardless of tax residence status. A country may also implement a combination of both options.

When a business generates its revenue from cross-border activities, it can be taxed on the same income in more than one country, known as juridical double taxation. Bilateral tax treaties are established to address this issue by allocating taxing rights between the residence country (where the taxpayer is a resident) and the market country (where the income is generated). The internationally binding elements of a tax treaty cannot be affected by domestic legislation. When a conflict arises between domestic law and the provisions of the tax treaty, some countries rule that the tax treaty overrides the provision of domestic law (Holmes 2007).

There are currently more than 3,000 effective bilateral tax treaties, which are generally based on two models of tax convention: The OECD model and the United Nations model. Both models allocate the right to tax the business profit of a taxpayer exclusively to the resident country. The market country only has the right to tax the business profit of a nonresident, and only if the taxpayer has a permanent establishment, in which case the market country may tax the profit attributable to that permanent establishment.

The OECD and United Nations models require the physical presence of a nonresident to establish a permanent establishment. This may take the form of a physical place or nonresident representation in the market country. Furthermore, the characteristics of the permanent establishment are (1) the existence of a place of business, (2) a business established at a particular place with a certain degree of permanence, and (3) business carried out through a fixed place of business (OECD 2017b).

3.3 Recent Developments in Digital Taxation

3.3.1 Value-Added Tax and Goods and Services Tax

The OECD (2015) observes that a simplified registration and collection regime is the best way to collect VAT or GST on digital goods and services. The government should appoint certain foreign suppliers to collect and report VAT or GST to consume services or intangible goods in market countries. VAT registration, collection, and reporting should be done online to make it easier for foreign suppliers who do not have representatives in market countries. The role of technology in these processes is therefore critical. Further, the government must lay out a clear and straightforward process (OECD 2017a). The application of this regime is expected to improve the compliance of nonresidents because of simpler administration and low compliance costs. The main features of the simplified registration regime are described in Table 3.1.

As of 2018, 31 of the 35 OECD countries² required foreign suppliers to register and collect VAT. Most countries apply a simplified registration and collection regime. Only Switzerland and Iceland require suppliers to register under the

Table 3.1 Main Features of the Simplified Registration and Compliance Regime

<i>Features</i>	<i>Description</i>
Registration	Online registration with a limited information requirement
Input tax recovery	No recovery of input tax
Return procedure	Simplified electronic filing
Payments	Electronic payment using the currencies of main trading partners
Record-keeping	Electronic record-keeping systems
Invoices	<ul style="list-style-type: none"> • The system allows commercial invoices if required • Only contain specific data, such as customer identification information, date of supplies, taxable amount, tax rate, and tax payable
Availability of information	Information should be available online
Use of third-party service providers	Allows foreign suppliers to appoint a third-party service provider to act on their behalf

Source: Organisation for Economic Co-operation and Development. 2015. *Action 1 Final Report Addressing the Tax Challenges of the Digital Economy* (October). Paris: Organisation for Economic Co-operation and Development. <https://doi.org/http://dx.doi.org.10.1787/9789264202719-en>

standard regime. Japan and Switzerland require suppliers to appoint a tax agent in the country to account for VAT (OECD 2018a).

The implementation of simplified registration and collection regimes is also emerging in Southeast Asia. Singapore and Malaysia imposed a general consumption tax on digital services at the beginning of 2020, and Indonesia followed suit in July 2020. Viet Nam and Thailand are also considering introducing such measures. Further, although no concrete plans have been revealed, the Philippines has shown interest in amending its taxation rules (Taxamo 2019).

Singapore introduced overseas vendor registration for GST on sales of digital services to Singapore consumers. Foreign digital service providers with an annual global turnover of more than S\$1 million (\$720,000) and turnover in Singapore of more than S\$100,000 (\$72,000) should charge 7% GST on their supplies to Singapore. Malaysia imposed a 6% service tax for the supply of digital services by foreign-registered businesses to consumers in Malaysia, with an annual threshold of RM500,000 (\$120,000).

Viet Nam will collect VAT from nonresident e-commerce businesses in 2021. In contrast to the approach used by Singapore and Malaysia, Viet Nam collects VAT and withholding tax (corporate income tax) simultaneously. Financial services will act as tax withholders. Rates are not statutorily prescribed and are determined on a case-by-case basis. The rate of the VAT component will be 2–5%, and the rate of withholding tax will be 1–10% (Rolfe 2020).

In June 2020, the Thai cabinet approved a draft bill requiring foreign electronic service providers with revenue of more than B1.8 million (\$57,750) to register for VAT. The supplier will have to pay 7% VAT on digital services provided to Thai consumers, and the platform operator will pay VAT on behalf of digital service providers.

3.3.2 Toward a Consensus-Based Solution

In October 2019, the OECD released a proposal for a consensus-based solution to taxing the digitalized economy, consisting of two pillars (OECD 2019a). Under Pillar One, the proposal outlined the new nexus and profit allocation rules (also known as the Unified Approach). A market country may have the right to tax the income of a foreign business, even when the business has no physical presence in that country. Under Pillar Two, the proposal describes a set of rules to address ongoing risks from structures that allow multinational companies to shift their taxable profit to low-tax countries. The OECD estimates that global corporate tax revenue will increase by up to 4% or around \$100 million as a result (Bradbury et al. 2020). This proposal provides a basis for negotiating a consensus-based solution that was expected to be completed in 2020 (this target has been extended to mid-2021). Once a consensus is reached, any temporary measures that have been taken should be revoked (OECD 2020b).

Regarding profit allocation under Pillar One, the proposal does not specifically target the digital economy but covers automated digitalized services (such as online search engines and social media platforms) and consumer-facing businesses (defined as businesses that generate revenue from the sale of goods and services of a type commonly sold to consumers). Commodities and specific financial sectors are expected to be excluded under the proposal.

The proposal allocates the taxable income of a digitalized business to the market country through three approaches, depending on the presence of a business in the market country:

- (1) Amount A: Allocation of the right to tax foreign businesses to market countries in the absence of a physical presence of the business;
- (2) Amount B: Allocation of taxing rights to market countries using a determined fixed rate of remuneration for a determined “baseline” distribution and marketing functions in market countries;
- (3) Amount C: Allocation of taxing rights where there is the presence of business functions exceeding those covered by Amount B.

Amount A targets large businesses that interact remotely with users in market countries. Therefore, only multinationals that exceed a certain amount of annual global consolidated revenue are within the scope of Amount A. The profit used in the base calculation for Amount A is consolidated global profit before tax. Profit will be allocated based on Amount A only if it exceeds a specific profitability level. A specified formula will be used to determine how much profit is allocated

between market and resident countries. Finally, profit allocation for each market country will be determined based on the “allocation key,” based on revenue in each country.

Although a global consensus is still being formulated, market countries have the sovereignty to implement unilateral measures through their domestic regulations, with some considerations; that is, these regulations must (1) comply with a country’s international obligations; (2) be temporary; (3) be targeted; (4) minimize over-taxation; and (5) minimize the impact on start-ups, business creation, and small businesses more generally (OECD 2018b). The most crucial consideration is that the measures should be temporary. Once a global consensus solution has been agreed upon and implemented, the temporary measures should be revoked.

3.3.3 Unilateral Measures

3.3.3.1 Significant Economic Presence

Some countries introduced the “significant economic presence” concept to reinforce the ineffectiveness of the “physical presence” concept in allocating the right to tax to the market country. A foreign taxpayer can be deemed to have a permanent establishment in the country as a significant economic presence, based on a purposeful and sustained interaction with the economy. A vital indicator of this presence is sustained revenue from the market country. It can be combined with digital factors such as domain name, and user-based factors such as monthly active users, online contract conclusion, or data collected (OECD 2015). As this approach conflicts with the permanent establishment definition in current tax treaties, the method can be applied only to foreign businesses from non-tax treaty partners.

In Israel, tax authorities introduced the concept in a draft circular in 2015, stating that a foreign entity is deemed to have a taxable presence in Israel if it provides online services to Israeli customers. The provision can be applied if the entity’s activity is conducted through the internet. Similarly, India expanded its scope of “business connection,” which is equivalent to a permanent establishment, through its Union Budget 2018. Nigeria introduced the same approach in its Finance Bill 2020. Further, the European Commission proposed a significant economic presence concept as a “long-term” suggestion to reform corporate tax rules.

The European Commission introduced a revenue threshold of €7 million (\$8.3 million) in annual revenue, and Nigeria introduced a threshold of ₦25 million (\$65,000). However, the European Commission recommends a more specific threshold in addition to revenue. A permanent establishment can be deemed to be present in a country if a foreign company has 3,000 contract conclusions or 100,000 users in a year. Meanwhile, Israel and India have not yet announced detailed regulations. India deferred the definition of significant economic presence to April 2022, with the expectation that the OECD will soon reach a globally accepted solution (see Table 3.2).

Table 3.2 Key Features of Significant Economic Presence in Selected Countries

Threshold	European Commission proposal	Israel	Nigeria	India
Revenue factor	€7 million (\$8.3 million) of annual revenue in a member state	Significant revenue related to the volume of online activities performed by Israeli users	Gross turnover or income of more than ₦25 million (\$65,000)	Aggregate amount of payments
Contract conclusion	Over 3,000 business contracts for digital services with business users in a year	A significant number of contracts with Israeli customers		
User factor	Over 100,000 users in a member state in a year	A significant number of Israeli customers	Purposeful and sustained interaction with persons in Nigeria through a customized digital page or platform	Systematic and continuous business activities or many users in India
Digital factor		A website with localized features targeting the Israeli market	A Nigerian domain name or web address registered in Nigeria	

Sources: European Commission. 2018. Proposal for a Council Directive Laying down Rules Relating to the Corporate Taxation of a Significant Digital Presence. Brussels: European Commission. https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_significant_digital_presence_21032018_en.pdf (accessed 17 February 2020); Organisation for Economic Co-operation and Development. 2018b. Tax Challenges Arising from Digitalisation—Interim Report 2018: Inclusive Framework on BEPS. In *OECD/G20 Base Erosion and Profit Shifting Project*. Paris: Organisation for Economic Co-operation and Development Publishing. <https://doi.org/10.1787/9789264293083-en>; Federal Republic of Nigeria. 2020. *Federal Republic of Nigeria Official Gazette* 107(21). 10 February. Lagos: Federal Government Printer. <https://assets.kpmg/content/dam/kpmg/ng/pdf/tax/companies-income-tax-%28significant-economic-presence%29-order-2020.pdf> (accessed 15 August 2020).

Some countries have narrowed the scope of their definition of permanent establishment. In 2018, the Slovak Republic revised the scope of permanent establishment to target specific activities carried out by online platforms. Transport and accommodation services arranged through a digital platform can create a permanent establishment for the digital platform. Similarly, the Kingdom of Saudi Arabia introduced the concept of a “virtual service permanent establishment.” A foreign business is deemed to have a permanent establishment if it furnishes services in the Kingdom for a period exceeding the threshold in an applicable tax treaty (usually 183 days).

3.3.3.2 Withholding Tax

Some countries impose a withholding tax on a certain kind of digital-related payment to overseas suppliers previously not taxed in market countries. This approach consists of, for example, broadening the scope of royalties, imposing a withholding tax on fees for technical services, or introducing new withholding taxes on other specific categories of income, such as income from online advertising (OECD 2018b). However, since tax treaties allocate the taxing right for such payments, the change will not affect payments to tax residents of tax treaty partners.

The rate and scope of “digital income” are diverse depending on the domestic regulation of each country. Tax is also withheld in various ways. Some countries impose the withholding requirement on consumers at the time of payment. In contrast, other countries appoint a third-party intermediary, such as a bank or other financial institution, as a withholder (see Table 3.3).

3.3.3.3 Turnover Tax

Some countries impose a levy outside of the scope of income tax. This levy is applied to foreign businesses, regardless of an effective tax treaty. The levy shares some of the characteristics of significant economic presence, in that it applies to digital businesses with considerable revenue. The levy also has the features of the consumption tax, which is imposed in the place of consumption. In some countries, the measures are applied regardless of the status of the supplier (whether tax nonresident or tax resident), while in other countries, the levy only targets non-residents. The scope of taxable revenue also varies—some countries only target specific revenue while others target a broader scope of digital revenue.

Taxable suppliers are generally determined by a certain threshold (determined by annual consolidated global revenue) to ensure that only large companies are subject to the levy. The local threshold (measured by total taxable revenue from the market country) is then determined as an indicator of significant presence in that country. The local threshold can also be determined by the total amount paid by the customer in a specified period.

Countries that apply such levies put the administrative burden of the levies on different parties. Some countries require the supplier to remit and report to

Table 3.3 Key Features of Withholding Tax on “Digital Revenue” in Selected Countries

<i>Country</i>	<i>Year</i>	<i>Rate</i>	<i>Scope</i>	<i>Withholder</i>
Pakistan	2018	5%	Payments for offshore digital services, e.g., online advertising, designing, creating, hosting, or maintaining websites, providing any uploading services, digital content storing or distribution, online collection or processing of user-related data, and any facility for the online sale of goods or services	Financial institutions
Turkey	2019	15%	Payments made to providers of advertising services or intermediaries in return for the provision of such services via the internet	Local taxpayers
Uruguay	2018	12%	The income of nonresidents from services related to businesses involved in the digital economy in Uruguay	Local taxpayers
Viet Nam	2021	1–10%	Payments made to “nonresident e-commerce businesses”	Financial institutions
Thailand	Proposal	5%	Payments for goods and services supplied in the country by e-commerce, including online advertising, gaming, shopping, and others	Financial institutions

Source: KPMG. 2020. Taxation of the Digitalized Economy: Developments Summary. <https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf> (accessed 3 March 2020)

the authority directly, while others appoint local taxpayers as agents to fulfill the obligations of the supplier. In other countries, customers withhold the levy.

India was one of the first countries in Asia to impose a turnover tax on digital business. In 2016, India introduced a 6% equalization levy on payments made to a nonresident service provider with no permanent establishment in India. Taxable services are specific to the advertising sector, such as online advertisement, digital advertising space, and facilities for online advertisement. The threshold is based on customer payments: If the annual payment to one service provider exceeds ₹100,000 (\$1,367), Indian business residents must impose a levy on the payment and remit the amounts to the government.

India expanded the levy to e-commerce operators from April 2020, at a lower rate of 2%. This revised levy applies to nonresident businesses that do not

have a permanent establishment in India and are not subject to the existing 6% equalization levy. The levy applies if the e-commerce operator's turnover is at least ₹20 million (around \$267,000). Unlike the equalization levy for advertising services, the compliance responsibility for this levy lies with the nonresident e-commerce operator.

The European Commission suggested the turnover threshold as a European Union (EU)-wide approach to tax the digital economy. The 3% levy was introduced as a digital services tax levied on the gross revenues of businesses with a central role in user value creation. The European Commission suggested two revenue-related thresholds for businesses to be taxable under the digital services tax: (1) €750 million (\$887 million) in annual revenue generated worldwide, and (2) €50 million (\$59.5 million) in annual revenue generated in the EU. The proposal was revoked amid differing views from the group's members. The Finance Ministers of Denmark, Finland, and Sweden released a joint statement on digital taxation criticizing the digital services tax³ and called for any solution reached to be a consensus-based solution. Other EU members continue to impose a unilateral digital services tax with a design similar to the European Commission proposal. As of August 2020, a substantial number of EU members had already implemented a digital services tax, including Austria (in 2020), Hungary (in 2017), Italy (in 2020), and Poland (in 2020), while other countries such as Belgium, the Czech Republic, Latvia, and Spain are currently preparing to implement such a tax. France planned to implement a digital services tax in 2019, but payment was postponed to prevent retaliatory tariffs on French goods by the United States (US).

A growing number of countries from other parts of the world have announced, proposed, or implemented such levies. In 2020, Israel, Tunisia, Turkey, and the United Kingdom (UK) implemented a digital services tax (Indonesia also introduced a digital services tax in 2020, but detailed regulation has not yet been released). In Latin America, Brazil plans to impose a digital services tax with a progressive rate according to local revenue. In Africa, Kenya planned to implement a digital services tax in 2021. Canada has also indicated its intentions to propose a similar measure. Critical features of turnover-based tax in selected countries are described in Annexes 3.1 and 3.2.

3.4 Discussion

3.4.1 Value-Added Tax and Goods and Services Tax as Priorities

Market countries should prioritize the VAT or GST approach to raise tax revenue from the digital economy, rather than pursuing income or turnover tax measures. Based on the destination principle, market countries have undisputed taxation rights of VAT or GST on cross-border supplies. VAT or GST is more straightforward than other measures, with a broader scope of taxable objects than withholding tax that only covers specific income, such as royalties (Cheang 2020).

Challenges in tax collection can be solved by implementing a simplified foreign supplier registration and collection regime, as introduced by the OECD.

Simpler registration procedures can significantly reduce compliance costs and attract foreign suppliers to cooperate with the tax authority (OECD 2017a). This system is proven to have had positive results in terms of compliance and additional revenues collected (OECD 2020a). The EU reported steady growth in VAT revenues from these measures, from €3 billion (\$3.55 billion) in 2015 to more than €4.5 billion (\$5.33 billion) in 2018. Australia added A\$728 million (\$522.3 million) in the first two years of its simplified registration and collection regime, while South Africa raised R3 billion (\$173.5 million) in the first five years after implementing the OECD standards. The Government of Malaysia expects a tax revenue increase of RM2.4 billion (approximately \$575.2 million) in 2020 (Cheang 2020).

Countries that implement such measures must formulate an enforcement scheme to ensure that the system does not depend only on the voluntary compliance of suppliers. However, voluntary compliance might work for high-profile operators, which occupy a considerable market share, as they tend to be tax-compliant for reputational reasons. As the suppliers are located outside the country and data on transaction information are not readily available, the government should ensure that they can assess supplier compliance. Tax authorities should cooperate to ensure that suppliers fulfill their VAT or GST obligations in market countries by establishing information exchange and assistance in recovery. This will help identify suppliers who should register and ensure the appropriate amount of payment (OECD 2017a).

Further, governments should regulate enforceable penalties for noncompliant suppliers. For example, in Australia, foreign suppliers face a significant risk of liability, interest, and penalties. In extreme cases, the supplier may be prosecuted (Toryanik 2020). However, governments should keep the cost of tax administration and enforcement as low as possible.

Although the simplified registration and collection regime can lower compliance costs, governments should think about the obligations of foreign suppliers as a whole, especially if the responsibilities of foreign suppliers do not only include VAT or GST. Other related tax liabilities, such as turnover or withholding taxes, should be synchronized to minimize compliance costs. Based on India's experience, Shah (2020) noted that there is an excessive compliance requirement given the multiple taxes on digital products and services in India (e.g., the equalization levy, income tax, and indirect taxation). The government should provide an independent online portal for e-commerce operators and unify all taxes into a single payment window. Further, the payment system for these taxes should be simplified and combined on a particular date of the subsequent month of sales.

The design of VAT or GST should be neutral, to ensure that business decisions are motivated solely by economic rather than tax considerations. The VAT or GST system should create equal treatment for taxpayers who carry out similar transactions in similar situations. The tax should not dictate consumer choices between remote or local suppliers, or between suppliers with a digital platform or a physical store (OECD 1998). This can be ensured, for example, by applying the same rate and registration threshold.

3.4.2 Market Country Involvement in the Consensus-Based Solution

As a global solution to tax the profit of digitalized businesses, the Unified Approach provides mechanisms to allocate taxation rights to market countries without a physical presence. In formulating the Unified Approach, developing and developed countries have equal footing for multilateral negotiation as members of the Inclusive Framework on BEPS. Therefore, the involvement of market countries in the detailed discussion is critical to ensure fair tax allocation.

The global revenue threshold will determine how many multinationals will be subject to the Unified Approach. Further, there will be a local threshold, possibly based on the annual revenue of multinationals in that country. The smaller the threshold, the larger the tax base to which the market country will be entitled. Market countries will favor a lower threshold, as this will cover more multinationals. The proposal indicates that the global threshold will resemble that of country-by-country reporting under BEPS Action 13 (€750 million/\$887 million). As of the financial year 2018, there were around 5,600 companies with revenue above that amount.

As only profit that exceeds “routine profit” can be allocated to market countries, the share of taxable profit for market countries may also be limited. Regardless of how much revenue is derived from market countries, the countries cannot tax the profit of a multinational business if its profit is below a specified level of profit. Furthermore, if the profit of a qualified multinational exceeds the specified level of routine profit, not all the excess profit is allocated to market countries; instead, a ratio (still unknown) will determine how much of the residual profit is allocated to market countries.

Market countries should propose a low routine profit to gain more taxing rights. If the residual revenue threshold is set at 10%, the increase in corporate income tax revenue for low-income countries might be 1–2%. However, if the residual profit threshold is doubled, the increase in corporate income tax revenue for low-income countries might be less than 1% (Bradbury et al. 2020). Further, of around 5,600 companies with more than €750 million (\$887 million) in annual revenue, only 64% have a profit ratio above 5% of revenue. This share declines to only 40% if the profit level threshold is set to 10% (see Figure 3.4).

3.4.3 Some Considerations in Implementing Unilateral Measures

Tax treaties override the provision of domestic law. Therefore, unilateral measures by amending domestic income tax regulation affect only foreign entities from non-treaty countries. For example, a significant economic presence approach in India will not affect foreign businesses from 98 jurisdictions, and the 15% withholding tax in Turkey will not affect payments to foreign companies from 86 jurisdictions (see Figure 3.5). Since tax treaties are usually established between countries with significant economic relations (Braun and Zagler 2014), amending only domestic tax law without modifying tax treaties is expected to yield an insignificant result. Moreover, amending all significant tax treaties is significantly unlikely to be successful. Tax treaty partners may be reluctant to amend the treaty

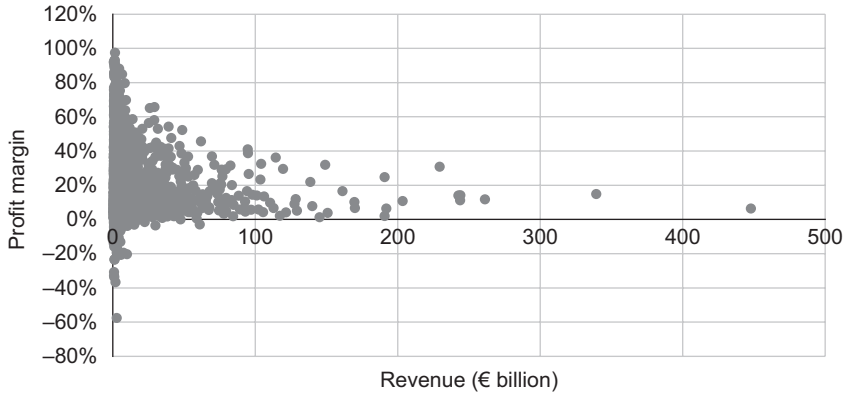


Figure 3.4 Distribution of Companies with More Than €750 Million (\$887 Million) in Revenue, 2018. Profit margin = earnings before interest, tax, depreciation, and amortization divided by revenue. Source: Directorate General of Taxes Indonesia, author’s calculation.

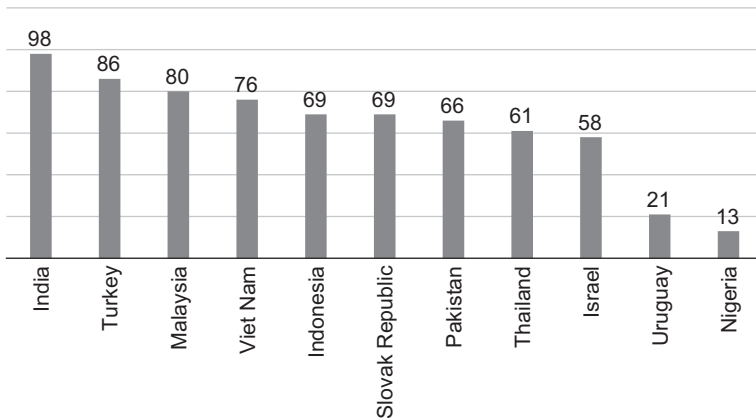


Figure 3.5 Number of Effective Tax Treaties of Selected Countries. Source: International Bureau of Fiscal Documentation Tax Research Platform. <https://research.ibfd.org/#/>. Accessed 19 August 2020 (processed by author).

because allocating more taxation rights to a market country means reducing the tax rights of partner countries.

Some countries choose to implement measures outside the scope of tax treaties, to raise a “fair share” of revenue from foreign digital businesses. In India, the equalization levy raised an additional ₹5.5 billion (\$77 million) of revenue in 2017–2018 (TMF Group 2019). Digital services tax was estimated to generate €5 billion (\$5.6 billion) annually for EU member states, €500 million (\$595

million) for France in 2018 (Ministre de l'Économie et des Finances 2019), €25 million (\$28 million) for Austria in 2020 (Bundesministerium für Finanzen 2019), and €600 million (\$708 million) for Italy in 2020 (PricewaterhouseCoopers 2019).

However, levying a tax on turnover raises several problems. Turnover tax is not aligned with the ability-to-pay principle and may cause an excessive tax burden for businesses. Although such measures could serve as an attempt to allocate a “fair share” of the tax on income, a levy on turnover is more likely to be regressive than a tax on corporate profits (Lowry 2019). As turnover tax is applied to gross revenue, businesses must pay it regardless of their profit margin, even when they suffered a loss. The UK is the only country that provides an alternative calculation under a “safe harbor” for businesses with low profit margins on in-scope activities and provides an exemption for the first £25 million (\$33 million) of taxable revenue. The turnover tax can also double taxation for businesses since tax paid is less likely to be credited against their income tax in their home country. This burden might then be shifted to domestic customers, rather than borne solely by the business (Kofler, Mayr, and Schlager 2017).

The narrow scope of the turnover tax may give rise to unequal treatment among digital services more generally. In some cases, turnover tax can lead to unequal treatment between economically equivalent digital transactions (OECD 2018b). For example, the levy on digital advertising services will have a different effect than that on non-advertising digital services. Similarly, a digital levy applied to business-to-business transactions will spark concerns of unequal treatment compared to business-to-consumer digital services.

The problems raised by implementing turnover tax might trigger retaliation from countries where businesses have a tax residence. After France adopted a digital sales tax, the US conducted an investigation that concluded that France's digital services tax discriminates against US companies, is inconsistent with international tax principles, and is burdensome for affected US companies (Office of the United States Trade Representative 2019). Consequently, the US threatened France with a 100% rise in tariffs on products imported from France. Although both countries agreed to postpone their measures, in June 2020, the US announced the same investigation in countries intending to implement unilateral measures, including Austria, Brazil, the Czech Republic, the EU, India, Indonesia, Italy, Spain, Turkey, and the UK.

Developing countries should consider the risk of retaliation, as many large digital companies are established in significant global trading partners. The top 100 digital companies (measured on sales, profits, assets, and market capitalization) are dominated by US companies (39), including eight in the top ten (Forbes 2019). The People's Republic of China and the US account for 90% of the world's 70 largest digital platforms (United Nations Conference on Trade and Development 2019). Further, the European Commission estimates that its digital services tax proposal would apply to 120–150 companies, half of which are located in the US, and one-third of which are in the EU (KPMG 2018). The world's largest trade partners are outlined in Figure 3.6.

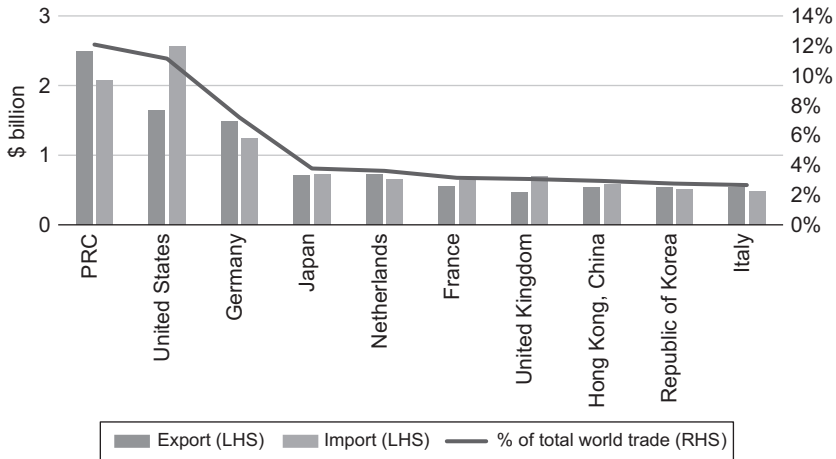


Figure 3.6 Trade in Goods, 2019. LHS=left-hand side, PRC=People's Republic of China, RHS=right-hand side. Source: International Trade Centre. Trade Map. www.trademap.org/Index.aspx. (accessed 20 August 2020).

3.4.4 *Digital Taxation in Indonesia*

As the largest country in Southeast Asia, Indonesia is a considerable market for the digital economy and has a promising future. As of January 2020, Indonesia had 175.4 million internet users, 88% of whom had made an online purchase (Kemp 2020b). Indonesia has the most significant and fastest-growing internet market in Southeast Asia, and its market is projected to grow from \$40 billion in 2019 to \$130 billion in 2025 (Google, Temasek, and Bain & Company 2019). The digital economy has had a positive impact on the Indonesian economy, amounting to an additional \$150 billion in annual economic impact by 2025 (Das et al. 2016).

Under the current income tax and VAT laws, the Government of Indonesia cannot tax foreign digital businesses without a physical presence. For domestic transactions, VAT is collected by VAT-registered businesses.⁴ For imported tangible goods, Indonesia implements both the traditional collection model and intermediary collection model, regardless of the value of the goods. However, for imported intangible goods and services, consumers should collect and report the VAT. The system is ineffective in capturing VAT from a foreign business-to-consumer supply of intangible goods and services and relies on consumer self-assessment (Indonesia Ministry of Finance 2019).

Indonesia's income tax law still requires the physical presence of a foreign business to tax its business profit. To impose corporate income tax on a foreign company, the foreign company should have a permanent establishment in Indonesia, which can take the form of a physical building, the presence of an agent, or the furnishing of a service in Indonesia. Indonesia's tax treaties also allocate the taxing right of business income only if there is a physical presence in

Indonesia. Amending only the income tax law is less likely to result in significant revenue since the current Indonesia tax treaty network covers significant economic partners. In 2018, tax treaty partners contributed 92% of total foreign direct investments, 95% of total exports, and 95% of total imports.

COVID-19 is making it more urgent for the government to find an alternative source of tax revenue. In the 2020 budget, the government allocated Rp695.2 trillion (\$47.14 billion) to overcome the pandemic's impact. Unfortunately, the pandemic also impacted tax performance negatively. As of mid-2020, tax revenue had contracted by 12.0%, compared to the same period in 2019. As a result, the estimated deficit widened significantly, from 1.7% of GDP (2020 budget before the pandemic) to 6.34% of GDP (2020 revised budget after the epidemic) (see Figure 3.7).

In March 2020, the government issued a Government Regulation in lieu of Law on State Finance Policy and Financial System Stability (approved as Law Number 2/2020 by Parliament in May) containing emergency measures to combat COVID-19. Taxes on electronic transactions are among the measures stipulated in the law. These “digital tax” measures cover VAT collection on digital transactions and adopt a “significant economic presence approach” through the income tax and electronic transaction tax. These measures will remain ineffective until the government issues the implementing regulations.

3.4.4.1 Value-Added Tax on Digital Remote Transactions

The government issued Ministry of Finance Regulation Number 48 Year 2020 and Directorate General of Taxes (DGT) Regulation Number 12 Year 2020 providing details related to VAT collection on digital transactions. Effective from 1 July 2020, overseas businesses that sell digital goods and services to Indonesian consumers that meet specific criteria will be appointed as VAT collectors by the government. As of August 2020, the government has selected 16 companies.⁵

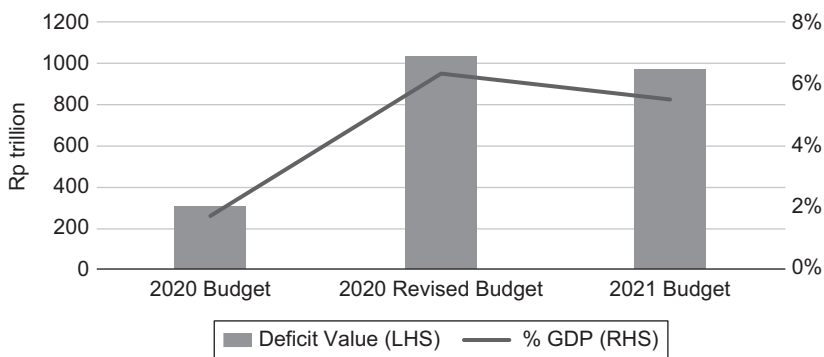


Figure 3.7 Indonesia Budget Deficit, 2020 and 2021. GDP = gross domestic product, LHS = left-hand side, RHS = right-hand side. Source: Indonesia Ministry of Finance. 2019. *Academic Paper on Draft Law of Taxation Measures to Strengthen the Economy*. Jakarta: Indonesia Ministry of Finance.

“Digital VAT” is applied to digital goods and services at a rate of 10% (or 1/11th of the amount paid by the Indonesian customer). Digital goods are defined as intangible goods in the form of digital information, including software, multimedia, and electronic data, while digital services are defined as services sent via the internet or electronic networks and involving little human intervention. It is not possible to ensure delivery without information technology, including software-based services. It should be noted that VAT for intangible assets and services other than those subject to this “digital VAT” is subject to VAT using the standard mechanism.

Suppliers can be both individuals and enterprises. Suppliers of digital products and services that might need to charge VAT are overseas merchants or online retailers supplying digital goods or services to Indonesian consumers, and operators (overseas or Indonesian) of online marketplaces delivering digital goods or services to Indonesian consumers. A customer is considered Indonesian if the customer provides a billing address or mailing address in Indonesia, uses Indonesian payment facilities, or places orders using Indonesian internet protocol addresses or the Indonesia country calling code.

The government will appoint a foreign supplier as a VAT collector if the supplier exceeds transaction value or traffic thresholds. The transaction value threshold is Rp600 million (\$41,000) in a year or Rp50 million (\$3,420) in a month, while the traffic or access numbers threshold is 12,000 users annually or 1,000 users monthly. A foreign supplier that does not exceed the thresholds can notify the DGT to be appointed as a VAT collector voluntarily. The designated foreign supplier will be given a tax identification number for VAT collection purposes. Appointment as a VAT collector does not necessarily constitute status as an Indonesian tax resident for income tax purposes.

The government provides an online system for appointed suppliers to exercise their tax rights and obligations, including registration. Appointed suppliers start to collect VAT at the beginning of the month following the appointment. The supplier must issue a VAT receipt for each transaction, which can be a commercial invoice, bill, order receipt, or another similar document, as long as it mentions the collection of VAT and payment made. The VAT amount can be stated inclusively in or separately from the price.

Consumers can account for VAT paid as their input tax by providing their name and taxpayer identification number to the supplier to be included in the VAT collection receipt. The receipt is considered equal to the VAT invoice as long as it contains the name, taxpayer identification number, or email address of the buyer registered in the DGT system. The information can also be provided as an attachment to the receipt.

The supplier must deposit the monthly VAT collection in the following month. Deposits are paid electronically to the state bank account in rupiah (using the exchange rate on the date of deposit), dollars, or other foreign currencies. The supplier should submit quarterly reports, including the number of customers, number of sales, amount of VAT collected, and amount of VAT paid. The due date for each report is 30 April for the first quarter (Q1), 31 July for Q2, 31

October for Q3, and 31 January of the following year for Q4. The government may require the supplier to provide detailed information covering transactions in a year. The report should include the record number and date of VAT receipts, sales amount, VAT collected, customer name, and customer tax identification numbers (if provided).

The processes of appointment, collection, and legal remedies are carried out according to the General Tax Provisions and Procedures Law. The government may charge appointed sellers an administrative penalty for noncompliance. Further, the Ministry of Finance may issue a warning, followed by a request for access termination to the Ministry of Information and Communication. However, as of August 2020, executing regulations regarding the warning mechanism and termination requests are still being formulated.

3.4.4.2 Significant Economic Approach and Electronic Transaction Tax

Under Law 2/2020, the government regulates income tax measures or turnover tax for overseas sellers or overseas operators of online marketplaces with a significant economic presence in Indonesia. This significant economic presence may be based on the amount of global turnover of a multinational company, total sales in Indonesia, or the number of Indonesian users. If a foreign business meets specific criteria, the business is deemed to have a permanent establishment in Indonesia and is therefore subject to corporate income tax based on its income attributable to Indonesia.

However, if the seller cannot be deemed a permanent establishment because of the application of a tax treaty, the government will impose an “electronic transaction tax” outside the scope of income tax, which is not covered by tax treaties. The electronic transaction tax is a turnover tax with a specific rate imposed on the sale of goods and services from outside Indonesia through electronic transactions made to buyers or users in Indonesia, both directly and through a platform.

Overseas sellers or operators of online marketplaces are responsible for paying and reporting the income or electronic transaction tax. Alternatively, a representative in Indonesia can be appointed to handle the administration of digital VAT, income tax, and electronic transaction tax.

However, the significant economic presence concept for both income tax measures and turnover tax measures has not yet been applied, as the government has not issued implementing regulations. The government still needs to provide government regulation regarding the tax rate, the basis for imposition, and procedures for calculation. Furthermore, a Minister of Finance regulation is needed to regulate the procedures for payment and reporting of income tax or electronic transaction tax, and appointing representatives.

3.5 Conclusion and Policy Recommendations

Market countries are facing challenges in collecting tax revenues from digitalized businesses. The income tax principle does not give market countries the right to

tax foreign enterprises without any physical presence, and general consumption tax collection faces administrative and enforcement obstacles. The COVID-19 pandemic has highlighted the urgent need to tax foreign digital businesses.

Collecting revenue from indirect tax should be a priority for market countries. It is globally accepted that the right to tax is given to countries wherein consumption takes place. Applying the simplified foreign supplier registration method suggested by the OECD is the best option since it can significantly promote efficiency and increase compliance. Market countries should cooperate with other state authorities to identify foreign suppliers that meet the requirements of VAT or GST collectors, and ensure that those suppliers pay and report VAT or GST appropriately. Law enforcement must also occur to incentivize compliance. In the case of Indonesia, the government should immediately issue the implementing regulation regarding the procedure of warning issuance and access termination for noncompliant suppliers. Furthermore, governments should apply a broad VAT or GST promoting equal treatment for digital and physical businesses. The scope and exemption of goods and services, registration threshold, and tax rate should be the same as the current local system to maintain neutrality.

Market countries should actively engage in the discussion around formulating a global solution to tax the digital economy to ensure that threshold, nexus, and profit allocation are fair for market countries. In the absence of a global solution, some countries implemented a unilateral approach in the form of income or turnover taxes. The income tax approach (such as modifying the permanent establishment definition and expanding the withholding tax base) will be less likely to result in favorable revenue since changing income tax will only affect nonresidents from non-tax treaty partners. On the other hand, although a country can impose a levy other than income tax, such measures must be applied carefully as they can trigger issues with the country wherein the business is located. Thus, any such measures should be temporary and revoked immediately once a global consensus has been agreed upon and implemented.

Notes

- 1 Consumption taxes are divided into (1) general taxes on goods and services, including value-added tax (VAT) and goods and services tax (GST), and (2) specific taxes on goods and services, including excise and import duties. Consumption tax as discussed in this chapter is general consumption tax.
- 2 This includes 23 European Union (EU) member states, Australia, Iceland, Japan, the Republic of Korea, New Zealand, Norway, Switzerland, and Turkey.
- 3 See Government Office of Sweden 2018.
- 4 An individual or company with taxable transactions of more than Rp4.8 billion (approximately \$350 million) in a year must register for VAT purposes.
- 5 These are Amazon Web Services Inc., Google Asia Pacific Pte. Ltd., Google Ireland Ltd., Google LLC, Netflix International BV, Spotify AB, Facebook Ireland Ltd., Facebook Payments International Ltd., Facebook Technologies International Ltd., Amazon.com Services LLC, Audible Inc., Alexa Internet, Audible Ltd., Apple Distribution International Ltd., Tiktok Pte. Ltd., and The Walt Disney Company (Southeast Asia) Pte. Ltd.

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Annexes*Annex 3.1 Digital Services Tax in Selected Countries*

<i>Country</i>	<i>Effective</i>	<i>Rate</i>	<i>Scope of revenue</i>	<i>Global revenue threshold</i>	<i>Local revenue threshold</i>
Austria	January 2020	5.0%	Online advertising or software or websites rendered in Austria	€750 million (\$887 million)	€25 million (\$29.8 million)
France	January 2019 (postponed)	3.0%	Provision of a digital interface, targeted advertising, and transmission of user data for advertising	€750 million (\$887 million)	€25 million (\$29.8 million)
Hungary	July 2017	7.5% (0% until 2022)	Broadcasting or publication of advertisements in Hungary		Ft100 million (\$330,000)
India	June 2016	6.0%	Online advertisement, digital advertising space, and facilities for online advertisement		₹100,000 (\$1,367)
	April 2020	2.0%	Online sale of goods or services (including facilitation of the sale of such goods or services) by an e-commerce operator		₹20 million (\$267,000)
Italy	January 2020	3.0%	Advertising, digital interface that allows users to buy and/or sell goods and services, and the transmission of user data generated using a digital interface	€750 million (\$887 million)	€5.5 million (\$6.55 million)
Kenya	January 2021	1.5%	Gross revenue from the digital marketplace		
Poland	July 2020	1.5%	Access to audio-visual media service and audio-visual commercial communication		
Tunisia	January 2020	3.0%	Sale of computer applications and digital services		₪20 million
Turkey	March 2020	7.5%	Provision and management of digital services, such as advertising, the supply of any digital content on digital platforms, including software, applications, music, videos, video games, or in-game applications	€750 million (\$887 million)	(\$2.73 million)
United Kingdom	April 2020	2.0%	Revenues from social media platforms, internet search engines, and online marketplaces	£500 million (\$664 million)	£25 million (\$33 million)

Sources: KPMG. 2020. Taxation of the Digitalized Economy: Developments Summary. <https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf> (accessed 3 March 2020); Bunn, D., E. Asen, and C. Enache. 2020. Digital Taxation Around the World. Tax Foundation. <https://files.taxfoundation.org/20200610094652/Digital-Taxation-Around-the-World1.pdf> (accessed 20 July 2020).

Annex 3.2 Proposed Digital Services Tax in Selected Countries

<i>Country</i>	<i>Rate</i>	<i>Scope of revenue</i>	<i>Global revenue threshold</i>	<i>Local revenue threshold</i>
Belgium	3%	Advertising, user data generated from the user, digital platform, and digital intermediation services	€750 million (\$887 million)	€5 million (\$5.9 million)
Brazil	1%, 3%, and 5%	Advertising, digital platform, and transfer of user data	R\$3 billion (\$538.5 million)	R\$100 million (\$17.9 million), R\$150 million (\$26.9 million), or R\$300 million (\$53.8 million) \$40 million
Canada	3%	Advertising, intermediary services, and advertising services based on user data	\$1 billion	\$40 million
Czech Republic	5%	Advertising, transmission of user data, and digital interface facilitating supplies among users	€750 million (\$887 million)	Kč100 million (\$4.5 million)
Spain	3%	Provision of digital services, online intermediary services, and data transmission services	€750 million (\$887 million)	€3 million (\$3.57 million)

Source: KPMG. 2020. Taxation of the Digitalized Economy: Developments Summary. <https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf> (accessed 3 March 2020).

4 Developing a Cooperative Compliance Model for Developing Economies

Justification, Prerequisites, and Administrative Design

Denny Vissaro

4.1 Introduction

Suboptimal tax collection performance has long been an unresolved problem, particularly in developing countries, which commonly suffer from a low tax ratio, relatively high compliance costs, poor revenue collection from personal income tax, and lagging digitalization. At the same time, they are facing growing pressure to lower corporate tax rates because of global tax competition, while giant digital businesses' market share is primarily from their territory (Organisation for Economic Co-operation and Development [OECD] 2019). As these growing challenges collide with the increasing need for tax revenue, appropriate administrative and policy breakthroughs are crucial. Several developing countries have begun considering new approaches to interacting with taxpayers under a new framework, in which a mutual exchange between transparency and certainty with them can be established.

This chapter examines how cooperative compliance may be adopted to this end in the context of developing countries. In general, cooperative compliance can be defined as a trust-based relationship framework, through which tax authorities and taxpayers collaborate with the aim of forming and maintaining mutual understanding. In doing so, the tax authority provides taxpayers with certainty in exchange for transparency. Accordingly, the findings of this chapter focus on how such a framework can be justified, what factors serve as the pre-conditions for this approach, and the types of administrative tools that enable effective performance.

The compliance model has been developed by synthesizing conceptual analyses, comparative studies, and path analyses to shape the concept and apply it as per the needs of developing countries (Popper 2002). The aim is to extract insights from other countries' experiences under this conceptual perspective and then apply these according to the characteristics of developing economies.

To determine the scope of the chapter, it is essential to first define the term "developing countries." One suggestion is that it refers to medium- to low-income nations (World Bank 2019). However, using such a strict line to determine a country's development status might be inappropriate for certain countries, such as Malaysia and the Russian Federation. Thus, this chapter does not use

the term “developing” to exclude countries that are near the edge of this limit. Instead, the term “developing” is used to indicate a country’s high dependency on tax revenues, assuming that the public provision function is strictly concave (Acharyya and Marjit 2014). Such countries are still relatively at the beginning of the curve, where the marginal value of public goods is high. In other words, the development of these countries relies on tax revenues.

This chapter recommends that tax authorities begin with a pilot program before initiating more public programs. They can start with certain state-owned enterprises (SOEs) and large enterprises that have proven cooperative. Having coped with the challenges faced in the pilot program and prepared certain key administrative aspects of larger-scale, specific, and objective requirements (particularly the existence of a tax control framework), the tax authority should choose the participants selectively. In addition, equivalent programs that offer certainty should be provided to other taxpayers, including small and medium-sized enterprises (SMEs) and individual persons.

This study emphasizes how tax authorities should maintain and develop cooperative compliance, both as a program and a paradigm. During implementation, the tax authority should remain cautious and prevent distrust between taxpayers and tax officers. Clear governance and administrative flexibility are crucial to realizing cooperative compliance.

4.2 Why Cooperative Compliance

Developing countries have traditionally pursued tax compliance under coercive fiscal contracts, in which taxpayers are positioned below the tax authority (Roch 2012). Not only are taxpayers obliged to pay imposed taxes, but they must also observe all formalities and technicalities, including calculating, withholding other taxpayers’ liabilities, and filing tax returns within certain periods (Santos 2014).

This approach treats taxpayers as opportunistic individuals who will take advantage of opportunities not to comply. Accordingly, the tax authority treats all taxpayers the same, without considering their compliance risk and behavior (Braithwaite 2002). It does not include trust or reciprocal actions to establish a better ambiance and framework, and eventually a more taxpayer-friendly tax system.

The 21st century marked the beginning of an era in which several countries began to work to improve their tax systems. Taxpayer rights, compliance costs, and better tax services are being increasingly acknowledged. There is an overall trend toward a more collaborative and transparent relationship, wherein a horizontal position between the tax authority and taxpayers is a virtue.

There is no universally accepted understanding of the nature of compliance. However, utility maximization from an economic perspective can be an excellent starting point to comprehend why or why not an individual would choose to comply (Allingham and Sandmo 1972). As rational actors, taxpayers will consider all factors affecting their utility along with the probability of the incidence of being caught for noncompliance. In the context of tax compliance, they rationalize

this probability and how much money they would ultimately save. The lower the probability of getting caught, the higher their tendency not to comply. Thus, the prevailing attitudes of tax authorities have become limited to increasing the probability of detection and level of punishment (Kirchler, Muehlbacher, and Kogler 2014). They do not consider the impact of this approach, that is, the possibility of degrading taxpayers' perceptions of and attitudes toward the tax system.

However, this simple explanation provides little clarity regarding the decision-making process. Most other social sciences have studied taxpayer behavior (Kirchler 2007). For example, if we account for tax morale as one of the main psychological determinants of a taxpayer's utility, complying with tax rules would maximize satisfaction apart from the money spent.

Furthermore, taxpayer behavior should not be categorized into compliance and noncompliance. In a wider context, there are spectrums that need to be considered (OECD 2004). Compliance behavior mapping can be a good example to show the different characterizations underlying taxpayers' behavior (see Figure 4.1). Identifying underlying motives and situations that may affect the decision can help tax authorities determine the most appropriate action. Consequently, taxpayers who are willing to comply but do not know how will receive assistance and/or facilitation, instead of unnecessary threats. Meanwhile, taxpayers whose compliance behavior is situational must be informed of the consequences of their decision.

Compliant taxpayers' trust in the tax system will likely weaken if they are treated as if they will try to disobey tax regulations if given the chance. At some point, they may make the logical choice not to comply in the future, since the expected return will probably be the same. This may happen if the auditing

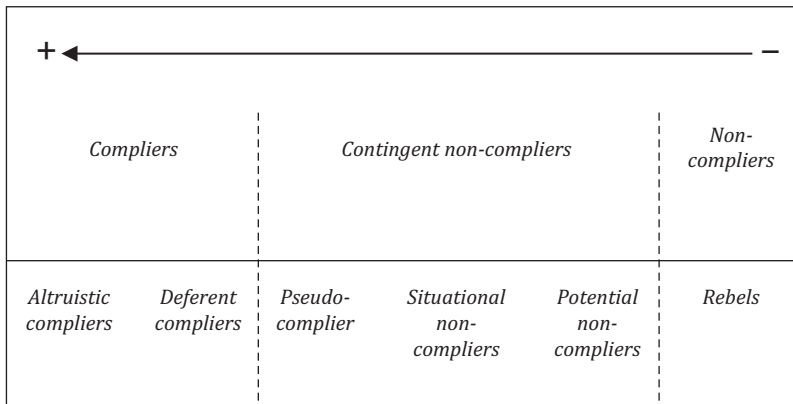


Figure 4.1 Taxpayer Classification Based on Compliance Behavior in Canada. Source: The Federal/Provincial/Territorial Underground Economy Working Group in Surveying Underground Economy in Canada in 2002 and 2003. Darussalam, D., B. Septriadi, B. Kristiaji, and D. Vissaro. 2019. *Era baru hubungan otoritas pajak dengan wajib pajak*, 1st ed. Jakarta: Danny Darussalam Tax Center Publishing.

process is poorly targeted or punishment is imposed on non-guilty taxpayers. To preserve the “best” form of compliance, a platform on which both the tax authority and taxpayers can interact with transparency and mutual trust is needed. This would enable taxpayers to obtain information on their tax position, while the tax authority can acquire voluntary disclosures that will reduce administrative costs and improve work speed.

Cooperative compliance can provide such a platform where the tax authority and compliant taxpayers can meet and trade inputs. Such a platform would also separate the noncompliant taxpayers and can restore the fiscal contract between the government and society. Cooperative compliance may be an important part of the answer to increasing concerns over the fulfillment of taxpayers’ rights and improved bureaucracy (Darussalam, Septriadi, Kristiaji, and Vissaro 2019). Unfortunately, cooperative compliance programs and other equivalent initiatives are mostly found in developed countries with mature tax systems. Key factors in their implementation include supportive technology and institutions complemented with good tax morale and an equal stance between the tax authority and taxpayers.

4.3 Setting the Context for Developing Economies

Developing countries rely heavily on tax revenues, placing them in an unstable position. Concurrently, they face competition among countries to attract capital and quality human resources to improve their economies and investments (Kristiaji 2019). The momentum of competition is even more significant for developing economies with a large gross domestic product and population, such as Bangladesh, India, Indonesia, and Viet Nam. Such countries are experiencing low dependency ratios, meaning that they need to establish conducive economic conditions to provide job opportunities. They also have a lower capacity to compete in terms of tax rates and incentives, because losing tax revenue to attract capital inflow may make them worse off (Vissaro 2016). This is because developed countries and those with relatively small gross domestic products have the advantage of lowering their taxes since the benefits from capital inflow outweigh the lost tax revenue (Kanbur and Keen 1993).

Further, such countries also face more severe challenges in collecting taxes, and unfortunately harbor a significant share of undetected economic activities as well. Of developing countries, the biggest shadow economies are located in Nigeria (52.5%) and the Democratic Republic of the Congo (47.0%), while others are reported at 17–33% (Figure 4.2). While it has been suggested that shadow economies primarily originate in the agricultural sector, most are found in SMEs (Medina and Schneider 2018).

It is unsurprising that most developing economies have a low tax ratio or low tax coverage (Figure 4.3), and are vulnerable to low tax buoyancy. When a significant number of economic activities are uncovered, tax revenue is insensitive to overall economic growth. Accordingly, tax base broadening, in terms of both administration and policies, is considered the best option to optimize tax

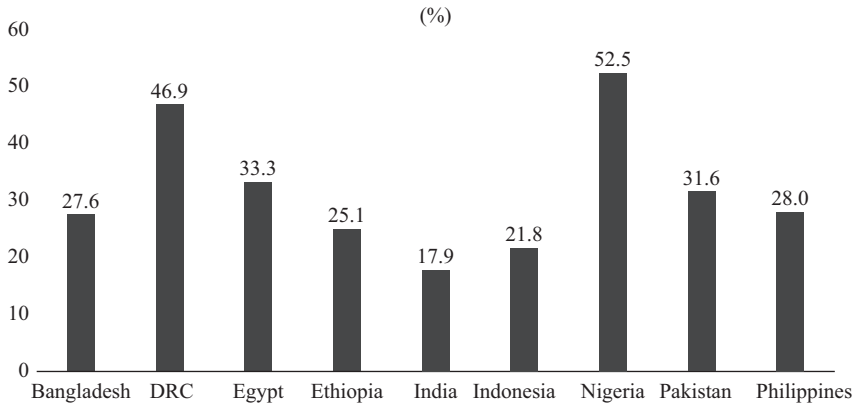


Figure 4.2 Shadow Economy in Selected Developing Countries. DRC=Democratic Republic of the Congo. Source: Medina, L. and F. Schneider. 2018. *Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?* International Monetary Fund Working Paper 17. Washington, DC: International Monetary Fund.

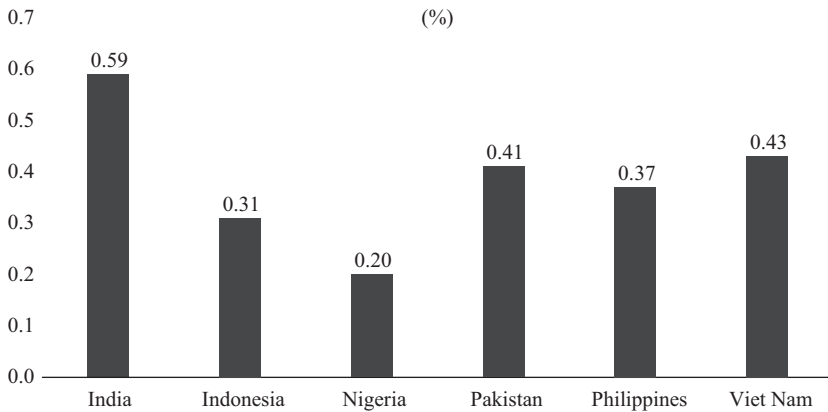


Figure 4.3 Tax Effort Estimation in Several Developing Economies. Source: Mawejje, J. and R. K. Sebudde. 2019. *Tax Revenue Potential and Effort: Worldwide Estimates Using a New Dataset.* *Economic Analysis and Policy* 63: 119.

revenues. Tax administrations should prioritize unregistered taxpayers, inheritance, and accumulated wealth to broaden their sources of tax revenue (e.g., new types of taxes and more taxpayers), instead of merely intensifying efforts toward existing taxpayers (Darussalam and Kristiaji 2019).

Figure 4.4 indicates that a lower number of tax officers compared to the labor force causes problems. If the population is large and the economy is not yet developed, the labor force–tax staff ratio increases, indicating that thousands of

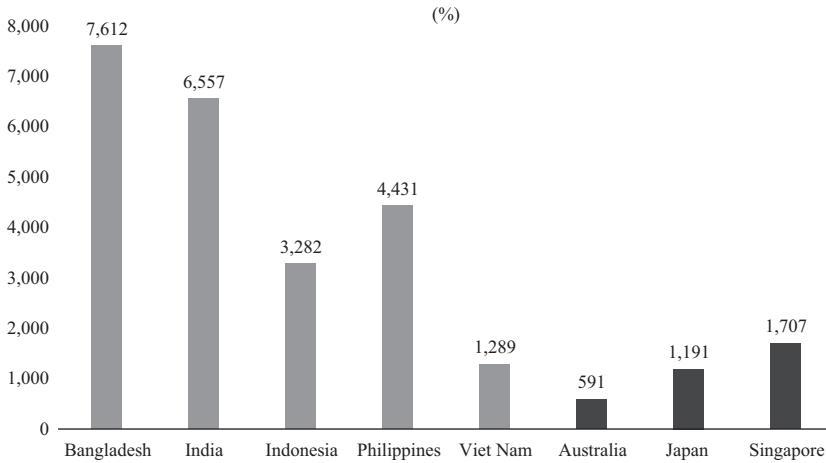


Figure 4.4 Labor Force–Tax Staff Ratio in Selected Developing and More Advanced Economies, 2015. Source: Author, using data from the Asian Development Bank, Organisation for Economic Co-operation and Development, and the World Bank.

potential taxpayers are handled by one tax officer. The opposite is found in developed countries, such as Australia, Japan, and Singapore. Unsurprisingly, personal income tax contributions are more significant in developed countries than in developing economies.

Countries with small populations are arguably better equipped for tax competition, primarily because tax-revenue loss caused by lowered tax rates can be far outweighed by the capital inflow. In contrast, more populous countries are ill-equipped for tax competition, as losing more tax revenue may be harmful to the welfare of these countries. They are thus weaker compared to other countries in such competition.

In developing countries, every dollar of tax revenue is comparatively more valuable. At the same time, collection is more difficult to optimize because of the size of the shadow economy, the inadequacy of the tax administration, tax competition, and the rise of the digital economy. Tax compliance must be accelerated via a framework that helps taxpayers provide data to the tax administration in a collaborative manner. While massive tax administration reforms are necessary, “assistance” from cooperative taxpayers would provide significant insights into taxpayers’ economic and behavioral characteristics.

4.4 Understanding Cooperative Compliance

It is important to understand how the concept of cooperative compliance emerges to identify ways to implement it according to the context, needs, and feasibility of the country. Although the conceptual root is the same, the practice may be

different. This section describes how cooperative compliance has developed, and what the future may hold.

The OECD chose the term “cooperative compliance” in 2013 when it introduced compliance programs emphasizing collaboration, trust, and an equal relationship between tax authorities and taxpayers. However, several countries had already promoted such an initiative approximately a decade earlier. Australia first formulated this approach in the 1990s and implemented it in the tax administration in the mid-2000s to promote collaboration with taxpayers. This captured the attention of other countries and the OECD. During the 2000s, the OECD’s Forum on Tax Administration attempted to study and develop the concept of cooperative compliance. In 2008, these efforts produced the Seoul Declaration under the title “Enhanced Relationship Study.” At the same time, the number of countries implementing such an approach kept growing, using different names or contextualized approaches. For example, the Netherlands launched “Horizontal Monitoring,” while Ireland, South Africa, and the United States also developed their own versions (Balharova 2016).

The term “enhanced relationship” led to challenges and debates as several scholars and tax professionals felt that it did not truly reflect the concept of collaboration and an equal, two-way relationship between tax administrations and taxpayers. It was also argued that this resulted in the unequal tax treatment of taxpayers. To accommodate these perspectives, the OECD decided to change the term to “cooperative compliance” as concluded in the 2013 Cooperative Compliance Report (Hasseldine 2000). The concept of cooperative compliance reflects a sense of mutual understanding between tax authorities and taxpayers and a willingness to help in fulfilling their obligations. This approach establishes a trust-based relationship and equal stance between tax authorities and taxpayers as the foundation to collaborate and help each other accomplish their goals.

The aim is to improve voluntary compliance that can be well maintained since tax authorities and taxpayers are meant to act as partners to safeguard the integrity of tax collection. Accordingly, taxpayers must be fully transparent in terms of any relevant information that might affect their tax obligations to the tax authority. In return, they should be granted certainty regarding their tax status. The logical consequence of this objective is an efficiency benefit for both sides: Tax authorities can reduce their administrative costs while taxpayers can reduce their compliance costs. The tax authority can more easily distinguish between compliant and risky taxpayers, obtain more data, and elicit further assistance from taxpayers to understand the changing business landscape and tax planning structures that may arise in certain sectors. Meanwhile, taxpayers gain confidence regarding their tax obligations and their ability to prevent being audited or falling under suspicion from the tax authority. This can assure them that they will not have to face tax disputes during upcoming tax years.

In short, cooperative compliance should be understood as more than a program. In fact, it can be argued that any efforts to create a mutual relationship are substantively part of the cooperative compliance regime. These efforts can be

realized either through programs or values embodied in every business process in the tax system.

4.5 How Other Countries Implement Cooperative Compliance

As of 2017, according to the OECD, 37 member countries had implemented or at least planned a cooperative compliance approach. This section reviews how certain countries select their approaches, and what challenges commonly arise. While overall implementation is monitored, more in-depth studies are being conducted on cooperative compliance approaches in Australia, Austria, Belgium, the Netherlands, and the United Kingdom (UK).

4.5.1 Similar Problems, Different Approaches

There are several variations in how countries approach cooperative compliance, mostly in terms of the collaboration mechanism, taxpayer requirements, and scope of the participants.

Despite such differences, several similarities or patterns emerge in implementation. First, with respect to the need for cooperative compliance, most countries currently considering this approach have had a poor relationship with taxpayers. For instance, in Australia, this problem can be traced to the 1980s, when interaction between the tax authority and taxpayers was governed by distrust and suspicion toward each other. Similarly, an absence of trust and collaboration was also present in the UK. In particular, large businesses and the UK tax authority (Her Majesty's Revenue and Customs) seemed to be always in opposition to each other. At the time, conflict and dispute between the two seemed normal. The situation was slightly different in the Netherlands, where the tax authority had long been perceived as taxpayer-friendly, although things were not perfect. Although distrust existed, it was not as significant as in other countries (de Widt 2017). Given these comparatively better circumstances, the introduction of cooperative compliance—referred to as Horizontal Monitoring—in the Netherlands was more easily accepted, and the changes were seen as more natural and simpler.

Second, the tax authorities clearly demonstrated their willingness and commitment to improving their relationship with taxpayers. Accordingly, this should be shown to the whole society, whose perception afterward would be decisive. Table 4.1 depicts how a strong and clear intention from the tax authorities preceded the enactment of a cooperative compliance program. To this end, a tax authority must take decisive action to address administrative complexities, simplify tax procedures, and reduce uncertainty. In addition, there should be room for intense communication to help taxpayers instead of merely collecting taxes (Bronzewska 2016).

During implementation, it usually takes time for countries to develop the right features and arrangements that work effectively. Where such features and arrangements are settled, most countries prefer to disclose their tax position and

Table 4.1 Pre-Condition Characteristics before Cooperative Compliance

<i>Pre-condition</i>	<i>Australia</i>	<i>The Netherlands</i>	<i>United Kingdom</i>	<i>Belgium</i>	<i>Austria</i>
Taxpayers' right fulfillment	√	√	√	Not clear	√
Efforts to simplify tax system	√	√	√	√	√
Tax certainty improvement	√	√	√	√	√

Sources: Australia: Reinhardt, S. and L. Steel. 2006. *A Brief History of Australia's Tax System*. Canberra: Department of the Treasury. <https://treasury.gov.au/publication/economic-roundup-winter-2006/a-brief-history-of-australias-tax-system> (accessed 1 February 2020); Australian Taxation Office. *Taxpayers' Charter*. Canberra: Australian Government. www.ato.gov.au/About-ATO/Commitments-and-reporting/Taxpayers--charter/ (accessed 1 February 2020).

Austria: Hollbacher, M. and K. Kubik. 2010. National Report on Taxpayers Protection' in Austria. In *Protection of Taxpayer's Rights: European, International and Domestic Tax Law Perspectives*, edited by W. Nykiel and M. Sek. The Hague: Kluwer.

Belgium: Docclo, C. 2009. National Report on Taxpayer Protection in Belgium. In *Protection of Taxpayer's Rights European, International and Domestic Tax Law Perspectives*, edited by W. Nykiel and M. Sek. The Hague: Kluwer.

Netherlands: Sommerhalder, R. A. and E. B. Pechler. 1998. Protection of Taxpayers' Rights in the Netherlands. In *Taxpayers' Rights: An International Perspective*, edited by D. Bentley. Gold Coast, QLD: Bond University, School of Law, *Revenue Law Journal*: 310.

United Kingdom: Maas, R. W. 2017. *Guide to Taxpayer's Rights and HMRC Powers*. London: Bloomsbury Publishing.

compliance consequences (70.3%), while also providing solutions in real time (67.6%) (Figure 4.5). Further, when issues cannot be solved and an audit is required, they also provide the audit schedule, when requested.

When commencing a cooperative compliance program, countries tend to set taxpayer criteria selectively (Table 4.2). This selection is generally meant not only to prioritize taxpayers from whom the tax authority can gain the most because of the size of their business but also to ensure that they are truly willing to cooperate in fulfilling their tax obligations.

In general, these taxpayers as participants require a well-established tax control framework (TCF) and a proven record of compliance. The TCF is an internal control that can objectively disclose all business arrangements that may affect a taxpayer's tax position (OECD 2013). The tax authority can later be assured that all tax requirements are met, along with possible tax risks. The TCF enables a wide range of transactions that help corporations engage with a cooperative compliance program.

In addition, the tax authority must ensure that the taxpayers' characteristics align with the tax officers' ability to handle enormous amounts of data and business complexities (Bronzewska 2016).

Nevertheless, this is not intended to engender unequal treatment, but to ensure that the scope of taxpayers' eligibility is feasible and can be effectively maintained (Darussalam, Septriadi, Kristiaji, and Vissaro 2019). Tax officers must

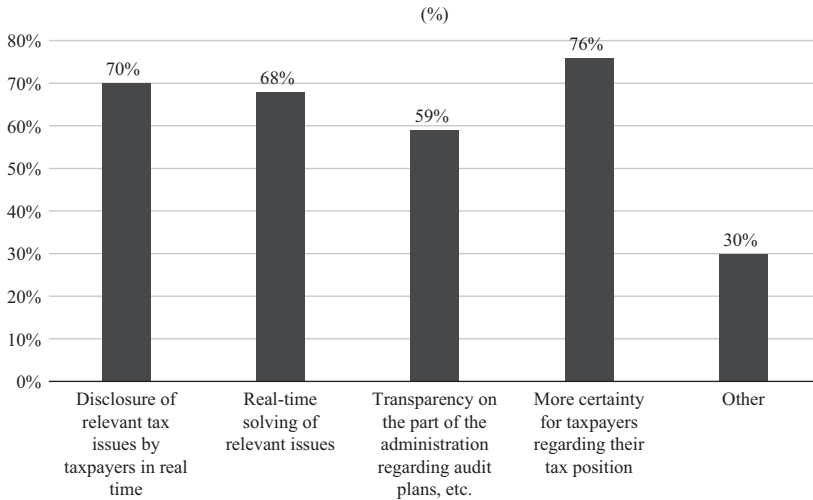


Figure 4.5 Cooperative Compliance Features in Organisation for Economic Co-operation and Development Countries, 2017. Source: Organisation for Economic Co-operation and Development. 2019. *Tax Administration 2019*. Paris: Organisation for Economic Co-operation and Development Publishing: 54.

have adequate knowledge and understanding to cooperate with certain taxpayers. Moreover, the complexities of current business transactions often demand tax officers with specific skills. It is therefore reasonable for the tax authority to begin with a limited scope of taxpayers.

The Austrian tax authority took this approach by only selecting the largest companies with turnovers of at least €40 million. In addition, the companies were expected to have strong tax governance through the TCF (Bronzewska and Majdanska 2019). The adequacy of the TCF will be routinely monitored to ensure that taxpayers can fulfill their responsibilities. As a result, the companies can receive real-time assistance and would not be subject to further audits (Bronzewska and Majdanska 2019).

In Belgium, the tax authority has launched its Cooperative Tax Compliance Program (CTCP) in several stages: An initial meeting as an introduction for interested business taxpayers, the application procedure for the CTCP, the verification of eligibility criteria, discussions, and an intake and acceptance phase. In the first two stages, the authority presents how the CTCP works, what to expect, and whether the taxpayer is eligible and allowed to participate in the program. Although any company may apply, it must have a compliant track record, a revenue of at least €750 million, an aggregate balance sheet of €1.5 billion, and more than 1,000 employees (Bronzewska and Majdanska 2019). In the intake phase, which lasts six months to one year, the company's ability to provide accurate

Table 4.2 Characteristic Patterns of Cooperative Compliance Implementation in Selected Countries

	<i>Australia</i>	<i>The Netherlands</i>	<i>United Kingdom</i>	<i>Belgium</i>	<i>Austria</i>
Background	Lack of certainty, high compliance costs, and lack of a commercial approach of the ATO	More equal relationship between the government and citizens	Poor communication and lack of trust	The need for certainty and fewer tax disputes	The need for improved tax certainty
Program	Forward Compliance Arrangement; Annual Compliance Arrangement	Cooperative Compliance Program; Horizontal Monitoring	Framework for Cooperative Compliance	Cooperative Tax Compliance Program	Horizontal Monitoring
Existence of a pilot program	Pilot project with three participants from different sectors: financial, energy, and manufacturing (Forward Compliance Arrangement)	Pilot project	N/A	Two-year pilot project on cooperative compliance	15 participants (2011)
Targets	Large businesses	Large businesses and small and medium-sized enterprises	Large businesses	Very large businesses	Large businesses

Participants' limitations	Yes	N/A	Yes	Yes
Taxes covered	The majority of taxes, including income tax, GST, excise, fringe benefit tax, mineral source rent tax, and petroleum resource rent tax	Corporation tax, VAT, and employer duties	Income tax, VAT, and other miscellaneous taxes	Most taxes dealt with by corporate taxpayers, excluding wage taxes and customs duties

ATO = Australian Taxation Office, CIT = corporate income tax, GST = goods and services tax, N/A = not applicable, VAT = value-added tax.

Sources:

Australia: Bronzewska, K. 2016. Cooperative Compliance: A New Approach to Managing Taxpayer Relations. Amsterdam: International Bureau of Fiscal Documentation Doctoral Series nos. 43, 110; Australian National Audit Office. *Annual Compliance Arrangements with Large Corporate Taxpayers*. Canberra: Australian National Audit Office. www.anao.gov.au/work/performance-audit/annual-compliance-arrangements-large-corporate-taxpayers (accessed 2 February 2020); ATO. *Cooperative Compliance: Earlier Engagement, Transparency and Greater Certainty*. Canberra: Australian Government. www.ato.gov.au/uploadedFiles/Content/LB_1/downloads/PGL_qc38038_nat71246_js29773.pdf (accessed 13 September 2020).

Netherlands: de Wilt, D. 2017. Dutch Horizontal Monitoring: The Handicap of a Head Start. Fair Tax Working Paper 13; Bronzewska, K. and A. Majdanska. 2019. The New Wave of Cooperative Compliance Programmes and the Impact of New Technology: 101; Organisation for Economic Co-operation and Development. 2013. *Co-operative Compliance: A Framework. From Enhanced Relationship to Co-operative Compliance*. Paris: Organisation for Economic Co-operation and Development Publishing: 23; and Hornstra, J. 2011. Country Experiences in Risk-Based Tax Audits. In *Risk-Based Tax Audits: Approaches and Country Experiences*, edited by M. S. Khwaja, R. Awasthi, and J. Loeprick. Washington, DC: World Bank: 86.

United Kingdom: Bronzewska, K. 2016. Cooperative Compliance: A New Approach to Managing Taxpayer Relations. Amsterdam: International Bureau of Fiscal Documentation Doctoral Series: 100.

Belgium: Bronzewska, K. and A. Majdanska (ibid.) nos. 55, 100; Her Majesty's Revenue and Customs. 2018. Large Business Compliance—Enhancing Our Risk Assessment Approach; and Bloomberg Tax. Belgium MoF Announces Pilot Program for Cooperative Tax Compliance. <https://news.bloombergtax.com/daily-tax-report-international/belgium-mof-announces-pilot-program-for-cooperative-tax-compliance-1> (accessed 11 March 2020).

Austria: Bronzewska, K. and A. Majdanska. 2019. *The New Wave of Cooperative Compliance Programmes and the Impact of New Technology*. Amsterdam: International Bureau of Fiscal Documentation: 100; KPMG. 2018. Austria: Proposed Administrative Tax Law Changes: “Horizontal Monitoring” and Advance Rulings. <https://home.kpmg/xx/en/home/insights/2018/04/tmf-austria-proposed-administrative-tax-law-changes-horizontal-monitoring-and-advance-rulings.html> (accessed 2 February 2020); Schrottmeier, N. 2018. Horizontal Monitoring Made in Austria. *Taxand*. www.taxand.com/our-thinking/horizontal-monitoring-made-in-austria/ (accessed 14 September 2020).

information in a timely manner and evaluate the TCF is tested. If everything goes well, the company can be accepted.

Meanwhile, in Australia, this began with the forward compliance arrangement, which invites voluntary collaboration from large businesses, beginning with a pilot program for three taxpayers from the financial, energy, and manufacturing sectors. In 2008, the program was discontinued and rebranded as the annual compliance arrangement (ACA) to provide greater practical certainty (ATO 2014). The ATO defines ACA as an administrative arrangement whereby it can agree with selected taxpayers to implement specific compliance arrangements. Under this governance, the ATO can consider tax risks in real time, making it possible to issue tax rulings for taxpayers. During this process, participants are required to disclose consistently any material risks that may affect their tax position, after which necessary discussions and meetings will be held to find a solution. The ATO will concurrently assign tax officers to provide real-time responses to prevent unnecessary risks and provide taxpayers with advice to improve their tax governance. The process subsequently receives feedback from taxpayers. Several have indicated that entering the ACA was costly, in terms of both money and the energy necessary to comply with administrative requirements.

The Netherlands introduced a similar approach in 2005 as a pilot program with 20 taxpayers, before expanding this to SMEs. A member of the NTCA management board revealed the new approach and the rules governing it at a meeting of the tax directors from the largest corporate taxpayers. Initiating, developing, and maintaining cooperative compliance is a long process that requires substantial preparation and discussions between taxpayers and tax authorities. The Horizontal Monitoring guide outlines seven steps of this process, the first of which (step zero) is undertaken with all large taxpayers, irrespective of their continuation into Horizontal Monitoring, since the NTCA wishes to have an up-to-date overview of all taxpayers.

A deviation from the UK's approach is worth considering. Her Majesty's Revenue and Customs uses, not a single program, but rather a set of actions aimed at developing a trust-based relationship with taxpayers. Data-based business risk ratings are used to determine the form of cooperation to be undertaken. They also seek to reduce the number of formal procedures required to perform the cooperation arrangement (Bronzewska 2016).

A study of these countries suggests that, while tax authorities must be proactive in improving the program, different taxpayer segments also require different forms of treatment. However, the tax authority must first account for the fact that program participants should not only have the required characteristics but also be committed to providing the requested information and doing the necessary work (Bronzewska 2016) (see, e.g., Figure 4.6).

In most countries, technology also accompanies the development of such a program. When interacting with participants, exchanging data, and providing certainty, technology facilitates accurate decisions in a timely manner. Future developments will also need advanced technological support to realize the essence

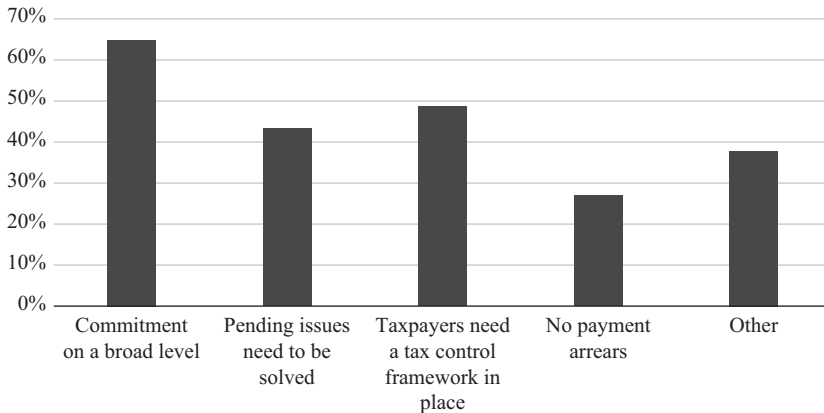


Figure 4.6 Cooperative Compliance Requirements in Organisation for Economic Co-operation and Development Countries, 2017. Source: Organisation for Economic Co-operation and Development. 2019. *Tax Administration 2019*. Paris: Organisation for Economic Co-operation and Development Publishing: 54.

of cooperative compliance. Given the difficulty of implementing such a broad initiative, the experience of other countries suggests that the spirit of cooperative compliance should be embedded in several different programs. Insofar as the program represents cooperation and the tax authority’s trust that taxpayers are willing to comply, it ensures that the same benefits are provided to all taxpayers (OECD 2013).

4.5.2 Lessons for Developing Countries

Previous comparative studies present several useful insights. Firstly, SOEs can be a good option for gradual implementation starting with a pilot program since they belong to the government but function like other enterprises. Indonesia began with several SOEs whose financial data were integrated into the Directorate General of Taxes, and gradually expanded this number. This approach represents the beginning of cooperative compliance in the country. It will be followed by a learning process whereby the tax authority will have more discretion to simulate certain approaches and obtain insights as to how these approaches will function in the field.

Pilot programs are meant to determine how to develop the most effective interactions between the tax authority and participants. For example, the tax authority should identify how to craft the agreement as to what extent of disclosure is necessary, in what form it should be provided, and how quickly the tax officer should determine the tax position (Huiskers-Stoop and Gribnau 2019). Second, the tax officers should anticipate the steps of interaction required if voluntary disclosures reveal tax rule violations.

This balance between strictness and flexibility is essential to sustain cooperative compliance in the long term. If the program has raised suspicions and negative perceptions from the start, it will be difficult to attract more participants in the future. Hence, pilot programs should anticipate every possible scenario.

Secondly, it is necessary to limit program participants. Most countries have restricted the number of taxpayers involved in the program to ensure that collaboration is well managed. In particular, a trial-and-error approach might be necessary initially as each participant brings new information that can be useful for adapting the program.

Thirdly, every country must ultimately develop its own program according to its taxpayers' characteristics and its domestic tax landscape, with the support of digitalization. For instance, focusing on individual taxpayers or SMEs might be more urgent than involving large corporate taxpayers. In addition, the emergence of digital businesses could help absorb the shadow economy, which has been performing transactions "under the radar." Accordingly, certain administrative flexibility is also important to ensure that adjustments and improvements can be adopted to ensure the program's sustainability.

4.6 Building the Model

The characteristics of developing countries should also be considered in introducing cooperative compliance. While much can be learned from its implementation in developed countries, different contexts and priorities should be taken into account (Bronzewska 2016). In tailoring the cooperative compliance approach for developing economies, the aim should be to determine how the tax authority can cooperate with taxpayers in tackling the problems of the shadow economy, low tax coverage ratio from non-employee individuals, and challenges of the digital economy.

4.6.1 Where and How to Start

The cooperative compliance model for developing countries should be built on the understanding that tax collection underperformance is caused by the shadow economy and low tax morale. To address the shadow economy, it is necessary to broaden the tax base instead of intensifying efforts toward existing taxpayers, while low tax morale results from society's inherently negative perception of the long-established fiscal contract with the government. Hence, fundamental improvement is crucial (Darussalam, Septriadi, Kristiaji, and Vissaro 2019).

Interactive collaboration is required to separate taxpayers who are willing to comply from the rest (Darussalam, Septriadi, Kristiaji, and Vissaro 2019). This approach should produce administrative actions that provide every taxpayer with certainty and a similar trust-based relationship with the tax authority. Hence, to begin with, it is necessary to convey the message that the tax authority is looking to build a new regime of compliance. Trust-based collaboration must precede the implementation of cooperative compliance programs (Table 4.1). As emphasized

by Darussalam, Septriadi, Kristiaji, and Vissaro (2019), the spirit of cooperative compliance programs should also be embodied in all changes to the future tax system (Darussalam, Septriadi, Kristiaji, and Vissaro 2019).

Figure 4.7 illustrates that two approaches precede possible cooperation with taxpayers: Tax policy design and supportive tax administration. Tax policy design starts with how tax policy is made. The policy formulation mechanism will ultimately improve not only the balance of the tax system (Leijon 2015) but also the development of the perception that the government is open to other perspectives and takes into account how it affects taxpayer interests.

Regarding a supportive tax administration, tax simplification would reduce compliance costs (Saad 2012). Although this is not the primary goal of a tax system (Tran-Nam 2016), it would help lower unnecessary costs and decrease the probability of tax corruption (World Bank 2009). Thus, while tax simplification is not an end in itself, it can yield a more predictable and transparent tax system, make the administration more comprehensible, and eliminate potential manipulation and illegal transactions between tax officers and taxpayers (World Bank 2009).

The need for simplification is growing more urgent because of the increasing complexity of the tax system. In most cases, the emergence of new business models, arrangements, and transactions results in tax rules being adopted without accounting for the ambiguities that may follow (Partlow 2013). Simultaneously, interactions among stakeholders in the formulation of regulation may lead to a coalescing of various interests. As a result, different perspectives of what is the “best” policy and how to approach it often sacrifice tax simplicity (Slemrod and Bakija 2008).

Nevertheless, although certain complexities are inevitable or even necessary, simplification can be directed toward eliminating repetitive information or requirements for different offices (Bradford 1986). In addition to reducing compliance costs, such efforts should also consider the prevention of uneven distribution between layers of taxpayers. Tax administrations should accommodate

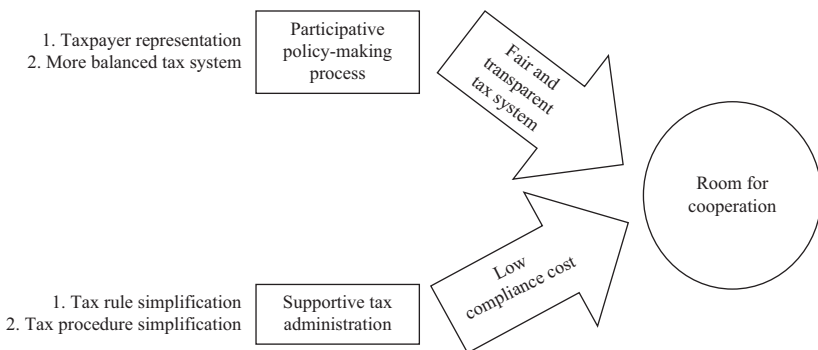


Figure 4.7 Necessary Pre-Conditions for Cooperative Compliance. Source: Author.

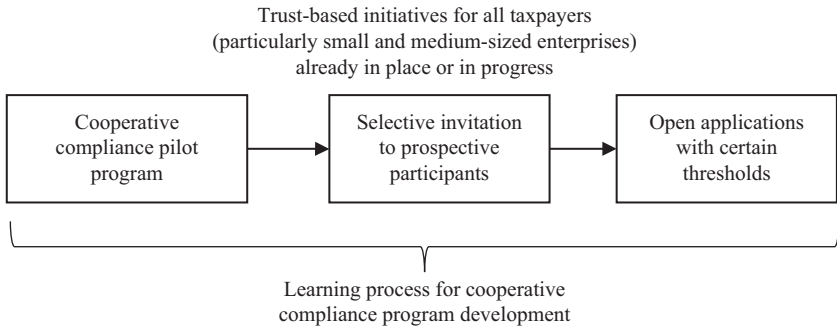


Figure 4.8 Early Stages of the Cooperative Compliance Model. Source: Author.

different income levels, sectors, and business models with the same degree of attention (Sandford, Godwin, and Hardwick 1989).

Once the necessary conditions are established, a cooperative compliance program must be initiated with strict limitations. The steps are indicated in Figure 4.8. As described previously, a pilot program should be initiated before broader types of taxpayers can participate. When all scenarios have been anticipated and the tax administration is ready, a wider scope of taxpayers may participate in the program, but only by invitation. This is important because the tax authority is aware of its initial limitations, as well as what kinds of taxpayers the tax officers can properly assess. The program can be offered based on taxpayers' proposals after the tax authority is confident that they can accommodate a larger number of participants (Bronzewska 2016).

The limited capacity of tax administrations in developing countries could place greater restrictions on participant numbers because the staff assigned to communicate with the taxpayers must have a high level of taxation knowledge to communicate and respond in a timely manner. Therefore, in relatively limited programs, a selective approach to identifying eligible taxpayers can be implemented by requiring participants to (1) have a well-established TCF, (2) have clean track records of tax compliance, (3) meet threshold criteria of business scale or gross turnover, and (4) sign pre-agreements with the tax authority regarding to what extent information should be disclosed and how the policies and approach can be agreed upon accordingly. It is important to note that the purpose of such an approach is not to discriminate against taxpayers but to ensure that the program can start in an effective and efficient manner. The spirit of cooperative compliance should nevertheless be provided to a broader range of taxpayers under suitable frameworks.

4.6.2 Administrative Aspects

A lack of administrative preparation can be detrimental to the success of cooperative compliance implementation. The primary challenge for the tax authority

is ensuring that every administrative technicality is designed to receive capably a huge amount of data on transparency, while adequately providing certainty in a timely manner (Torgler and Schaltegger 2005). Further, a certain degree of flexibility should be given to accommodate business landscape changes and adopt new necessary technologies.

The launching of compliance risk management (CRM) commonly precedes the implementation of cooperative compliance. The idea is to treat taxpayers effectively according to their compliance risk profile, thus establishing taxpayer trust that those who comply will be treated fairly (OECD 2004). This is essentially the goal of cooperative compliance: To provide certainty to transparent taxpayers.

CRM can be defined as a systematized process of identification, assessment, and rating followed by appropriate tax treatment (ADB 2018). Accordingly, it is a decision-making tool that can not only achieve improved tax compliance but also protect compliant taxpayers from enforcement that should target noncompliant taxpayers. Ultimately, it helps create the foundation for a new compliance paradigm (Directorate General of Taxes Circular Letter Number 24/PJ/2019).

Thus, CRM should be developed to accommodate all related data to establish accurate and comprehensive taxpayer profiles. The goal is to establish trust and a positive perception on the part of taxpayers. If they comply, they can be confident that they will be perceived favorably and provided with convenience and assistance to sustain compliance (Darussalam 2019). This complements other existing efforts, such as compliance cost reduction and taxpayer representation in the tax system (as suggested in Figure 4.7).

When cooperative compliance is to be implemented, three important factors must be fulfilled: (1) Human resource capacity, (2) effective data management, and (3) effective communication arrangements between the tax authority and taxpayers. This is important not only to ensure the administration's readiness but also to preserve the inclusivity of the approach. For developing economies, in particular, the primary goal is to ensure that the cooperative regime does not exclude certain taxpayers, particularly individual taxpayers or SMEs, which constitute the majority of taxpayers (Evans, Krever, and Mellor 2015).

Since it is not feasible to provide similar programs to cover all taxpayers, it is crucial to use the support of tax intermediaries. Instead of directly arranging administration with taxpayers, the tax authority should set up selection and collaboration with third parties, including tax professionals, tax service providers, or advisors who must meet certain standards to earn trust (Herrijgers 2015).

Most importantly, the tax authority should enter into a compliance agreement with tax service providers with respect to business processes, quality, integrity, and cooperation. The provider must ensure that their methods are adequate and transparent to the tax authority.

4.6.3 Cooperative Compliance: Beyond a Mere Program

The number of countries adopting cooperative compliance continues to rise. Although this approach might differ both across countries and over time, the

ultimate goal of cooperative compliance is to establish sustainable optimal tax compliance maintained by trust and cooperation between the tax authority and taxpayers (Bronzewska and Majdanska 2019). The implementation of cooperative compliance is evolving and will likely adapt to the changing landscape of taxation and business. Thus, tax authorities must preserve the essence of cooperative compliance through such changes, and prioritize trust as the basis for exchanging transparency with certainty with taxpayers.

In the context of developing countries with a large number of taxpayers, cooperative compliance programs can be nurtured by beginning with a limited number of taxpayers. This limitation should not indicate that the tax authority does not intend to take an equivalent approach for every taxpayer. The spirit of collaboration in terms of exchanging transparency with certainty should be affordable to taxpayers in general, particularly SMEs.

Given the reconstruction of international taxation architecture and the increased blurriness of digital business tax residences, cooperative compliance may be part of the solution to maintain objectivity as the cornerstone to ascertaining the tax position of digital business players. To preserve the realization of cooperative compliance in the long run, tax authorities might need to consider monitoring their tax officers for certain behaviors that can erode taxpayer trust. Countries should maintain the legitimate expectations of taxpayers by not violating the spirit of the cooperative compliance regime (Gribnau 2015).

4.7 The Role of Digitalization in Achieving Cooperative Compliance

Since the late 1990s, it has become clear that every breakthrough to manage the broad spectrum of taxpayers' compliance behavior requires support from technological advancements. Notably, digitalization has proven its effectiveness in transforming tax administrations' capacities. It brings automation to every aspect of the tax business process and unlocks new opportunities where previously assumed impossible.

Technology can also play a role in building relationships between the tax authority and taxpayers, particularly in manifesting cooperative compliance. However, the realization of this concept depends on the underlying motive of digitalization. Technological advancement should be used not only to enforce the law but also to improve advantages for taxpayers. Accordingly, this approach is critical to meet the necessary pre-conditions for cooperative compliance. Without digitalization, it will be impossible to simplify procedures, improve administrative convenience, and establish CRM. Support from effective technological advances will help improve taxpayers' perceptions of and trust in the tax authority's goodwill.

For example, it is clear that taxpayers want to be able to fulfill their administrative obligations from any device. Accordingly, e-reporting (mostly online filing and payment) through a single portal must be facilitated. In this regard, the main features that should be included in smart portal development include

security of access, certainty of use, proactive customized service, efficient user journeys, and technology-enabled support via online help and customer service (OECD 2016). To this end, third-party involvement by system developers is important to ensure the success of the cooperative compliance framework.

Taxpayer convenience should be maximized in the tax authority organization's business processes. Easily accessible integrated services are essential. For example, the Australian tax authorities have moved from web-based to smartphone-based business processes, making it easier for taxpayers to interact or consult with tax officials.

Another aspect worth considering is the reduction of the use of currency in all business processes, from registration to payment processing. Austria, France, and the Russian Federation are among the countries that have abandoned the use of currency (OECD 2019). In addition to offering convenience, the use of digital transactions may also prevent errors related to payment amounts, make transaction flows more transparent, and reduce shadow economy transactions.

Further, amid the current pandemic, tax authorities should prioritize socialization and consulting related to changes in policies and business processes, such as those carried out by the tax authority in Canada, the Canada Revenue Agency. The tax authority is being directed to be more proactive in advertising taxes, especially for sectors included in the shadow economy, as has been done in New Zealand (OECD 2019).

In the registration process related to tax extensification, tax authorities can focus on permits and the legality of businesses run by taxpayers. In the UK, for example, the tax authority employs banking transaction data and assigns value-added tax numbers to online marketplace-based taxpayers (OECD 2019).

In establishing effective CRM to determine the appropriate treatment based on the taxpayers' risk profile, digitalization is primarily used in data management and analytics. For instance, in Australia, the tax authority has used predictive modeling to build a real-time debt management system. This system automates responses to taxpayer requests for more time to pay their tax arrears. Moreover, the system can decide on payment tiers to be put in place with taxpayers based on their predicted propensity and capacity to pay (ADB 2020). Another useful technique is social network analysis, which helps to draw potential connections by bringing together the "big picture" of interactions and relationships among players within and outside risky groups. Relevant data such as addresses, telephone numbers, joint bank accounts, and other related information are used to draw potential connections (ADB 2020).

It is crucial to note that in providing a conducive environment for cooperative compliance, this technique should not be used as a weapon to "punish," but rather to establish an open and transparent environment for both parties. Taxpayers should not fear misjudgments by the authority, regardless of their efforts to comply. Moreover, the authority should market this technique positively, as well as extend it to other areas, such as maximizing taxpayer services, as a substantial factor in triggering voluntary compliance. For instance, Singapore has reported success in using text-mining techniques to track trends and patterns

in taxpayer inquiries (OECD 2016). Besides increasing taxpayer satisfaction, this service indirectly improves the public perception that the tax authority is open to solving future tax issues.

When a cooperative compliance program is about to launch, technology plays a role in ensuring its sustainability. Integrating data with taxpayers, establishing a TCF, analyzing information accurately in a timely manner, and arranging effective communications all require strong technological support. It is necessary to acknowledge these relevancies to technologies, particularly in terms of artificial intelligence, the internet of things, robotics, and more radical innovations. To this end, advanced analytics, such as text mining and social network analysis, are generally applied. They use large data sets to determine the likelihood of full and accurate disclosure of income by taxpayers. By applying predictive analytics, revenue bodies can anticipate likely behavior patterns by mapping taxpayers' risk profiles in an effective way.

Hence, if done correctly, technology can both enable and accelerate the tax system in moving closer to the realization of tax principles such as certainty, mutual trust, understanding, and transparency. In this context, cooperative compliance can support the realization of efficient tax administration procedures, minimize tax disputes, diminish the need for tax audits, and increase legal certainty. Therefore, digitalization should be implemented to provide certainty to taxpayers in a timely manner. In this sense, business processes should accommodate automation at every step, from taxpayer registration, processing notices, tax returns, and other tax documents, tax payments, auditing, and billing to taxpayer accounting. Further, the use of advanced analytics through machine learning needs to be improved in implementing the tax compliance framework. For example, Belgium has begun using a predictive model to measure the risk level of taxpayer compliance and tax payable reduction and is undergoing a significant development process using artificial intelligence.

The machine learning model implemented in the Netherlands and Singapore aims more at raw data in the form of text. Therefore, the tax authorities in these countries apply natural language processing to tax-related documents (OECD 2019). The People's Republic of China is also developing a cloud-based big data platform that can integrate value-added tax invoices, export tax rebates, and historical data.

4.8 Conclusion: Establishing Cooperative Compliance in Developing Countries

This chapter considers how cooperative compliance can be adopted in developing countries. The findings focus on justifying cooperative compliance, determining the factors that serve as pre-conditions, and identifying the administrative tools required for effective performance. Developing countries should prioritize two important factors to make it possible to establish cooperative compliance: Participative tax policy-making and the existence of a supportive tax administration. Participative tax policy-making starts with how the process is conducted.

The formulation mechanism, in turn, impacts not only the balance of the tax system but also the development of the perception that the government is open to other perspectives and takes into account how it affects taxpayer interests. This aspect emphasizes efforts to reduce compliance costs.

Once the necessary pre-conditions are met, the program can be initiated with strict limitations. As mentioned, only certain taxpayers are eligible as participants. After every scenario is anticipated and the tax administration is prepared, the program may be open for participation by a wider scope of taxpayers, but only by invitation. This is important because, at the start, only the tax authority knows its capability regarding the program's limitations and what kind of taxpayers the tax officers can handle properly. Taxpayers may participate in the program by submitting a proposal after the tax authority is confident that it can accommodate a larger number of participants. In this case, the tax authority must remain selective in accepting taxpayers as program participants (Bronzewska 2016).

In every phase of the process, digitalization will be key to determining the direction of cooperative compliance evolution in the future. After meeting the necessary pre-conditions, the tax authority should utilize technology not only to improve CRM performance but also to provide convenience and automation, making it easy for taxpayers to comply.

Importantly, the implementation of cooperative compliance is still evolving and will need to adapt to the changing landscape of taxation and business. Thus, to sustain it in the long run, tax authorities must preserve the essence of cooperative compliance through continuous adaptations and prioritize trust as the basis for exchanging transparency with certainty to taxpayers.

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Visions and Challenges of Digital Taxation

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5 The People's Republic of China's Tax Reform in the Digital Economy

Progress and Challenges

Yumin Li and Minquan Liu

5.1 Introduction

Since the 1980s, the world's system of production has changed. Countries that previously relied primarily on domestic production chains have shifted to depend on interconnected global supply chains and production networks. The rapid development of information and communication technology has ushered the global economy into the digital era, and many countries have targeted the development of a digital economy to improve national competitiveness by issuing digital economy development strategic plans. In 2015, the European Union (EU) released a Digital Single Market Strategy built on three pillars: (1) Easier access to digital products and services, (2) better conditions for digital networks and innovative services, and (3) greater potential of the digital economy (European Commission). From its dominant position in the global digital economy, the United States (US) has issued a new strategy related to the digital economy every year since 1998. For example, the National Cyber Strategy and Strategy for American Leadership in Advanced Manufacturing issued in 2018 targeted the consolidation of network security and international governance, and the development of infrastructure construction and an intercity benefit-sharing mechanism.

The concept of a digital economy is continuously evolving, while its boundaries are becoming increasingly blurred. In 1997, Japan first defined the digital economy as e-commerce in a broad sense, and in 1999, the US defined its scope as covering the internet, e-commerce, electronic enterprises, and online transactions. The digital transformation of various industries has led to many more of them being incorporated into the digital economy. In the 2016 Group of 20 (G20) Digital Economy Development and Cooperation Initiative, the G20 leaders defined the digital economy as a broad range of economic activities including the use of digitized information and knowledge as a key factor of production, modern information networks as an important activity space, and the effective use of information and communication technology as an important driver of productivity growth and economic structural optimization. This definition includes the internet, cloud computing, big data, the internet of things, financial technology, and other new digital technologies used to collect, store, analyze, and share

information digitally and transform social interactions (G20 Digital Economy Development and Cooperation Initiative).

The digital economy of the People's Republic of China (PRC) has developed rapidly and realized some significant achievements. According to the Digital Economy Report 2019 released by the United Nations Conference on Trade and Development (2019), global digital economic activities are highly concentrated in the PRC and the US today, and many digital technologies are being developed by enterprises in the PRC and US. For example, the PRC and the US are now responsible for more than 75% of blockchain-related patents, 50% of expenditures on the global internet, and more than 75% of the cloud computing market.

Since the beginning of 2020, the outbreak of coronavirus disease (COVID-19) and related quarantine measures have caused a massive decline in economic activities worldwide. As a result, many countries have realized the necessity and urgency of digital economy development. In a sense, digital economic activities are perfect for avoiding direct contact and cross-infection. More digitalized economies have been more resilient during this pandemic and economic crisis. In the PRC, the pandemic led people to use e-commerce platforms to buy groceries and takeaway food, and organizations to adopt online tools for work, teaching, and meeting. As a result, the development of the digital economy in the PRC has gained even more momentum since the outbreak of COVID-19. The digital field has also become a priority for controlling the epidemic on a global scale (Organisation for Economic Co-operation and Development [OECD] 2020a). For example, some governments, such as those of the United Kingdom (UK) and the US, have rapidly developed artificial intelligence systems to predict and monitor the spread of the disease and strengthen medical research.

One of the most important challenges in the development of the digital economy is taxation. Taxing the digital economy has been difficult, both internationally and domestically. Internationally, the PRC's rapid integration into global supply chains has increasingly required it to work with other countries on many issues, including a consensus-based international tax system. The digitalization of business operations has greatly contributed to tax base erosion and profit shifting. It is essential for countries to adopt a unified and fair tax system when taxing multinational companies (especially internet companies). In addition, international digital economy taxation should aim to be more inclusive of developing countries. From a global perspective, developing countries constitute the main digital platform markets with the right to tax foreign digital enterprises. However, the taxation location of profits does not currently match the place of value creation. As a result, OECD countries as well as non-OECD countries (including the PRC) have been reconsidering how to allocate taxation rights, with the aim of reaching a consensus soon. In 2017, the United Nations Committee of Experts on International Cooperation in Tax Matters formed a Subcommittee on Tax Challenges Related to the Digitalization of the Economy to avoid both double taxation and non-taxation, to tax profits rather than turnover, and to make taxation simple and easy to administer (United Nations Conference on Trade and Development 2019). Subcommittee members commented on the draft of Article

12B (the unofficial discussion draft) covering the taxation of automated digital services in 2020 to urge the OECD to adopt a cautious approach to taxing the digital economy. Until such internationally coordinated measures are finalized, the PRC will continue to rely on domestic measures, mostly in terms of value-added tax (VAT), to tax the digital economy.

The PRC currently lacks domestic tax-related laws or regulations specifically designed for the digital economy. The taxation system does not tax business transactions differently just because they are part of the digital economy. However, as noted previously, the characteristics of the digital economy make it harder to identify taxation subjects. It has been difficult to measure value creation related to the digital economy. For example, many consumer-to-consumer online transactions are currently not subject to tax, despite accounting for a significant part of the digital economy.

The PRC has been gradually reforming its tax system since the early 1980s. The business tax was gradually changed to VAT, and in 2018, the National Tax Bureau and the Local Tax Bureau were merged. Now enterprises pay corporate income tax based on their revenue, while individuals pay individual income taxes based on their income. The PRC will continue to reform its tax system throughout its rapid transition to a digital economy.

The existing literature on taxing the digital economy is increasingly devoting attention to international taxation challenges, such as tax base erosion and base cyberization (Corkery et al. 2013; Li 2015; Peng 2016; Olbert and Spengel 2017) and taxation reform policies in the digital economy, such as Action 1 of the OECD and G20 BEPS (base erosion and profit shifting) Project (Brauner and Baez Moreno 2015). Countries are adopting unilateral measures to respond to the challenges in developing tax rules in line with value creation in the digital economy (Olbert and Spengel 2019). In addition, many scholars have proposed various policy suggestions to tax the digital economy (Brauner and Baez Moreno 2015; Moreno and Brauner 2019), such as those related to business-to-business and consumer-to-consumer transactions, VAT reforms, withholding taxes, and internationally unified taxation solutions.

Among the developing countries, the PRC has played a leading role in the development of the digital economy and in discussions of the corresponding international tax system (Hearson and Prichard 2018). However, few studies address the measures taken by the PRC to tax the digital economy, and the problems that it has encountered. While Zhang and Wang (2017) mainly focus on the achievements and problems of electronic invoices in tax collection and tax reform in the PRC, Terada-Hagiwara, Gonzales, and Wang (2019) note that the PRC has implemented a VAT on e-commerce transactions, and suggest that it should improve its tax registration system to address untaxed consumer-to-consumer transactions and improve its tax administration capacity.

This chapter systematically reviews the tax reform process in the PRC, as well as the challenges it faces in taxing the digital economy, and offers possible policy recommendations. Section 5.2 introduces the development of the PRC's digital economy, as well as the taxation challenges; Section 5.3 discusses the progress

of tax reform; Section 5.4 discusses some relevant foreign reform measures and proposes directions for future reform; and Section 5.5 summarizes the chapter.

5.2 The People's Republic of China's Digital Economy and Taxation Challenges

5.2.1 The People's Republic of China's Digital Economy

Digitalization of the economy has become an important driving force in the PRC's economic and social development (Figure 5.1). The digital economy in the PRC can be divided into three components. The first is the information and communication industry, which includes the electronic information manufacturing, telecommunication, software and information technology service, and internet industries. Digital products and services have brought together talented labor and new technologies, creating new forms of demand, promoting continuous research and development, and generating further pressures for value creation. The second component is traditional industries that are still undergoing digital transformation, but whose output has been an important part of the digital economy. The application of digital technology has increased their production quantity and efficiency, in that the output of the digital industry has been transformed into the production factors for these traditional industries, indirectly promoting their production efficiency, improving product and service quality, and upgrading their technology. The third component is digital governance, including innovation in governance and the application of digital technology to improve the

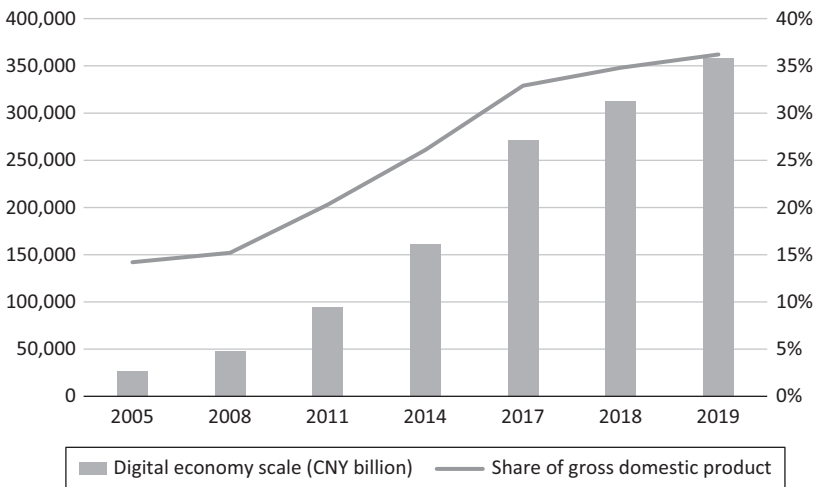


Figure 5.1 Size of the People's Republic of China's Digital Economy and Its Share of Gross Domestic Product. Source: China Academy of Information and Communication Technology. 2020. White Paper on Digital Economy Development and Employment in China. www.caict.ac.cn/kxyj/qwfb/bps/201904/P020190417344468720243.pdf (accessed 25 April 2021).

governance system and enhance the comprehensive governance capacity of the government (China Academy of Information and Communication Technology 2019).

Although the digital economy emerged later in the PRC than in many OECD countries, the rapid development of the PRC's domestic market, technology, and the government's Internet Plus initiative helped the PRC catch up with the OECD countries. Since the beginning of the PRC's digital economy in 2003, the growth rate of the sector has been significantly higher than that of the rest of the economy. In 2018, the total value of the PRC's digital economy reached CNY31.3 trillion (\$4.56 trillion), accounting for 34.8% of the country's gross domestic product. Its nominal growth rate in 2018 was 20.9%, accounting for 67.9% of the country's gross domestic product growth (China Academy of Information and Communication Technology 2019). The PRC's digital economy has undoubtedly become the core driving force in the development of its national economy.

In terms of scale, the PRC's digital economy ranked second in the world, after the US, as of 2020. It ranked 50th out of 131 countries in 2016, according to the World Bank Digital Adoption Index, and 36th out of 60 in 2017 according to the Fletcher School Digital Evolution Index. Although the PRC's overall digitalization rate is not among the highest in the world, it is already a world leader in certain fields. In 2017, the PRC accounted for 40% of all e-commerce transactions in the world, more than the sum of the transactions in France, Germany, Japan, the UK, and the US (McKinsey Global Institute 2017). According to Zhang and Chen (2019), the value of the PRC's consumption-related mobile payments by individuals totaled \$790 billion in 2016, 11 times that of the US. Moreover, Chinese companies accounted for more than 70% of the total global valuation of the financial technology industry in 2019.

Since the outbreak of COVID-19, social distancing has been advocated worldwide. As a result, the sales and market share of many digital economic activities are booming, including telecommuting, telemedicine, and online shopping. In the PRC, on New Year's Eve and the following nine days, the fresh food turnover on JD.com¹ increased by 215%, and the daily transaction volume of online payment for online reading, games, audio, and video exceeded CNY1 billion (\$0.15 billion), an increase of more than 50% from 2019 (Gao and Ma 2020). After the Spring Festival vacation in February, more than 300 million residents began remote office work, and monthly usage of digital software increased by 663% compared with 2019. The digital economy enhanced the resilience of the PRC's economy during the epidemic crisis, sustaining many economic activities throughout. Premier Li Keqiang emphasized in the 2020 Government Report, "the new forms of industry, such as online shopping and online services, played an important role in the fight against COVID-19. We will continue to develop supporting policies, comprehensively promote the 'Internet+' initiative, and strengthen the digital economy" (Xinhua News Agency 2020).

However, the PRC is facing issues in the development of its digital economy. First, there is a significant regional gap, with the eastern region being

significantly more digitalized than the central and western regions. Secondly, strict implementation of legal regulations on the digital economy has been problematic. For example, there are problems of monopolies, illegal use of user information, and malicious competition among digital platforms. Some platforms involving online transactions were even implicated in false advertising, vulgar content, and copyright infringement. Since dynamic technological innovation and the rapid iteration of business models are quite common in the digital economy, such new phenomena warrant attention (Gao and Ma 2020). The third challenge, taxation of the digital economy, is discussed in detail in Section 5.2.2. Since the PRC's current tax system does not adequately cover digital economic activities, the rapid expansion of the PRC's digital economy poses a series of taxation challenges.

5.2.2 Challenges of Taxing the Digital Economy

In a digital economy, business models share some common characteristics, such as a large amount of cross-jurisdictional transactions, heavy reliance on intangible assets (especially intellectual property), and data and user involvement. Conventional tax laws mainly rely on the physical location of an activity, and cannot effectively determine such in the case of value creation in a digital economy. This gives rise to issues such as uncertain objects of taxation, data collection, and tax legislation. At the same time, it is difficult to tax foreign corporations in light of their permanent establishment status, profit transfers, and the need to integrate with international digital tax laws.

5.2.2.1 Challenges of Digital Tax Collection within the People's Republic of China

5.2.2.1.1 MISSING OBJECTS OF TAXATION

The PRC's tax base has mainly been turnover tax and income tax, of which the main categories are VAT and enterprise income tax. The PRC's tax system is based on the traditional industrial chain of "manufacture-wholesale-retail." However, most enterprises are now nodes in some extensive, real-time collaborative production network. The flow of products is becoming increasingly complicated, with serious implications for the traditional model of VAT deduction. In addition, the digital economy's significant dependence on intangible assets is making it increasingly hard to determine who and how much to tax. For example, although data may create huge profits, the network characteristic of the data makes it impossible to predict its exact value (Sun 2019). The complexity of tax sources and profit attribution is posing serious challenges to the PRC's tax system.

When traditional enterprises undergo digital reform, they integrate digital technology to optimize operation or manufacturing processes. However, since it is difficult to identify the value added by digital methods, objects of taxation are hard to determine, and may also be hidden. Certain economic activities that used to be preparatory and auxiliary, and might not generate much economic value in

traditional industries, could become key to value creation in the digital economy (Li and Xing 2020). For example, the distribution of warehousing originally belonged to a common link in the supply chain of an enterprise, creating little value. However, in e-commerce, intelligent warehousing management is key for companies to create value and become competitive. Unfortunately, the value of digital warehouse distribution is often ignored and not included in the scope of digital tax collection.

Emerging digital enterprises can largely be sorted into either the manufacturing industry or the service industry. While objects of taxation in the digital manufacturing industry can be final digital goods, it is difficult to identify these in the digital service industry, and hard to quantify the value created by digital means. For instance, if a user browses a shared tutorial on a digital platform for free, and then applies those skills to earn money in real life, it is difficult to trace the revenue back to the value creation of the digital platform. In such cases, the final value of services rendered by digital companies is difficult to identify, creating barriers to identifying taxation objects.

For cross-border e-commerce transactions, the tax exemption threshold for imported, low-sum-of-value goods encourages enterprises and consumers to split orders to avoid tax. The development of the digital economy has reduced the barriers to market access, and sharply increased the number of cross-border transactions of low-sum-of-value products and services.

5.2.2.1.2 HIGH COST OF OBTAINING TAX-RELATED INFORMATION

The development of the digital economy is making it difficult to obtain tax-related information. Compared with the traditional economy in which business activities are relatively easy to track, transactions in the digital economy are more frequent and harder to track. Transactions are no longer limited to certain enterprises from a certain region. It is difficult for tax authorities to determine where taxable behavior occurred and consumption happened. It is also relatively difficult to determine the nature of and source of income from economic activities in the digital economy. For example, it is difficult to determine the location of taxable behaviors for new business models like live broadcasting and short video applications.

In sum, it is difficult for tax authorities to track transactions through existing tax collection and management means, because of difficulties in determining the time, duration, and location of transactions.

5.2.2.1.3 POSSIBLE FAKE SALES DATA

The digital economy is mostly organized in the form of digital platforms, and taxing transactions on e-commerce platforms is mainly based on transaction data generated from those platforms. For example, in e-commerce, e-commerce enterprises connect operators and consumers via a bilateral or multilateral platform.

While digital platform companies and prolific sellers on the platform must pay VAT and enterprise income tax under traditional tax legislation, some self-employed small business operators on the platform pay no tax as their monthly income is less than the tax exemption threshold. These small sellers are motivated to falsify their sales and post-sale review data to attract more consumers, as this is a key criterion for many consumers making purchasing decisions. Such sellers often hire people to make fake orders and reviews, a phenomenon that was previously hard to detect.

In June 2020, some e-commerce stores and self-employed sellers were required to check their operating income and expenditure for the past three years and pay overdue taxes. Under the rules, those self-employed small businesses had to pay huge amounts of tax, even though there was an enormous gap between the data and their actual sales. Many sellers confessed to falsifying the data and complained about the huge amounts of tax they had to pay. The State Administration of Taxation eventually issued a notice to not carry out large-scale centralized tax collection to support economic recovery during the pandemic.

5.2.2.1.4 LACK OF DIGITAL-ECONOMY-SPECIFIC LAWS AND REGULATIONS

As mentioned above, the PRC has few digital economy-specific regulations, and the government mostly applies traditional regulations to the digital economy. Both domestic enterprises and multinational enterprises with permanent establishments are subject to VAT, income tax, stamp tax, and urban construction tax. To promote the development of some industries, the state may adjust the threshold and tax rate of VAT and enterprise income tax from time to time. According to their size and type of business, some firms may enjoy various degrees of tax relief on VAT and enterprise income tax. In addition, some enterprises may need to pay other types of tax according to the nature of their industries, such as resource tax or tobacco tax. These regulations are not related to the digital economy but are more about industrial policy.

However, many new characteristics of the digital economy require new regulations. For example, the storage and use of tax data should be legally supervised. There is a social consensus that digital data are an asset, and the government should thus promote data sharing and use (Gao and Ma 2020). Although the National Tax Bureau has been constructing an internal government data-sharing network, no regulations have been issued to ensure the security of tax information. In 2018, as the pioneer of privacy and data protection, the EU launched the General Data Protection Regulation, a consistent privacy protection law that has higher requirements for data collection, processing, and storage. Such regulation of the digital economy is missing in the PRC.

In addition, research and development activities, data, and user participation, among other things, all create value in the digital economy. However, the value of these elements has not been recognized or adequately evaluated. For example, after purchasing goods on an e-commerce platform, some consumers

review the purchased goods. These reviews not only help businesses design better products and improve their quality but also act as references for other potential consumers. Enterprises may earn huge profits from these review data. At present, the PRC's tax regulations have not clearly formulated how to measure the value generated by these factors, and have therefore not taxed the value generated from them.

5.2.2.2 Challenges of Taxing Multinational Enterprises Without a Permanent Establishment

The OECD (2012) defines a permanent establishment as a fixed place of business through which the business of an enterprise is wholly or partly carried on. The traditional international tax system allows source countries to tax nonresidents' business profits only if the enterprise's local presence constitutes a permanent establishment. However, many businesses in the digital economy sector, such as online advertising and social networks, can be conducted online without a permanent establishment. For example, some companies avoid establishing physical business entities in the PRC and directly sell goods or services such as remote consultation and data processing to Chinese residents through the portals of low-tax countries, thus bypassing tax supervision in the PRC. It is difficult for Chinese tax authorities to collect tax from these transactions. Several countries have yet to form a unified standard in the face of tax evasion caused by a lack of permanent establishment.

The PRC currently imposes a 10% withholding income tax on the profits of foreign enterprises that have not set up permanent establishments in the PRC but have obtained profits from the PRC. Withholding tax can be understood as income tax withheld in advance, as opposed to a formal tax. Moreover, as most withholding taxes are announced or passed in the form of domestic laws that have not yet been translated into bilateral or multilateral agreements, they may be subject to potential restrictions (Li and Xing 2020).

5.2.2.2.1 PROFIT TRANSFER

It is common for multinationals to transfer the profits of enterprises to subsidiaries in different countries to evade tax liability. For example, they might make a subsidiary in a country with a high corporate tax rate pay a high price for products and services provided by another subsidiary from a different country with a lower corporate tax rate. For example, the US taxes profits of US resident corporations at a rate of 21.0%, while Ireland only applies a rate of 12.5%, and Bermuda does not tax corporations at all. As a result, as a multinational enterprise with a presence in each of these countries, Google may settle its massive profits in Bermuda (Corkery et al. 2013). Taking advantage of different characteristics of the tax systems in different countries and regions, many multinational enterprises have controlled their actual tax burden at a level far below the industry average by undervaluing intangible assets among affiliated companies, overestimating

royalties, and repatriating profits to tax havens. For example, Google and other multinational companies use the tax avoidance structure known as the “double Irish with a Dutch sandwich,”² while Apple sheltered \$44 billion from taxation anywhere in the world from 2009 to 2012 using the iTax international tax avoidance structure.³

Gaoua (2014) points out that France’s tax law prevents the country from taxing digital value creation because most generated profits are transferred to low-tax jurisdictions although most of the data are collected in developed countries. This tax arbitrage, designed to reduce a company’s total corporate tax liability, has been practiced since the emergence of the digital economy. For instance, from 2009 to 2014 IKEA transferred its high profits from Dutch companies to those in Luxembourg under the name of “royalties,” and was granted tax-free privileges by the Government of Luxembourg. Such practices are difficult to root out when there are no international agreements on tax harmonization.

Such arbitrage is even easier in the digital economy. At the same time, it has become difficult for tax authorities to obtain comparable information from enterprises and third parties. When investigating enterprises, it is difficult to find comparable transactions of intangible assets transfer, and information about royalties. Moreover, while it is hard for tax authorities to determine where exactly an activity is located, it is easy for multinationals to pool profits with entities in countries with low corporate taxes, thereby cutting their overall tax payments. Intellectual property rights may be established in any country but consumed all over the world. Many Chinese corporations have minimized their taxable incomes in the PRC through contractual arrangements by maximizing their spending in the PRC by paying interest, royalties, and service fees to subsidiaries in other countries.

5.2.2.2.2 ALIGNING WITH INTERNATIONAL DIGITAL TAX

Digital economy-related tax reform will require a reshaping of international tax rules. As an important participant in the digital economy, the PRC must consider the interests of domestic consumers and digital enterprises. There will be many challenges to achieve relatively unified digital tax collection rules with the international community.

Tax rules differ between the PRC and other countries. Different tax rules can lead to double taxation, double non-taxation, or insufficient taxation (Cui 2020). Many multinationals use a “mixed mismatch,” referring to the use of various financial instruments, dual resident status deductions, and other means to avoid tax by taking advantage of differences in the tax rules across countries.

Some multinationals also avoid income tax payments by taking advantage of the PRC’s preferential tax agreements with certain countries or regions. They avoid paying such taxes by setting up shell companies in countries with preferential tax agreements and using the internet and digital platforms to complete transactions in the PRC.

5.3 Recent Tax System Reform in the People's Republic of China

5.3.1 Tax System Reforms in the People's Republic of China since the 1980s

The tax system in the PRC has undergone several rounds of reform in response to rapid change in the economy. After 1949, the central government collected taxes and distributed them to local governments and enterprises according to central plans. After 1980, the PRC implemented a tax system that substantially empowered local governments to collect taxes with the aim of incentivizing them to develop their local economies (Xu 2008). At the end of 1982, tax authorities at local levels were established. In 1983, the State Council began to implement the state-owned enterprises (SOEs) reform of “substitution of tax payment for profit handover” throughout the country. The system of SOEs paying profits to the government, which had been used for more than 30 years, was changed to a system where enterprises paid income tax instead. This provided a broader tax base and formalized the relationship between the state and SOEs, signifying that the PRC's tax system had gradually transformed into a multi-tax and multi-level tax system.

In the early 1990s, the central government's share of public revenue was decreasing, seriously weakening the central government's ability to allocate resources. Thus, in 1994, the PRC formally began to implement a tax-sharing reform. To enforce the related provisions, the government set up two parallel tax authorities, one for collecting taxes for the central government, and another for collecting taxes for local governments. The Central Administration of Taxation took VAT as its main tax source, while local tax bureaus collected a unified enterprise income tax and personal income tax. In general, the scope of VAT covered the manufacturing industries (except the construction industry), while most service industries are subject to business tax. This reform greatly increased the proportion of tax revenue received by the central government (Liu 2019). Since 1994, the PRC has also reformed industrial and commercial taxes (including a comprehensive reform of the turnover tax), unified enterprise income taxes for domestic enterprises, and unified the collection of individual income tax.

VAT and business tax became the two most important taxes to regulate the circulation of goods and labor in the PRC. However, with the establishment and development of a market economy, the defects of the business tax, such as double taxation and impediments to the division of labor, were gradually exposed. Therefore, the disadvantage of multiple taxation under the business tax had an increasingly negative impact on the service industry. To reduce the tax burden on the service industry, the PRC started to extend VAT to services. A pilot program for the collection of VAT instead of business tax was carried out in the PRC in 2004 and was extended to the whole country in 2009. The PRC completely abolished business taxes in May 2016, which helped resolve the double-taxation issue, and reduced enterprises' tax burden (Lou 2000). Traditionally, local tax bureaus

collected business tax. After transforming business tax into VAT, the taxing authority was transferred from local tax bureaus to the National Tax Bureau.

The replacement of business tax by VAT also catalyzed the merger of the national and local tax bureaus. In 2018, a reform of the national and local tax collection and management systems was implemented. National and local tax institutions were combined, and social insurance premiums and non-tax income are now collected and managed by the unified tax department. The merger of the two parallel tax institutions and integration of tax and fee payments have further streamlined and strengthened the relevant departments in the service of national governance. This merger can help reduce the cost of tax fee collection and management, provide unified and standardized services for taxpayers, and improve overall efficiency.

Since 2018, the VAT system has been continuously improved and tax rates have been gradually reduced. The Ministry of Finance, the State Taxation Administration, and the General Administration of Customs jointly announced a new package of VAT cut measures in 2019 (Weng 2019). Enterprises that meet the requirements have received tax rebates, and the individual income tax law was reformed. The 2019 VAT reform is of great significance. The PRC has taken further steps to apply a pure VAT system. The tax cut will not only improve the PRC's tax system but also make the domestic market more attractive to foreign investors. After the outbreak of the COVID-19 pandemic, the National Tax Bureau also accelerated a further series of tax reductions to help restore production and promote economic recovery.

5.3.2 Recent Reforms to Tax the Digital Economy

The digital transformation of the PRC's economy has made it difficult to identify correct tax subjects and monitor their business activities. As a result of massive information asymmetries, tax authorities are typically unable to obtain the relevant tax-sensitive information in a timely and effective manner. Nevertheless, the PRC has implemented several measures in the face of these challenges.

5.3.2.1 Golden Tax Project

In 1994, the Golden Tax Project was announced with the aim of migrating the VAT system to an internet-based platform using advanced network and information technology. The Third Period of the Golden Tax Project, which started in 2008, dealt with the security of the tax information system. The project was intended to achieve nationwide data sharing, cross-check, and electronic invoicing. This unified tax administration information system has improved the efficiency of tax collection and administration.

5.3.2.2 Electronic Invoices

The concept of electronic invoices was first proposed in 2013. After ensuring the validity of invoice information generation; the reliability of storage, queries, and

verification; and the uniqueness of electronic invoices, tax authorities decided to permit their use. In December 2014, the PRC Life Insurance Company was the first to issue electronic invoices (Zhang and Wang 2017), and the PRC implemented a nationwide VAT e-invoice system in 2015. In August 2018, the Shenzhen Tax Bureau issued the first blockchain e-invoice in the PRC, which helped the tax bureau supervise and inspect the whole taxation process. The State Administration of Taxation now also requires taxpayers to use electronic signatures, which have the same legal status as a handwritten signature or stamp.

5.3.2.3 Electronic Commerce Law

On 31 August 2018, the Electronic Commerce Law was passed at the fifth session of the Standing Committee of the 13th National People's Congress. This law was formulated to protect the legitimate rights and interests of all parties of digital businesses, regulate e-commerce transactions, and promote the development of sustainable and healthy digital platforms. It clarifies the tax-related responsibilities of parties on an e-commerce platform. All e-commerce sellers are required to register and declare their market entities truthfully and pay taxes according to the regulations.

The PRC has also formulated import tax policies for cross-border e-commerce retailers. Specifically, the law stipulates that cross-border e-commerce purchasers are taxpayers, and e-commerce stores, platforms, or logistic enterprises are tax-withholding intermediaries. In general, the PRC has no tax jurisdiction over foreign enterprises that have no permanent establishment in the PRC. If such enterprises earn interest or profits in the PRC, they are required to pay withholding income tax.

Although the PRC has been cooperating with the OECD and G20 on various international tax issues, it does not currently have digital economy-specific tax measures. At the 2016 G20 Hangzhou Summit, the Government of the PRC also announced that it would set up an international tax policy research center to engage in international tax policy design and research. In 2020, the China International Taxation Research Institute set up a research group to track the results of solutions to cross-border tax issues in the digital economy and put forward suggestions to the OECD for the first time.

5.4 Suggestions for Tax Reform of the Digital Economy in the People's Republic of China

5.4.1 Current International Digital Taxation Practices

The topic of taxing digital economy activities has attracted more and more attention in various countries, and the OECD has introduced a unified approach. Different countries have thus far developed different unilateral measures. Most EU countries have begun to levy a digital services tax, that is, a gross revenue tax with a tax base that includes revenues derived from a specific set of digital goods

or services, or based on the number of digital users within a country (Bunn, Asen, and Enache 2020). For example, the European Commission (2018) imposed a 3% digital service tax on digital economic transactions, such as digital advertising, the sale of collected user data, and the provision of digital platforms (Richter 2019). Tax exemption thresholds and tax rates for digital enterprises may vary among different EU countries. In addition to the EU countries, the UK and Myanmar, among others, have started to levy a digital services tax. The OECD is aiming to reach a consensus on the tax scheme for the digital economy to replace the current digital services tax.

A digital tax differs from a digital services tax in definition and scope of collection. In general, the scope of a digital services tax as currently levied by many countries targets the revenue of digital platforms, which form only part of economic activities in a digital economy. Moreover, since the threshold of the digital service tax in these countries is relatively high, it typically only concerns certain US multinational corporations such as Google, Facebook, Apple, and Amazon (Hufbauer and Lu 2018).

Secondly, instead of establishing a new tax law, some countries have adopted the approach of adding digital goods and services to the scope of VAT, to minimize the workforce and financial resources involved in the reform process. For example, Thailand currently treats all digital service providers in Thailand as permanent establishments for the implementation of VAT. Similarly, the PRC is using the traditional VAT system to tax the digital economy.

Finally, several countries have used the withholding tax in digital economy taxation. Even if a foreign enterprise does not own a physical institution or location, it is still required to pay the withholding tax in these countries. For example, the provisional digital economy tax scheme in Germany imposes a 15% withholding tax on online advertising. Similarly, the PRC imposes a 10% withholding income tax on the profits of foreign enterprises that have no permanent establishment in the PRC but have obtained profits from the PRC.

5.4.2 Suggestions for Tax Reform in the PRC

The OECD had planned to establish a new tax framework to tax the digital economy at the end of 2020. However, as a world-unified tax framework has been slowed by the COVID-19 pandemic and political differences, the OECD decided to keep working to reach an agreement by mid-2021. At the end of 2020, the OECD solicited opinions from more than 100 countries as to a consensus-based, long-term solution to the tax challenges arising from the digital economy. Participants were invited to offer advice on the Pillar One Blueprint and Pillar Two Blueprint of the project. The PRC's International Taxation Research Institute actively participated in these projects and all suggestions were published on the OECD's official website. The PRC should carry out its tax reform on the digital economy in line with the forthcoming international unified tax rules.

Before the OECD offers specific unified tax rules, the authors do not propose creating a new type of tax, such as the digital service tax in Europe, given its

limitations, including not covering all activities in the digital economy and not achieving global unification. The PRC can temporarily upgrade and reform the VAT to make the scope of taxation of digital economic activities as comprehensive and detailed as possible. When digital tax is unified on a global scale, the PRC should levy digital tax according to international rules. In addition, the National Tax Bureau's digital tax policies should adhere to the following principles in design.

First, a digital economy taxation program reform must reflect fairness and neutrality; for example, it would be unfair to levy extra taxes only on high-technology digital enterprises. The next step of the PRC's tax reform on the digital economy should aim to include comprehensively all related economic activities under the scope of taxation, including consumer-to-consumer transactions. The tax registration and administration system for consumer-to-consumer transactions is still under consideration. Although taxing consumer-to-consumer transactions may put financial pressure on many small businesses, the government can support them by establishing fair and neutral tax exemptions or subsidy programs.

Second, the government should accelerate the legislative process in view of the rapid development of the digital economy. Tax legislation is the first step to better tax collection and management. The State Administration of Taxation should also actively participate in formulating international tax rules and speed up corresponding domestic legislative processes.

Third, by taking advantage of cloud computing, big data, blockchain, and artificial intelligence technology, the PRC can standardize tax collection in different types of digital businesses, and achieve intelligent tax collection and management. The PRC has been promoting the application of blockchain and e-invoices in data tracking; data analysis; and information storage, transmission, and release. It is also aiming to strengthen data identification, storage, calculation, audit, and supervision further.

Developing a complete digital economy taxation platform through algorithms can help identify value added by digital channels, and facilitate the tax payment process and supervision of taxpaying subjects. We suggest using digital platforms as the tax withholding agent to relieve the tax collection burden of the State Administration of Taxation. A tax withholding system can be implemented to enable third-party platforms to withhold and remit taxes on sellers' taxable income, forming an effective tax management chain, improving the efficiency of tax collection, and strengthening tax supervision.

Finally, taxation of the digital economy needs to align with international standards. The digital economy is the most important engine promoting economic development globally. A reasonable and sustainable set of tax standards and systems can help achieve the goal of long-term and stable economic development.

Neutrality is an important principle in international tax system reform. Nellen (2002) points out that the tax system should guarantee neutrality and fairness, meaning that similarly situated taxpayers should be taxed similarly. For the PRC to align with international tax practices, it may need to change the tax subject from producer to consumer. However, doing so could undermine current

incentives for local governments to promote manufacturing industries in their local economies.

When aligning with international tax practices, it is sometimes difficult to balance international cooperation with safeguarding national interests. Some European governments are advancing a core tax policy claim that user data or user participation in the digital economy justifies a gross tax on digital receipts, new profit attribution criteria, or a special formulary apportionment factor in a future formulary regime (Grinberg 2019).

It should be noted that formulary apportionment requires multinational companies to be taxed based on their global income. Some fraction of that company's global income would be assigned to the nation based on a sales formula (Clousing 2020). For example, the tax base for the PRC would be the product of a company's worldwide income and the share of its worldwide sales destined for Chinese customers. Formulary apportionment would be applied to affiliated companies when there is common control of the companies. However, the feasibility of formulary apportionment is low. It invisibly increases incentives for avoiding taxes and shifting real investments to countries with low tax. A unilateral move could lead to double taxation (Tax Policy Centre 2020).

For the PRC to sustain or even further expand its role in global supply and value chains, it must align its tax system more closely with international developments and practices. The PRC has been actively participating in the BEPS Actions and collaborating with the OECD and G20 on many international tax issues. Internationally, concerning the reallocation of tax rights, all proposals have argued for reallocating them in favor of the user or market jurisdiction, that is, changing tax rights from the production end to the consumption end (see OECD 2020b and OECD 2020c). The PRC may need to move in a similar direction. However, while such reallocations might provide the government with a more effective and equitable basis for taxation in the digital age, it could also potentially realign local governments' incentives in attracting manufacturing investment, and may therefore work against manufacturing expansion in the country.

5.5 Conclusion

The PRC's increasingly digitalized economy is posing increasingly serious challenges to its evolving taxation system. The design of the PRC's tax system is based on the traditional industrial chain of "manufacture-wholesale-retail" characteristic of traditional enterprises. However, in a digitalizing era, it has become more and more difficult to determine who, when, and where to tax. At the same time, given the PRC's increased integration with the global economy, it has now become quite urgent for the PRC to better align its tax system with internationally recognized rules and practices, in particular its increased integration with global value and supply chains.

The PRC has been reforming its taxation system by establishing digital economy-compatible tax laws. It has rolled out a range of measures, first on a trial

basis and, when successful, implemented these nationwide. The PRC has also been an active player in international tax governance, especially by collaborating with many countries under the Belt and Road Initiative (e.g., the Belt and Road Initiative Tax Administration Cooperation Mechanism).

It is inevitable and necessary to apply international unified tax rules to regulate the activities of the digital economy. The PRC has also joined in discussions of a new international tax system to offset domestic tax base erosion and profit shifting. On the one hand, we expect that taxation of the digital economy can be well regulated and coordinated on a global scale. On the other hand, when adapting to the international tax system, Chinese tax authorities will also have to balance advancing international cooperation with safeguarding national interests.

Notes

- 1 JD.com, an online business-to-consumer platform, is one of the largest retailers in the PRC.
- 2 This technique involves the use of a combination of Irish and Dutch subsidiary companies to shift profits to low- or no-tax jurisdictions. The technique has made it possible for certain corporations to reduce their overall corporate tax rates dramatically.
- 3 Ting (2014) provides a detailed discussion of the iTax arrangement.

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6 Blockchain and Its Implications for Tax Administration in the People's Republic of China

Yan Xu and Zeping Zhang

6.1 Introduction

The rapid development of internet and communication technology and the digital transformation of the economy offer considerable opportunities for tax administrations (Hadzhieva 2019: 87); however, they also pose systemic challenges and risks. Labeled the Fourth Industrial Revolution (Maynard 2015; Schwab 2016; McCredie, Sadiq, and Chapple 2019; Morgan 2019), the extraordinary technological advances that have taken place in the recent several decades—particularly those relating to artificial intelligence, big data, and blockchain (Caruso 2018; Park 2018; Kimani et al. 2020)—have begun to facilitate the administration and collection of taxes in many jurisdictions, including the People's Republic of China (PRC).

Among these technologies, blockchain stands out with its distinctive features of transparency, accountability, and inclusiveness (Maupin 2017). This can contribute to an open tax administration and enhanced voluntary tax compliance (Hadzhieva 2019: 87; Cipek 2019). The emergence of blockchain and the unfolding of its applications have ushered in a paradigm shift in tax administration practices, from traditional means to new ways of managing information and dealing with taxpayers. While blockchain and other new technologies may have great potential to enhance transparency, accuracy, and efficiency in tax enforcement and compliance, it is not entirely clear to what extent technology can help modernize and improve tax administration in developing and transitional economies where the development of tax administration has been inadequate to enforce taxes effectively to meet revenue generation needs (Van Brederode 2013; Organisation for Economic Co-operation and Development [OECD] 2016a; Mikhaleva et al. 2019). This chapter considers that question by focusing on blockchain technology and the implications of its use for tax administration in the PRC.

The PRC has been at the forefront of technological innovation, which has significantly transformed its economy since the early 2000s (Chhabra et al. 2020; Lam 2019; Shen 2018; Liefner and Losacker 2020). Technological improvements have not only transformed the way businesses operate and deliver value to customers, but also impacted the ability and strategy of the PRC's tax authorities in managing tax matters and providing services to taxpayers. The government

has been exploring the potential of digitalizing the tax administration since 2000. Building on progress made in a continuous large-scale tax administration modernization project launched in the mid-1990s, a nationwide, multi-sided, value-added tax (VAT) information system that links taxation data across the different tax administration levels and regions to facilitate the management of VAT and prevent fraudulent activities has been in place since 2016 (State Taxation Administration [STA] 2016; Xing and Whalley 2014). The PRC tax authorities have been exploring a variety of new technologies to modernize the tax administration and enhance tax compliance, and blockchain in particular is believed to offer unparalleled advantages in doing so (Wright 2020). The Thirteenth Five-Year National Plan for Information Development (December 2016) issued by the PRC's State Council (the executive branch of the Government of the PRC) includes blockchain as a priority project and highlights this in a range of areas, such as digital and intelligent services in public governance. This indicates the considerable attention that the government is paying to this technology. The ensuing creation of a new blockchain research and development division within the STA in June 2017 has been accompanied by several pilot projects launched by local tax bureaus at various levels to explore blockchain technology.

While this seems to be a good start to modernize the PRC's tax administration, tax law enforcement has been an issue in the country because of ambiguous tax rules, a lack of consistent guidelines, and the arbitrary interpretation of tax law and policy, among other things (Brondolo and Zhang 2016; Xu 2017: 8–11). There has been a serious information asymmetry between taxpayers and tax authorities, and the quality and efficiency of tax compliance and enforcement vary from region to region, and sometimes even across different cities within the same region.

This chapter considers whether blockchain can be an effective instrument to help address issues in tax law enforcement, modernize tax administration, and increase tax compliance in the case of the PRC. Section 6.2 examines challenges and problems with tax law enforcement and identifies general and specific issues faced by the PRC's tax authorities in administering and collecting taxes. Section 6.3 discusses how the technological features of blockchain can be positioned to help address these problems. Specifically, this section uses the pilot project on blockchain and e-invoices in Shenzhen as an example to look at how blockchain technology interacts with tax administration and the likelihood that this interaction will have a positive impact on tax administration. Section 6.4 explores further potential uses of blockchain technology and considers its limitations in terms of both the modernization and efficacy of tax administration reforms and the promotion of rule of law principles. Section 6.5 concludes.

6.2 Challenges in Tax Administration in the People's Republic of China

6.2.1 An Overview

The PRC's modern tax system developed relatively belatedly. It was not until the early 1980s that the country began operating its first set of modern income

tax laws: Individual Income Tax Law (effective 10 September 1980), Income Tax Law on Chinese-Foreign Equity Joint Ventures (effective 10 September 1980), and Income Tax Law on Foreign Enterprises (effective 1 January 1982). Domestic enterprises with various types of ownership were not subject to a coherent, consolidated set of regulations until the early 1990s (Provisional Regulations on Chinese Enterprise Income Tax, effective 1 January 1994), and they were taxed differently and often more heavily than foreign enterprises until 2008, when a uniform enterprise income tax law became effective nationwide (Enterprise Income Tax Law, effective 1 January 2008). VAT was also applied in a piecemeal manner until its formal introduction in the early 1990s (Provisional Regulations on Value Added Tax, effective 1 January 1994; Xu 2015).

The development of a modern tax administration system has arguably lagged behind the development of the country's tax law system (Cui 2015; Brondolo and Zhang 2016; Qian 2018; Fan et al. 2020a). Tax administration used to be largely based on manual operations, particularly in the initial development stage and in some remote, underdeveloped regions (Cui 2015; Xing and Whalley 2014). The use of modern information technology such as the internet and computerizing of tax administration across various levels of the government came relatively late, in the 1990s (Fan et al. 2020b). The most important feature of this development period was the introduction of the Golden Tax Project (GTP) by the government in 1994 (Xing and Whalley 2014; Li, Wang, and Wu 2020). The GTP was purported to prevent VAT fraud using computer technology and networks. Because of the unique function of special VAT invoices that are recognized in most cases as the only legitimate documents for claiming input tax credits in the PRC (Provisional Regulations on VAT, as amended in 2017, Articles 8[1], 21), there have been rampant fraudulent activities relating to these invoices, such as fabricating and selling them and issuing them without any actual transactions. The stake of revenue losses was high, as VAT has been (and continues to be) the government's most important source of tax revenue (STA 2020a; Fan et al. 2020b), contributing around 45–55% of total tax revenue since its implementation in 1994. The GTP was thus launched to combat tax fraud and modernize the administration and collection of VAT through reliance on technology rather than on manual control, which was frequently associated with errors and mistakes (Fan et al. 2020b; Xu 2010). The GTP has undergone three phases, the third of which was completed in 2016 (Li, Wang, and Wu 2020). Phase III was notable for its unification of national and local tax administration systems, integration of tax data across all tax administrations in the country, and improved exchange of information among different government departments (Li, Wang, and Wu 2020). To some degree, it also helped achieve the aim of using data rather than invoices to control tax administration and tax compliance. The GTP Phase IV started in late 2020 to integrate not only tax information but also non-tax information within a single digital platform.

Although the PRC's rapid economic development since the launch of the Reform and Open-Door policy in around 1980 has helped improve tax administration and collection to a certain extent, some issues are difficult to address,

and if left unresolved could undermine the improvement in tax administration and enforcement in the country, threatening the government's revenue interest. There is an observable lack of efficiency and quality in tax collection and administration, as well as serious information asymmetry between the tax authorities and taxpayers (Fisman and Wei 2004). On the one hand, taxpayers tend to misrepresent information to access various benefits, creating considerable nonconformity between actual business operations and the use of invoices, in addition to fraudulent activity in cheating on tax invoices (Hashimzade, Huang, and Myles 2010). On the other hand, the lack of transparency in the exchange of information between the tax authorities and third parties undermines the tax authorities' ability to obtain complete information relating to tax matters. This is further compounded by the absence of an intelligent digital method for tax authorities to process the large amount of information that they collect (Hu 2020; Zhang et al. 2016; Zhang et al. 2017).

6.2.2 Distortion of Information

Information distortion is a serious issue. It is often found that some taxpayers provide false information on business transactions to avoid taxes or maximize their business interests (Fisman and Wei 2004). The increasing frequency, popularity, and sophistication of digital economic activities could intensify this problem. A typical example in the context of the PRC is the use of tax invoices, which have traditionally been the primary source of information for tax authorities to obtain tax-related information. Invoices issued by the supplier of goods and services to the customer are the main original evidence recording the execution of transactions. The issuance and receipt of invoices are meant to reflect the flow of information relating to tax-related transactions.

However, this mechanism has some inherent shortcomings. First, as invoices are small, they can only record limited information and cannot reflect all elements of a transaction, not to mention the real-time status of supply and cash flow of the transaction. Second, since invoices cannot reflect the real-time status of transactions, it is possible for taxpayers to generate false information. In many cases where there is a discrepancy between actual transactions (including the parties and timing) and those recorded in the invoice, it is difficult for tax authorities to detect the discrepancy instantaneously. In some cases, invoices are even issued without actual transactions (Hashimzade, Huang, and Myles 2010; Cheng and Luo 2013; He and Xiao 2019), or transactions occur without invoices being issued (Hashimzade, Huang, and Myles 2010; He and Xiao 2019). The separation or independence of the invoice mechanism from actual transactions can easily lead to confusion and poor-quality information collected by the tax authorities.

With the implementation of the GTP Phase III in 2016, the PRC has been moving gradually toward digitalizing invoice management, and electronic invoices have begun to replace paper invoices (Cano 2020). However, the substitution of electronic invoices merely shifts invoice management from offline

to online and does not fundamentally alter the separation of actual transactions from invoices under the traditional invoice mechanism. This leaves the issue of information distortion unresolved (Zhu 2020: 54). Such distortion has impeded tax administration and collection and could be worsened if no substantial change is made in the use and management of invoices in the continuing digitalization of the economy.

6.2.3 Information Exchange within the Tax Administration

The second tax administration issue is the insufficient exchange of information among tax authorities. Although the PRC's tax authorities have created a series of information management systems on tax return filing, auditing, and the like, these systems contain many inherent challenges.

One challenge is that a backlog of taxpayer information has built up within the information systems over the years, and the existing technology is unable to classify, verify, and update the information in a timely and effective manner to facilitate tax administration and collection (Zhang et al. 2016). This delayed, ineffective information processing poses risks for subsequent tax enforcement activities. Another challenge is the lack of communication between different tax datasets, undermining the comparability of the relevant data (Zhang et al. 2016). For example, companies may under-report employees' salaries when they help file individual income tax returns for employees based on the PRC's withholding mechanism, while over-reporting employees' salaries in filing enterprise income tax returns, leading to under-taxation of both because of a lack of data comparison between the two systems (Wu, Zhu, and Wang 2020: 57).

6.2.4 Information Exchange between the Tax Administration and Other Departments

The third problem is insufficient information exchange among taxation agencies and other government departments, social organizations, companies, and other business entities. Currently, data of these organizations and institutions are kept within their respective information systems and only disclosed to the tax authorities at a specified time upon request (Wu, Zhu, and Wang 2020: 57). There are no uniform standards regarding the time, format, and the like for tax-related information exchange, reducing the data's usefulness. Moreover, because of a lack of strong technological and technical support during the exchange process, the applications in the relevant platforms and data transmission procedures are often complicated, causing delays in obtaining information and difficulties in detecting and correcting data errors in a timely manner for the requesting parties (often the tax authorities) (Wu, Zhu, and Wang 2020: 57). This indicates that tax-related information exchange among multiple entities must be significantly improved.

The aforementioned issues have undermined the creation of trust between taxpayers as information providers and tax authorities as information receivers

and reduced the efficiency and fairness of tax enforcement and compliance. Blockchain technology could help address these issues.

6.3 Blockchain for Tax Administration

6.3.1 The Nature and Function of Blockchain

Blockchain is a transformational technology and is considered to have the potential to substantially improve socioeconomic outcomes (Kaal 2020). Blockchain technology has been defined in different ways, but is usually understood as being electronic, decentralized, immutable, and enabling cryptographic verification (Deloitte 2016: 4–7; Low and Mik 2020: 137–138). A report by the World Economic Forum (WEF) defines blockchain broadly as “an emerging technology [that] replaces the need for third-party institutions to provide trust for financial, contract and voting activities” (WEF 2015). In the PRC, the government’s China Blockchain Technology and Application Development White Paper 2016 defines blockchain as a new technological application based on distributed data storage, consensus mechanisms, point-to-point transmission, and cryptographic algorithms.

Subject to specific design and operation (Low and Mik 2020: 138–146), blockchain is fundamentally a distributed ledger that can be added to but not modified, suggesting it is secure. Moreover, its replacement of a (centralized) third party to provide trust (by way of protocol via consensus) means that it cannot be easily maneuvered by a single party, and eliminates the need for intermediation (Bader and Deckers 2017). Once a record is secured into blocks of entries, it is known to the public that it is linked to the chain of the blocks and cannot be altered. This technology creates a decentralized network in which all parties are equal, and each record or transaction is verified and validated by all parties in the network (Kaal 2020: 3). This decentralized network via the internet and the distributed consensus mechanism for verification and validation prevents fraud (Valkenburgh 2016). At its most basic theoretical meaning, and when well designed and operated, the decentralized, distributed, and immutable nature of this technology provides a technological solution to maintain a safe and reliable database, enhance efficiency, and strengthen the checks and balances that prevent manipulation by powerful players (Kaal 2020).

These features of blockchain are very useful in addressing the issue of information asymmetry in the PRC’s tax administration, as identified earlier. First, blockchain can help tackle information distortion through its distinctive features of a distributed consensus model and individual network nodes that verify and validate chain transactions before transaction execution. Under the traditional invoice mechanism, the inaccuracy and unreliability of information provided by entities involved in a transaction are caused largely by the separation of invoices from actual transactions. Blockchain technology can enable the automatic connection and comparison of orders in a transaction with the cash and supply flows during the transaction’s execution. It can also synchronize and automatically

generate standardized electronic data, going beyond the information contained in invoices under the invoice mechanism, and recording complete information related to the transaction orders as well as real-time information about the execution of the transactions. At the same time, tax authorities can act as a special node with the right to verify the identities of all parties joining the blockchain and require all parties to decrypt tax-related information from the transactions written into the blockchain so as to grasp all transaction-related information in a timely and complete manner.

Second, blockchain can help address the issue of insufficient exchange of information among tax authorities and between tax authorities and third parties. Blockchain's unique advantages, such as decentralized network connectivity and consensus algorithms, can integrate government departments, social organizations, and other entities into the same blockchain network. Once all parties agree on the data and information to be exchanged, and record and notify all nodes of transaction information in chronological order, the data and information from one party can be promptly transmitted to the other parties for recording and updating. This collaborative and synchronous framework can not only enable tax authorities to verify and rectify internal data in a timely manner, but also make the exchange of information between multiple entities more transparent and convenient, reducing unnecessary complexity in tax management and thus enhancing tax enforcement and compliance.

6.3.2 Blockchain Pilot Scheme in Shenzhen: A Case Study

As one of the most developed cities in the PRC, Shenzhen has taken the lead in pioneering the use of blockchain technology in public administration, including tax administration. The Shenzhen tax bureau has been developing a plan to pilot the implementation of “blockchain plus electronic invoices” since March 2018 (Shenzhen State Tax Bureau and Shenzhen Local Tax Bureau, Shengguoshuifa 2018: 47; Liao 2019). With the establishment of an “Intelligent Tax” innovation laboratory in cooperation with Tencent, a leading technology company in both the PRC and internationally, the Shenzhen tax bureau formally started to implement the pilot “blockchain plus electronic invoices” scheme in August 2018 after obtaining approval from the STA (Shenzhen State Tax Bureau, Shengonggao 2018: 11; Liao 2019; China Banking News Editor 2020). Under this pilot scheme, taxpayers who were not yet included in the VAT invoice control system would become the first batch of taxpayers to use blockchain to manage VAT invoices during their business transactions, including issuing invoices to the customers and claiming input tax credits for VAT paid, as shown in the invoices, in the purchase of relevant goods and services for making taxable sales. In addition to applying blockchain to electronic invoices, the Shenzhen tax bureau has used blockchain technology to create and develop other platforms for the exchange of information in taxation, such as a natural person information exchange platform that allows tax bureaus to acquire, manage, and exchange tax-related information of natural persons with other

government departments, as explained further in the following (China Banking News Editor 2020).

These pilot practices have enabled the Shenzhen tax authority to produce a set of original tax blockchains based on a two-layer chain structure with one layer of a core chain and one layer of business nodes (China Information Research Institute 2019: 1–10). The core chain is the consensus node of the blockchain, and the Shenzhen tax bureau is the core. This chain collects all data submitted by the business nodes and has the right to evaluate and verify the data. This chain is also linked to the dedicated STA intranet for tax administration. The business nodes support the participation of business entities in the tax blockchain and maintain a connection with the core chain through the routing gateway (China Information Research Institute 2019: 1–10). These business nodes can only store tax-related data and cannot possess all data in the tax blockchain (China Information Research Institute 2019: 1–10). They can apply to the core chain to obtain tax-related data within their own authority and submit a chain request to the core chain with a commitment to verify the data (Li and Xie 2020). The tax blockchain can be divided into two sub-chains: The digital asset sub-chain and the information exchange sub-chain. The digital asset sub-chain focuses on the ownership of digital assets and the capacity of contract execution, including blockchain e-invoices and tax certificates. The information exchange sub-chain concerns the classification of data and information sharing between involved parties, including the four-department information exchange platform and the natural person information exchange platform. These two sub-chains are examined further in the following discussion.

6.3.2.1 Digital Asset Sub-Chain

Information distortion originating from information sources has always been considered a bottleneck for tax administration and collection in the PRC. The advent of blockchain e-invoices was intended to overcome this issue, and these e-invoices have driven the creation of the digital asset sub-chain under the Shenzhen pilot scheme. The e-invoices are legally valid digital invoices based on blockchain technology that serve as evidence of the purchase of goods and services for making sales. Blockchain e-invoices have several key characteristics. First, e-invoices are issued upon transactions (Firecoin Research Institute 2020: 61–62). Unlike the traditional invoice mechanism that separates invoicing from transactions, the blockchain e-invoice model closely links the issuance of invoices by one party to a transaction with online payment by another party to the transaction. With real-name authentication, invoices will be issued online in real time once a transaction is successful, eliminating the separation problem in the traditional invoice mechanism. Second, all information related to a transaction will be recorded in the tax blockchain. As noted earlier, a traditional paper invoice contains limited information and cannot reflect cash flow information after transaction execution. In contrast, blockchain e-invoices provide a comprehensive set of transaction data, payment data, and the entry of all claims, among other things,

for tax authorities to verify and use. Third, the blockchain e-invoice model makes it possible to manage the entire tax invoice process, including issuing invoices, claiming input tax credits, and filing tax returns (Research Team on Blockchain and Tax Modernisation 2019: 70). With real-time checking, verification, and traceability of invoices, tax authorities can perform more refined invoice management, and, in particular, can now engage in ex-ante supervision of the use of tax invoices. That is, the blockchain e-invoice model can automatically determine whether a company has depleted its invoice quota, thereby limiting the conditions under which the company can continue to issue tax invoices. When a company is categorized as at risk for tax noncompliance, the blockchain e-invoice system will automatically restrict the company from issuing tax invoices, thus realizing ex-ante risk control.

These features of blockchain e-invoices, including complete traceability and data security, can effectively help combat fake tax invoices. The development of e-invoices through blockchain can be seen as an important step toward “information control” of taxation from the previous “invoice control,” which focused excessively on formality but not on the substance of transactions.

6.3.2.2 Information Exchange Sub-Chain

The Shenzhen tax bureau has designed and developed the information exchange sub-chain as a way to improve the efficiency of collaboration between different government departments. There are currently four blockchain application platforms under the information exchange sub-chain. The first is a smart platform that aims to provide a channel for sharing natural person information collected and acquired by various government departments through the specific taxation management activity of data verification for individual income tax deductions. The newly amended Individual Income Tax Law (2018 amendment, effective 1 January 2019) allows resident individuals to deduct special deductible items and special additional deductible items, as well as a fixed amount in calculating taxable income under the consolidated income category (Article 6, para. 1[1] of Individual Income Tax Law). These various special deductions include, among other things, contributions to basic pension insurance, basic medical insurance, unemployment insurance, housing provident funds, expenditures for children’s education, continuing education, medical treatment of serious diseases, housing loan interest, housing rentals, and support for elderly parents (Article 6, para. 4 of Individual Income Tax Law). These deductions involve a wide range of information from different government departments. The blockchain natural person information platform integrates information from multiple departments and allows 11 departments to use the platform to investigate and check tax-related information about education, medical care, housing, finance, real estate registration, human resources, and social security through simple online inquiries (Li and Xie 2020). This is a change from past practices that had to rely on the manual input and verification of data on individual income tax deductions, and the manual exchange of relevant data with other government departments for the

administration and collection of individual income taxes. The resulting efficiency significantly improves tax enforcement and reduces compliance costs for individual income taxpayers.

The second platform is a “tax and industry” alliance or consortium chain (National Business Daily 2020). This chain uses cross-chain technology to create a data channel between the tax chain, finance chain, and industry chain such that companies, financial institutions, and tax authorities can share information in the alliance chain and achieve a synergy effect. When a company applies for a financing loan on the consortium chain, financial institutions will be able to obtain simultaneously the information declared in tax invoices by the company taxpayer from the tax authority and the information on purchases and logistics from the company to review and verify the relevant information to decide whether to make a loan to the company (Du 2020). The tax information, including the company’s tax contributions and tax compliance credibility, is used in this process as evidence and a basis for financial institutions to make a lending decision, helping to shorten loan approval time and mitigate lending risks.

The third platform is a four-department information exchange platform jointly launched in November 2019 by the Shenzhen tax bureau, Shenzhen customs, Shenzhen public security bureau, and Shenzhen branch of People’s Bank of China (Wang 2019). The purpose of the platform is to improve both capability and efficiency in combating illegal activities, including tax evasion.

The fourth platform is a bankruptcy management linkage platform. Under this platform, bankruptcy administrators can complete a series of tasks, from issuing notices of creditors’ rights declaration to preparing documents for creditors’ meetings to receiving creditors’ declaration results, thereby enhancing the quality and efficiency of tax administration matters during bankruptcy cases (Li 2020).

These four platforms complement each other, and each cooperates with the other platforms to facilitate the exchange of information among different organizations and entities. This digital cooperation and collaboration have surpassed the traditional approach to administering taxes by tax authorities alone to incorporate multiple government departments into the same digital system to improve tax administration and collection while preventing tax fraud and reducing compliance costs.

6.4 Prospects and Challenges for Further Improvements in Taxation

6.4.1 Prospects of Blockchain

As discussed earlier, one of blockchain’s primary characteristics is decentralization. This technology uses a set of consensus-based algorithms to build trust among different network participants in a decentralized network. Generally, blockchain is a distributed ledger to record (but not modify) data and share the data across multiple data ledgers (Cipek 2019: 10). Through transparent and immutable ledgers, it creates a source of truth that all participants can trust (Hadzhieva

2019: 87). The decentralized network can be operated through pre-set technical rules and standards, without human intervention.

While a notable advantage, some commentators argue that blockchain's decentralization feature should not be overestimated (Rikken, Janssen, and Kwee 2019; Abramowicz 2020; Low and Mik 2020: 152, 160). One reason for this is that the kind of autonomy created by the technology is, to a certain extent, subjective because algorithms are developed by humans who inevitably have subjective opinions. If an algorithm or technology developer invents a free blockchain that contradicts national laws and regulations, the invention could threaten national sovereignty and infringe on the individual rights of participants, posing risks to the rule of law. For this reason, some scholars in the PRC suggest that decentralization may not entirely align with the needs of the tax administration as an integrated part of public administration, and it may be necessary to establish tax blockchains under the concept of a "sovereign blockchain" (Gao et al. 2018; Wang et al. 2019). This concept was first proposed in the PRC in a report by the Government of Guiyang (i.e., Guiyang City People's Government Press Office 2016), which argued that a sovereign blockchain, in contrast to other blockchains, should be scattered and multi-centralized (Guiyang City People's Government Press Office 2016: 21–22). It also argued that sovereign blockchains can be regulated and supervised, whereas decentralized blockchains cannot be (Guiyang City People's Government Press Office 2016: 23).

It appears that on the one hand, the PRC encourages the exploration and application of blockchain technology in government administration, while on the other hand, it is cautious about the potential risks posed by the technology to the security of sovereignty and public administrative systems. The country learned this lesson several years ago from the seemingly unbridled development of cryptocurrencies using blockchain technology in the country (Hsu and Li 2020; Millar et al. 2019: 150). This suggestion to develop tax blockchains under the concept of a sovereign blockchain may be justifiable from the perspective that taxation relates directly to a nation's fiscal and economic systems, and only when fiscal and tax security is ensured can blockchain technology be explored to realize its potential. Given the continuing evolution of blockchain technology and its ongoing application in the country, it is necessary to design and formulate legally binding uniform standards to govern its development and use, including basic standards and standards for application, procedures and methodologies, credibility, and information security. It is also necessary to designate regulatory bodies clearly so that the operation of underlying technologies and blockchain applications can be regulated and supervised, and a security mechanism that suits the blockchain technology can be created. In essence, the use of blockchain in tax administration should be based on clearly written law if the goal is to encourage the rule of law in taxation.

The current "blockchain plus electronic invoices" pilot scheme in Shenzhen has achieved certain success in terms of the number of e-invoices issued through blockchain (around 23 million in 2019–2020) (Wang and Wu 2020). Other

regions and cities such as Beijing, Guangzhou, Hangzhou, and Fujian have followed suit. Despite the pilot's initial success and further expansion, it was unable to resolve some difficult tax compliance issues. As noted above, the Shenzhen pilot scheme enables the issuance of invoices upon transactions, realizing the integration of information on cash flow and invoice flow. This integration has effectively prevented the incorrect and under-reporting of transactions in invoices, as well as non-issuance of invoices (Demirhan 2019). However, this integration does not include information relating to the flow of goods and services, leaving room for tax fraud.

It is suggested that tax authorities should control all information on transactions, including the real-time execution of the transactions, to increase tax compliance (Research Team on Blockchain and Tax Modernisation 2019: 71). The blockchain e-invoices scheme can be further improved to achieve an integration of the three sources of information related to a transaction: Information on cash flow, information on invoice flow, and information on the flow of goods and services. First and foremost, invoicing rules should be well designed by tax authorities and implemented through smart contracts. The invoicing company should apply for invoices through the tax blockchain and add data about its business identity, transaction orders, and logistics of delivering goods (or services) to the chain (Liu and Yang 2020: 160). Next, the purchaser should claim the invoices on the chain, check and verify documentation and logistics information of goods or services, confirm transaction and logistics information while updating its identity, audit and add entries, and update the status of the invoices on the tax chain (Liu and Yang, 2020: 160). These improvements are needed in the context of the PRC to effectively combat the rampant false issuance of tax invoices that has existed since the implementation of the VAT in the mid-1990s (Hashimzade, Huang, and Myles 2010; Winn and Zhang 2013; Li and Wang 2020).

In addition to e-invoices, blockchain technology can be explored in other areas of tax administration. For example, it can be applied—with support from artificial intelligence, big data, and other technologies—to promote the automation of tax collection. The WEF estimates that governments could start collecting taxes using blockchain by 2023–2025 (Deloitte 2017). Payrolls are digitalized in most countries including the PRC, and digitalization could make tax payments easier and more convenient for taxpayers. In the case of the PRC, payrolls are just one category of income under its income tax law, albeit the most important since most employable people are employed workers in the PRC. For example, in 2019 around 775 million people out of the PRC's labor force of around 811 million were employed (Textor 2020). Although it is challenging to assess income taxes while taking into consideration deductions, preferential treatment, and other special situations that are unique to a single individual under the current income tax law, blockchain can help investigate and classify tax-related information according to the tax return forms and then automatically generate tax returns using smart contracts, reducing taxpayers' compliance costs. In the field of VAT, the widespread use of blockchain e-invoices will enable tax authorities to obtain and supervise all information on cash flow during business operations

and transactions. Information on input taxes and output taxes will become much clearer. Blockchain can also be deployed to automate the collection of VAT through smart contracts.

Further, blockchain technology can aid the development of smart operations in daily tax management. Tax blockchains can be combined with artificial intelligence and big data to prevent tax fraud, detect risks, and solicit feedback on tax policy through real-time tax administration and tracing, as well as advanced analytics (OECD 2016b). This means that the focus of compliance management would shift from manual operation to automation. Such a shift would greatly reduce direct contact between tax authorities and taxpayers, thereby reducing opportunities for corruption in tax administration and enforcement. At the same time, the quality and efficiency of tax management can be increased both by the increased transparency and integrity of data and by more accurate identification of the riskiest taxpayers, thereby improving tax compliance and trust in tax administrations.

Moreover, blockchain can be used to investigate possible transfer pricing. As the world's second-largest economy and given its deep integration within the global economy, the PRC faces challenges in international taxation, particularly in the area of transfer pricing. Like many jurisdictions, the PRC has designed and implemented transfer pricing rules to prevent the manipulation of transfer prices among member companies in a multinational enterprise (MNE) group for tax benefits. Transactions between MNE group members are required to accord with the arm's length principle (ALP), which provides a mechanism to allocate income among MNE group members based on an estimate of how the income would have been divided had the group members been acting as independent, unrelated enterprises in an open market (Avi-Yonah 2015: 28). The ALP focuses on "comparables" as the basis for pricing transactions between related parties, which should be comparable to the price of transactions between unrelated parties (Avi-Yonah 2010). A functional analysis is usually conducted to determine a comparable price. Although the ALP is a predominant principle in transfer pricing, concerns have been raised about its application. A major concern for tax authorities is information asymmetry in finding "comparables" in many modern MNE arrangements, while a key concern for MNEs is high compliance costs arising from the implementation of different transfer pricing rules across jurisdictions (Collier and Andrus 2017: 133–144).

As a distributed ledger with transparent, immutable data accessible to all parties connected to a chain, blockchain technology can be used to help tax authorities collect real-time transaction data, track accounting systems to the transaction level, strengthen the "substance over form" approach that prevents artificial arrangements for tax avoidance purposes (Bankman 2004: 929; Mooij, Klemm, and Perry 2021: 166), and facilitate cross-jurisdictional cooperation through information exchange to auditors anywhere in the blockchain network. As for MNEs, including those investing in the PRC and those originating from the PRC, they are anticipating increased compliance costs because of the requirement to provide master and local files from their organization as well as operation

information in multiple jurisdictions under the OECD and Group of 20 anti-base erosion and profit shifting (BEPS) project (OECD, BEPS Action Plan 13). They may also need to file country-by-country reports when certain conditions are met (OECD 2019: 19). These requirements have been incorporated into the PRC's domestic laws (Ho et al. 2016; Avi-Yonah and Xu 2018). This could significantly increase compliance costs. Blockchain technology has the potential to help MNEs comply with their reporting obligations by allowing the direct exchange of transparent and immutable data with tax authorities in the PRC and other jurisdictions, and facilitating the streamlined verification of data, thereby reducing transaction costs and compliance burdens for MNEs.

6.4.2 Limitations of Blockchain

Blockchain's unique features offer a promising solution to enhance the quality and efficiency of tax administration and enforcement in the PRC. Using time-stamped transaction data in tax administration will enable tax authorities to obtain and cross-verify information to ensure tax compliance. Meanwhile, the technology would prevent tax authorities from arbitrarily making decisions based on the data. As a result, the process of tax administration and compliance could become more transparent, certain, and fair, as required by the rule of law principle.

Nevertheless, it would be wrong to assume that all blockchains share the distinctive features of immutability, trustworthiness, and validation ability of participants in the chains (Low and Mik 2020: 138–146). Equally misleading is the notion that blockchain, combined with other technologies such as smart contracts, will be able to meet the challenges of interpreting open-ended legal terms and unforeseeable events that have long existed in legal systems (Low and Mik 2020: 172–173). The technologies themselves might create issues for public administration because of opaque algorithms, legal ambiguities, unrepresentative datasets, and similar problems.

The PRC's tax administration has experienced a leapfrog development since the mid-1990s, particularly in developed regions and at the national and provincial levels of the government. This development can be seen in the rapid transformation of tax administration mechanisms, from a mainly manual operation to modern information control within a short time span (around two and a half decades). However, this development has been uneven (Zhang et al. 2018; Fang, Li, and Zhang 2019). Developed regions such as Shenzhen, Shanghai, and Hangzhou have been able to use blockchain, one of the most advanced information technologies currently available, to support tax management and collection. Developing regions in general and lower-level governments within those regions in particular have just begun to grapple with the challenges of computer networking, building administrative personnel capacity to work with new technologies, and keeping pace with continual technological advances (Zhang et al. 2018; Fang, Li, and Zhang 2019). Blockchain technology alone will never be able to help overcome the challenges in capacity building for developing regions. The national government must make a greater effort, including fiscal and personnel

support, to equalize the capacity and capability of tax bureaus across the country. It will be unable to achieve the aim of modernizing the tax administration if developing regions lag behind.

Another limitation of blockchain technology in tax administration is that it does not eliminate arbitrary tax enforcement, although it could improve the process of tax decision-making. As discussed above, blockchain has significantly reduced information asymmetries for tax authorities in collecting and verifying data supplied by taxpayers. This could enhance the accuracy and efficiency of tax enforcement. However, it also suggests that the key nature of decision-making in tax law implementation remains unchanged; that is to say, decisions on tax matters are ultimately made by humans. While the operation of algorithms underlying a particular blockchain can be automated, the operation of law cannot be separated from human involvement. When real-time, immutable data becomes available, traceable, and accessible to tax authorities and other parties in a blockchain network, the data could be used in a way that reduces arbitrary decision-making by tax authorities. However, except for clear-cut issues, there are many instances in tax enforcement that require human analysis, reasoning, and judgment; and data could also be interpreted and applied differently across tax authorities in different regions (as has been happening in the PRC).

The very fact that broad tax authority discretions often cause the tax law to be implemented with different criteria across the country has led the PRC's national tax authority, the STA, to call for the introduction of discretion benchmarks to achieve consistent and equal implementation of tax law across the same region of the country (*STA Guiding Opinion on Regulating Tax Administrative Discretion* 2012). The discretion benchmarks envisaged by the STA refer to a set of detailed judgment standards to be applied within the range prescribed by law when specific conditions for a particular category of tax treatment are satisfied. More detailed standards could help prevent arbitrary decision-making. Nonetheless, the process of formulating discretion benchmarks entails the injection of human insights, experience, and an understanding of uncertain legal concepts and factors to be considered in classifying tax treatments. Blockchain technology is limited in its ability to play a role in this process.

For taxpayers to challenge a decision reached by a tax authority, it is critical to understand how and why the tax authority reached that decision. Although the transparency and accessibility of tax-related data provided by blockchain technology could help tax authorities administer and collect taxes, the technology will not grant taxpayers access to the data behind the decision. Taxpayers will be unable to object meaningfully if they lack the necessary knowledge to ascertain whether they are being treated equitably, and when they face significant obstacles in determining how the automated decision-making mechanisms were developed.

Moreover, it is demanding for taxpayers to grasp a vast volume of normative documents related to taxation and to keep pace with frequent changes in taxation matters. For example, VAT has been levied according to administrative regulations (*Provisional Regulations on VAT*) issued by the State Council and around more than 1,000 normative documents issued by tax authorities (as of November

2020) according to the official website of the STA. Blockchain technology can hardly deal with this issue facing taxpayers. VAT rates for general taxpayers (those with annual turnovers over a threshold that subjects them to the full VAT regime, including eligibility for input tax credits) have been modified several times since 2017. The original four positive rates of 17%, 13%, 11%, and 6% were reduced to three rates with the removal of 13% in July 2017. These were then lowered to 16%, 10%, and 6% in May 2018; and further to 13%, 9%, and 6% in April 2019. Ascertaining the correct rate for supplies, particularly mixed or composite supplies, can be challenging for taxpayers, and the process provides fodder for disputes between taxpayers and tax authorities. Blockchain technology is incapable of addressing this challenge.

6.5 Conclusion

Blockchain is a disruptive technology that has transformed, and continues to transform, the economy, society, and government. With its basic theoretical underpinnings, blockchain keeps records on transparent and immutable ledgers accessible to all participants and enables peer-to-peer interactions and control of data by multiple networked participants to build trust and prevent manipulation by any single party. These features could be applied to improve tax administration and enhance compliance. The pilot reforms on blockchain and electronic invoices in some regions in the PRC have shown the promising potential of blockchain technology to tackle information asymmetry and insufficiency in information exchange among government departments, reduce instances of arbitrary enforcement, and increase tax compliance. The even wider application of new information technology in managing tax matters for tax authorities and complying with tax laws for taxpayers in the country during the global pandemic only suggests that the digitalization and informatization of tax administration will be ever-increasing at a much faster pace. Non-contact tax administration and compliance will become a new normal (STA 2020b).

Nevertheless, blockchain technology is not a panacea, and its potential to improve tax administration and compliance is limited by several factors, including the uneven development level of tax administration across the country and the limitations of the technology, as noted earlier (Low and Mik 2020). It will also not solve the capacity-building issues for developing regions in the PRC. The applications of blockchain technology are still evolving. Use of the technology should be based on clear laws that delineate the function of algorithms and data and prescribe clear rules and procedures for the use of the technology. If used blindly as a “magic bullet,” the addition of blockchain technology to tax administrators’ arsenals may prove an unnecessary waste of resources that yields few, if any, positive outcomes. Blockchain can serve as a technological tool to help improve tax administration to the extent that it reduces arbitrary decision-making and increases tax compliance. It is, however, limited in furthering other fundamental goals, in particular the rule of law, which relates to more basic constitutional and political structures beyond blockchain technology.

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7 The Role of International Collaboration in Digital Services and Tax Compliance in India

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7.1 Introduction

Advancements in digital, information, and communication technologies are transforming traditional economies, business organizations, and the lives of people around the world. Digital transformation is the most important economic development since the industrial revolution (Martin and Waldfoegel 2012). It is also a major driver of investment, new businesses, jobs, innovation, growth, and sustainable development (United Nations 2009).

In general, digitalization of the economy refers to the application of internet-based digital technologies to the production and marketing of goods and services. The internet industry contributes significantly to large economies and affects the lives of numerous people. The internet revolution has penetrated every aspect of the global economy, including taxation and the ability of governments to generate revenue.

Digital transformation improves productivity and efficiency, promotes innovation, and boosts sustainable economic development and social well-being. However, it has also created new challenges for governments and policymakers around the world. Governments not only must address concerns about the impact of digitalization on employment, inequality, and the construction of digital infrastructure, but also should prepare a national digital strategy including a response to new regulatory challenges. As these activities all require huge sums of money, taxes as the main source of government revenue are very important.

Digitalization develops new tools and techniques to improve understanding of tax issues on the part of tax regulators and taxpayers. It also improves the performance of basic players and the associated risks. Taxation of the digital economy is perhaps the biggest challenge in the realm of direct tax policy. The digital economy is characterized by mobility, including the movement of intangibles, business activities, and the user base. For example, digital businesses can maintain a significant economic presence (SEP) in a country without maintaining a physical establishment, making it possible for them to avoid taxes.

Digital taxation has played a key role in international tax policy issues since the 1990s when e-commerce online businesses first emerged. In online e-commerce, product and service information is accessible electronically and business activities

are carried out without the movement of people or products across international borders. Overseas firms have made significant profits using domestic and utility facilities without having to establish a physical presence in a particular country. Such online business activities present unique and difficult challenges for tax policymakers around the world. The various international concepts that emerged in the 1990s such as permanent establishment, important human activities, and corporate physical presence were never designed to meet the problems of the online digital environment.

In addition, the Organisation for Economic Co-operation and Development (OECD) has identified a high degree of dependence on intangible assets, excessive use of personal data by users, and acceptance of business models (OECD 2015). The OECD has also acknowledged the difficulty of identifying the jurisdiction of value creation and has found it difficult to create a ring-fence to separate the digital economy from the rest of the economy (OECD 2017). In light of these factors, the OECD has formed a comprehensive definition of the digital economy covering a wide range of tangible goods and services based on digital technologies, including computers, mobile phones, communication devices, cloud computing services, artificial intelligence, and peer-to-peer communication.

There have also been calls from academic experts and political and financial institutions for systematic and comprehensive changes to international tax systems. The relevant literature on the digital economy has reviewed various factors such as revenue classification, the physical establishment concept, transfer price estimates, and the implementation of withholding taxes. The OECD's efforts to propose reform were supported by the extensive literature on the subject. Accordingly, the OECD has proposed the concept of SEP, which need not be based on physical presence. However, a lack of consensus has arisen from the absence of interpretation and measurement of digital value chain elements developed as a result of the latest technology and the proliferation of online networks.

Tax revenues play an important and vital role in the economic development of countries, especially developing countries like India. Various concerns have arisen from the challenges facing big data on economic tax issues in India. Some taxation issues relating to major technology companies such as Amazon, Facebook, and Google were also discussed at the 2019 Group of 20 (G20) summit. However, neither the international community nor India's tax administration is fully equipped to deal with such tax-related problems in the digital economy.

Because of the complexity involved in providing digital services that use intangibles such as algorithms, big data, internet domains, and various other methods globally, the levying of digital taxes on the profits of global giants has become increasingly prominent. In addition, the revenue generated from digital services by these giant multinational groups in India is so high that appropriate measures are needed to tap such revenues. Since there are reportedly wide variations in revenue and taxes collected by tax administrators in India, the tax administrators must conduct due diligence to impose a tax on the digital economy. However, there are various challenges with regard to the adoption of digital taxes from the perspective of both India and the international community.

This study aims to identify the challenges facing the Indian digital tax system and to explore the role of international collaboration in the provision of digital services and tax compliance in India. The central theme of this chapter is how to ensure international collaboration in the pursuit of digital tax, tax administration, and tax enforcement in India. The research approach is primarily descriptive and includes a comprehensive review of the literature on the impact of international collaboration on digital services and tax compliance in India's digital economy. The policy recommendations of this chapter will help increase the understanding of academics, tax professionals, and policymakers with respect to the importance and benefits of international collaboration in digital services and tax compliance in India.

7.2 Literature Review

Digital information and digital knowledge are key elements of the digital economy. Information and communication technology is the driving force behind the digital economy. Almost all countries in the world are adopting digital technology, hardware, and software as basic infrastructure at various levels (Terada-Hagiwara et al. 2019).

The concept of a digital economy encompasses the development of information and communication technology that contributes to better social and economic conditions (Zimmerman 2000). The digital transformation of the so-called fourth industrial revolution uses digital systems that focus on end-to-end digitalization of physical assets; technological integration; and connecting the physical, digital, and biological spheres (World Economic Forum 2016; Tungboriboonrat 2017). The failure of tax administrators to keep pace with the developments and trends in digitalization could lead to significant losses of government revenue. It is thus important for tax administrators to consider the impact of digital transformation (Firmansah and Rahayu 2020).

Olbert and Spengel (2019) review the existence of digitalization challenges related to both direct taxes such as corporate profits and indirect taxes as consumables. Looking at both the evidence and the anecdotes, they examined current developments in the European Union and OECD. In addition, they argue that there is no reason for a new tax code for information technology-driven digital businesses.

Some major challenges of the digital economy include international taxation and the normalization of domestic taxes. As taxes are a major source of government funding for its various infrastructure projects and public services, tax administrators must learn how to transform their capabilities to keep pace with the rapid changes in the digital economy. However, the capacity of developing countries in Asia and the Pacific is considered low (Wawan and Rebecca 2017).

As the digital economy has grown independently to become a major economic segment, it is difficult to ring-fence. It is important for economists and policymakers to act swiftly in relation to this changing economy. Policymakers, in particular, must build a digital mindset to resolve the various challenges that have emerged (Wawan and Rebecca 2017).

European tax administrators in particular believe that Google, Apple, Facebook, and Amazon do not pay their share of taxes from the European market. There are a number of important challenges related to the cross-border digital economy. There are also differences in world opinion, perspectives on existing laws, and long-term expectations of digital taxation of companies in Europe (Beebe 2019).

Given the rapid development of technology and digitalization in Indonesia, the challenges of digital taxation must be addressed equally from the government's perspective with respect to changes in tax laws, the structure of the tax administration, and staff experienced in developing digital businesses. Tax authorities must also be capable of formulating appropriate tax regulation policies and a reliable information technology sector for transforming the tax administration (Tambunan and Rosdiana 2020).

Although there are many differences between the proposed digital tax measures used or implemented since 2010, two basic similarities connect them. First, the current international tax system, which is based on measures from the 1920s, is clearly in need of reform. Second, those digital approaches should be modified to focus on three basic factors, namely, the need for physical presence, lower tax availability, and the ability of many countries to generate income without a physical presence or to convert income to lower tax brackets (Faulhaber 2019).

To address these tax challenges, it is necessary to develop a new business model for the digital economy. In particular, the problem of international digital companies that perform various functions in a number of countries without a physical presence in that particular country must be addressed. This is a major challenge for small open economies with a large share of foreign resources, such as Slovakia. It is necessary to analyze various theoretical and practical methods of solving this problem (Sestakova 2018).

While the digital economy presents many challenges, at the same time it also offers opportunities to address treaty-related laws that make successful tax management possible (Committee of Experts on International Cooperation in Tax Matters 2017). The effective leadership skills of the United Nations Committee of Experts will play an important role in helping developing countries meet these challenges, and can help them take advantage of a variety of opportunities related to tax administration issues.

It is important to be involved in the business and industrial sector, and major countries should be provided with sufficient time to comply with their tax plans, even if 100% compliance is not possible. However, simplifying tax compliance processes can enable policymakers to ensure the tax compliance of large enterprises in the digital economy. Individual governments should take additional steps to engage with large business institutions operating within their jurisdiction (Wawan and Rebecca 2017).

India is expected to be the largest user of digital technology in the coming years. Internet usage in India is growing rapidly and is projected to continue to grow at an unprecedented rate. Because of the rapid expansion of the internet in

both urban and rural areas, the digital economy is projected to grow significantly. People use portable internet for a variety of personal communication purposes wherever they go. Most mobile devices are used to access social media platforms such as Facebook, Twitter, LinkedIn, and WhatsApp. Mobile device users tend to use the internet for social media activities more than for educational or other informational needs (Waykar 2016).

Of the various communication platforms used to access products and services, digital platforms are the latest and most convenient. Private and public companies must work together to address these challenges in ways that make the internet a stable place while not hindering its commercial growth and development (Ramija 2018).

Overall, India's tax structure is considered well developed. Under the Indian constitution, the responsibility and power to tax are vested in the state administration at three different levels (Bholane 2020). However, despite many changes in government, the tax structure is not yet up to international standards. Many problems, such as corruption, tax evasion, and unregulated transactions, need to be addressed to improve the current economy (Ghuge and Katdare 2015).

Kumat (2014) focuses on various aspects of India's tax system and the challenges facing the country. For example, a major challenge for India is improving the productivity of its tax system. It is also important to reduce the country's reliance on indirect taxes, and efforts should be made to increase direct taxes on the richest people and companies to compensate for losses. Moreover, strategies such as the use of transfer rates by companies to evade taxes should be investigated (Jha 2013).

The equalization levy on digital transactions is highly applicable to India. In 2016, the Government of India introduced a 6% tax rate on digital business-to-business services, including online advertising and providing digital advertising services. This tax must be deducted by a recipient living in India (CBDT 2016). The expected outcome of this measure was to solve the problem of double taxation or taxes in the digital sector on household income (Brookings India 2017). This problem has been discussed for several years and is being re-evaluated with the base erosion and profit shifting (BEPS) package. The equalization levy in India is to be paid from gross revenue and may be exempt from income tax.

With the launch of the goods and services tax (GST), the new digital India is expected to emerge as a single country, single market, and single tax status. With many government authorities interested in promoting the pan-India tax system, GST is a significant achievement for the region as a whole (Roy 2017).

7.3 Taxation Challenges in Digital India

Of the world's 20 largest economies, India is currently the second-fastest-growing digital economy. India's Department of Technology and Information Technology (2019) predicts the steep growth of the digital economy and estimates that its value will reach around \$1 trillion by 2025. Such estimates indicate that digital revenues as a whole are far higher than India's tax revenue base.

The government is encouraging the digitalization of operations and is providing much-needed support for regular online communication with citizens. Moreover, the widespread adoption of advanced digital technologies such as artificial intelligence, cloud computing, bitcoin, cryptocurrency, and blockchain networks is expected to create a set of associated tax problems and risks for consumers and businesses involved in such digital activities. Business models are also developing rapidly in step with digital technology. It is important to understand both the technology and business models that ensure tax compliance under the current laws and regulations until rules with the necessary modifications are introduced.

There is still much to be done to achieve the goal of a \$1 trillion digital economy. The national digital tax policy does not appear to be fully compliant and there is no international consensus on digital tax policy. The recent launch of the GST regime is expected to play a key role in integrating the manufacturing and services sectors into the digital economy, which could also help India boost economic growth and social development. However, ensuring stability, credibility, and a clear framework for the digital economy depends on the resolution of problems and uncertainties that exist in the current tax system. It is necessary for India to address the challenges and problems related to digital taxation to achieve the goal of \$1 trillion.

According to the government, international digital companies have a large consumer market base in the country but do not pay local taxes. International tax administrators are now pressuring international digital multinational companies (MNCs) to pay Indian domestic taxes. The Indian tax administration has proposed a tax system in which foreign companies that advertise on Indian internet provider addresses should be taxed. This could be seen as a first step toward addressing international digital taxes and an indication that India will consider implementing a tax levy soon.

All countries, including India, would like to increase their power to tax the digital giants like Google, Apple, and Facebook, which are doing business in their territories. The OECD proposal aims to increase governments' right to tax MNCs, especially large online companies using a tax-efficient approach.

India is already in the process of implementing its own laws and regulations to levy taxes on digital businesses. The government has been encouraged by the fact that the OECD also supports proposals on the right to tax. According to taxation experts, based on the concept of SEP, the right to tax MNCs will have a significant impact on many digital operations in India as they are expected to pay higher taxes. However, the Indian tax administration has not yet finalized the construction and amount of tax to be charged.

The government has already proposed a SEP-based framework for the purpose of levying taxes on digital companies in India even if they do not have permanent establishment status within India. In addition, there are recommendations from the Central Board of Direct Taxes regarding digital tax laws and regulations in India. However, these proposals are yet to be announced and approved by law. Digital MNCs like Google, Facebook, Twitter, and LinkedIn are actively

working to halt the OECD proposal and its impact on their business income in India.

In the 2018 Finance Act, the government introduced the concept of SEP in line with their proposal for digital tax on companies, which is expected to take effect in 2023 (Sikarwar 2020). The latest fiscal government bill for 2020 has raised some concerns about the income tax law adding new rules relating to the country's taxable base. In 2020, the OECD released a draft MNC digital draft tax for public comment. Such proposals will increase the total tax rate to include large digital businesses involved in online business operations in India.

In general, international tax administration primarily focuses on corporate income tax. Digital businesses like Amazon, Facebook, Google, and WhatsApp use a digital location for digital business activities, making it difficult to regulate them under local tax laws, which apply primarily to physical business operations. To address this, the concept of digital tax has been developed to increase taxes based on revenue related to the operation of digital businesses in local legal entities. Commonly known as the "Google tax" or digital service tax, it is levied by the source country based on revenue received by international technology companies in those countries. Digital tax is not established in any international treaties or local tax laws.

Digitalization in India offers many tools to improve tax administration and make it more efficient. These tools are used not only in tax collection and monitoring but also in designing forms, methods, and guidelines for the development of the tax system. The government will make full use of those tools to improve the tax administration through digital transformation.

Taxpayers in India are deeply concerned about inequality, transparency, and other difficulties in the Indian tax system. Less than half of the taxpayer community sees the tax system as fair and impartial. Public opinion seems to be aligned with existing policy negotiations as international collaboration on tax policy gains citizen support in the G20 countries. Ultimately, formulating tax policy depends on trust among governments, companies, and the public. It is therefore important to protect this trust in strong economies like India. In this case, the decision to debate taxes on the digital economy could either increase or diminish confidence in the international tax system.

Tax evasion approaches adopted by large digital platforms are a major challenge to development (United Nations Conference for Trade and Development 2018). Some challenges to be addressed in Digital India include the SEP of a company in India outside the corporate or employee environment. According to international tax laws, permanent establishment is a basic form of tax data, and pricing is the main asset of a business in the digital economy. However, no specific rules have been set for mass data testing for tax purposes.

Identifying digital economic activities within India's borders, determining the extent of digital economic activity, and collecting and verifying tax and law enforcement legislation for digital businesses may seem like insignificant challenges for the development of tax policy, but they have a major impact on implementation. While such issues and outcomes are still being discussed at the

international level, India has already begun to embrace cooperative approaches to address them.

In India, digital tax policies can lead to double taxation of digital technology-intensive institutions. As a result, the SEP concept could eventually lead to undue hardship for MNCs, defeating the objectives of the double taxation avoidance agreements signed between India and various other countries where international technology companies are based. Therefore, the SEP provision remains ineffective in India.

7.4 Tax Compliance in Digital India

Tax compliance is just as important in India as in any other country. India expects to capture even the smallest transaction data in terms of tax compliance. Moreover, with respect to the sale of digital services, tax assessments are conducted online without the need for a test allowing the data to speak for itself. Indian companies are now fully convinced that digital transformation is inevitable. Larger institutions can only carry out internal work using digital technology tools and a well-organized data system. Tax operations in India are in different phases of immersion, with some making a complete change while others have only partly accepted it.

Like tax policymakers, India's tax administrators are facing rapid and radical changes from the digitalization of the economy and emergence of new ways of working and operating a business. Tax administrations now have access to digital technologies and tax-related data sources, while increasing international collaboration is offering new opportunities to manage tax compliance, protect the tax base, and reduce administrative problems.

The Tax Administration Series, containing a rich set of comparative data on jobs, activities, and tax administration practices, is an important and critical resource providing necessary assistance relating to the opportunities and challenges experienced by tax administrations (OECD 2019). Such resources are helpful at both the international and national levels for understanding the strengths and weaknesses of tax administrations and can identify areas for the development of collective and individual partnerships.

In India, there has been a dramatic shift in tax administration with respect to the number of ways to file tax returns and make payments online. There has also been a rapid increase in personal tax inclusion and corporate income tax. The use of digital resources for social networking such as email, the internet, and online and digital assistants is growing, while the use of traditional services such as postal, telephone, and telegraph services is declining.

Tax administrators in India plan to use advanced technology such as artificial intelligence, cloud computing, and analytics. There is also growing awareness of the use of taxpayer ethics information as a tax compliance tool. The Indian tax administration must use a mathematical and ethical understanding of how taxpayers have used that information to design and develop tax policies. To this end, tax administrations in some developed countries employ behavioral researchers and data scientists.

The Indian tax administration is increasingly adopting a proactive approach to disaster risk management by seeking intervention prior to rather than after the completion of a refund. Tax administrators must use legal mechanisms to encourage the collaboration of senior taxpayers. In India, such cooperation is important as the data show that 35–60% of total revenue includes taxable employee benefits received from taxpayers consolidated under major taxpayer programs.

Tax compliance measures cover multiple revenue sources and recommend tax refunds based on availability and information sharing. There are also plans to implement systematic measures for various other categories of taxpayers, including the integration of tax laws with accounting systems and implementing data security safeguards. Many Indian corporations are already using electronic invoices for tax purposes.

The large number of high-level employees in India is expected to create challenges in human resource management. In addition to these challenges, Indian executives are facing ongoing organizational changes, which require them to build new skills relating to modern data management that is highly data-driven while retaining the knowledge of existing employees. Tax authorities in India want to fight tax fraud and the government wants to achieve the goal of increasing taxes efficiently and effectively.

As India transforms into a digital system, its digital tax administration is developing rapidly. Tax administrators use data analysis to assess risks within the data. As tax officials in India and around the world exchange reports, the OECD has issued tax risk recommendations. It is hoped that in the future the tax system will achieve greater transparency and attract less controversy. India's digital tax administration is reflected in the increase in data transmission, the development of data statistics, and the efficient and effective exchange of information among taxpayers, the tax authority, and the tax administrators in various regions. The motivation to digitalize tax administration is clearly visible to the public and business institutions in India.

There are many concerns raised regarding the equalization levy or similar measures. The first question regards the lack of clarity on the type of taxes to be imposed. Tax administrators in India are introducing an indirect tax that is not covered by tax treaties. Another question has to do with the issues of equality and efficiency. It is generally thought that taxation has a negative impact on small domestic subscribers of digital services. Another problem is the tax rate. It is assumed that digital service vendors will pay tax; however, part of this tax could be transferred to domestic customers, especially start-ups in India. The basic problem is how to separate digital products and services from non-digital transactions. The development of transactions should also be considered and the list of legal activities revised as often as possible. If residents do not pay the levy for the same services, this could be considered a violation of international law.

India continues to struggle to expand its tax base amid rising growth rates. As a result of its low tax-to-GDP ratio, the government is finding it difficult to invest in infrastructure projects and is therefore compelled to meet its budget

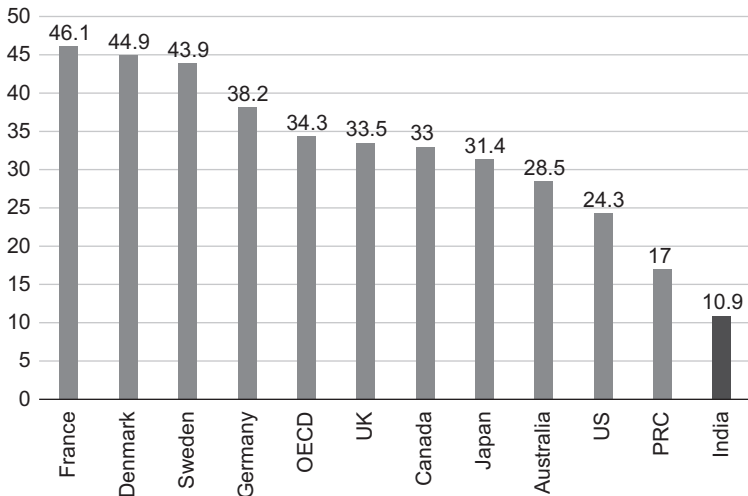


Figure 7.1 Tax Revenue to Gross Domestic Product. GDP= gross domestic product, OECD=Organisation for Economic Co-operation and Development, PRC=People’s Republic of China, UK=United Kingdom, US=United States. Source: Author, using data from the Organisation for Economic Co-operation and Development. 2019. Global Revenue Statistics Database. www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm (accessed 27 August 2020).

deficit targets. In India, the tax-to-GDP ratio is very low compared to the average OECD rate of 34% in 2019 (OECD 2019). While developed countries tend to have higher tax-to-GDP ratios, India’s tax-to-GDP ratio is significantly lower than even that of other developing countries (see Figure 7.1).

India has been struggling to raise its tax-to-GDP ratio for many years. In fiscal year (FY) 2019 (1 April 2018 to 31 March 2019), the ratio was still lower than the FY2018 level of 10.9%. In FY2020 it declined to a ten-year low because of declining customs and corporate tax collection, while property tax revenues have seen modest growth. The ratio is projected to decline further, with revenues dropping because of the unprecedented halt in economic activity due to the global coronavirus disease (COVID-19) pandemic.

The most effective and efficient way to increase the tax-to-GDP ratio is to ensure that people pay their taxes as soon as possible. Implementing a direct code program can help increase tax compliance, while GST reorganization and maximizing the overall levels will also help improve tax enforcement and stop tax evasion. It is important to take appropriate steps to improve tax compliance and expand the tax base. While such measures may increase tax revenue, it is also necessary to focus on promoting economic growth. The government must take responsibility for restoring the economy to a higher level of economic growth.

7.5 International Collaboration

Globally, it is prudent to maintain a consistent set of appropriate international tax frameworks to improve the welfare and efficiency of the economy. This can only be achieved through international collaboration. Despite several attempts to find a consensus-based solution, other countries including India have begun to work together. However, such an initiative in digital economy tax policy could increase legal fragmentation and affect the soundness, flexibility, and growth prospects of the global digital economy.

International cooperation is especially critical to address the challenges of introducing taxation of digital services and tax enforcement. However, international collaboration simply for the sake of collaboration may fail. Many aspects of international collaboration must be considered. To address the challenges of digital taxation, India must take appropriate steps to promote and facilitate international collaboration, while taking into consideration the principles of justice, simplicity, and certainty in reaching an international consensus.

It is important to develop a global digital tax policy that works for the benefit of all in the digital economy. However, creating such a policy involves a rigid and complex process. It is necessary to identify and follow clear goals while maintaining open and transparent consultation at the appropriate level. Identifying price structure and developing a coherent tax policy is a major challenge in India and must be addressed collaboratively. In addition, international cooperation policies should be developed to resolve disputes in a well-planned manner and to handle future disputes.

In addition to these basic principles for successful collaboration, India should follow the potential design considerations in the OECD consultation document, including (1) looking at different levels of development and tax management capacity, (2) ensuring a level playing field between small and large areas (keeping cooperation in mind at all times), (3) maintaining coherence between international and domestic laws, and (4) agreeing on the application of the rules in all local tax administration laws to participate in international cooperation.

In India, like in many other countries, people tend to cut taxes regardless of how much tax international companies pay. This is particularly important in the context of the digital economy because of the existence of ambiguities and the failure of tax systems to keep pace with the changing digital business models that have shaped government and public opinion since the late 2000s.

There are several benefits to having a diverse and multidisciplinary team. Good collaboration encourages and facilitates diversity of knowledge and ideas. By working in partnership with people with different influences, methods, innovations, and cultural backgrounds, the return on investment can be achieved very quickly. The exchange and sharing of the experience of a group of tax administration officials and appropriate collaboration enable teams to work together. It can also expand talents and facilitate long-term thinking, allowing the team to overcome organizational limitations that may exist without such collaboration.

7.6 Recent Developments

The unprecedented COVID-19 pandemic has had a profound effect on the lives of everyone in the world. Not only has it created an extremely challenging situation in India, but it has also spurred the adoption of digital technologies that will change the country's future prospects. The future is about integrating digital technologies, and COVID-19 has given policymakers and the Indian government the opportunity to be part of the digital revolution (Sharma 2020). The pandemic has created many opportunities in the digital space, but has also led to serious problems in the business sector that require the use of technology and digitalization. To meet market demand, various companies in all industries are accelerating investment in emerging digital technologies. To drive digital transformation and the adoption of digital technologies, business enterprises in all industries are increasing investment to meet business needs. The current problem of COVID-19 should be used to drive digital transformation and the adoption of digital technology. Thus, COVID-19 will continue to transform the environment for customers, investments, and companies.

Some countries have taken steps to work together to speed up international consensus. In the case of COVID-19, the adoption of remote technologies helps to reduce the health risks associated with activities that require interaction between people. More and more people are ordering their needs online. Many firms, especially knowledge-based organizations, have adopted work-from-home policies for their employees. Colleges, schools, and training centers have shifted to online classrooms, while universities and professional organizations are using video conferences and webinars. Indian users of these digital services have expressed their interest in continuing to use these online services in the future, and the trend appears to be developing into a new standard.

The COVID-19 pandemic has severely crippled and devastated the global economy, and all activities related to product demand and sales have declined sharply. To counter this, many countries are offering packages of financial incentives to improve economic savings. The current situation has provided some tax compliance waivers and tax exemptions, which have also reduced tax revenue. While the world is embracing a "new normal" situation, economic growth could see a gradual recovery at best. Thus, the current economic climate has put great pressure on governments to seek new sources of taxation.

As digital businesses become a viable proposal, income tax on digital operations within India may not be a major concern. However, the question remains as to how the world's revenue is distributed from digital operations in the various countries where MNCs conduct their business. Under existing land tax laws, tax rights are granted to locations where essential functions occur, goods are used, and risks are taken. For example, revenue should be taxed in the country where marketing skills are developed, not in the country where a worker lives. This ensures that when a company is taxed in a particular area, the consumer's contribution to a worker's salary is unknown.

The global economy and the Indian economy in particular are expected to experience an unprecedented recession in the face of the current COVID-19 pandemic, and there is a great need to focus, consolidate, and improve tax revenue collection. The implementation of joint measures has intensified the digital tax debate and highlighted the need for international consensus on this issue. Consumer behavior has changed (often reversing), leading to significant changes in the digital marketplace. Therefore, it is important for digital companies to pay taxes to avoid a national loss of tax revenue. By filling legal gaps, digital businesses will no longer be tax-free and economies will be able to counter tax-avoidance strategies.

Moreover, the Indian government, like other governments around the world, is enforcing strict deadlines and closures during the current COVID-19 pandemic. Such measures are forcing the Indian economy into an even deeper crisis. However, the government has begun developing various economic stimulus packages to address the impact of COVID-19. To help taxpayers experiencing serious difficulties, the government has proposed a variety of measures to promote tax and regulatory compliance. Amendments of certain provisions and extensions have been incorporated in the Taxation and Other Laws (Relaxation of Certain Provisions) Ordinance (2020).

7.7 Conclusion and Policy Recommendations

The digital transformation of India's economy has created various challenges related to the taxation of international labor. The digital economy is seen as a catalyst for aggressive tax planning, and the purpose of future tax policy is to integrate tax and pricing. India has some unique tax requirements. The country is also compelled to continue to use tax policy as an economic base to increase infrastructure investment in the country. As the current trend toward digitalization appears to be deepening taxation issues, it is necessary for India to reach a consensus.

In general, all countries including India are trying to earn the highest possible revenue from taxation. However, India has a unique and special motive in this situation, as its incentives include its level of openness, reliance on foreign investment and the composition thereof, and level of digitalization. Developed countries such as the US, which is home to the internet digital giants, show a preference for taxing all profits linked to intangible assets.

In India, the introduction of digital processes in all industry sectors, in addition to greater government involvement, has forced major MNCs and local companies to be open and transparent in their digital and operational activities. In this context, the following policy recommendations are proposed as a result of the current research.

- (1) Given the rapid changes in technology and regulations around the world, it is imperative that India's tax administrators act more expeditiously than ever to ensure that they keep pace with the current rate of development;
- (2) It is important for tax administrators in India to participate actively in international discussions on tax policies and procedures. In the past, India has

played a significant role in the BEPS Action negotiations and collaborated effectively with the OECD and G20 on various international tax issues. However, India is yet to implement certain digital economy tax measures to meet the current challenges such as proposing specialized tax systems;

- (3) India must take appropriate steps to implement domestic measures or await international consensus on international collaboration measures. It must play a more important role than ever before in building international consensus and achieving the right kind of international collaboration;
- (4) In addition to effective international cooperation measures, India must have interim measures in place. While the country can consider various domestic ways of dealing with problems as a result of digitalization, it is important to ensure that such interactions do not create major conflicts, uncertainty, distortions, and operational difficulties;
- (5) To address the challenges of digital taxation, India must take appropriate steps to promote and facilitate international collaboration. India needs to consider three key issues—impartiality, simplicity, and confidence—in achieving international consensus;
- (6) India needs to reduce the effects of excessive taxes on start-ups, small and medium-sized enterprises, and new businesses, which are vulnerable to high costs and other problems;
- (7) India's tax structure should be reviewed as much as necessary to keep up with the development of the digital economy. It must endeavor to find the right balance between efficiency and effectiveness in tax compliance and tax collection;
- (8) It is important to enter into negotiations with the various countries whose organizations are heavily involved in digital data creation and marketing in India. It is also necessary to amend the terms of tax treaty provisions to use India's digital tax framework effectively;
- (9) The capacity of tax administration needs to be improved in all respects. The challenges posed by the digital economy concern customer identification, job size, data collection, and verification. These challenges must be addressed in the context of the current changes in tax administration;
- (10) With respect to dispute resolution for tax compliance, Indian tax administrators should consider using an appropriate dispute resolution strategy instead of the current traditional system. In addition to resolving current conflicts more effectively, it should also aim to prevent such conflicts in the future. Effective strategies proposed by India can also be extended globally to resolve tax disputes in other countries;
- (11) Tax administrators must establish a digital instrument by issuing an appropriate and simple tax policy framework. Such a program requires immediate follow-up training and appropriate deployment.

The revitalization and restructuring of India's tax administration systems to address the novel challenges of the digital economy involve many challenges, including the redefinition of many concepts, the asking of many research

questions, and the testing of many suggestions and hypotheses. All parties concerned agree that the solution to this issue must be long-term (at least the basic principles thereof) and based on international consensus. For now, however, India seems to be looking for short-term and immediate solutions to this serious problem. It is seen as a clear indication of the digital business model as a short-term measure, regardless of the various costs associated with value creation and location.

It is important for India to pursue international cooperation to increase trust in the international tax system and avoid divisions in the law. International integration of digital services will improve digital revenue streams and ultimately support economically sustainable development. Such measures must go beyond focusing on digital companies, and consider all businesses with cross-border activities, whether digital-intensive or not.

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8 Digitally Prepared?

The Journeys of the Revenue Administrations in Australia and New Zealand

Jennie Granger and Adrian Sawyer

8.1 Introduction and Methodology

Digitalization is embedded in almost everything we do, from purchasing goods and services to accessing services from government departments. Not only has it opened the globe to everyone with access to broadband, but it has also enabled the efficient use of large amounts of data and enhanced services. Since well before the expansion of digitalization, organizations have been looking for ways to reduce costs and enhance efficiency.

Since the 1970s, the concept of “just in time” has been associated with producing goods to meet customer demand exactly, with respect to time, quality, and quantity. More recently it has been taken to mean producing with minimum waste (Institute for Manufacturing 2018). Originally a Japanese management philosophy developed for Toyota’s manufacturing plants by Taiichi Ohno, it has become a global phenomenon, extending to embrace almost all forms of economic activity (including services) in resource-challenged times. It also extends to the philosophy of modern governments that adopt a neoliberal approach. The coronavirus disease (COVID-19) pandemic has presented a new challenge to the provision of goods and services, leading the world to recognize the fragility of global supply chains and rethink their viability. Debate is also growing on how best to protect local industries in the national interest, at least with respect to essential supplies such as food and protective equipment. Some commentators are arguing for a fundamental rethink to make supply chains more regional and reinsert human judgment as the most important factor for businesses to be successfully agile (Cordon and Buatois 2020). One way to respond to these challenges may be to move toward a “just in case” approach to incorporate more scope in systems and to better recognize risks.

Technology, including digitalization and automated data flows, has played, and will continue to play, a crucial role in helping revenue administrations carry out their ever-growing role in supporting the expectations of government and society. Digitalization combined with smart data exploitation has created both new opportunities and challenges for administrations, serving as the catalyst for organizational restructuring and the embracing of greater use of artificial intelligence.

This chapter applies a tax policy lens to what may be termed a traditional legal perspective. The approach taken is largely positivist, interspersed with some normative suggestions. Further, while there is no specific theoretical framework, an element of institutionalism is applied. Marriott and Holmes (2006) observe that:

Institutional theory is widely employed in disciplines ranging from history and sociology, through to economics and political science. In its simplest form, *institutional theory may be thought of as a focus on the effects of institutions on political outcomes, such as policy formation*. As organisations or individuals must act through the state (considered as the executive, legislative and judicial functions of government) to attain policy objectives, *the rules and institutions within the state can have a significant impact on outcomes*.

(81, emphasis added; citing Gourevitch, 1986: 61)

According to Eccleston (2004: 15), a principal focus of institutional theory is the concept of how institutional factors influence the state's ability to create productive political relationships with key interest groups. In the context of this chapter, the success (or failure) of administrations in delivering digital services is key to the confidence that some groups have in the government. This chapter adopts an in-depth exploratory case study approach. As Yin (2014) states, the need for a case study arises from the desire to understand complex social phenomena, and allows investigators to retain the holistic and meaningful characteristics of real-life events. This chapter looks at how digitalization is shaping the role of revenue administrations, the dominant player in influencing tax compliance, with a focus on Australia and New Zealand.

First, this chapter reviews the “digital journey” taken by Australia and New Zealand since the late 1980s and highlights some common features and challenges. It then considers new digital services, the growing role of data analysis, the emergence of new policies and powers, and the impact of COVID-19. Finally, the chapter looks ahead to what might be the “new normal” for administrations, before offering some concluding observations.

8.2 An Overview of Two Digital Journeys

It is no accident that Australia and New Zealand enthusiastically embraced the twin drivers of change in the late 20th century—globalization and technological innovation. Despite being situated near the bottom of the world, these island neighbors have benefited enormously from their global connections. Their administrations have proved to be resilient adaptors to the forces that have shaped their nations and economies, but the question remains: have they done enough, fast enough, in order to be prepared in time for the challenges of the 21st-century digital economy?

8.2.1 Australia's Journey

The late 20th-century technology revolution that evolved into the 21st-century digital economy has been an important enabler of the prosperity of Australia,

which is the world's largest island (or smallest continent) with a relatively small population. For the Australian Taxation Office (ATO), it has been a constant challenge to stay on the curve of adaptation to meet rising service expectations efficiently and sustain a culture of voluntary compliance, as tax avoidance, evasion, and crime have become borderless and as common online as on the street.

The ATO is a long-lived organization, having celebrated its centenary in 2010. The secret to its longevity is not the essential nature of tax collection, as governments can and do choose different ways to collect tax, but because the organization has proven resilient and responsive to change. This has been tested in high-stress moments when the government has called on the organization to deliver widespread economic stimulus responses rapidly, such as during the global financial crisis and the current COVID-19 pandemic. Digital adaptation and innovation have not always gone smoothly, and some hard lessons have been learned along the way from design and implementation challenges and unintended impacts on taxpayers and practitioners.

Like most administrations and businesses, the ATO initially identified the benefits of technology to improve its internal efficiency and automated manual functions such as tax return processes. The 1990s was a notably innovative period as the organization started to utilize technology to improve its services. As a first step, it pioneered the development of an electronic lodgement service for tax practitioners, an unsurprising move as Australia has one of the highest levels of reliance on tax practitioners of all the Organisation for Economic Co-operation and Development (OECD) countries, being second only to Italy (Australian Parliament 2018: para. 2.76). It also developed the world's first electronic tax return for personal taxpayers.

However, a reckoning was looming. The ATO's growing appetite for technology-supported processes and services was built on an increasingly shaky foundation and a patchwork of legacy systems. The organization kept adding new features as they were given new functions or taxes to administer and patched them into other systems as necessary. By the late 1990s, there were around 180 specialized systems, some dating back more than 25 years. The system had become complex and costly to maintain and difficult to adapt, slowing the implementation of new policy and making innovation increasingly risky (Australian National Audit Office 2018: 13).

The catalyst for change was the government's decision to introduce Australia's goods and services tax (GST) on 1 July 2000. This highly controversial move divided the general public and involved significant changes to business processes and practices. The ATO's implementation challenges were complex, including the need to cater to online and paper-based interactions as many small businesses were not computerized. The ATO, tax practitioners, and taxpayers found themselves returning to using paper-based communication, and ATO workloads increased dramatically (about 25%).

It was clear to the ATO that their information and communication technology systems were unsustainable. After a year spent listening to the community and practitioners, in mid-2003 they announced their self-funded change program,

the Easier, Cheaper, and More Personalised Program (ATO 2003), then the largest and most complex technology change program in revenue management. It involved developing a completely new platform to replace their tax-specialized processing and administrative systems with one processing system and a single management system.

This was more than just an ambitious re-platforming. Importantly, the new integrated system could be easily reconfigured to implement new policies and functions, making it more responsive to the government. Equally important, it supported the ATO's ambition to deliver secure online interactions and services, making compliance with tax law easier, cheaper, and more personalized for taxpayers and their advisors (ATO 2003). However, things did not go entirely smoothly, as the platform, which was planned to be delivered in four years, underwent many changes in scope including new policy changes, and took seven years to be completed, at almost double the expected cost (Inspector-General of Taxation 2010: iii).

The ATO also developed portals to create a single point of access for tax agents and businesses to transact and interact online. For personal taxpayers, pre-population of electronic tax returns turned data matching from a "gotcha" audit to a helpful prompting service. Centralized voice and data analysis and management supported nationally linked call centers, dramatically improving the speed and helpfulness of contacting the ATO for advice.

Another important development was the establishment of a centralized data management and exploitation system under a chief knowledge officer. This system not only supports new digital services, particularly the rapid expansion of data flows from third parties to support prefilling, but also produces a sophisticated analysis of tax risks and supports the customization of compliance responses.

The flexibility and capabilities of the new platform were significantly tested in early February 2009, when the government announced, as part of its response to the global financial crisis, that it would provide cash payments of up to A\$900 to each of its 8.7 million personal taxpayers in April. The rapid distribution of A\$7.7 billion was intended to instill confidence and encourage consumption.

The ATO was fortunate (or benefited from good planning) that their new platform gave them agility. Under the old system, change proposals had to be finalized by 25 December every fiscal year so the remaining time could be spent making and testing the intricate changes in time for the start of filing. In contrast, in 2009 the ATO designed and implemented tax bonus payments in less than two months and distributed payments from April while preparing the system for the ensuing tax time, which also went smoothly.

Since 2010, the ATO's shift to digital accelerated. They launched a reinvention program with the following goals (ATO 2017a: 5): (1) Make it easier for people to participate, (2) deliver a contemporary and tailored service, (3) ensure purposeful and respectful relationships, and (4) be a professional and productive organization. A key focus was developing digital services available through a single-entry point on any device at any time. In 2014, that entry point for individuals and sole traders became myGov, a single access point for government online

services. For businesses and tax practitioners the entry point remained through portals. In 2019, the ATO replaced the aging tax practitioner portal with online services for agents. The ATO plans to replace the business portal with online services for businesses by 2022 (Djurdjevic 2020).

Interactions for businesses and practitioners were further improved in April 2020 with the introduction of the myGovID login, which uses the security features on whatever device is being used (e.g., fingerprint or facial recognition). This illustrates how quickly requirements change, as the previous authentication process was specific to the device on which it was registered.

To ease business and practitioner interactions, the ATO has pursued embedding Standard Business Reporting in application programming interfaces developed in partnership with software developers. Embedding ATO requirements into commercial software could make the reporting of data and tax transactions a by-product of normal business and accounting processes.

Standard Business Reporting, which has been available since 2010, aims to simplify business reporting across government, not just the ATO, by standardizing digital record-keeping terms and requirements for government reporting. By 2018, the House of Representatives Tax and Revenue Committee noted that the ATO's digital services were on par with those of many other nations in the use of prefilled data, and advanced in the use of application programming interfaces to support the development of a "tax eco-system" of partners (Australian Parliament 2018: para. 2.99).

Two important recent developments were (1) the lessons learned dealing with the 2016–2017 system outages, and (2) the implementation of Single Touch Payroll (STP) in 2018. During 2016–2017 the ATO experienced several outages in its online services, the most significant of which resulted in a ten-day outage in December 2016 and a five-day outage in February 2017. Both were caused by problems with the data storage network (Australian National Audit Office 2018: para. 1.17–1.18). This was a salutary lesson on the interconnectedness of the digital world. The impacts were particularly felt by tax practitioners and shook confidence in the reliability of the ATO systems.

Lessons learned by the ATO included the following:

- (1) "[I]dentify the optimal balance of performance, stability, resilience and cost as an overarching consideration" in designing and managing infrastructure (ATO 2017b: 7, recommendation 1.1); and
- (2) Improve business communication on system performance (key services are now reported in real time on their website), and explain when and how general waivers apply, specifically to those impacted through no fault of their own (ATO 2017b: 9, recommendations 5.1 and 5.2).

At a subsequent House of Representatives Tax and Revenue Committee hearing, tax profession representatives raised concerns about the impact on practitioners. Some criticized what appeared to be a "disproportionate spend on myTax, while the businesses of tax professionals floundered during outages and the regular

three- or four-day maintenance downtimes” (Australian Parliament 2019: para. 2.122).

Partnering with software developers to integrate and automate regular ATO interactions as a by-product of businesses’ normal accounting processes reached a new high with the successful implementation of the STP, which commenced in July 2018 with large employers. The STP automated employers’ payroll reporting such as salaries and wages, pay-as-you-go withholding, and superannuation. STP-enabled accounting software automatically reports this information when employees are paid. Implementation largely went smoothly and has created efficiencies for businesses and the ATO, as well as up-to-date data on employee payments. The Institute of Public Administration Australia (IPAA) recognized this achievement with its Culture and Capability award, for “Harnessing business payroll systems to create an enduring, real-time flow of pay and super information and realise new levels of transparency, compliance and social benefit for the Australian community” (IPAA 2020a). By June 2019 over 160,000 employers were reporting information for around 8.1 million individuals (ATO 2019a: iii). By 2020, most employers had transitioned to STP (ATO 2020a: iii), just in time for it to play a key role in supporting the government’s response to COVID-19.

8.2.2 New Zealand’s Journey

New Zealand’s first foray into information technology as we know it was in the 1990s through the Future Inland Revenue Systems and Technology (FIRST) system, described by Inland Revenue as follows:

Originally the term FIRST described the Unisys mainframe components but now is often used to collectively describe both the core Unisys mainframe applications, the integration layer (EAI) and the associated satellite systems and environments. These satellite systems retrieve information via an Enterprise Application Integration (EAI) software layer.

(2013: 80)

One of the chapter’s authors, who was working at Inland Revenue at this time, can confirm that while the system was “clunky,” it was also a “game changer” in supporting Inland Revenue’s daily operations. Inland Revenue’s legacy system was built when it was just the “tax department,” and played virtually no role in social policy or information sharing with other departments. The current commissioner, Naomi Ferguson, is reported as stating,

It was built before anybody really even understood the internet, never mind smartphones, so it doesn’t really work in a real time, real life way ... At what point does a 25-year-old system start to get too fragile? It’s not there yet, but we wanted to act before we got to that.

(Black 2017)

In May 2008, Inland Revenue began working to stabilize FIRST. It was clear that Inland Revenue did not have the right operating model or capabilities required to deliver effective services in the future, and change was needed. In April 2013, the government accepted Inland Revenue's case to change its information systems, including its four-stage transformation roadmap known as Business Transformation. It also endorsed Business Transformation's investment objectives, at a cost of NZ\$1.5 billion–NZ\$1.7 billion. These objectives are as follows: (1) Improve agility so that policy changes can be made in a timely and cost-effective manner; (2) deliver new and more effective services to improve customer compliance and help support the outcomes of social policies; (3) improve productivity and reduce the cost of providing our services; (4) improve the customer experience by making it easier and simpler for our taxation and social policy customers, with a particular focus on the enhanced digital provision of services; (5) increase the secure sharing of intelligence and information to improve the delivery of services to New Zealanders and improve public sector performance; and (6) minimize the risk of protracted system outages and intermittent systems failure (Inland Revenue 2016: 18).

Inland Revenue needs to use information more intelligently to ensure that taxpayers get their tax affairs right from the start, and fit the revenue collection and dissemination processes seamlessly into people's lives to enable them to self-manage with speed and certainty. Inland Revenue itself needs to become much more agile, effective, and efficient. The major facilitator of this change would be a modern technology platform that is digitally based and highly automated. In addition to more reliable information technology that is less costly to operate, the system must be able to accommodate government policy changes in a timely and cost-effective way.

Funding was made available in 2015, with Business Transformation expected to take around ten years to complete, assuming largely "business as usual" conditions. While it is not the purpose of this chapter to discuss Business Transformation in detail, Sawyer (2019) offers an "outsider's" perspective of the impact of New Zealand's largest and most complex information technology project, expressing the worry that Business Transformation's focus on the enhanced use of technology continues to isolate the "digitally challenged," giving rise to concern regarding taxpayers' rights.

As of late 2020, the project was well past the halfway point and about to enter the final phase. An ongoing challenge is the need to incorporate new developments, including social policy changes and student loan updates, and most recently to deal with the Government of New Zealand's COVID-19 fiscal response (New Zealand Treasury 2020).

Technology is facilitating the increased use of automated algorithms to make sense of large volumes of data and identify trends in information such as taxpayers' filing and payment behavior. The use of benchmarking data is a significant feature. Morris (2018), a customer segment leader in Inland Revenue, emphasizes that "Algorithms don't make any decisions, only inform them. The ones IR uses are predictive in nature, programmed and checked by real people and the privacy of taxpayer information is always paramount."

Key to Business Transformation's success to date has been its approach of "co-design, built on clear communication with the customer, about the goals and benefits of their engagement" (O'Neill 2020). Assurity, one of the key technology providers to Business Transformation, states,

Change is never done for the sake of change ... It is done for people. It's easy to overlook this principle because the physical aspect of change is often centred around technology, primarily, and process. But both those aspects are delivered only for the people they serve.

(O'Neill 2020, emphasis added)

Inland Revenue's Business Transformation program has received two Digital Transformation Awards: 2020 Digital Disruptor for Australia and New Zealand, and 2020 Omni Experience Innovator for Australia and New Zealand (Williams 2020). More generally, New Zealand is at the forefront of much of the world's digitalization, being one of the original five members of the Digital Nations, now expanded to nine members. The Digital Nations meet regularly to share best practices and key learnings, collaborate on common projects, and help each other become even better digital governments faster and more efficiently (Government of New Zealand 2018).

Several lessons can be drawn from the two countries' experiences. Both countries had systems at risk of failure as they were designed before the demands of operating in a digital environment became paramount. Their experiences are similar in that they moved from patchwork legacy systems to a new platform characterized by automated operational processes. The development of data exploitation and the use of technology-assisted professional tasks such as risk assessment are core to the administrations' abilities to remain agile. Highlighting the need for systems to be flexible and adaptive, both administrations have added new functions, including new taxes, new information-sharing requirements, and non-tax functions, such as enhanced welfare provision.

Engaging stakeholders results in better-designed services and greater support for change. Managing risks to system performance and infrastructure resilience increasingly involves managing impacts on an ecosystem of interconnections, that is, identifying and managing impacts on partners. System outages can have significant and costly impacts throughout the ecosystem, and confidence is lost quickly. Balancing the expectations of practitioners, businesses, and individuals is challenging and gives rise to difficult choices, such as whether administrations should be keeping pace with digital innovations in managing competing demands.

8.3 Enhanced Services

8.3.1 Australia's Approach

The ATO has pursued a strategy of utilizing digital technology and data to encourage voluntary compliance by making interactions as convenient and straightforward as possible. Interactions can be carried out through a single-entry point, are increasingly automated, and are a seamless by-product of everyday transactions.

Guidance is also increasingly available in context (“just a click away”), and support tools such as spreadsheets and calculators are embedded where they might be needed. As businesses and the community have become more sophisticated digital users, the challenge has been to keep up with rising expectations and balance competing demands for improvements.

For individuals and sole traders, online services are linked through their myGov accounts. They can manage their tax, superannuation, and a range of other interactions if needed, such as activity statements, pay-as-you-go installments, and payment arrangements in one place, on any device. The flagship investment has been in easing the annual preparation and filing of tax returns. Compared to its predecessor, myTax is a significantly streamlined experience, and most of the data required can be prefilled, particularly if the taxpayer also uses the ATO’s MyDeductions mobile app. This app can be used to capture receipts progressively and keep track of expenses and travel records. For those who use a tax agent, the same prefiling services are available in agent software.

Today’s business portal can be used to prepare and lodge activity statements and annual reports, manage accounts, view reports, request rulings, and update registration details. Businesses can also access a range of online tools, calculators, and support services such as an after-hours call-back service and click-to-chat functionality for small businesses. Online services for agents are the entry point for practitioners, where they can access various ATO systems and client records, lodge statements and returns, create payment plans, and manage a range of practice administration tasks, including updating client lists.

8.3.2 New Zealand’s Approach

A key feature of Inland Revenue’s journey is enhanced services. The importance of this feature is reflected in its nomenclature, which has moved away from “taxpayer” to “customer,” and from “investigating accountant” to “customer compliance specialist.” This emphasizes a focus on service rather than traditional enforcement. Although such terminology is understandable, it creates a potentially misleading impression of the role of the administration, which extends well beyond service provision. Although the move for administrations to replace “taxpayer” with “customer” has become common practice to create a “customer-focused” culture, it is beyond the scope of this chapter to examine whether this has been successful. However, Prebble (2001) correctly argues that the term “customer” is inappropriate for taxpayers engaging with Inland Revenue regarding their tax liabilities and obligations.

Nonetheless, a focus on enhancing customer service remains, with statistics collected annually for inclusion within the administration’s annual report. Indeed, one component of Inland Revenue’s corporate strategy is to “keep our customers at the centre of everything we do” (Inland Revenue 2019: 1). Inland Revenue’s intention is to achieve its primary outcome of improving the economic and social wellbeing of New Zealanders. The Government of New Zealand has begun to focus on wellbeing, as seen in the introduction of wellbeing budgets

and the adoption of the New Zealand Treasury's Living Standards Framework (New Zealand Treasury 2018).

This focus includes a drive to provide digital and data services personalized to individuals, businesses, and tax agents. Principally provided through the myIR portal, which was set up in the early stages of Business Transformation, all taxpayers can access their tax details (including their accounts and correspondence) and interact with Inland Revenue. Tax agents are also included where they have been granted access by their clients.

Implementing new technology almost always encounters some “teething problems,” and Business Transformation is no exception. Tax agents have principally borne the brunt of these issues, having lost access to clients' information, had letters incorrectly sent out to clients, and encountered other failures by Inland Revenue to respect agent–taxpayer agreements fully. Resolving such issues is a time-consuming process, leading to a negative impact on accountants and their relationships with their clients (Pullar-Strecker 2019). Anticipating such issues, Inland Revenue called upon the assistance of several accountants in 2018 to pre-test the changes prior to roll-out (Johnson 2018). However, not all issues could be reasonably expected to be foreseen.

8.4 Smart Data-Led Compliance

Digitalization has opened opportunities for tax administrations to analyze enormous amounts of data and undertake sophisticated customer-segmented compliance analyses.

8.4.1 Australia's Experience

Complementing the development of its digital and data capabilities, the ATO was restructured in 2002 to bring its compliance activities (both assistance and enforcement) into one compliance group configured largely into taxpayer segments. Enabled by the new expert data exploitation capability, its compliance data-led activities have transitioned from simple data matching to a sophisticated intelligence-led capability to understand taxpayers at the customer segment level, identify risks, and tailor compliance responses. This capability has evolved into today's Client Engagement Group, which “emphasises how important quality relationships are in shaping future compliance—from our support and assistance work, our advice, all the way through to audits and investigations” (Towell 2016).

This cultural journey has been significant, from a service centered on tax expertise to one that is customer-facing, and from technology-supported to technology-complemented. The journey continues and reflects a broader societal trend of artificial intelligence automating some professional work. This leads to the question: What unique expertise do humans contribute to complement smart technology?

Data exploitation and digitalization have given the ATO the means to upstream compliance responses on an industrial scale. By utilizing behavioral

economics (i.e., “nudge”) techniques, they can exploit taxpayer insights to prevent and preempt noncompliance (ATO 2020a: 15). Automated nudges during the preparation of digital returns illustrate this approach. Nudges may prompt taxpayers to check if certain income was included or question a claim for expenses as above typical claims for that industry or occupation. As a recent example, data acquired from cryptocurrency transactions were used to remind taxpayers through the pre-fill service to report income from those transactions (ATO 2020a: 16).

8.4.2 New Zealand’s Experience

To make this technology and associated digitalization work, demand has increased for highly skilled data engineers and scientists, both as system developers and in-house within the administration. This in turn has led to a change in the skill mix and professional expertise of staff. With this changing focus, cyber-sleuthing is emerging as a new core skill, as Inland Revenue staff need to work through and make sense of huge amounts of data and taxpayers’ online presence, necessitating greater use of artificial intelligence.

8.5 Tackling Tax Avoidance, Tax Evasion, and Financial Crime

At the other end of the compliance spectrum, combating tax evasion and tax crime has become even more challenging as it has become borderless and digital, using the dark web and digital tools such as cryptocurrencies to mask activities. New cyber threats such as identity theft and tax-related hacking can manifest anywhere globally, and often simultaneously. Adding to the challenge, tax crimes are often the tip of the iceberg. For example, multinational modern slavery rings and smuggling operations linked to terrorism or even financing terrorist activity can be lurking in the hidden economy.

For the ATO’s compliance officers and criminal investigators, combating these threats increasingly means working in multi-expert taskforces that may include other agencies and may be multi-jurisdictional. The two flagship ATO taskforces are:

- (1) The Tax Avoidance Taskforce, which works with partner agencies and other jurisdictions to investigate the most aggressive multinational tax avoidance arrangements, including profit shifting (ATO 2019b); and
- (2) The ATO-led Serious Financial Crime Taskforce, which can share intelligence and utilize the collective powers of its members to investigate jointly the most serious and complex financial crime. Its current priorities are cyber-crime (technology-enabled crime) affecting the tax and superannuation systems, offshore tax evasion, and illegal phoenix activity. Recently added is serious financial crime affecting the ATO-administered COVID relief measures (ATO 2020b).

8.6 Increasing Global Interconnectedness

In responding to the emerging digitally enabled compliance risks, administrations have needed to react to new business models, enhanced global supply chains, and digital marketplaces that are emerging in businesses both nationally and globally. The ATO and Inland Revenue both recognize that being digitally prepared extends well beyond their country's domestic environment or jurisdictional boundary. They are both longstanding contributors to key international forums and collaborate frequently with each other and like-minded authorities on issues of common interest.

The base erosion and profit shifting response of the OECD and Group of 20 (G20) requires countries' administrations to have highly sophisticated digitalized tax systems, *inter alia*, to facilitate the exchange of information between the Global Forum on Transparency and Exchange of Information for Tax Purposes. The ATO and Inland Revenue are both enhancing their global interconnectedness with other administrations to support information exchange, a form of global supply chain, and developing infrastructure to support a digital interface as the principal means of interacting with each other.

The most challenging component of the OECD/G20 Action Plan is arguably Action 1: Tax Challenges Arising from Digitalisation (OECD 2020a). It is not the purpose of this chapter to review the efforts of the OECD and Global Forum, but it is worth observing that digitalization is facilitating three significant phenomena: scale without mass, reliance on intangible assets, and centrality of data. All three pose serious challenges to elements of the foundations of the global tax system.

At the time of writing in late 2020, public consultation is open on the OECD's reports on Pillars One and Two. Pillar One, the reallocation of taxing rights, (1) addresses the question of business presence and activities without physical presence, (2) determines where tax should be paid and on what basis, and (3) determines what portion of profits could or should be taxed in the jurisdictions where customers and/or users are located. Pillar Two, the Global Anti-Base Erosion mechanism, will (1) help stop the shifting of profits to low- or no-tax jurisdictions facilitated by new technologies, (2) ensure that multinational enterprises pay a minimum level of tax, and (3) level the playing field between traditional and digital companies (OECD 2020a).

Elliffe (2020) provides a comprehensive analysis of the Global Forum's Inclusive Framework's compromise on Action 1, as of mid-2020. A useful insight is Elliffe's recognition that, just like the "1920s compromise" developed by the League of Nations to reduce double taxation, the response to Action 1 can be seen as the "2020s compromise." The goal of this compromise is to develop new tax architecture both to deal with growing forms of non-taxation of components of the global digital economy and to respond to the challenges faced by governments in their fiscal responses to COVID-19. Dealing with the digital economy necessitates reference to broader issues, including the allocation of taxing rights, reduced relevance of physical presence, and challenges created by the "arm's

length” principle. It remains to be seen if there will be a compromise, and what it will look like if it emerges.

8.7 New Laws and Expanding Powers

New laws and strengthened powers have been needed to deal with businesses as they become increasingly agile and operate internationally and online, making where they pay tax more of a choice. For example, the ATO’s ability to deal with multinational avoidance has been strengthened by the introduction of (1) multinational anti-avoidance law, which addresses permanent establishment avoidance schemes and allows the commissioner to double maximum penalties; (2) diverted profits tax, which addresses transfer pricing and general avoidance schemes; and (3) OECD hybrid mismatch rules to neutralize the effects of cross-border mismatched arrangements (Hirschon 2019).

Powers to tackle crime have also grown, at least by association, as administrations have been tasked with a greater role in law enforcement. Partly a consequence of administrations’ unprecedented access to taxpayer data, both nationally and globally, this also reflects the multidimensional nature of the most serious and complex financial crime, not just tax crime.

8.8 Data Sharing and Data Transparency

The ATO and Inland Revenue receive and exploit data on a massive scale. The ATO alone receives more than 600 million transactions yearly (ATO 2020c), and its sources continue to expand. The ability to combine reported data with a myriad of other sources, such as Google Earth views of properties, social media, and voiceprints, is a very powerful investigative tool. Taxpayers need to be aware of its potential to create a much deeper and broader insight into people, businesses, and their interconnections. Such insights are being increasingly shared.

Information-sharing agreements enable administrations to assist, and be assisted by, other government departments in detecting and addressing noncompliance in non-revenue income and expenditure streams. For instance, administrations are monitoring student loan obligations and the provision of income support and other benefits nationally, as well as sharing approved information with treaty partners globally. Such widespread growth in data sharing necessitates enhanced data protection and transparency, both within governments and between governments, to protect taxpayers’ rights and instill confidence in the community that data are being shared appropriately.

For example, taxpayer privacy in Australia is protected by both the Privacy Act 1988 and strict secrecy provisions in tax laws. Data sharing by the ATO with other agencies is a legislative exception to this strict secrecy requirement. The list of exceptions has notably grown, particularly in law enforcement. The ATO must also publish any program where they obtain information on 5,000 individuals or more and must include the purpose, what is being collected, how it will be used, and with which agencies or organizations data will be shared (ATO 2020d). The

ATO is generally keen to be transparent about the data it collects and regards communicating its intention to collect data as preventing noncompliance by alerting people to be careful.

Ethical questions about what data are collected and combined and with whom such data are shared are growing increasingly complex. For example, the ATO and Inland Revenue now have biometric databases of voiceprints recorded with taxpayers' consent. These voiceprints can be used to identify taxpayers accessing their myGov or New Zealand's myIR accounts. In Australia, this voice biometric information can also be shared with linked services from other agencies (ATO 2020e).

The strict requirements of taxpayer confidentiality can shroud revenue administrations' activities and unless they find ways to demystify what they do, can raise justified concerns about whether they are exercising their powers appropriately. One effective way to promote understanding and confidence is to share anonymized data about taxpayers and the system.

8.8.1 Australia's Experience

The ATO has published aggregate annual tax statistics for around 100 years. Since the mid-2000s it has made data available for researchers, releasing annual redacted income tax sample files (ATO 2016: 1). In 2019, the ATO began releasing ATO Longitudinal Information Files, a 10% sample of longitudinally linked individual tax and superannuation records available only to approved researchers in a secure environment. Aggregated results can only be published once checked to ensure that taxpayers cannot be re-identified (ATO n.d.).

8.8.2 New Zealand's Experience

In New Zealand, Inland Revenue is committed to delivering the benefits of open data by proactively making its data freely available to the public, where appropriate. Within its broad strategy of facilitating taxpayer compliance, and acknowledging the need to maintain taxpayer information secrecy, it removes identifying information before publicly releasing any data.

The 2017–2019 Tax Working Group made two important recommendations concerning making data publicly available, as follows:

- (i) Strongly encourages the Government to *release more statistical and aggregated information about the tax system* (so long as it does not reveal data about specific individuals or corporates that is not otherwise publicly available). The Government could consider further measures to increase transparency as public attitudes change over time.
- (ii) Encourages Inland Revenue to *publish or make available a broader range of statistics*, in consultation with potential users, either directly or (preferably) through Stats New Zealand.

(2019: 21, emphasis added)

To implement each recommendation, Inland Revenue requires a sophisticated information system capable of handling an enormous amount of data, along with secure links to Statistics New Zealand and other relevant government departments. The Government of New Zealand's response to both recommendations has been to consider including them in its tax policy work program. At the time of writing in late 2020, these recommendations form part of an information collection and use workstream that includes "the collection and public release of information to support policy advice, evaluation and public debate on policy issues" (Inland Revenue 2020).

8.9 Impacts on Taxpayers and Tax Professionals

There is no doubt that developing digital and data capabilities delivers benefits and efficiencies beyond tax administrations. Digital services that are simple, almost seamless for everyday transactions, and available around the clock are fast becoming the expected norm, not the gold standard. However, they are not a panacea.

The transition to such services can be challenging as taxpayers become familiar with new online platforms. The closure of physical offices, call centers involving the navigation of complex interactive voice response menus, lengthy wait times, and the switch to digital communication rather than mail can be daunting for many, and an insurmountable obstacle for the digitally challenged and vulnerable.

Even for the digitally confident, there are times when it is important to connect with a person, and the digitally vulnerable need specialized support. For example, the free ATO Tax Help program has accredited community volunteers available face to face or by phone to help low-income earners prepare their tax returns using myTax. The Government of Australia also recently funded a national program of independent tax clinics to provide free advice to people, small businesses, and non-profits who may be unable to afford professional advice and representation on their tax affairs (see ATO 2020f). In New Zealand, while the digital channel is intended to be the focal point for all forms of communication between Inland Revenue and taxpayers, it does not adequately serve those taxpayers who are "digitally challenged" or "digitally excluded," principally those who are elderly, disabled, and without access to reliable broadband (Sawyer 2019).

For tax agents, accessing their client's information and carrying out transactions online at times that suit their practice have significant efficiency benefits. Because of the frequency of their interactions with clients and administrations, they also bear the brunt of any implementation "teething problems" as well as additional costs if they have to upgrade their computer hardware and software, a cost that will be passed on to clients. This can turn into recurring costs of upgrading accounting software to stay current with administration requirements. Friction can also emerge if agents feel that less effort and funding is going into improving their interactions and removing irritants than is being expended on free taxpayer services. Agents must also manage a new vulnerability beyond their control; that is, the interconnectedness of their system means that any revenue

system instability or outages can immediately and significantly affect their practice. For times when they wish to have direct telephone contact with key staff, the ATO provides a dedicated tax agent phone line and a Fast Key Code guide that can be used to key ahead to their option without listening to the entire menu. Moreover, if the answer to their question is available online, the service representative will direct them to where they can find the answer.

As taxpayer and practitioner dealings become increasingly seamless and automated, a key question is, who is or should be making decisions? System-generated correspondence, with no apparent human intervention, has been a feature of many administrations' operations for some time. Mistakes are made too frequently, and taxpayers may be unable to rely on computer-generated communications. For example, in *Pintarich v. Deputy Commissioner of Taxation* (2018) Federal Court of Australia—Full Court 79, a taxpayer remained liable for interest charges even though a computer-generated ATO letter purportedly remitted the taxpayer's liability. The court held that the statement in the computer-generated letter could not be relied on since there was no related mental process involved.

Digitalization raises the possibility that such issues could be expanded. The need to consider carefully how wise it is to “design out” human judgment is illustrated by the recent A\$1.2 billion settlement by the Government of Australia in the class action over its “robodebt” scheme to detect welfare overpayments. The scheme automatically took tax annual income data and averaged it over 26 fortnights, presuming that income was the same in each two-week period. The government admitted in litigation in 2019 that the income-averaging method was unlawful.

AI systems could potentially make decisions concerning investigations, information sharing, and choices of action, although Morris (2018) suggests that, in New Zealand, Inland Revenue will only use algorithms to inform decisions that will be made by humans. However, questions remain, is this within the law, nationally and/or globally? Is this within the scope of the delegations provided to the Commissioner by Parliament? Is human intervention a statutorily expected feature of these delegations? Can the Commissioner, in delegating their powers to staff, also delegate this to artificial intelligence systems?

These questions need to be continually revisited as the potential for digital decision-making grows. Continual demands to cut costs, especially those of lower-skilled staff, exacerbate this pressure.

8.10 Readiness for the Coronavirus Disease Pandemic

The OECD Forum on Tax Administration (2020b: 3) reported that new responsibilities being taken on by administrations fall into the following three categories: (1) Financial assistance to citizens and businesses; (2) providing services and/or staff to support wider government COVID-19 responses; and (3) information assistance, that is, sharing information and using their data analytics capabilities. The ATO and Inland Revenue both illustrated the invaluable contribution that tax administrations can make to government fiscal responses during a pandemic.

They are playing all three roles described here while demonstrating impressive agility to deliver at scale. It is also fair to say that the timing was fortuitous.

8.10.1 Australia

From February 2020, the ATO's priorities shifted to delivering stimulus measures, including:

- (1) Jobkeeper (a wage subsidy scheme), businesses, and not-for-profits receiving fortnightly payments for eligible employees;
- (2) Cash flow boosts of A\$20,000–A\$100,000, delivered as credits when eligible businesses lodged their activity statements;
- (3) A temporary investment incentive for eligible businesses, accelerating depreciation deductions for eligible assets acquired from 12 March 2020; and
- (4) Early access to superannuation, allowing individuals affected by COVID-19 to access some of their superannuation.

They also introduced a shortcut claim of A\$0.80 per hour for running expenses for working from home during the peak of social isolation (1 March–30 June 2020).

The ATO's resilience and agility have been impressive. Commissioner Chris Jordan acknowledged, "Single Touch Payroll already being used by the majority of employers to report salary and wage information was the right vehicle at the right time for Jobkeeper payments and to access Cash Flow Boost for employers" (ATO 2020a).

While this may be largely good timing, it was an extraordinary challenge to respond rapidly while ensuring the safety of staff and preparing for tax time starting on 1 July. The ATO re-deployed 5,000 staff while up to 15,000 people were working from home (IPAA 2020b). By 30 June they had distributed A\$35 billion in Jobkeeper payments and cash flow refunds and released A\$20 billion from superannuation for almost 2.5 million individuals (ATO 2020a: iii).

Another vital contribution was the ability of STP data to provide an early insight into the impact of social isolation restrictions on employment, revealing a better-than-predicted outcome (Burton 2020). Access to this data enabled the Australian Bureau of Statistics to report on more than ten million employees and publish results within 2.5 weeks, compared to a monthly survey of 50,000 individuals that took five weeks to publish.

The impact on Australia's finances has been alarming. The budget deficit is forecast to reach a record A\$213.7 billion in the fiscal year 2020–2021, and net debt is set to peak in 2024 at A\$966 billion, 36% of gross domestic product. The ATO announced that net tax collections were A\$404.7 billion in 2019–2020, A\$21.2 billion (5.0%) less than the previous year and A\$33.9 billion (7.7%) below forecast (ATO 2020a: 59).

The diversion of ATO staff to work on the economic stimulus and the cautious approach taken to compliance activity and debt collection has also

impacted the country's finances. The total revenue effect from compliance activities was A\$13.7 billion, against a target of A\$15.0 billion (ATO 2020a: 66). It is currently too early to tell the impact on the tax gap, which is measured retrospectively.

8.10.2 New Zealand

Inland Revenue is well placed to handle the government's response to COVID-19. New Zealand's response to COVID-19, which involves a mix of excellent timing and good fortune, includes the following:

- (1) A wage and leave subsidy (the largest call on the NZ\$50 billion funding package);
- (2) A temporary tax loss carry-back regime to provide cash flow quickly to businesses;
- (3) Increased administrative flexibility for Inland Revenue to modify due dates, timeframes, or other procedural requirements quickly for taxpayers impacted by COVID-19;
- (4) Tax residency concessions;
- (5) Small business loans through Inland Revenue; and
- (6) Increases in various thresholds (for example, provisional tax and asset write-offs).

The package also recognizes that more people have been required (or are choosing) to work from home, and provides enhanced employment allowances and reimbursements where employees are not normally allowed to claim deductions.

Like most developed countries, Australia and New Zealand adopted a fiscal stimulus approach to retaining jobs, facilitating business survival, and reducing the level of potential negative economic decline. The immediate consequence of this is burgeoning levels of government debt. In New Zealand, government debt as a share of gross domestic product is expected to rise from around 20% to over 50% (over NZ\$200 billion) by 2021. With the Government of New Zealand focusing on enhancing the wellbeing of New Zealanders, this increase in debt gives rise to several key questions:

- (1) What does recovery look like from an intergenerational equity point of view?
- (2) How will the government's "books" be rebalanced in the future?
- (3) How will agencies (such as Inland Revenue) ensure that the fiscal stimulus is spent effectively and efficiently?

One direct consequence is that Inland Revenue staff have had to divert their efforts away from investigating and auditing taxpayers, to reviewing wage subsidy applications and administering the small business loans scheme, among other new roles. Much of this work has been conducted by staff working from home, raising

concerns over possible breaches of confidentiality and the quality of broadband access. The effect on overall levels of taxpayer compliance remains unclear at this time.

Cuthbertson (2020), New Zealand’s tax leader with Chartered Accountants Australia and New Zealand, observes that the efficiencies of New Zealand’s digitized tax system (developed through Business Transformation) provided Inland Revenue with a degree of nimbleness in responding to COVID-19, and an ability to respond while maintaining the capacity to support “business as usual” services. New Zealand’s tax system’s administrative capability has inbuilt flexibility to enable significant changes that facilitate a change of direction in ways not possible in many other countries. Concurrently, technology has been repurposed in ways not originally intended, such as the myIR portal. Specifically, Cuthbertson (2020) comments the following:

New Zealand was both fortunate and lucky to have invested in our tax infrastructure and systems upgrade when we did. *If this pandemic had occurred even 12–18 months earlier, it is likely that our tax system would not have been well placed to deal with it.* While IR’s \$1.8 billion business transformation project to automate and digitize the country’s tax system has not been without issue on implementation, its versatility has served NZ Inc. well. . . . *Over the past six months IR’s agility, the investment in digitalisation, and perhaps some fortunate timing, have enabled the country’s tax system to excel in its response to the pandemic.*

(emphasis added)

Access to data that aid a government’s understanding of the crisis and how their strategies are impacted has been vitally important. Of any organization, tax administrations can provide the broadest and most in-depth analysis of the state of the economy and businesses. While national treasuries may offer a global perspective, they rely on data analysis from the tax administrations, supported by national statistics.

8.11 Looking to the Future: What Will Be the “New Normal”?

Many people are now asking, “What will be the new normal post-COVID-19?” Will we revert back or does COVID-19 mark a permanent shift to a world of greater travel restrictions, lockdowns, protectionism, and economies struggling to provide sufficient employment opportunities? While it is generally not our intention to make predictions, we see a number of implications that suggest a “new normal” for administrations, the extent of which is not yet clear.

Tax administrations have become important data hubs for governments. Their reach extends well beyond tax-related information, often acting as a “shop front” for businesses when dealing with government agencies, as well as the administrator of numerous tax expenditures, superannuation, and social services. The

scale and currency of their data and ability to provide rapid analysis are extremely valuable. The exchange of information between government departments means that data can be held by various agencies but is accessible by the administration when necessary.

Tax administrations now offer services facilitating almost any part of compliance with tax obligations, including tax payment mechanisms via myGov in Australia and myIR in New Zealand. The pandemic response proved that tax administrations can deliver digitally at scale, minimizing the burden on taxpayers, tax professionals, and the general public; and maximizing fast distribution. They will likely be expected to remain agile and responsive and may become a “one-stop shop” for interactions between businesses and governments. From a national perspective, digital services and collection can be expected to increase as digitalization becomes the expected (and perhaps only) way for taxpayers and tax agents to interact with the administration. The move toward seamless everyday interactions will continue, and tax returns themselves may become invisible. The role of artificial intelligence will grow, as will the understanding of when and how complementary human expertise and judgment are required, and multi-expert cross-agency teams will continue to tackle complex multifaceted compliance and enforcement issues. In the future, it may even be possible to use the revenue system to digitally nudge taxpayers to comply with non-tax regulatory obligations.

Digital capabilities will increasingly be used to collaborate with international partner agencies to facilitate compliance and other activities. Currently, most international agreements, both bilateral and multilateral, are largely limited to helping share information. The collaborative digital capabilities being developed focus on improving these information flows. However, agencies do connect virtually and continue to explore ways to work together where they have a common interest while maintaining jurisdictional autonomy. For example, in 2019, the ATO was internationally connected to the Financial Crime Intelligence Network, a decentralized computer system that enables financial crime investigation services from different countries to work together, while respecting each jurisdiction’s autonomy (ATO 2020a: 17).

8.12 Conclusions and Policy Recommendations

This discussion offers insights through comparative case studies of how the ATO and Inland Revenue Department evolved “just in time” to meet the challenges of digitalization. They have been resilient adaptors to keep pace as their countries embrace the opportunities of globalization and technology innovation. Digitalization combined with smart data exploitation has created new opportunities and challenges for them. Our case studies point to five significant policy issues.

- (1) The design of information technology infrastructure is moving away from being tax-specific to being integrated and networked.

It is essential to plan for contingencies and be prepared, not just for today's requirements and the envisaged future, but also for significant change (COVID-19 is a potent example) during the redevelopment of systems, while remaining nimble and adaptable.

- (2) The role of tax administrations is expanding as a smart data hub for a whole-of-government approach.

The data collected and tax administrations' ability to exploit this to support digital services is a valuable resource that can provide valuable insights and intelligence well beyond tax-related interactions. More regular and expanded sharing of data throughout the government (and in some cases between jurisdictions) should be expected.

- (3) The shift from merely consulting stakeholders during the design process to collaborating with them.

Stakeholders must be actively involved in the design and implementation phases, reflecting a two-way engagement. This reflects the fact that the reach of tax administrations extends well beyond taxation, being linked to welfare and other government services—they are effectively a digital intermediary between citizens and businesses, and the government.

- (4) Supporting people through transition, especially the vulnerable.

An outstanding challenge is to invent new approaches for the digitally challenged and vulnerable for whom the digital approach is unsatisfactory. Recognizing that not all businesses are highly digitalized is vital to help them transition to becoming more digitalized.

- (5) Managing ecosystem risks.

High levels of system integration mean that risks, such as system outages, extend beyond the tax system.

The case study findings emphasize the need for digital preparedness and engagement with key stakeholder groups. The tax administrations' success in delivering digital services has been instrumental in facilitating a high level of confidence in their governments. In addition to the policy recommendations above, these digital journeys also highlight large policy issues, such as those stemming from enhanced digital decision-making and its associated powers. It is imperative to check that administrative powers are effective and sufficient and to implement any necessary changes. From the perspective of Australia and New Zealand, this new digital approach must be developed within the context of the rule of law and must ensure that the rights of citizens are protected.

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9 Digitalization of the Tax Administration and Its Achievements in the Republic of Korea

Jae-Jin Kim

9.1 Introduction

Before winning distinction in the international community as an information technology powerhouse and the world leader in e-government, the Republic of Korea (ROK) experienced a series of impactful events, including the Korean War from 1950 to 1953, seven Five-Year Economic Development Plans from 1962 to 1997, and the country’s request for an International Monetary Fund bailout in 1997. Despite the resulting economic turmoil, the ROK became the first former aid recipient to join the Organisation for Economic Co-operation and Development Assistance Committee¹ in 2009, and it had accomplished \$1 trillion in trade by 2011. The ROK was also the first emerging economy to join the Paris Club² in 2016 and became the seventh member of the 30/50 Club in 2019³ after France, Germany, Italy, Japan, the United Kingdom (UK), and the United States (US). Further, the ROK has successfully hosted two Olympics and one World Cup and is home to many world-famous sports stars, K-pop singers, and K-drama actors.

One of the many factors behind the ROK’s remarkable economic success is the digitalization of its tax administration. Digitalization has been initiated to respond to taxpayers’ demands for a better tax service, fulfill the need for effective tax management, exploit the mature information technology environment, and benefit from the synergies created by information sharing among government bodies. Digitalization has also benefited Korean society positively in the ongoing coronavirus disease (COVID-19) crisis, which has severely impacted many people and economies around the world. Since digitalization allows taxpayers to do their taxes without having to meet tax officials in person, this “untact” process has recently become even more significant.

The purpose of this chapter is to provide insights for countries working to digitalize their tax administrations and enable them to find solutions to make their tax administrations more transparent, efficient, simple, and equitable. Initiatives taken by the Government of the ROK to achieve digitalization—including the Tax Information System; Income Deduction for Amount Spent on Credit Cards, etc.; Home Tax Service (HTS); Cash Receipt System (CRS), Simplified Year-End Tax Settlement System; e-Invoicing System; pre-filled service; and Neo Tax

Integrated System (NTIS)—will be reviewed in chronological order. The chapter will then examine the country's achievements in terms of increased tax revenue through enhanced transparency, reduced operating costs,⁴ and improved convenience for taxpayers.

9.2 Digitalization of the Tax Administration in the Republic of Korea

During the initial stage of digitalization from 1967 to 1996, the main goal was to shift from processing simple, manual tax data to generating meaningful, automated information through the sophisticated management of such data. This shift was accompanied by the installation of computers, recruitment of computer-literate personnel, improvement of information technology, capacity building of employees, and data accumulation and processing. Efforts made in this initial stage laid a solid foundation for the digitalization initiative, which effectively began with the launching of the Tax Integrated System (TIS) in 1997.

9.2.1 Tax Integrated System (1997)

9.2.1.1 Background

In 1997, the National Tax Service (NTS) launched the TIS, an integrated database that connects all district tax offices into a single network and enables tax administration by function. This system overcame the shortcomings of automatic data processing, which initially laid a foundation for evidence-based taxation through the centralized management of tax data, but still required manual processing of data in many areas.

9.2.1.2 Infrastructural Framework

The NTS invested nearly W100 billion (approximately \$83.3 million) in establishing the TIS, and several large corporations in the ROK, including LG-EDS, Posdata, Dacom, and SsangYong Computer, formed a consortium in December 1993 to establish it. In December 1994, the NTS installed the main computer (IBM 9121-621) in its main office and established a wide area network and local area network to connect the main office with regional and district tax offices.

9.2.1.3 Functions

The TIS was initiated after the launching of the Real Name Financial Transaction System of 1993, which provided a massive amount of taxpayer data on financial income. Not only was the TIS a means of managing taxpayer information such as income and changes in assets, but it also functioned as a tool to trace taxpayers subject to tax filings, as well as noncompliant taxpayers subject to tax audits

based on the information gathered. The TIS also managed and issued various tax documents, improving taxpayer convenience.

9.2.1.4 Achievements and Limitations

Before the introduction of the TIS, tax officers handled tax-related tasks manually, resulting in an inefficient public tax service. The TIS played a role in improving such inefficiency by computerizing tax documents and issuing automatic notices to taxpayers. The TIS enhanced efficiency even more by allowing taxpayers to obtain certain tax documents from any district tax office.

In addition to improved efficiency, the TIS helped improve the management of taxation sources. Before the TIS was implemented, the use of disaggregated data and partially missing data only allowed limited analysis of the tax base. However, with the TIS in place, the tax history of each taxpayer could be viewed at a glance, enabling taxpayers to keep and manage their own tax data. Moreover, the TIS enhanced transparency by performing less arbitrary scrutiny. Redundant investigations were sorted by automatic analysis, and the research process made the tax system more transparent and objective. However, although the TIS substantially increased the overall efficiency of the tax administration by automating processes, it failed to meet the needs of users who demanded a more systemic and scientific analysis of tax data.

9.2.2 Income Deduction for Amount Spent on Credit Cards, etc. (2000)

9.2.2.1 Background

In the 1990s, the ROK was a huge cash economy. Although the introduction of value-added tax (VAT) made business-to-business transactions more transparent, most business-to-customer transactions done in cash were not taxed. There was also a growing consensus that wage earners bore relatively more tax than the self-employed, who were more likely to evade taxes by omitting sales records. To reduce cash transactions and address the tax equity issue between wage earners and the self-employed, the government introduced an initiative known as the Income Deduction for Amount Spent on Credit Cards, etc., which provided a tax incentive to use debit and credit cards to conclude transactions.

9.2.2.2 Infrastructural Framework

According to Article 126-2 of the Restriction of Special Taxation Act, the income deduction applies to amounts spent on credit, debit, and prepaid cards and stated in cash receipts. From a software perspective, the Act on the Submission and Management of Taxation Data provided the essential legal basis for the NTS to collect transaction details from different institutions. From a hardware perspective, all merchants required were point-of-sale terminals that issued card receipts, while wage earners required tangible cards.

9.2.2.3 Tax Incentives

The income deduction was enacted to incentivize credit or debit card usage to broaden the tax base of the self-employed. It also provides tax incentives for wage and salary earners. For the purposes of the 2019 year-end tax settlement, employees may deduct up to 15% of purchases made on a credit card, or 30% of purchases made on a debit card (prepaid or cash receipt), exceeding 25% of their total income to a maximum of W3 million (approximately \$2,500) or 20% of their total income, whichever is less.

Moreover, for expenditures made in traditional markets and public transportation, the allowed deduction is equivalent to 40% of the expenditures. The deduction on the purchase of books, performance tickets, and entrance fees to galleries and museums shall be equivalent to 30% of the expenditure, for those with a total income of W70 million (approximately \$58,000) or less.

In 1999, the initial scope of the tax incentives included expenditures incurred on credit, debit, and prepaid cards only, with a 10% deduction rate. Further, the initial deduction ceiling was W3 million (approximately \$2,500) or 10% of annual income (whichever was less), and the minimum threshold for expenditure was the amount of purchases exceeding 10% of annual income.

However, these incentives evolved from 1999 to 2019 (see Table 9.1). The scope of tax incentives was expanded to include amounts spent on cash receipts; purchases made in traditional markets; and amounts spent on transportation, books, performance tickets, and entrance fees to galleries and museums. The deduction rate was increased and diversified to 15% for credit cards; 30% for debit or prepaid cards and cash receipts; 40% for traditional markets and transportation; and 30% for books, performance tickets, and entrance fees to galleries and museums. The deduction ceiling was increased to W3 million (approximately \$2,500) or 20% of annual income (whichever is less), plus an additional W3 million (approximately \$2,500); it was also differentiated according to income level. Finally, the minimum threshold for expenditure increased to purchase amounts exceeding 25% of annual income (Table 9.2).

Table 9.1 Chronological Development of the Republic of Korea's e-Tax Administration

<i>Initiatives taken</i>	<i>Implementation year</i>
Tax Integrated System	1997
Income Deduction for Amount Spent on Credit Cards, etc.	2000
Home Tax Service	2001
Cash Receipt System	2005
Simplified Year-End Tax Settlement System	2006
e-Invoicing System	2010
Pre-filled and fully filled services	2010
Neo Tax Integrated System	2015

Source: Author.

Table 9.2 Evolution of the Income Deduction for Amount Spent on Credit Cards, etc

<i>Year</i>	<i>Target</i>	<i>Deduction rate</i>	<i>Deduction ceiling</i>	<i>Minimum usage (or total income)</i>
1999	Credit cards	10%	Min (\$2,500, 10% 0.1Y)	
	Debit/prepaid cards	10%		
2005	Credit cards	10%		
	Debit/prepaid cards	30%		
	Cash receipts	30%		
2010	Credit cards	10%	Min (\$2,500, 25% 0.2Y)	
	Debit/prepaid cards	30%		
	Cash receipts	30%		
2012	Credit cards	10%		
	Debit/prepaid cards	30%		
	Cash receipts	40%		
	Traditional markets	40%		
2013	Credit cards	10%		
	Debit/prepaid cards	30%		
	Cash receipts	30%		
	Traditional markets	40%		
2018	Transportation	40%		
	Credit cards	10%		
	Debit/prepaid cards	30%		
	Cash receipts	30%		
	Traditional markets	40%		
2019	Transportation	40%		
	Books and performance tickets	30%		
	Credit cards	15%		
	Debit (check) cards	30%		
	Prepaid cards	30%		
	Cash receipts	30%		
	Traditional markets	40%		
	Transportations	40%		
	Books	30%		
	Performance tickets	30%		
Entrance fees to galleries and museums	30%			

Y = annual income.

Source: Author.

To compensate for the negative economic impacts of the COVID-19 pandemic, the government revised the Restriction of Special Taxation Act by raising the deduction rate to 80% for transactions incurred between April and July 2020, regardless of business type (supplier) and payment method (e.g., credit card, debit card, or cash). The 80% deduction rate also applies to purchases made in traditional markets, as well as purchases of bus and train tickets. Such income

deductions for wage and salary income earners shall be applicable to year-end settlements for the fiscal year 2020.

9.2.2.4 *Achievements and Shortcomings*

Implementation of the deduction resulted in a drastic increase in payment by cards. In 2018, as noted in Figure 9.1, purchases made with credit cards increased from W352.2 trillion (approximately \$293.5 billion) in 2004 to W741.3 trillion (approximately \$617.7 billion) in 2018. Purchases with debit cards also increased exponentially from W80.0 billion (approximately \$66.7 million) in 2002 to W184.3 trillion (approximately \$153.9 billion) in 2018 (Figure 9.2).

The deduction stimulates the use of credit cards, driving taxpayers to sell or purchase more goods and services using credit cards. On the HTS, which will be discussed shortly, taxpayers can now look up sales or purchases made by credit cards, and such information is linked directly to VAT returns. Consequently, the deduction has not only broadened the tax base and made business transactions more transparent, but it has also reduced taxpayers' compliance costs.

The Credit Finance Association collects information on credit card transactions from credit card merchants and transmits the information to the NTS by the 15th day after the end of each quarter. Likewise, banks transmit information on debit card transactions to the NTS by the 15th day after the end of each quarter (this submission requirement has been revised to once a month). Direct submission of this data has lowered the administrative costs of the NTS.

Another reason why administrative costs dropped is the Early Alarm system. Article 64-6 of the Specialized Credit Finance Business Act requires the Credit Finance Association to submit a daily report to the NTS for credit card merchants engaged in the following activities:

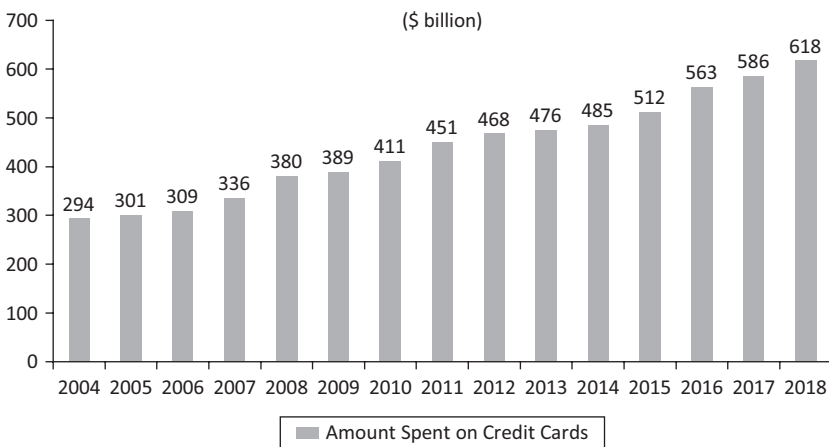


Figure 9.1 Credit Card Usage (\$ Billion). Source: Economic Statistics System. http://ecos.bok.or.kr/flex/EasySearch_e.jsp (accessed 5 March 2020).

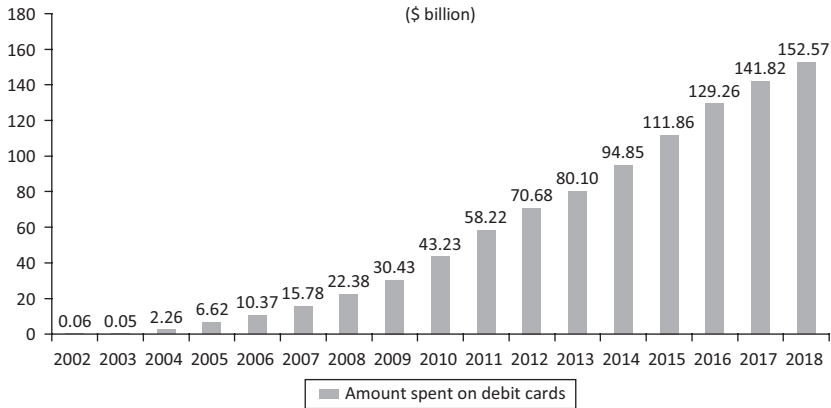


Figure 9.2 Debit Cards Usage (\$ Billion). Note: Statistics for debit card usage are only available from 2005. Source: Economic Statistics System. http://ecos.bok.or.kr/flex/EasySearch_e.j (accessed 5 March 2020).

- (1) Making a fraudulent credit card transaction without selling goods or providing services;
- (2) Overstating the amount of a credit card transaction, exceeding the amount of actual sale;
- (3) Making a credit card transaction using the name of another credit card merchant;
- (4) Lending the name of the credit card merchant to any other person; or
- (5) Acting as an agent for a credit card transaction.

This Early Alarm system has reduced administrative costs significantly by allowing the tax authority to identify fraudulent transactions or suspicious taxpayers immediately.

Despite its significant contributions to improving the tax system, the income deduction and the resulting drastic increase in credit card use incurred a tremendous amount of social costs. For example, the ROK was hit severely by the 2003 credit card crisis. Excessive competition among card companies and the reckless issuance of credit cards resulted in liquidity issues for financial institutions, high consumer indebtedness, and millions of credit defaulters.

As the credit card market was two-sided and adopted a three-party scheme where the same entity is both an issuer and an acquirer, card transaction fees remained high. Merchants were also obliged to join a credit card affiliation by legislation if their sales exceeded a certain threshold. Finally, “honor all cards” and “no surcharge” rules prohibited franchisees from refusing to accept credit cards or discriminating against card transactions through price. Merchants’ weak bargaining power forced them to accept fees unilaterally set by credit card

companies. While an increasing number of consumers were encouraged to use credit cards to take advantage of income deductions, excessive competition to attract consumers increased costs, a large portion of which was ultimately passed onto the merchants.

A study conducted by the Korea Institute of Public Finance revealed that total expenditures from 2000 to 2016 (\$30 billion) exceeded the amount of revenue from the self-employed during the same period (\$26.7 billion). Even worse, expected tax expenditures are increasing while the number of returns filed seems to be declining. Further, critics have been skeptical about the income deduction because it functions more favorably for high-income earners whose marginal tax rates are high. In addition, since high-income earners are more capable of using credit cards and are likely to spend more, the deduction allows them to enjoy greater benefits.

Although the income deduction has far exceeded the primary objectives of revealing the income of the self-employed and enhancing tax compliance, it does not seem sustainable as the costs exceed the benefits. Thus, there has been a growing consensus that the income deduction should be abolished. However, attempts to eliminate these tax incentives have faced strong opposition from taxpayers, and the benefits are still effective as the deduction's sunset clause has been renewed several times.

9.2.3 Home Tax Service (2001)

The HTS, formerly known as Next-Generation Hometax (NGH) (discussed later in this chapter), is an internet-based integrated tax administration service that enables taxpayers to handle their taxes at home or at the office. The HTS was launched to alleviate the inconveniences experienced by taxpayers and tackle the problems of previous tax administration services, which issued tax payment notices by mail and required frequent visits to tax offices.

9.2.3.1 Background

Given the rapid development of information technology and high internet penetration ratio in the ROK, the NTS officially commenced its project to launch the HTS in December 2001 based on the e-filing service established in December 1999 and began to provide services from April 2002. Although the HTS was initially designed for tax agents, it later enabled taxpayers to e-file their taxes themselves.

9.2.3.2 Functions

The HTS is not just an e-filing platform, it is a complete paradigm shift providing comprehensive online tax services, including the electronic filing of tax returns, electronic notices of assessment, electronic transfers of tax payments, electronic issuance of tax certificates, inquiries on past filing and payment records,

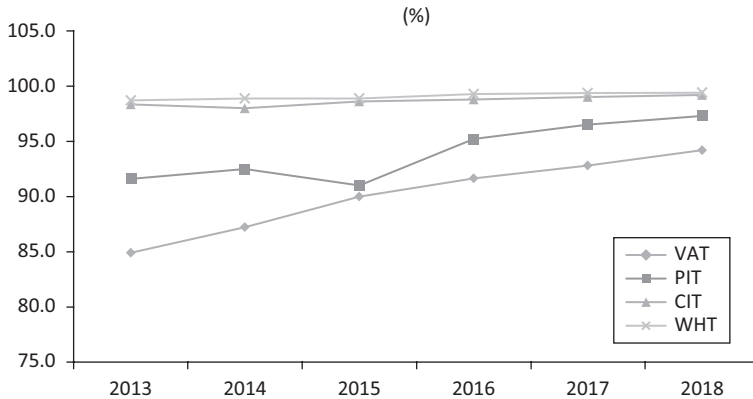


Figure 9.3 E-Filing by Tax Type (%). CIT=corporate income tax, PIT=personal income tax, VAT=value-added tax, WHT=withholding tax. Source: National Tax Service.

and automatic calculation of tax exemptions. Figure 9.3 shows the percentage of e-filings by tax type. The HTS also became available on smartphones in 2020.

9.2.3.3 Infrastructural Framework

The prerequisites for the success of the HTS via the internet or mobile phone application include the rapid growth of the number of internet users and of smartphone penetration, together with the fastest average internet connection speeds and average Long-Term Evolution download speeds in the world. Moreover, on the software side, the NTS revised relevant tax laws to implement tax incentives to encourage e-filing. For example, from 2004, W20,000 (approximately \$16.70) per tax return was deducted from the final tax liability when a taxpayer e-filed personal income tax (PIT) or corporate income tax (CIT), and W10,000 (approximately \$8.30) per return was deducted when a taxpayer e-filed VAT. Moreover, W10,000 (approximately \$8.30) per client up to W1 million (approximately \$833) was deducted from the final tax liability when a tax agent e-filed PIT, CIT, or VAT.

9.2.3.4 Achievements

After the introduction of the HTS in 2001, the number of subscribers to the HTS grew rapidly, reaching 3.9 million in 2005. The registration rate in 2008 was 66.8%, 56.9% higher than in 2002 (see Figure 9.4). Furthermore, the accumulated number of visitors to the HTS reached 2.3 billion at the end of 2015.

The HTS was a major innovation in Korean society. Taxpayers no longer needed to go to tax offices to file their tax returns, and there was no need for tax officers to review tax data or assess taxes manually. The HTS also meaningfully lessened compliance and administrative costs and improved taxpayer convenience.

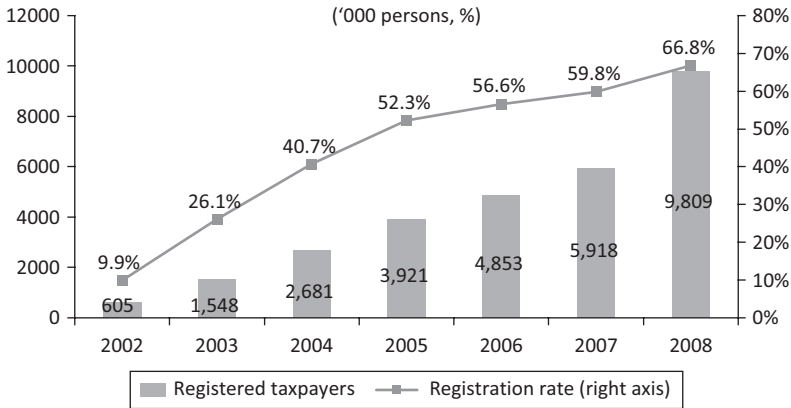


Figure 9.4 Home Tax Service Subscribers (per Thousand Persons, %). Notes: (1) The number of registered taxpayers includes business taxpayers and non-business taxpayers. (2) Registration rate = number of business subscribers/total number of business taxpayers. Source: National Tax Service.

9.2.4 Cash Receipt System (2005)

9.2.4.1 Background

The CRS was implemented in 2005 to impose VAT or income taxes on non-traceable cash transactions, which accounted for about 61% of total private consumption in 2004, even after the notable success of tax policies to incentivize card transactions.

9.2.4.2 Infrastructural Framework

At the time of the implementation of the CRS, the NTS minimized the costs of establishing the CRS by connecting the NTS computer network with the communication network of the Value-Added Network, which transmitted credit card information to the Special Finance Association. Merchants were also required to install cash receipt devices, such as point-of-sale terminals, Value-Added Network terminals, and mobile devices. Another form of hardware infrastructure required by the CRS was the cash receipt website, available to both consumers and registered stores. Cash receipt records can be viewed on the website, and taxpayers can also register personal identification numbers on the website to receive cash receipts or apply for a cash receipt card. The website also provided information on relevant laws, policies, and private consultation, among other things. The CRS website was incorporated into the NGH in February 2015.

From a software standpoint, the NTS has implemented mandatory cash receipt regulation since April 2010 to enforce the issuance of cash receipts. For example, professionals such as lawyers and doctors must issue cash receipts for goods and

services sold at over W300,000 (approximately \$250), whether or not the customer requests one. The NTS also imposes penalties on violations of the obligation to issue cash receipts.

9.2.4.3 Mechanism

Under the CRS, cash transactions are ultimately transmitted to the NTS through cash receipt devices (see Figure 9.5).

When a registered customer purchases goods or services in cash and provides a mobile phone number, resident identification number, or cash receipt card issued at a registered store that owns a cash receipt device, the store issues a cash receipt via the device to the customer. Meanwhile, the registered store sends a request for approval to the CRS operator, who authorizes the transaction. The operator, certified by the NTS, sends transaction records to the NTS by no later than 4:00 the following day. The NTS stores the transmitted data and utilizes them to trace revenue for business taxpayers. Wage and salary earners also use those transaction data to receive income deductions for their year-end tax settlements, and business owners receive cash receipts for expense deductions and input VAT credits.

The CRS resulted in a drastic increase in the number and value of cash receipts issued (see Figure 9.6). In 2018, the value of cash receipts issued was W116.4 trillion (approximately \$97 billion), about 6.3 times higher than in 2005; and the number of cash receipts issued reached 45.3 billion.

9.2.4.4 Achievements

In line with the 1999 Income Deduction for Amount Spent on Credit Cards, etc., one of the purposes of the CRS is to broaden the tax base by minimizing non-traceable cash transactions. Since the NGH provides information on the issuance of cash receipts and the information is linked to a year-end tax settlement for wage and salary earners or VAT returns for business taxpayers, the CRS reduces compliance costs significantly. Moreover, it became easier for the tax authority to track personal income or business revenues, curtailing administrative costs.

9.2.5 Simplified Year-End Tax Settlement System (2006)

9.2.5.1 Background

Pursuant to Article 137 of the Income Tax Act and Article 196 of the Enforcement Decree of the Income Tax Act, an employer (withholding agent) shall make a year-end tax settlement on behalf of an employee whose source of income is from employment only. The Simplified Year-End Tax Settlement System (SYTSS) was introduced via the NGH to improve the time-consuming, costly, and cumbersome year-end tax settlement process.

Before the implementation of the SYTSS, wage and salary income earners personally collected data for their tax deductions from hospitals, schools, and

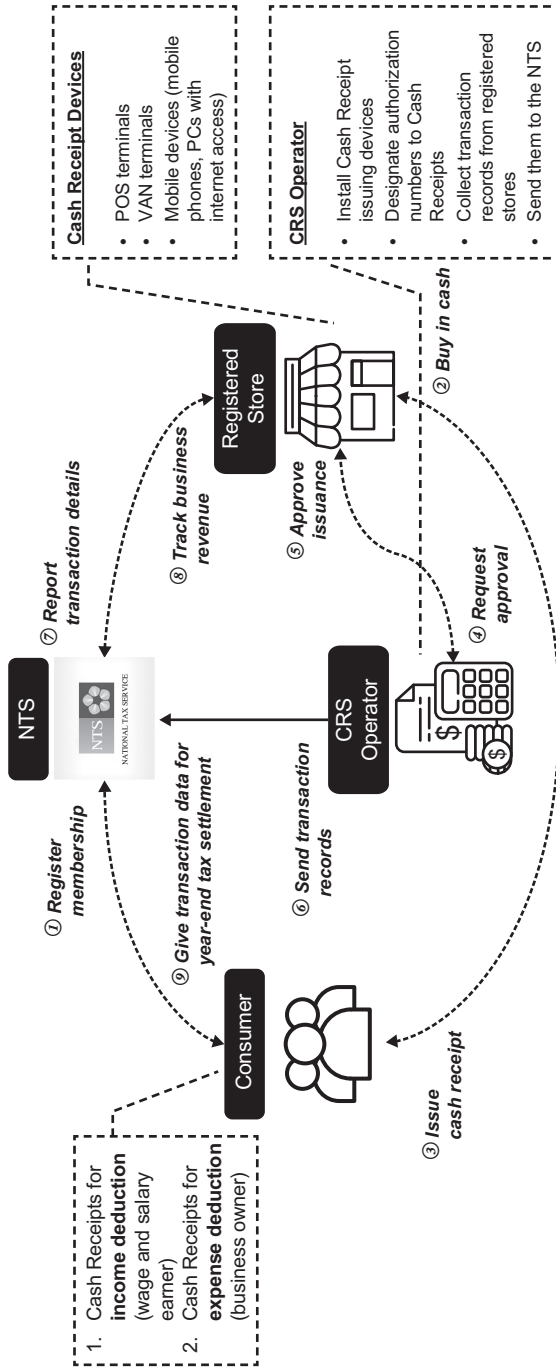


Figure 9.5 Cycle of the Cash Receipt System. CRS = Cash Receipt System, NTS = National Tax Service, PC = personal computer, POS = point-of-sale, VAN = Value-Added Network. Source: Author.

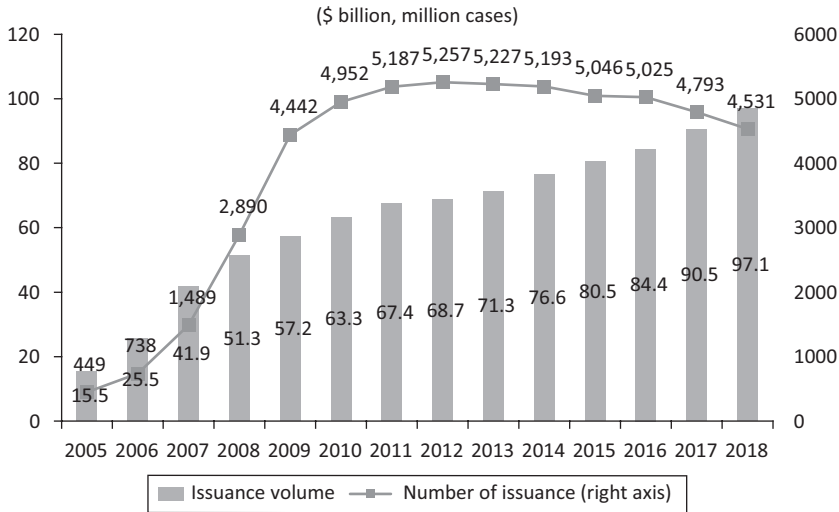


Figure 9.6 Issuance of Cash Receipts (\$ Billion, Million Cases). Source: National Tax Service.

financial institutions, among others, and submitted them to their employers. Once employers received the data, they prepared year-end tax settlements manually and submitted them to the tax authority.

The manualized process of year-end tax settlements incurred high operating costs. For example, employees incurred high compliance costs because they had to contact or visit all of the relevant institutions to collect the data to submit to employers, and the tax authority incurred high administrative costs because they had to spend a long time verifying the data received from employers. In contrast, the SYTSS is a one-stop service, as a result of which employees no longer need to visit all relevant agencies to collect various proofs of deduction to claim income deductions and tax credits on their wage and salary income.

9.2.5.2 Infrastructural Framework

The NTS faced strong resistance from institutions, especially from hospitals for issues regarding privacy, because the hospitals believed that they had to provide personal medical records. Ultimately, the NTS persuaded the hospitals that they only had to provide details on the payment of medical expenses. After long debates and litigations over Article 165 of the Income Tax Act, which required the submission of supporting documents for income deduction and tax credits, the NTS won its case in a 2008 decision that the tax provision complied with the Constitution.

The NTS put in much effort to distribute a computer program enabling the electronic submission of data. In 2005, the NTS provided a service for taxpayers

to look up their data easily on its website, and in 2006 it finally launched a system exclusively for year-end tax settlements (this was later incorporated into the NGH).

9.2.5.3 Mechanism

Figure 9.7 illustrates how the SYTSS operates. A taxpayer can easily view the amount spent for each deduction item on the SYTSS website. Another feature of the website is that taxpayers can choose to download and print relevant documents or submit the documents electronically via the website. In addition, based on the information available on the website, taxpayers can easily anticipate the amount of taxes payable or refundable.

9.2.5.4 Achievements

As a result of the implementation of the SYTSS, the total number of taxpayers and their dependents who used the SYTSS increased by six times from 2006 to 2018 (Figure 9.8). In 2018, more than 13.5 million taxpayers used the SYTSS, and 16.5 million dependents agreed to access their tax settlement data. At the same time, because of the convenience offered by the SYTSS, the tax authority and

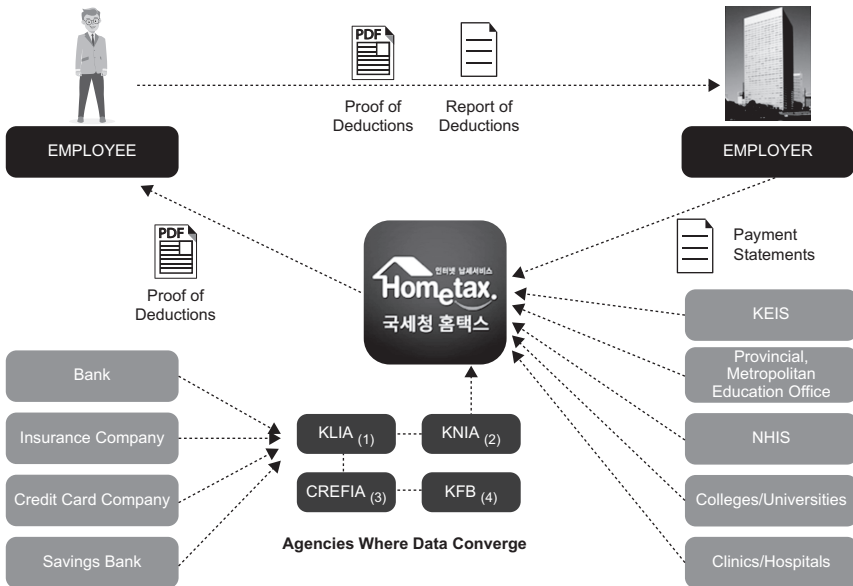


Figure 9.7 Structure of the Simplified Year-End Tax Settlement Service. CREFIA=Credit Finance Association, KEIS=Korea Employment Information Service, KFB= Korea Federation of Banks, KLIA= Korea Life Insurance Association, KNIA= General Insurance Association of Korea, NHIS= National Health Insurance Services. Source: National Tax Service.



Figure 9.8 Number of Taxpayers Using the Simplified Year-End Tax Settlement Service (Thousands). Source: National Tax Service.

taxpayers both save time and effort in year-end tax settlements. Consequently, the SYTSS significantly helped reduce operating costs.

9.2.6 *e-Invoicing System (2010)*

The e-Invoicing System is a platform enabling taxpayers to prepare and issue VAT invoices electronically and transmit them to the NTS. There are five different channels to issue e-VAT invoices, and taxpayers should transmit them by the following day.⁵

9.2.6.1 *Background*

The e-Invoicing System was launched in 2010 in response to the business environment in the ROK, which was becoming more complicated and diversified while the volume of commercial transactions was growing continuously. Taxpayers faced high compliance costs, including the costs of preparing, storing, and reporting invoices manually. Meanwhile, the government began to recognize the need to enhance the transparency of the tax system due to the difficulty of tracing tax evaders using false manual VAT invoices and the vulnerability of VAT-exempt transactions leading to fraudulent VAT-evasion activities. Most importantly, the digitalization of the Korean economy, including an increase in the issuance of tax invoices by large corporations using an enterprise resource planning or application service provider system, was a favorable condition under which the e-Invoicing System was successfully implemented.

9.2.6.2 *Infrastructural Framework*

The hardware infrastructure initially established by the NTS includes the website known as eSero, which has been incorporated into the NGH. Taxpayers used

to log into eSero using accredited certificates. Once logged in, suppliers created VAT invoices and sent them to customers by e-mail. The NTS website also made it possible to create e-VAT invoices via an enterprise resource planning or application service provider system. To enforce the issuance of e-VAT invoices from a software perspective, the NTS revised the relevant tax laws to impose penalties for violations and allow tax credits, among other things, for the faithful issuance of e-VAT invoices.

9.2.6.3 e-Invoicing System

The e-Invoicing System was a voluntary invoicing system when first introduced in January 2010, but became mandatory for corporate taxpayers in 2011. The scope of the e-Invoicing System continued to expand (see Figure 9.9): From January 2012, self-employed persons who supplied taxable goods or services amounting to W1 billion (approximately \$0.83 million) or more in a prior year were required to issue e-VAT invoices; in July 2014, this threshold changed to the taxable supply value of W300 million (approximately \$250,000) or more in a prior year. Finally, from July 2019, self-employed persons who supply VAT-able and VAT-exempt goods or services amounting to W300 million (approximately \$250 thousand) or more are required to issue e-VAT invoices.

One benefit of the e-Invoicing System is that taxpayers are eligible for a tax credit of W200 (approximately \$0.17) per issuance of an e-VAT invoice, up to W1 million (approximately \$833.00) per year. However, taxpayers are also subject to penalty taxes for failure to issue or transmit e-VAT invoices. For non-issuance of e-VAT invoices, a seller is obligated to pay 2% of the total amount of VAT, and a purchaser cannot claim an input deduction on the purchase. For late issuance, a penalty of 1.0% of the concerned amount of VAT is imposed on

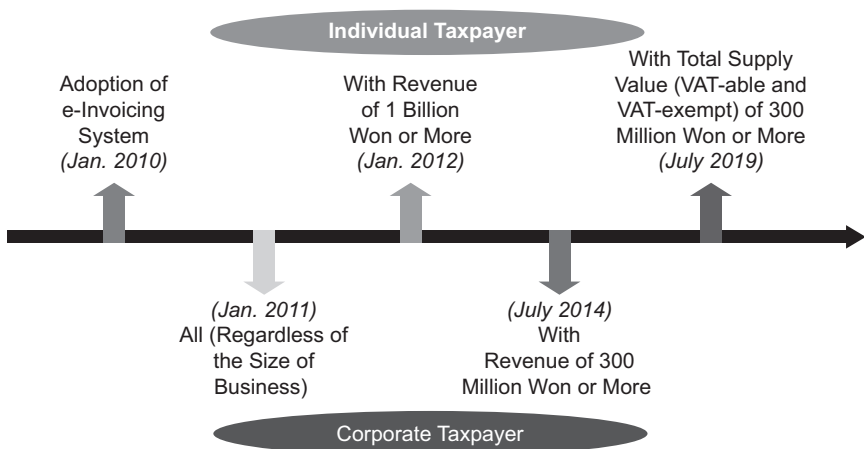


Figure 9.9 Evolution of the e-Invoicing System. Source: Author.

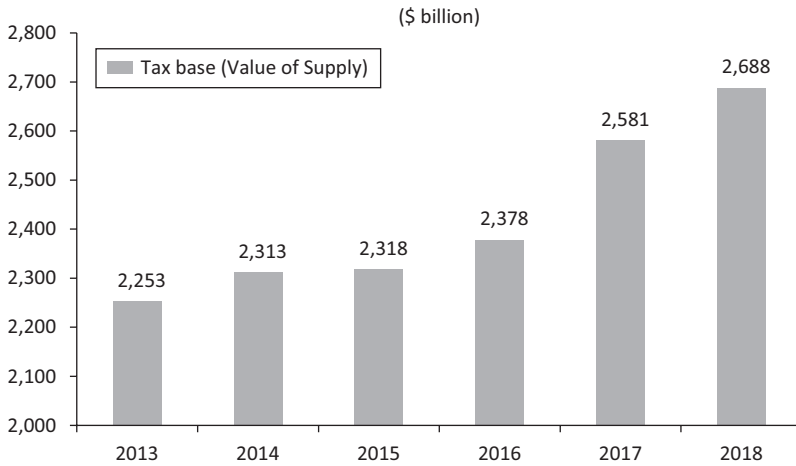


Figure 9.10 Total Value-Added Tax Base (\$ Billion). Source: National Tax Service.

a seller, and 0.5% on a purchaser. Moreover, sellers must pay 1.0% of the amount of VAT if they issue a paper VAT invoice, 0.5% for non-transmission, and 0.3% for late transmission.

Since the implementation of the e-Invoicing System, the total amount of VAT base increased by 19.3% from W2,704 trillion (approximately \$2,253) in 2013 to W3,225 trillion (approximately \$2,688) in 2018; and the e-Invoicing System boosted the amount of VAT by 22.7% from W238 trillion (approximately \$198.3) in 2013 to W292 trillion (approximately \$243.3) in 2018 (Figures 9.10 and 9.11). At the same time, the number of taxpayers who issued e-invoices almost tripled from 0.46 million in 2010 to 1.36 million in 2014, and e-invoices accounted for 95.7% of all tax invoices in 2014 (NTS 2016: 348). As of July 2013, 99.9% of tax invoices issued by mandatory issuers were sent electronically.

9.2.6.4 e-Bill of Supply System

In April 2013, the e-Bill of Supply System (e-BSS), an invoicing scheme for the supply of VAT-exempt goods or services, was launched under Article 26 of the VAT Law and Article 106 of the Restriction of Special Taxation Act. The e-BSS was initiated to lessen tax compliance costs by lowering compliance costs incurred from non-issuance, delivery, or storage of paper invoices and increasing the convenience of accounting. Another purpose of the e-BSS was to enhance tax transparency by making VAT-exempt transactions more transparent and preventing data-free transactions. Figure 9.12 explains how the corresponding tax law evolved over time.

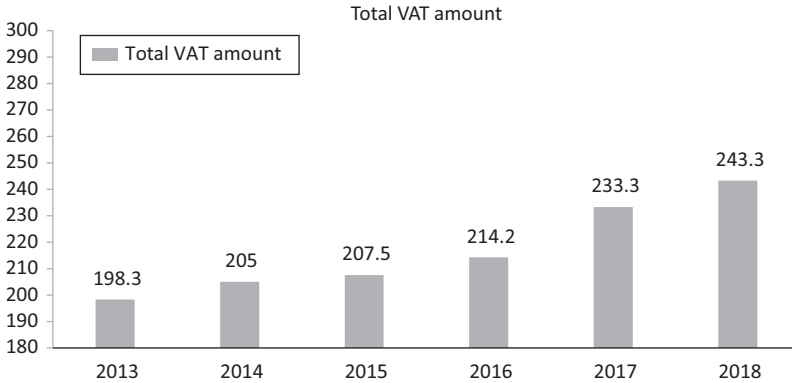


Figure 9.11 Total Value-Added Tax Amount (\$ Billion). VAT=value-added tax. Source: National Tax Service.

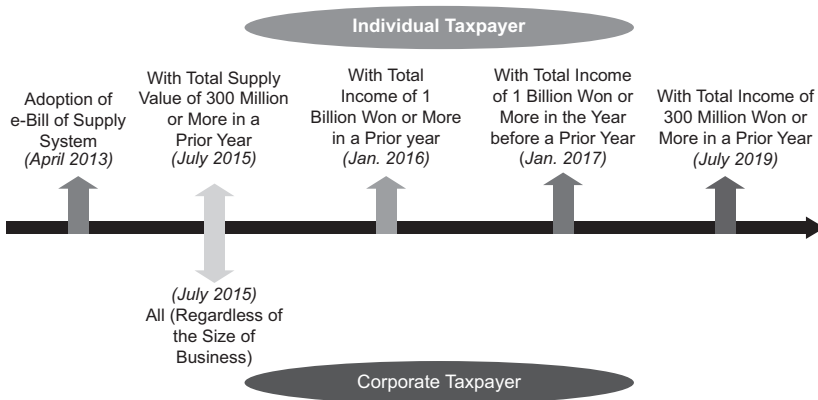


Figure 9.12 Evolution of the e-Bill of Supply System. Source: Author.

9.2.6.5 Achievements

Since their inception, the e-Invoicing System and e-BSS have deployed information technology to achieve their intended goals. As a result of the NTS’s efforts to implement the e-Invoicing System and e-BSS, the two systems together form the core of a state-of-the-art system for VAT reporting. By improving taxpayer convenience and efficiency in VAT reporting, the e-Invoicing System played a crucial role in reducing compliance costs. In 2011, Ha et al. (2018) estimated that compliance costs diminished by \$0.83 billion after the introduction of the e-Invoicing System because taxpayers no longer needed to issue, receive, or store paper VAT invoices. Simultaneously, the scheme helped cut the administrative costs of the NTS by encouraging taxpayers to report VAT faithfully from the

outset, significantly reducing the NTS workforce required to rectify unfaithful reporting later.

9.2.6.6 Drawbacks and Solutions

Krever (2014) has criticized the comprehensive data collection and matching (a unique feature of the Korean VAT administration) to which most administrative resources are devoted in business-to-business transactions (in which compliance is likely to be the highest), while the invoice matching system faces limitations in identifying false input claims by registered traders and unreported cash sales to unregistered final consumers. However, the ROK has proposed a series of tax schemes that have effectively prevented VAT fraud in multifaceted ways.

First, the ROK has adopted a reverse charge mechanism to prevent tax evasion activities and improve transparency in certain industries. For example, merchants engaged in selling gold-related products and scraps, among other things, to another business shall not withhold VAT on those transactions; instead, purchasers must pay the selling prices to sellers and remit the relevant VATs to bank accounts at financial institutions designated by the NTS Commissioner. The Korean tax authority is likely to expand the scope of industries to which a reverse charge mechanism can be applied in the near future.

Another such tax scheme is the proxy payment of VAT on amounts paid with credit cards. Credit card companies shall deduct 4/110 of the amounts paid with credit cards to entrepreneurs who supply VAT-able goods and services at general amusement and drinking places as well as dancing and drinking halls and remit the relevant VATs directly to the NTS. Entrepreneurs subject to proxy payments of VAT may deduct 1% of the proxy payments from their VAT payables, and such payment by proxy shall not be applicable to taxpayers under the simplified taxation scheme.

Finally, the NTS deems card or cash receipts as qualified evidence for input VAT deductions and expenses under the PIT. In other words, traders may claim input tax deductions for VAT and expenses for PIT, as long as the traders submit card or cash receipts issued by non-registered businesses or individuals. Since card or cash payment data are reported to the NTS by the following day, it is possible to monitor each of these transactions, leaving almost no room for tax evasion.

9.2.7 Pre-Filled and Fully Filled Services (2010)

9.2.7.1 Definitions

The pre-filled service (PFS) on the NGH automatically fills out taxpayer information on tax returns based on the NTS database. Compared to the traditional way of filling out tax returns manually, the PFS improves taxpayer convenience by reducing time spent by taxpayers on preparing their tax returns and minimizes human errors. The NTS also provides a service known as the fully filled service (FFS). As with the PFS, the FFS helps taxpayers file tax returns more easily, but

there are fewer fully filled items than pre-filled ones. Tax returns filled out by the PFS or the FFS include PIT returns, VAT returns, and capital gains tax returns.

9.2.7.2 *Infrastructural Framework*

To make available the PFS or FFS, a database warehouse is required to keep extensive tax data that have been processed by tax officials through a tax administration portal and provided by taxpayers through an external portal. With the database warehouse in place, tax returns can be pre-filled or fully filled based on the accumulated information.

9.2.7.3 *Evolution of the Service*

As outlined in Table 9.3, the PFS or FFS for PIT has evolved over time since its inception in 2015.

VAT payable is calculated automatically upon entering a sales amount for a simplified taxable person, and the items in Table 9.3 are pre-filled for a VAT-registered general taxable person (Table 9.4).

Finally, the PFS is provided for securities transactions on capital gains tax returns, as the scope of a major shareholder of listed companies has expanded. The pre-filled items include types and issuers of securities, number of shares, and selling prices.

Table 9.3 Transition to the Pre-Filled or Fully Filled Service for Personal Income Tax

	<i>Services</i>	<i>Effective date</i>
PFS	Fills out part of a tax return, such as total revenue and income	May 2015
FFS	Fills out a tax return in full for those who have business income only and who apply the simplified expense rate	May 2016
ARS reporting	Completes tax returns by telephone for those who have business income only and who apply the simplified expense rate	May 2017
Customized reporting	Provides tax return formats and type of income automatically, depending on income class	May 2018
Addition to PFS	Pre-fills tax credit items (e.g., medical expenses and individual pension accounts) and income deduction items (e.g., health insurance)	
Addition to FFS	Fully fills tax returns for those who have business income only and two or more business places	May 2019
Addition to PFS	Pre-fills tax credit items (e.g., insurance premiums, educational expenses) and income deduction items (e.g., housing expenses)	

ARS = automatic response service, FFS = fully filled service, PFS = pre-filled service.
Source: National Tax Service.

Table 9.4 Items Pre-filled on Value-Added Tax Returns

Output	<ul style="list-style-type: none"> · Amount of sales with electronic VAT invoices issued · Amount of sales made by credit cards · Amount of sales with cash receipts issued · Amount of sales on a local letter of credit or written confirmation of purchase issued electronically
Input	<ul style="list-style-type: none"> · Amount of purchases with electronic VAT invoices issued · Amount of delayed payment of import VAT by small and medium-sized enterprises whose primary business is exports · Amount of purchases made with business credit cards · Amount of purchases made with welfare credit cards owned by truck drivers · Amount of purchases with cash receipts issued · Amount on a statement of deemed input VAT
Tax deductions	<ul style="list-style-type: none"> · Amount of input VAT on inventory purchased in a prior period · Amount of inventory tax payable · Amount of tax credits on a credit card sales slip · Amount of non-refunded VAT on a preliminary VAT return for a general taxable person · Amount of VAT on a preliminary notice of payment for a general taxable person · Amount of preliminarily assessed VAT for a simplified taxable person · Amount of VAT on a preliminary VAT return for a simplified taxable person · Amount of taxes paid by unusual purchasers, such as steel scrappers · Amount on a statement of deemed input VAT on recycling products · Reverse charges prepaid by credit card companies and tax credits
Others	<ul style="list-style-type: none"> · List of lessees in a prior period on a statement of value of leasing real estate · Original VAT returns and supporting documents prior to revision or request for correction · Sum of sales with electronic VAT invoices issued and details by customer · Sum of purchases with electronic VAT issued and details by seller · Information on taxes deposited to a national coffer · List of additional taxes on delayed issuance, receipt, and transmission of electronic VAT invoices · Statement of actual export (including export registration number, shipping date, and foreign exchange rate) · Statement of the status of a business place for a prior year

VAT = value-added tax.

Source: National Tax Service.

9.2.7.4 Achievements

As mentioned above, the PFS not only improves taxpayer convenience but also significantly reduces human errors. Moreover, the PFS allows the tax authority to spend much less time verifying tax returns to assess or collect taxes. Consequently, the PFS helps reduce compliance costs for taxpayers and administrative costs for the tax authority, decreasing overall operating costs.

9.2.8 Neo Tax Integrated System (2015)

The NTIS is a next-generation tax system that integrates all tax-related systems into one. The NTIS consists of the NGH (see Figure 9.13), an online portal for tax payment service, and the Tax Administration Portal, an integrated service for tax officials at the NTS.

9.2.8.1 Background

The existing TIS was modernized because it was a complicated system that distorted the effective management of tax data and increased the system maintenance costs. The need also stemmed from the fact that tax laws had been revised to adopt 30 new systems since 1997. The advancement of the ROK's administrative and technological capabilities also triggered the reform of the TIS.

9.2.8.2 Infrastructural Framework

The e-taxation knowledge accumulated by the NTS over 20 years and the matured information technology environment supported the initiation of a large-scale project to reorganize 22,300 computer programs and 180 billion data items.

9.2.8.3 Effects of Implementation

Several changes came into effect after the implementation of the NTIS. First, there were previously several different tax-related websites operating independently, requiring taxpayers to log in to different websites and go through various authentication procedures. The NGH integrated eight independent websites into one portal, allowing taxpayers to log in only once. Secondly, under the existing scheme, e-filing was only available for periodic tax filings, and pre-filled services were limited. Under the new system, however, e-filing is available for all tax items, except for gift and inheritance taxes. Moreover, the new system enables late filings, amendment of tax returns, and a request for correction, while the PFS now provides expanded services to fill out 43 categories. Thirdly, taxpayers were previously not allowed to attach or submit documents through e-filing under the existing service, while adoption of the NGH made it possible to submit any documents or attachments in a PDF format. Fourthly, prior to the implementation of the NTIS, the hours within which online tax certificates could be issued

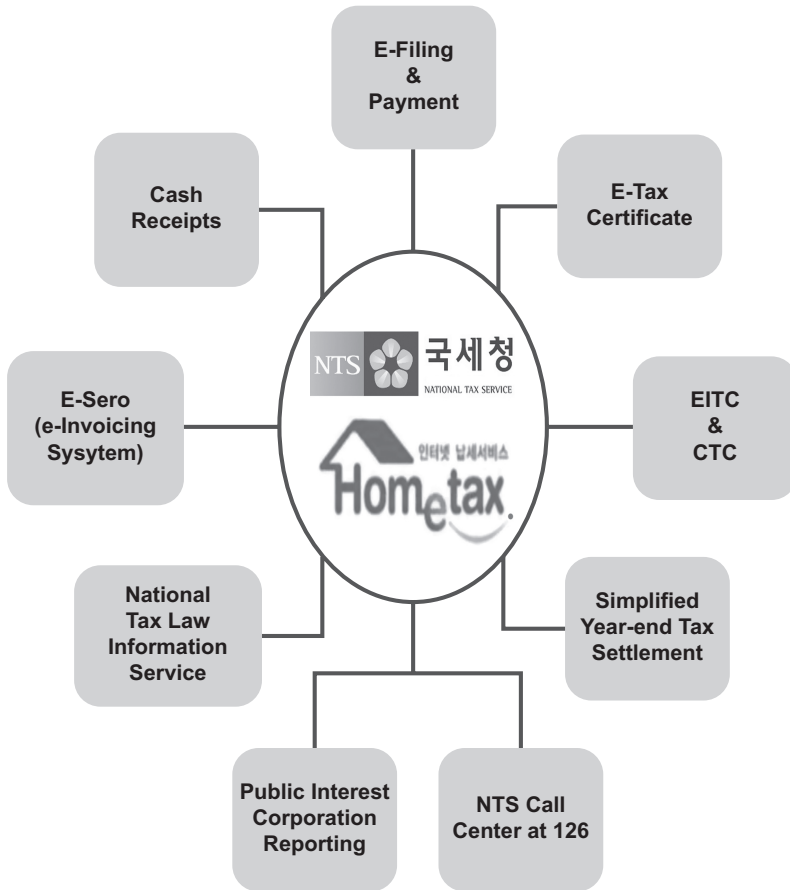


Figure 9.13 Main Features of the Next-Generation Hometax. CTC=Child Tax Credit, EITC= Earned Income Tax Credit, NTS=National Tax Service. Source: National Tax Service.

were limited to 9:00–19:00 during weekdays and 9:30–13:00 on Saturdays, and a limited number of tax certificates were issuable. However, the NGH is available whenever taxpayers wish to issue tax certificates, including Sundays and holidays, and the number of tax certificates issuable increased. Moreover, the old system used to take two days to confirm tax payment details at the Bank of Korea, while the new system confirms tax payment details immediately.

9.2.8.4 Achievements

The integrated, customized, and ubiquitous tax service lessened compliance costs by enabling taxpayers to submit electronic copies of data required by the NTS,

and reduced administrative costs by preventing data losses, among other things. Secondly, it helped build a sound tax culture, accurately analyze tax sources and investigation as well as real-time information sharing, prevent tax evasion, and maximize tax revenue. Finally, the improvements to the internal system and integrated communication network increased the productivity of the NTS and thus reduced administrative costs.

9.3 Overall Achievements

9.3.1 *Increased Tax Revenue through Enhanced Transparency*

Overall transparency has been improved since the inception of the digitalization initiative, which made it possible to track and crosscheck information on transactions by corporate and individual taxpayers with credible electronic evidence. In particular, the income deduction helped make the Korean economy cashless, and the CRS made business-to-customer transactions more transparent. Consequently, both tax schemes have significantly increased the tax revenues of the self-employed.

The biggest benefit from the adoption of the income deduction and CRS is an increase in tax revenues through enhanced transaction transparency. From 2000 to 2016, PIT increased by W18 trillion (approximately \$15 billion) and VAT increased by W14 trillion (approximately \$11.7 billion).

However, it is misleading to conclude that the total increase of W32 trillion (approximately \$26.7 billion) stemmed from the implementation of these two tax schemes alone, as the government has also introduced other tax policies to broaden the self-employed tax base. Kim (2018) proposed the elasticity of tax revenues with respect to gross domestic product (GDP), calculated by dividing the percentage of the increase in tax revenues by the percentage of the increase in nominal GDP. An elasticity greater than 1 means that the taxes collected exceed the nominal economic growth rate.

As shown in Figure 9.14, the ratio of tax revenue elasticity to GDP (4.41 for PIT and 3.04 for VAT) were higher in 2006 immediately after the introduction of the CRS than in other periods. In addition, the ratios in 2000 (immediately after the implementation of the income deduction) were 2.76 for PIT and 2.19 for VAT. The results show that the income deduction introduced in 2000 and the CRS introduced in 2005 played an important role in increasing tax revenues.

9.3.2 *Reduced Operating Costs*

As mentioned above, operating costs can be divided into tax compliance costs and administrative costs. According to Evans and Tran-Nam (2001), compliance costs include “the costs of labor and time consumed in completion of tax activities, the costs of expertise purchased to assist with completion of tax activities, and incidental expenses incurred in completion of tax activities.” They also defined administrative as costs that “comprise the costs of running and maintaining

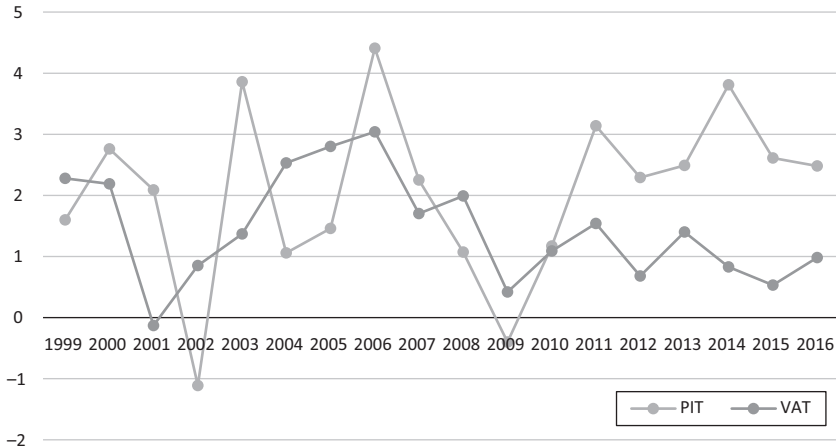


Figure 9.14 Elasticity of Tax Revenue with Respect to Gross Domestic Product (%). PIT=personal income tax, VAT=value-added tax. Source: Kim, J.-J. 2018. *Income Deduction and Tax Credits on Amount Spent on Credit Cards, etc.* Report. Seoul; Sejong City: Korea Institute of Public Finance (in Korean).

revenue agencies, including salaries of staff, and pensions, accommodation and other expenses relating to those staff.”

9.3.2.1 Compliance Costs

From 2001 to 2016, total compliance costs in the ROK increased by 12.4%, attributable to the increased number of taxpayers and inflation, among other things (see Table 9.5). However, despite this increase in compliance costs, there was a decline in unit costs per taxpayer, unit costs per sales of W10,000 (approximately \$8.00), and unit costs for tax revenue of W1,000 (approximately \$0.80) (Ha et al. 2018).

In addition, compliance costs of four administrative activities—the issuance of tax certificates, receipt and storage of tax certificates, bookkeeping, and tax filings and payments—decreased, while the percentage of e-filing—particularly of VAT and global income tax (Table 9.6)—increased dramatically from 2003 to 2018.⁶ These results indicate that the more taxpayers file their taxes online, the lower the tax compliance costs that they incur (Table 9.7).

9.3.2.2 Administrative Costs

In addition to reducing compliance costs, digitalization also made tax administration more efficient because the use of the ubiquitous tax services helped decrease administrative costs incurred by the NTS. As seen in Figure 9.15, which shows the

Table 9.5 Increases in Personal Income Tax and Value-Added Tax of the Self-Employed (\$ Million)

FY	<i>Increase in tax revenue of the self-employed</i>		
	<i>PIT</i> (A)	<i>VAT</i> (B)	<i>Total</i> (C = A + B)
2000	769	778	1,547
2001	615	-47	568
2002	-494	388	-107
2003	904	408	1,312
2004	389	1,022	1,411
2005	359	846	1,205
2006	1,177	1,053	2,230
2007	1,169	1,084	2,253
2008	481	1,063	1,543
2009	-137	183	47
2010	920	1,110	2,030
2011	1,489	933	2,422
2012	803	289	1,092
2013	1,054	667	1,721
2014	1,854	445	2,299
2015	1,939	383	2,323
2016	1,861	655	2,516
Total	15,153	11,258	26,411

PIT=personal income tax, VAT=value-added tax.

Source: National Tax Service.

Table 9.6 Reduction in Compliance Costs in the Republic of Korea

<i>Costs</i>	<i>Unit</i>	<i>2011</i>	<i>2016</i>	<i>Change</i>	
				<i>Amount</i>	<i>Rate</i>
Total cost	\$ billion	8.25	9.25	1.00	12.4%
Unit cost	\$ billion	1.50	1.35	-0.15	-11.0%
Per taxpayer cost	\$	16.8	15.40	-1.40	-8.4%
Per sales of \$8.00					
Per tax revenue of \$0.80	\$	45.8	39.70	-6.10	-13.3%

Source: Ha, S. J. et al. 2018. *Measurement of Compliance Costs on National Tax Administration*. Report. Seoul; Sejong City: Korea Institute of Public Finance and National Tax Service (in Korean).

changes in the collection costs of the NTS from 1984 to 2018, tax revenue per one tax official increased by 20 times from W639 million (approximately \$533) in 1984 to W14,605 (approximately \$12,171) in 2018, and costs of collection per tax revenue of W100 (approximately \$.083) declined twice from W1.15 (approximately \$0.0009) in 1984 to W0.58 (approximately \$0.00048) in 2018.⁷

Table 9.7 Compliance Costs per Tax Revenue of W1,000 (Approximately \$0.80) (\$)

	2011	2016	Rate of change
Issuance of tax certificates	0.008	0.007	-16.3%
Receipt and storage of tax certificates	0.014	0.011	-20.9%
Bookkeeping	0.007	0.005	-24.8%
Tax filings and payments	0.010	0.009	-14.4%
Total	0.039	0.032	-19.0%

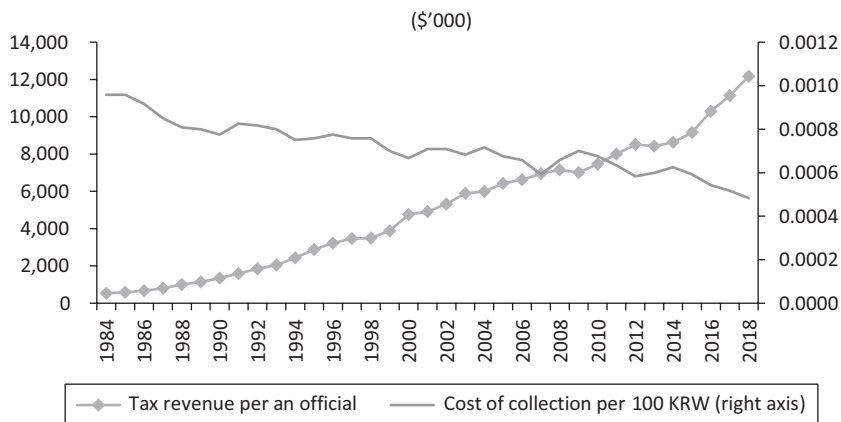


Figure 9.15 Collection Costs of the National Tax Service (1982–2018) (\$ Thousand). Source: National Tax Service.

9.3.3 Enhanced Taxpayer Convenience

According to Bae, Bae, and Suh (2011), taxpayer convenience induces compliance with tax payments through taxpayer satisfaction. Taxpayer convenience offered by digitalization has contributed significantly to improving taxpayer satisfaction, thereby increasing tax payments. For example, as mentioned earlier, the SYTSS no longer requires employees to visit or call relevant institutions to collect evidence to claim deductions or credits on their income tax returns; this has considerably increased the number of taxpayers using the system by improving taxpayer convenience. In addition, the PFS and FFS, which automatically fill out fields on tax returns based on information available in the NTS database, improve taxpayer convenience even more and encourage more taxpayers to pay their taxes online voluntarily. Finally, the creation of a taxpayer-friendly interface also played a key role in enhancing taxpayer convenience. As mentioned previously, nine different services or modules have been integrated into the NGH. The user-friendly interfaces of the NGH have been designed to improve taxpayer convenience considerably by displaying all services or modules on one webpage, and by allowing taxpayers to customize their own interfaces.

9.4 Policy Recommendations and Conclusion

9.4.1 Policy Recommendations

Prior to the COVID-19 pandemic, countries in Asia and the Pacific had already been experiencing fiscal shortfalls, slowing economic growth rates, and increasing poverty, among other things. Not surprisingly, the pandemic has brought even more economic shocks to the developing region of Asia and the Pacific. The region's expected growth rate is only 0.9%, the lowest since 1967. The pandemic also impoverished 38 million people in the region in 2020. Moreover, the Organisation for Economic Co-operation and Development anticipates that the ongoing crisis will reduce the region's tax and non-tax revenues even further going forward.

As COVID-19 has severely impacted many people and economies in the region, countries have come up with several different tax policy responses to the pandemic. These include the waiving or deferral of taxes, providing tax concessions, deferral of tax filings and payments, and speeding up of tax refunds, among other things. However, this support is costly and has increased fiscal demands. In addition, increased financial support provided by the government to citizens has caused tax revenues to decline considerably.

As proven by the case of the ROK, digitalization is a very effective way to boost tax revenues without raising tax rates. Therefore, digitalization is a highly recommended strategy for developing countries in the region that lack effective e-tax administrations. The COVID-19 pandemic has further proved the importance of digitalization since e-tax administration allows taxpayers to do their taxes without having to meet tax officials in person.

Secondly, even though raising tax revenues is an important way for countries to stay sustainable, economic sustainability can be also achieved by cutting operating costs, consisting of compliance and administrative costs. As shown earlier, taxpayer convenience stemming from digitalization has reduced compliance costs significantly. Digitalization has also helped lower administration costs markedly by making tax administration more efficient. Thus, digitalization is recommended for countries in Asia and the Pacific that are working to increase revenues.

Finally, digitalization has lessened corruption. Since all processes are computerized, there is less human involvement in tax administration. Moreover, e-tax administration has broken off collusive relationships between taxpayers and tax officials. For instance, the issuance of paper VAT invoices gave rise to many problems, such as the issuance of false VAT invoices and manipulation of existing ones. However, e-invoicing prevents taxpayers from evading VAT by transmitting VAT invoices directly from taxpayers to the tax authorities, reducing VAT gaps.

9.4.2 Conclusion

This chapter provided an overview of the initiatives taken by the Korean government during the e-taxation reform, including the TIS; Income Deduction for Amount Spent on Credit Cards, etc.; HTS; CRS; SYTSS; PFS; e-Invoicing

System; and NTIS. The TIS laid a solid foundation for the development of the ROK's e-tax administration; the income deduction helped shrink the informal sector by encouraging cashless transactions; the CRS made business-to-customer transactions transparent even when cash is used; the HTS facilitated a paradigm shift by allowing taxpayers to handle their taxes at home or the office; the PFS minimized human errors when preparing tax returns; and the e-Invoicing System made VAT filings easier and paperless while helping to make business-to-customer transactions more transparent. Finally, the NTIS, a modernized version of the TIS, not only significantly improved taxpayer convenience and the transparency of the tax system but also helped build a sound tax culture.

Digitalization has broadened tax bases by finding hidden tax sources. Moreover, all of the initiatives taken by the ROK to digitalize its tax administration have considerably reduced both compliance and administrative costs. From 2011 to 2016, compliance costs decreased by W1.23 trillion (approximately \$1.03 billion). With respect to administrative costs, tax revenue per one tax official increased by 20 times from W639 million (approximately \$581) in 1984 to W13,360 million (approximately \$12,145) in 2017, and costs of tax collection per tax revenue of W100 (approximately \$0.83) almost halved from W1.15 (approximately \$.00095) in 1984 to W0.62 (approximately \$.00048) in 2017.

The ROK is constantly trying to update its e-taxation in line with the changing business environment, influenced by such factors as the Fourth Industrial Revolution, robots, and artificial intelligence. Although the Korean initiatives may not be the only solution to help countries in Asia and the Pacific establish solid e-tax administrations, the ROK's e-tax administration is admirable and worthy of note.

Notes

- 1 This is a forum of the world's major donor countries that discusses issues around aid, development, and poverty reduction in developing countries; it currently has 30 members.
- 2 This is an association of creditor countries working to find sustainable solutions for payment difficulties faced by debtor countries; it currently has 22 permanent members.
- 3 This is a group of countries with a gross national income per capita above \$30,000 and a population of over 50 million.
- 4 Operating costs consist of tax compliance and administrative costs. Pope (2002) defined tax compliance costs as "expenses incurred by taxpayers to fulfill their tax obligations" and administrative costs as costs "incurred by a revenue body in assessing and collecting taxes."
- 5 The channels are (1) enterprise resource planning or an application service provider with an accredited certificate, (2) the NTS system, (3) CRS, (4) the Automatic Response System, and (5) a smartphone.
- 6 From 2003 to 2017, e-filing of VAT grew by 60.4%, reaching 94.2% in 2018, while e-filing of global income tax increased by 53.8%, reaching 97.3% in 2018.
- 7 Collection costs are the total expenditure of the NTS each year (Closing Standard: General Account). In the calculation of collection costs, tax revenue collected by

the NTS includes domestic taxes and transportation, energy, and environment taxes.

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10 Cross-Border Digital Taxation Challenges

Indonesia's Practices and Perspectives

*Bayu Andikara, Dwi Astuti,
and Iva Unnaiza Hanum*

10.1 Introduction

In the digital economy era, information spreads quickly and easily, and technology enables people to conduct transactions of a wide range of goods and services rapidly over vast areas. As a result, state borders are no longer relevant to a merchant's decisions as to where to sell digital products or services. These non-physical features combined with various complex business models can hamper governments' ability to levy taxes on these businesses.

The continuously increasing value of digital transactions and income generated therefrom, which allegedly do not bear an equal share of the tax levy compared to brick-and-mortar businesses, has augmented the policy rationale of the Government of Indonesia to design an effective mechanism for taxing the digital economy. The urgency of this aim has become more salient as a result of the coronavirus disease (COVID-19) pandemic. Potential tax revenue from digital-based business activities could be a prominent source of funds to cure both the disease and its economic fallout, especially since other tax revenue sources (namely individual and corporate income tax) have fallen drastically during the outbreak.

Indonesia's ability to capture this potential tax revenue is immense, given the scale of its market for digital providers. According to a 2018 survey, the internet user penetration in Indonesia is 171 million, or 64.80% of the total population, a significant increase from 54.68% in 2017 (Indonesian Internet Service Provider Association 2018). Digital goods and services sold to the Indonesian market could be a significant source of funding for national spending. For example, Table 10.1 shows the number of Indonesian Netflix subscribers, the subscription fee, and the forecast of the relevant value-added tax (VAT) revenue. Indonesia is lagging behind India, Japan, and the Republic of Korea in the number of subscribers (Moody 2020). From a single digital service provider (Netflix in this case), Indonesia could gain approximately \$11,305,945 of VAT revenue annually.

Yet, Indonesia has been unable to collect this potential tax revenue for years. Indonesia has fallen behind because it only began to implement digital economy taxation in 2020, while other jurisdictions—such as Australia (Australian Taxation Office 2020) and New Zealand (PricewaterhouseCoopers 2019)—have

Table 10.1 Forecasted Potential Value-Added Tax Revenue on Netflix Subscriptions

<i>Country</i>	<i>Number of subscribers, 2019</i>	<i>Number of subscribers, Q2 2020</i>	<i>Average monthly revenue per paying membership, Q2 2020 (based on Indonesian subscription fee) (\$)</i>	<i>Forecasted Netflix annual revenue (\$)</i>	<i>Forecasted potential annual value-added tax revenue (based on a 10% rate) (\$)</i>
Japan	3,000,000	4,240,115	10.39	528,657,538	52,865,754
Republic of Korea	2,720,000	3,844,371	10.39	479,316,176	47,931,618
India	2,000,000	2,826,743	10.39	352,438,317	35,243,832
Indonesia	481,543	906,797	10.39	113,059,450	11,305,945
Malaysia	221,750	336,100	10.39	41,904,948	4,190,495
Thailand	365,000	546,000	10.39	68,075,280	6,807,528

Q=quarter.

Source: Databoks. 2019. *Berapa Pelanggan Streaming Netflix di Indonesia?* <https://databoks.katadata.co.id/datapublish/2019/08/13/berapa-pelanggan-streaming-netflix-di-indonesia> (accessed 13 October 2020); Netflix. 2019. *Paket dan Harga*. <https://help.netflix.com/id/node/24926> (accessed 13 October 2020); and Statista. 2020. Number of Netflix Paid Subscribers Worldwide from 1st Quarter 2013 to 4th Quarter 2020. www.statista.com/statistics/250934/quarterly-number-of-netflix-streaming-subscribers-worldwide/ (accessed 13 October 2020).

been collecting goods and services tax and VAT on goods and services sold to consumers in their jurisdictions through digital means since 2018.

In 2020, the government reached a milestone in taxing a fair share of the digital economy by enacting Law Number 2 of 2020, which contains provisions concerning indirect tax through VAT, and direct tax through income or electronic transaction tax (ETT). This is a vital step in Indonesia's taxation history since there were previously no provisions directly regulating the mechanism of VAT collection in relation to cross-border transactions of goods and services through digital means. Under the new law, such collection is undertaken by overseas sellers officially appointed to be VAT collectors by Indonesia. Although the issuance of this implementing regulation is a critical beginning, questions remain in several areas.

This chapter aims to answer the following questions:

- (1) How do Indonesia's legal instruments deal with digital economy taxation?
- (2) Do any services and intangibles provided by foreign suppliers through electronic systems (e-commerce) fall under Indonesia's VAT law?
- (3) What are the challenges to collecting VAT from e-commerce?
- (4) How can Indonesia effectively collect VAT from foreign suppliers through e-commerce?
- (5) How does the direct tax provision in Law 2/2020 interact with the Organisation for Economic Co-operation and Development's (OECD's) global consensus on digital taxation?

Section 10.2 outlines the literature on digital economy taxation, and section 10.3 presents Indonesia's practice of indirect and direct tax on the digital economy. Section 10.4 reviews the regulations as such and analyzes the challenges in the application of indirect tax (underway) for capturing potential digital economy tax revenue. Section 10.5 discusses the direct tax aspect. This analysis concludes with workable recommendations to achieve a more ideal indirect tax system for e-commerce.

10.2 Literature Review

The digital economy continues to evolve, driven by the ability to collect, use, and analyze massive amounts of machine-readable information or digital data (United Nations Conference on Trade and Development 2019). The term "digital economy" refers to a broad range of economic activities that use digitalized information and knowledge as key factors of production (ADB 2018).

The nature of the digital economy can hamper the government's ability to levy taxes on these businesses (Tanzi 2000). This challenge is related to the application of tax rules designed for brick-and-mortar activities to new disruptive business models, as well as the fact that physical presence within a country is irrelevant to the digital economy (Tanzi 2000; Fajersztajn and Santo 2020).

In the digital economy, digital-based businesses allegedly bear a lower tax burden than conventional ones (Fajersztajn and Santo 2020). Practically, current international taxation rules cannot maintain fair competition between traditional

and digital companies, because digital companies can access customers in national markets without being effectively taxed in the market country (Angvik and Caymaz 2018).

Given the increasing value of digital transactions, most of the literature has found that digital taxation regimes can play an important role in the revenue system of a jurisdiction (Katz 2015). Digital advances have generated enormous wealth in record time (United Nations Conference on Trade and Development 2019). As of April 2017, there are 111 million Facebook users in Indonesia, the fourth biggest user base in the world (Statista 2016). In addition, Indonesia is also experiencing hyper-growth in terms of applications downloaded from the Google Play Store, with almost 3 billion downloads in 2016 (App Annie 2016). Netflix is expected to generate approximately \$76.6 million from its Indonesian streaming segment in 2020 (Statista 2020). McKinsey has predicted that, with the help of digitalization, Indonesia will enjoy massive economic growth of \$150 billion by 2025 (Das et al. 2016).

The pandemic has made the need to tax digital transactions even more urgent (Moore and Prichard 2020), as it seems to be a test case for the effectiveness of changes to many businesses, as well as taxation (BDO 2020). The rapid growth of digital services since the late 2010s could contribute to much-needed tax revenues in the wake of this crisis (Aslam and Shah 2020).

The most typical taxes imposed on the digital economy are corporate taxes and VAT. Import duties are also generally imposed on all types of digital equipment, whether consumer-oriented, such as smartphones, or needed by infrastructure operators, such as switches and servers (Katz 2015).

10.3 Indonesia's Practice in Addressing the Challenges of Taxing the Digital Economy

This chapter discusses Indonesia's practice in addressing the challenges of taxing the digital economy. The discussion commences with a summary of the development of regulation on digital economy taxation. Next, this chapter examines measures of implementing an indirect tax on cross-border e-commerce transactions in the form of VAT. Direct tax application, which is now on hold, is explained in the last section.

10.3.1 Development of Regulation of Digital Economy Taxation

Before considering the new regulations, it is important to grasp the context of regulation within Indonesia's domestic tax system, by understanding the hierarchy of laws and regulations in Indonesia. Article 7 of Law 12/2011 concerning Law Making stipulates the type and hierarchy of rules in Indonesia, as follows:

- (1) The 1945 Constitution;
- (2) Decree of the People's Consultative Assembly of the Republic of Indonesia (Majelis Permusyawaratan Rakyat Republik Indonesia);

- (3) Law, or government regulation in lieu of law;
- (4) Government regulation;
- (5) Presidential regulation;
- (6) Provincial regulation; and
- (7) Regency or municipality regulation.

In addition to the legal instruments listed here, there are presidential instructions or decrees, ministerial decrees, and circulation letters, which add further details to laws and government regulations. In general, the stronger the effect of a provision, the higher in the hierarchy such a provision should be placed. For example, criminal sanctions such as imprisonment should be stipulated in a law, at least, not in a government regulation. This is so that higher rules provide more certainty of law.

There is also a rule equivalent to a law called a government regulation in lieu of law. Such government regulations are characterized in Article 22 of the 1945 Constitution, as follows:

- (i) In urgency, the President shall be entitled to stipulate a government regulation in lieu of law.
- (ii) Indonesia regulation shall be approved by the House of People's Representatives in the subsequent meeting.
- (iii) In case of disapproval, Indonesia regulation shall be revoked.

Given the rapid growth of the digital economy and the 2008 amendments to the VAT and income tax laws, Indonesia felt that new measurements to deal with the digital economy should be added to the current law. However, in the past, the progress of discussions between the Government of Indonesia (the Ministry of Finance in particular) and the House of People's Representatives regarding three draft amendments to the taxation law (concerning general provisions and tax procedures, income tax, and VAT) has lagged disappointingly. Although these drafts were meant to be discussed during 2015–2019, no progress was seen until the end of this period.

To fill the gap in e-commerce regulation, on 20 November 2019, the President issued Government Regulation 80/2019 concerning trade activities through electronic systems. This regulation covers all trading activities conducted using electronic communications systems, both online and offline, and covers both business-to-business and business-to-consumer transactions (e-commerce). The regulation stipulates that foreign digital businesses conducting e-commerce in Indonesia are deemed to have a physical presence in Indonesia and to conduct permanent business activities in Indonesia if they meet certain criteria, including transaction volume, transaction value, number of delivery packages, and number of users. However, the lack of further implementation of regulation renders this regulation substantially ineffective to deal with the digital economy challenges.

In early 2020, Indonesia's growing focus on attracting investment by utilizing omnibus bills created momentum for adding more substantial digital tax provisions

to the draft of the Omnibus Law for Taxation. Black's Law Dictionary defines an omnibus bill as a single bill covering several diverse or unrelated topics, or a bill that deals with all proposals relating to a particular subject. This omnibus bill is one of several meant to streamline overlapping provisions in various laws to improve the ease of doing business in Indonesia. One of the proposed provisions is e-commerce taxation to level the playing field between local and foreign businesses.

The most important features of the bill concerning digital tax are the introduction of a significant economic presence concept to determine a permanent establishment, the imposition of an ETT if a tax treaty prevents the application of significant economic presence, and the appointment of certain foreign digital service providers as VAT collectors.

The subsequent emergence of the COVID-19 pandemic has harmed public well-being and the economies of countries around the world, including Indonesia which confirmed its first case in March 2020. In early March 2020, the coronavirus outbreak was predicted to cost the global economy as much as \$2.7 trillion, equal to the entire gross domestic product of the United Kingdom (UK) (Orlik et al. 2020).

This unprecedented outbreak motivated Indonesia to take extraordinary measures. According to Article 22 of the 1945 Constitution, the President is entitled to stipulate a government regulation in lieu of law in an urgent situation. At the end of March, as a legal basis to deliver extraordinary measures to fight the adverse economic impacts of the COVID-19 pandemic, Indonesia issued government regulation in lieu of law (Perppu) 2/2020. This set out several provisions regarding the state's finances, including a relaxation of the budget spending limit and a reduction of capital injections for state companies.

In addition, Indonesia made a strategic move to include two important matters in the draft of the Omnibus Law for Taxation to Perppu 1/2020: (1) A reduction of the corporate tax rate to boost foreign direct investment, and (2) taxation measures for e-commerce to provide extra revenue for Indonesia. This approach proved so effective that on 12 May 2020, the House of People's Representatives passed the Perppu into Law 2/2020. In the absence of the COVID-19 outbreak, the draft digital taxation measures might still have been in discussion between the Government of Indonesia (the Ministry of Finance in particular) and the House of People's Representatives.

The digital taxation provisions in Law 2/2020, the implementing regulations concerning VAT, and the direct taxation aspects of trade activities through electronic systems are explained further in the following section.

10.3.2 Value-Added Tax on Trade Activities through Electronic Systems (e-Commerce)

Services and intangible goods dominate trade activities through electronic systems. VAT Law 8/1983 (lastly amended by Law 42/2009) defines services as

Any services which are built upon agreement or legal action causing goods, facility, convenience, or rights are available to utilize, including service

performed to produce goods by order or by demand together with materials and directions from the person who makes the order.

In the last amendment to the VAT law, Indonesia introduced the notion of intangible goods by providing a specific definition of taxable intangible goods, as follows:

- (i) the use of or right to use copyrights in the field of literature, art or scientific works, patent, design or model, plan, secret formula or process, trademark, or form of rights on intellectual or industrial property or other similar rights;
- (ii) the use of or right to use industrial, commercial, or scientific equipment or accessories;
- (iii) the provision of scientific, technical, industrial or commercial knowledge, or information;
- (iv) the provision of additional or supplementary assistance related to the use of or right to use the rights referred to in (i), the use of or right to use the equipment or accessories referred to in (ii), or provision of knowledge or information referred to in (iii), in the form of:
 - (a) receipt or right to receive recording of pictures or recording of voice or both, distributed to the public through satellite, cable, optic fiber, or similar technologies;
 - (b) the use of or right to use recording of pictures or recording of voice or both, for television or radio broadcasting announced or broadcast through satellite, cable, optic fiber, or similar technologies; and
 - (c) the use of or right to use a part of or all of a spectrum of radio communication;
- (v) the use of or right to use motion picture films, films or video tapes for television broadcasts, or voice tapes for radio broadcasts; and
- (vi) release of all or a portion of rights related to the use of or right to use, or provision of rights on intellectual or industrial property, or other rights referred to above.

Any use of the abovementioned intangibles and/or services for VAT purposes is defined as any activity using intangibles and/or services. In general, whether the user is a taxable entrepreneur, an end-customer, or a non-taxable entrepreneur, VAT will be imposed on the events or activities. According to Circular Letter of the Directorate General of Taxes (DGT) S-1814/PJ.52/1995 concerning VAT Treatment on Transfer of Assets and Goodwill, there are certain characteristics of events that can be categorized as the use within the customs area of intangible taxable goods and/or services obtained from outside the customs area, as follows:

- (i) the intangible taxable goods are owned by any individual or entity residing in or established outside of the customs area;
- (ii) the services are delivered by any individual or entity residing in or established outside of the customs area;

- (iii) the place of use of the intangible taxable goods and/or services obtained from outside the customs area is within the customs area;
- (iv) the intangible taxable goods and/or services are used by any individual or entity within the customs area; and
- (v) with regard to services, a service could also be delivered inside of the customs area by a foreign provider with the proviso that the activity of delivery does not cause the individual or entity, which resides or is established outside the customs area, to become a tax subject.

In substance, the Indonesian VAT law adopts the destination principle, as reflected by the taxable events provision. As stated in the Minister of Finance Regulation 40/2010 concerning Procedures for Calculating, Withholding, Remitting, and Reporting of Value-Added Tax on the Utilization of Intangible Taxable Goods and/or Taxable Services from Outside of Customs and Excise Territory within Customs and Excise Territory, VAT on the use of taxable intangible goods and/or services is payable prior to events, including the following scenarios:

- (i) the taxable intangible goods and/or services are actually used by the party utilizing them;
- (ii) the cost of taxable intangible goods and/or services is claimed to be payable by the party utilizing them;
- (iii) the sales price of taxable intangible goods and/or services is collected by the seller;
- (iv) the cost of taxable intangible goods and/or services is paid partly or fully by the party utilizing them; or
- (v) if none of the above is known, the time when the utilization takes place is the date when the agreement is signed or in any other time that might be stipulated by the DGT.

Based on these provisions, it is clear that any services and intangibles provided via e-commerce fall under the scope of the VAT law, and Indonesia has full rights to collect VAT. However, prior to Law 2/2020, the mechanisms and technicalities of how to collect VAT from e-commerce were non-existent, specifically regarding how to collect VAT when a foreign seller sells its product through an electronic system to a consumer in Indonesia.

Law 2/2020 stipulates that VAT on the utilization of intangibles or services provided by overseas sellers and e-commerce platform providers should be collected, paid, and reported either by the sellers and providers themselves or by their appointed representatives in Indonesia. If the sellers fail to fulfill this obligation, Indonesia will impose sanctions, ranging from administrative sanctions to access termination.

Subsequent to Law 2/2020, on 15 May 2020, the Ministry of Finance issued Minister Regulation 48/2020 concerning the appointment of VAT collectors and procedures for collecting, paying, and reporting VAT. On 25 June 2020,

the DGT provided implementing regulations in the form of Director General Regulation 12/2020, followed by Circular Letter 44/2020 on 30 July 2020 elaborating the procedures in more detail. The main provisions in the regulations are as follows:

- (i) Digital goods and services fall under the scope of intangibles and services as defined in the VAT law.
- (ii) Sellers of digital products who might need to collect VAT include:
 - (a) overseas merchants or online retailers who sell digital products to Indonesian consumers,
 - (b) overseas operators of online marketplaces who supply digital products to Indonesian consumers, and
 - (c) Indonesian operators of online marketplaces who supply foreign digital products to Indonesian consumers.
- (iii) An Indonesian consumer is an entity or an individual that
 - (a) is domiciled or resides in Indonesia,
 - (b) pays for the transaction using any payment facilities provided by any institutions in Indonesia, and/or
 - (c) transacts using an Indonesian internet provider address or telephone number.
- (iv) The appointment of sellers as VAT collectors is based on certain thresholds:
 - (a) a transaction amount with Indonesian consumers exceeding Rp600 million in 1 year or Rp50 million in 1 month; and/or
 - (b) a number of Indonesian users exceeding 12,000 in 1 year or 1,000 in 1 month.
- (v) Sellers that have not been appointed a VAT collector, but would like to be appointed as such, may submit an application to the DGT.
- (vi) The amount of VAT that is obliged to be collected by the e-commerce VAT collector shall be 10% of the amount paid by the consumer, not including the VAT collected.
- (vii) VAT collectors may remit the VAT collected in rupiah, United States dollars, or other foreign currencies specified by the DGT.
- (viii) VAT collectors shall be obliged to file the VAT collected and remitted on a quarterly basis for every three tax periods, not later than the end of the month after the quarterly period ends.
- (ix) In special cases, the DGT may require a VAT collector to furnish a more detailed report covering 1 calendar year.

As of 29 January 2021, the DGT had appointed 53 VAT collectors.

As of 31 December 2020, 23 digital companies have collected Rp616 billion (approximately \$41 million) in VAT via electronic systems. Of the total tax revenue collected in 2020 (as much as Rp1,070 trillion), VAT collected through an electronic system accounts for 0.06%.

10.3.3 Direct Taxation Application on Digital Transactions

The traditional tax system was heavily based on physical presence to allocate taxing jurisdiction. The OECD has incorporated this physical presence principle in its Model Tax Convention on Income and on Capital as a form of permanent establishment that has been adopted by existing bilateral tax treaties around the world. As a result, the rights to tax business income are effectively located in resident countries. The source or market country is only able to tax such income if the seller fulfills a certain degree of establishment in the market country. This condition has created challenges for tax authorities to capture the potential of the digital economy.

The OECD tried to answer these challenges through its 2015 BEPS (base erosion and profit shifting) Action 1 Report on the digital economy by introducing several approaches, including taxing nexus in the form of significant economic presence, a withholding tax on certain types of digital transactions, and a tax imposed on the turnover of non-resident businesses with a significant economic presence. However, this report lacks a uniform recommendation and instead creates different taxing regimes for the digital economy in several jurisdictions.

Subsequently, several jurisdictions acted quickly by taking their own measures; while some followed the approaches in the report, others took a different path. The UK adopted the diverted profit tax, which applies a higher corporate tax rate to digital businesses that avoid permanent establishment status to divert profits from a market country (Picciotto 2015). This approach was followed by Australia in its Multinational Anti-Avoidance Law (Nguyen 2017). India adopted the BEPS Action 1 approach by implementing a gross-basis equalization levy in 2016 to level the playing field between brick-and-mortar and digital businesses (Basak 2016).

In early 2019, the OECD initiated a global consensus substantiated by a timeline summary of a long-term solution to address the digitalization challenges. The BEPS Inclusive Framework planned to deliver a consensus agreement on the digital economy taxation by the end of 2020. On 9 October 2019, the OECD released a public consultation document outlining a proposal for a unified approach under Pillar One focusing on new nexus and profit allocation rules to ensure that, in an increasingly digital age, the allocation of taxing rights with respect to business profits is no longer exclusively circumscribed by reference to physical presence. This was followed by the release of a similar consultation document on Pillar Two known as the Global Anti-Base Erosion proposal, presenting a coordinated set of rules to address risks from schemes that allow profit shifting by multinational enterprises to jurisdictions where they are subject to no or very low taxation.

Despite the need to capture potential tax revenue from the digital economy through the imposition of an effective direct tax, Indonesia as one of the members of the OECD Inclusive Framework has expressed its commitment to wait for a global consensus on digital taxation rather than implementing a digital services

tax of its own (KPMG 2020). However, in case the OECD Inclusive Framework fails to reach a consensus, Indonesia sets out a related measure in Law 2/2020.

10.4 Review of Indonesia's Indirect Tax Application on the Digital Economy

This section examines measures taken by Indonesia in executing its taxing rights on the digital economy (as described in section 10.3), comprising direct and indirect tax applications. First, this study looks at indirect tax, followed by direct tax, which is seen as the preferred strategy to address the challenges of the digital economy. The examination begins by identifying the remaining issues on establishing an effective tax system for capturing potential tax revenue and culminates with suggestions for implementing VAT collection in e-commerce.

10.4.1 Strategy for Getting Overseas Digital Platforms on Board

The imposition of indirect tax takes the form of VAT collection on the utilization of intangibles or services provided by overseas sellers and digital platforms. The underlying basis for the implementation of VAT on intangibles or services provided by overseas sellers and digital platforms in Indonesia accords with international tax norms. VAT is a tax on consumption, the burden of which is substantially born by final consumers and collected by businesses (Keen and Lockwood 2007). The application of VAT to international trade is based on the destination principle, which is sanctioned by World Trade Organization rules (OECD 2011).

As discussed in section 10.3, on 28 December 2020, the DGT appointed 52 platforms to be VAT collectors. Overseas digital platforms play a crucial role in a well-established indirect tax mechanism for digitalized goods and services, and it is necessary to establish cooperation with these platforms. In the era of the digital economy, the involvement of offshore digital platforms has become ubiquitous in the international tax landscape. Numerous jurisdictions have introduced, or are working on regulations requiring non-resident vendors of consumer goods to charge, collect, and remit VAT in the country of importation, such as Australia, New Zealand, and European Union member states (KPMG 2019). Indeed, the possible involvement of digital platforms in the collection process is a notable breakthrough in the tax system, because such platforms can significantly enhance the effectiveness of VAT collection by generating, facilitating, and executing online sales. Consequently, Indonesia should maintain a focused approach to ensure cooperation in on-boarding offshore digital vendors.

Provisions regulating the collection, remit, and reporting of VAT by the appointed offshore platforms are designed to simplify the process and allow VAT collectors to cooperate with minimum compliance costs. This intention can be seen from the provisions regarding the thresholds for qualifying platforms and report filing. To qualify as a VAT collector, platforms must meet certain thresholds, including the number of transactions and amount of traffic (see section 10.3). These thresholds would free some platforms from the obligation to collect

and remit VAT. This reflects the exclusion of some businesses without a sufficient level of connection with Indonesian customers from involvement in the indirect tax scheme, meaning that they need not allocate any resources for compliance. In contrast, other jurisdictions, such as Albania, Bahrain, and India, set no such thresholds for non-resident collectors of VAT and goods and services tax (Bunn, Asen, and Enache 2020).

This vision to simplify the involvement of offshore digital platforms is also reflected in the provision for VAT reporting. VAT collectors must file on a quarterly basis the VAT collected and remitted once in every three tax periods; in special cases, the DGT may require a VAT collector to furnish a more detailed report covering one calendar year. The provisions applied to overseas VAT collectors are less rigid than those regulating the reporting obligations of domestic VAT collectors: Article 15 of the VAT Law states that domestic VAT collectors shall file VAT returns no later than the end of the tax period after the tax period of the return.

The lenient reporting provision for overseas collectors seems to be the most appropriate approach since establishing solid cooperation is an essential phase in addressing the challenges of the digital economy. This aligns with Mahangila (2017), who finds that, in general, tax noncompliance increases significantly as tax compliance costs increase. Moreover, reducing the frequency of tax reporting could result in considerable cost savings for businesses (Gallagher and Jacobs 2009). However, the implementation of VAT collection on the utilization of intangibles or services by overseas digital platforms leaves the question of whether foreign VAT collectors face any impediments that could hinder them from VAT collection compliance.

In the author's view, the rules concerning the effective date of lawfully taking part in Indonesia's indirect taxation scheme should be designed to enable foreign digital platforms to prepare their resources sufficiently for a higher level of compliance and, in turn, for better collaboration between the tax authority and non-resident VAT collectors. For the four different official appointments of non-resident VAT collectors, the interval between the official appointment date and the effective date of VAT collection all are less than 30 days. The first appointment took place on 7 July 2020 with an effective date of 1 August 2020, the second appointment was on 7 August 2020 with an effective date of 1 September 2020, the third appointment was on 9 September 2020 with an effective date of 1 October 2020, and the last appointment was on 9 October 2020 (Table 10.2).

To function as a VAT collector, non-resident digital platforms might need to ready themselves by preparing the technical infrastructure to collect and remit VAT, allocating human resources to oversee VAT collection matters, and reorganizing their internal standard operating procedures, among other things. These preparations might require a sufficient amount of time to be allocated to prevent unnecessary errors. Therefore, in the case of non-resident VAT collectors, it is important to consider a longer time interval between the appointment date and the effective date.

Table 10.2 Appointments of Value-Added Tax Collectors

1st-phase appointment (7 July 2020)	2nd-phase appointment (7 August 2020)	3rd-phase appointment (9 September 2020)	4th-phase appointment (9 October 2020)	5th-phase appointment (17 November 2020)	6th-phase appointment (28 December 2020)	7th-phase appointment (29 January 2021)
<ul style="list-style-type: none"> Amazon Web Services Inc. Google Asia Pacific Pte. Ltd. Google Ireland Ltd. Google LLC. Netflix International B.V. Spotify AB. 	<ul style="list-style-type: none"> Facebook Ireland Ltd. Facebook Payments International Ltd. Facebook Technologies International Ltd. Amazon.com Services LLC Audible, Inc. Alexa Internet Audible Ltd. Apple Distribution International Ltd. TikTok Pte. Ltd. The Walt Disney Company (Southeast Asia) Pte. Ltd. 	<ul style="list-style-type: none"> LinkedIn Singapore Pte. Ltd. McAfee Ireland Ltd. Microsoft Ireland Operations Ltd. Mojang AB Novi Digital Entertainment Pte. Ltd. Amazon.com (Singapore) Pte. Ltd. Skype Communications SARL Twitter Asia Pacific Pte. Ltd. Apple Distribution International Ltd. Zoom Video Communications, Inc. PT Jingtong Indonesia Pertama PT Shopee International Indonesia 	<ul style="list-style-type: none"> Alibaba Cloud (Singapore) Pte. Ltd. GitHub, Inc. Microsoft Corporation Microsoft Regional Sales Pte. Ltd. UCWeb Singapore Pte. Ltd. To The New Pte. Ltd. Coda Payments Pte. Ltd. Nexmo Inc. (Steam) beIN Sports Asia Pte. Ltd. 	<ul style="list-style-type: none"> Cleverbridge AG Corporation Hewlett-Packard Enterprise USA Soflayer Dutch Holdings B.V. (IBM) PT Bukalapak.com PT Ecart Webportal Indonesia (Lazada) PT Fashion Eservices Indonesia (Zalora) PT Tokopedia PT Global Digital Niaga (Bibli.com) Valve Corporation beIN Sports Asia Pte. Ltd. 	<ul style="list-style-type: none"> Etsy Ireland Unlimited Company Proxima Beta Pte. Ltd. Tencent Mobility Ltd. Tencent Mobile International Ltd. Snap Group Ltd. Netflix Pte. Ltd. 	<ul style="list-style-type: none"> Nordvpn S.A. eBay Marketplace GmbH
Effective date: 1 August 2020	Effective date: 1 September 2020	Effective date: 1 October 2020	Effective date: 1 November 2020	Effective date: 1 December 2020	Effective date: 1 January 2021	Effective date: 1 February 2021

Source: DJP. 2021. *DJP Tunjuk eBay dan NordVPN Sebagai Pemungut PPN PMSE*. <https://pajak.go.id/id/siaran-pers/djp-tunjuk-ebay-dan-nordvpn-sebagai-pemungut-ppn-pmse> (accessed 6 March 2021).

10.4.2 Managing Reliable Data for Appointing Cross-Border Value-Added Tax Collectors

As mentioned earlier, the DGT had appointed 52 VAT collectors as of 28 December 2020. This list is sure to lengthen over time. However, the DGT's ability to retrieve the necessary information to appoint other qualifying offshore digital suppliers as VAT collectors remains uncertain. Indonesia should be able to monitor and retrieve data in relation to the thresholds described earlier to determine whether a non-resident digital platform is qualified to be a VAT collector and undertake the same level of involvement in Indonesia's indirect tax scheme as do all other offshore VAT collectors. This relates to the fairness principle that every tax system, including that of Indonesia, desires to uphold.

The notion of fairness is also crucial to creating a level playing field among digital businesses. From a commercial perspective, the costs incurred by businesses to comply with certain tax regulations should be imposed equally on those who satisfy the same threshold. It is suggested that the taxation system should be adapted to the digital economy and should ensure a level playing field so that companies are taxed in a fair, non-discriminatory, and channel-neutral way (E-commerce Europe 2019).

In the authors' view, Indonesia should adopt a set of strategies to enhance its ability to obtain and maintain reliable data pertaining to the effective implementation of VAT collection by non-resident digital suppliers. First, the DGT should not only rely on sellers' notifications to expedite the process of appointing VAT collectors but should also work in close collaboration with the Ministry of Trade to monitor e-commerce. Second, the utilization of exchange of information should be optimized. Since the exchange of information mechanism provides an opportunity to retrieve sales data from overseas e-commerce companies in Indonesia, Indonesia should actively request an exchange of information from partner jurisdictions where the companies reside.

10.4.3 Law Enforcement for Tackling Value-Added Tax Fraud

Law enforcement is a vital factor in establishing an effective tax system. Tax compliance outcomes can be achieved through voluntary or enforced compliance. Voluntary compliance refers to taxpayers' voluntary actions through dutiful obligation in the absence of intervention by the revenue administration, whereas enforced compliance generally means the coercive intervention of the revenue administration to increase tax compliance (Randlane 2016).

With respect to compliance, Article 7 of Law 2/2020 stipulates that any noncompliance is subject to administrative sanctions and, in the worst case, to access termination after receiving a warning. Yet, even after the issuance of several implementing regulations, the details and procedures of imposing such sanctions remain unclear.

In the absence of a legal basis for law enforcement with respect to cross-border VAT collection from the digital economy, noncompliance leading to lost revenue

cannot be properly addressed. Considering the soaring number of digital transactions in the Indonesian market, the amount of lost VAT revenue is a serious concern for national tax authorities. For example, in 2017 European Union countries lost €137 billion in VAT revenue to VAT fraud (European Commission 2019). One way to address potential tax fraud is through a tax penalty (Allingham and Sandmo 1972).

Since VAT is based on the destination principle, Indonesia has full authority to collect VAT from the domestic utilization of services or intangible goods traded through e-commerce (Andikara 2017), including the appointment of VAT collectors. Therefore, to guarantee future compliance, the authors suggest that Indonesia should immediately stipulate a clear implementing regulation regarding penalty procedures to ensure compliance.

10.5 Review of Indonesia's Direct Tax Aspects of Trade Activities through Electronic Systems

Law 2/2020 addresses not only the VAT treatment of e-commerce but also the direct taxation of such activities. In general, Law 2/2020 tries to cover all future possibilities, whether or not a global consensus is reached. First, the law introduces the concept of a deemed permanent establishment under a significant economic presence in Indonesia based on consolidated gross revenue, sales amounts in Indonesia, and/or the number of active members in Indonesia. If specific provisions in a tax treaty prevent the implementation of a significant economic presence nexus to determine a permanent establishment, a second provision in Law 2/2020 introduces a gross-basis ETT. However, before both measures can be implemented, further regulations are needed.

Indonesia is not the only country preparing a new tax if the OECD Inclusive Framework fails to reach a global solution. Poland and Norway have also announced that, without a consensus, they will introduce a unilateral measure (KPMG 2020). Meanwhile, other countries such as Austria, Italy, Spain, Turkey, and the United Kingdom adopted some form of digital service tax in 2020 without waiting for a global consensus (KPMG 2020).

Some measures might violate some existing tax treaties and not others, depending on the interaction between domestic law factors and the relevant provisions of the bilateral tax treaties (Christians and Magalhaes 2020). Therefore, further implementing regulations on the significant economic presence nexus and ETT should be designed meticulously.

The authors also suggest that Indonesia should ask for further explanation from the OECD regarding the global consensus implementation timeline, and demand rapid finalization. Since Indonesia has already waited overly long to execute its right to tax revenue from the digital economy, if global consensus cannot be successfully reached within the prescribed time, Indonesia should take a firm position to implement unilateral measures as stipulated in Law 2/2020.

10.6 Conclusions and Recommendations

10.6.1 Conclusions

Taxing the digital economy has been a major challenge for many countries, including Indonesia. To secure a source of essential funding amid the COVID-19 pandemic, Indonesia has introduced new measures to collect taxes from trade activities through electronic systems in Indonesia. The government's call to design a government regulation in lieu of law (Perppu) instead of a "normal law" is appropriate since the pandemic has been an exceptional incentive for Indonesia to introduce a Perppu. The digital taxation measurements covering VAT and direct taxes are laid out in Perppu 1/2020, which was eventually passed by the House of People's Representatives on 12 May 2020 as Law 2/2020.

Any services and intangibles provided from e-commerce fall under the scope of the VAT law, and Indonesia has full rights to collect VAT therefrom. In a business-to-business scheme, VAT is charged under a reverse charge mechanism. However, before Law 2/2020, mechanisms to collect VAT from a business-to-consumer scheme were non-existent, especially when a foreign seller sells its product through an electronic system to a consumer in Indonesia. Since it is impossible to collect VAT from each consumer, the only option is through businesses.

The VAT provisions in Law 2/2020 and its implementing regulation set the legal basis to establish an indirect tax mechanism for digitally based transactions through VAT on e-commerce. This measure has passed a practical milestone by appointing overseas sellers as VAT collectors. If sellers fail to fulfil their obligations, sanctions will be imposed, ranging from administrative sanctions to access termination.

This chapter also identifies three challenges in the ongoing collection of VAT by non-resident sellers as a means of capturing potential tax revenue from the digital economy; those are the approach to subtly creating reliable cooperation between the government and non-resident VAT collectors, managing reliable data from e-commerce and the business players therein, and law enforcement for tackling fraud in VAT collection.

In terms of direct taxation, Indonesia as one of the members of the OECD Inclusive Framework has expressed its commitment to wait for a global consensus on digital taxation. The introduction of a significant economic presence nexus to determine a permanent establishment and a gross-basis ETT in the Law 2/2020 is simply a backup plan if the OECD Inclusive Framework fails to reach a global solution.

10.6.2 Recommendations

This analysis yields some workable recommendations that are necessary to achieve a more ideal indirect tax system for e-commerce. To induce voluntary compliance by overseas digital platforms, the DGT should enable them to prepare their resources sufficiently to ensure a higher level of compliance and, in turn, better

collaboration between the tax authority and non-resident VAT collectors by providing a simplified mechanism and by allowing non-resident VAT collectors more time to comply in their role as VAT collectors.

Further, to enhance its ability to obtain and maintain reliable data pertaining to the effective implementation of VAT collection by non-resident digital suppliers, Indonesia should implement a set of strategies, as follows. First, the DGT should collaborate closely with the Ministry of Trade to monitor e-commerce. Second, the DGT should explore opportunities to cooperate with other competent authorities by utilizing its vast exchange of information network to collect data from potential overseas digital suppliers, especially segmented sales data showing sales in Indonesia. In addition, to guarantee future compliance, the authors suggest that Indonesia should immediately stipulate a clear implementing regulation regarding penalty procedures.

With regard to direct taxation, while the OECD is actively proposing a fixed implementation deadline on global consensus, Indonesia should meticulously design further implementing regulations on the significant economic presence nexus and ETT to manage the interactions between domestic law and the relevant provisions of bilateral tax treaties.

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11 The Role of Government Reform in Improving Voluntary Tax Compliance in the Digital Economy

The Bangladesh Experience

Tapan Sarker and Md Shabbir Ahmed

11.1 Introduction

The rapid growth of the digital economy has placed increased pressure on revenue administrations around the world in their efforts to enhance voluntary tax compliance by meeting taxpayers' obligations (Migai, Jong, and Owens 2018; Organisation for Economic Co-operation and Development [OECD] 2014). This is particularly relevant to developing countries in Asia and the Pacific, where tax agencies are struggling to capture adequate tax information with a conventional tax filing system and inadequate human resources (Gueydi and Abdellatif 2018). The current view is that there is a growing need for a well-functioning tax administrative system, incorporating advanced tax technology that can systematically gather and process taxpayer information, crossmatch, and thereby help both taxpayers and the tax authority meet their tax obligations (KPMG 2018).

The effects of tax system digitalization are significant for the economies in Asia and the Pacific. Digitalization is changing all aspects of taxation, from collection and compliance to the tax base itself (KPMG 2019). For example, in Bangladesh digitalization of the tax system is beginning to have an economic and social impact as the country embraces new and digitalized business models. While digitalization has the potential to drive innovation and thereby transformation, it is also seen as a way to drive welfare-enhancing changes in society. In a developing country, a digitalized tax system can enhance citizen–state relations by improving tax compliance. To date, several countries have adopted e-taxation to promote taxpayer satisfaction. In Romania, for instance, the use of digital public services has increased the level of tax compliance by making taxpayers feel more confident and responsible, which prompts them to comply (Fanea-Ivanovici et al. 2019). Similarly, in Slovenia, a country that ranks above the European Union average in online availability, taxpayer satisfaction with using personal income tax online services is very high because of ease of use and access (Klun and Decman 2006).

As the adoption of digitalization in taxation is relatively new in developing countries in Asia and the Pacific, there is no comprehensive study that examines the role of tax digitalization and automation in enhancing tax compliance. This research aims to fill this gap in the literature by exploring the role of tax digitalization and automation undertaken by the income tax wing of the National Board

of Revenue (NBR) in Bangladesh in enhancing voluntary tax compliance. To this end, we use an online key informant survey to better understand the relationship between digitalization and automation of the tax system, and improved taxpayer well-being. Aligning with the Government of Bangladesh's Sustainable Development Goals (SDGs) and Vision 2041, the study also explores possible links between digitalization and automation of the tax system in achieving the SDGs. Voluntary tax compliance is a chronic problem in Bangladesh (Sarker 2003; Faridy, Freudenberg, and Sarker 2018), and prior research indicates that it is necessary to understand the key factors that influence such noncompliance (Akhand 2015).

Our study has several practical and policy implications. First, it will contribute to our understanding of the factors influencing various groups of taxpayers in meeting their tax obligations within a growing digital economy. Second, from a tax administration point of view, the study will shed light on the opportunities and challenges in adopting digital technologies to provide tax services and thereby enhance tax compliance in developing countries. Due to the variety of policies and differing abilities to adopt digitalization to enhance tax compliance, the evidence on the current capability of revenue authorities in developing countries is mixed (Carnahan 2015). Consequently, from a policy perspective, the study will provide insights into the role of future reforms in tax policy and administration in the digital economy in the developing countries of Asia and the Pacific. This will help develop a well-functioning revenue system, which is necessary for strong, sustained, and inclusive economic development in the region.

This chapter consists of seven sections. The first section introduces the topic. Section 11.2 presents a literature review examining the need for and role of tax digitalization and transformation to enhance voluntary tax compliance in a developing country. Section 11.3 presents the theoretical framework of the study. Section 11.4 briefly presents the history, trends, and current state of the digitalization of the income tax system in Bangladesh. Section 11.5 presents the methodology used for the study, and section 11.6 presents the results of the study. Section 11.7 discusses the implications for further research, provides some policy options, and concludes.

11.2 Literature Review

A well-functioning revenue administration is central to supporting the effective modernization of a tax system (Kidd 2010). Within the literature, several studies examine the role of a well-functioning tax system in the digital economy. Carnahan (2015) posits that a well-functioning tax system is an important condition for strong, sustained, and inclusive economic development. This is more relevant to developing countries in Asia and the Pacific such as Bangladesh, which is facing a sharp decline in foreign aid while experiencing a high level of public expenditure (Sarker 2015). Increased domestic revenue mobilization in developing countries is crucial to fund public expenditure on the physical, social, and administrative infrastructure that is important to enhance the livelihood of

millions of people and achieve the SDGs (Kharas and McArthur 2019). Such infrastructure can also enable enterprises and businesses (small, medium-sized, and large) to start and/or expand, which is important to create jobs and wealth for a nation. An effective tax administration is thus a central element in supporting a strong “citizen–business–state” relationship that underpins effective, accountable, and stable governments. One important way to transform an effective tax system in a modern and dynamic market is to provide easier, cheaper, and faster access to digital technologies that can provide new opportunities to administer taxes, support taxpayers, and encourage their participation (Hodzic 2018). It is also possible to enhance engagement between individual taxpayers and the tax administration by improving trust in each other that can contribute to stronger economic and employment growth outcomes (Carnahan 2015).

Tax scholars posit that technology can play an important role in the current tax landscape to enable both taxpayers and tax administrators to be more accurate and compliant (Juswanto and Simms 2017; Migai, Jong, and Owens 2018; Hodzic 2018). These studies find that tax technology can help the tax department enhance transparency and accountability by streamlining taxation processes, which can result in good governance in domestic revenue mobilization. According to Thomson Reuters (2015), there are seven reasons to transform tax with technology: Accuracy and compliance, process efficiency, global collaboration, transparency, tax system satisfaction, key insights and metrics, and sustainability. This is echoed in an article by Ernst and Young (2017), which also emphasizes the growing importance of the digital wave transforming tax with technology. This trend has become stronger in recent years.

Since the early 2010s, the business case for adopting new tax technologies has gained further momentum. While tax authorities worldwide are introducing new initiatives, including tax codes to deal with these digital business models, it remains unknown how taxpayers, tax officials, and civil society perceive key global and country-specific trends directly impacting tax functions and the future of digital tax. Several studies examine the challenges posed by the spread of the digital economy for domestic revenue mobilization (Juswanto and Simms 2017; Hadzhieva 2016; Hodzic 2018; Victor 2019). Juswanto and Simms (2017) argue that tax authorities in many developing countries in Asia and the Pacific are struggling to adapt to the challenges posed by the digital economy, and must quickly enhance their competence to catch up with the rapid changes in digital economy activities. A recent study by Hadzhieva (2016) on behalf of the European Parliament highlights the direct and indirect tax challenges involved in the digital economy in light of the base erosion and profit shifting project. In particular, the study argues that it is difficult for tax administrations to levy taxes for digital goods that are highly mobile or intangible. In the context of Croatia, Hodzic (2018) highlights the tax administrative challenges of the digital economy. Using a strengths, weaknesses, opportunities, and threats analysis, this study shows that, while tax administrations face some barriers in adapting to digital technologies, these technologies also provide new opportunities to administer taxes, support taxpayers, and encourage their voluntary participation in compliance with tax

obligations. On the other hand, Victor (2019) posits that, while digitalization of the economy has increased base erosion and profit shifting carried by multinational corporations, there is an urgent need for developing countries to reform their tax systems by focusing on corporate tax standards and the tax challenges arising from the digitalization of the economy.

While these studies highlight the challenges and opportunities provided by digital and data technologies as well as the ways in which tax administrations are adapting to this transformation, there is little or no evidence as to how tax agencies in developing countries are embracing technology, or the benefits of such technology for managing the ever-evolving modern tax function. Further, the coronavirus disease (COVID-19) pandemic has impacted tax administrations around the world, with those in developing countries the worst affected. With revenues and economic activity in sharp decline, partly because of social distancing and the closure of tax offices, shuttering economies require tax administrators in Asia and the Pacific to innovate (Suzuki 2020). According to a recent World Bank report, the pandemic will bring in a “new normal,” and practices of tax administration will have to change accordingly. The report further highlights the importance of automated tax services over the medium term, and a massive acceleration in the use of digital technologies by tax administrations (World Bank 2020). Similarly, the OECD Forum for Tax Administration suggests that this crisis has provided an opportunity to build on lessons learned to improve the resilience and agility of tax administrations in the future (OECD 2020).

Hence, this research aims to explore the role of government reforms concerning the digitalization and automation of the tax system in enhancing voluntary tax compliance, through an in-depth case study of the income tax system in Bangladesh. The chapter attempts to understand how tax stakeholders embrace newer technologies in an income tax system in a developing country, using Bangladesh as a case study. It also discusses the impact of COVID-19 on tax administrations and how both tax officials and taxpayers are responding to the crisis.

11.3 Theoretical Framework: Digitalization and Tax Policy

This study is anchored on the theory of economic growth in the era of a digital economy (Qu, Simes, and O’Mahony 2016). At the macro level, two issues are critical for the well-being of societies: (1) How governments mobilize internal resources and spend them on public goods and services, and more importantly, (2) how fiscal policy is used to steer the economy (Gupta et al. 2017). Scholars find that the digitalization revolution has wide potential to improve fiscal policy in both developed and developing countries. By transforming how tax administrations collect, process, and act on information, the use of digital technology can reshape how governments create tax reforms to design and implement their tax system, spending, and macro-fiscal policies. Chen, Grimshaw, and Myles (2017) identify that digital technology can benefit tax administrations by reducing tax collection costs, increasing administrative efficiency, and fostering innovation

in tax policy. Scholars of behavioral economics posit that implementing digital technology can have significant positive effects (Sunstein and Thaler 2009). This is particularly true for taxation, in which compliance is determined by a complex mix of financial, social, moral, and psychological factors. While behavioral economics has demonstrated how a small shift toward digitalization can lead to behavioral change, it can also help an administration move from traditional paper-based filing to an online system, thereby significantly impacting compliance (International Monetary Fund [IMF] 2015).

Digitalization in taxation has both administrative and policy dimensions. Policy effectiveness largely depends on the administrative capacity of a tax system. In adopting policies for digitalization, it is important to consider the extent to which implementation of such policies is administratively feasible. In a developing country, where tax administrative limitations exist, it is often difficult to implement policies for digitalization unless the country adequately addresses the need to build the capacity of the tax administration. It is therefore imperative that the incorporation of technology is considered, not only in tax administration, but also in tax policy, and that tax reform for digitalization is seen more holistically.

Taxation provides developing countries with a stable and predictable fiscal environment, enabling them to accumulate funds for development, poverty reduction, and public service delivery. It offers an antidote to aid dependence in developing countries and provides the fiscal reliance and sustainability needed to promote growth (Lagarde 2016). It is also a strategic tool that makes it possible to finance the provision of public goods such as infrastructure, education, health, and justice, which are essential for growth. Taxes constitute an important component of government revenue, and the ratio of tax to gross domestic product (GDP) is a key barometer of a government's ability to invest in various development initiatives (Nangih, Idatoru, and Kumah 2018). The World Economic Forum (2019) posits that many developing countries like Bangladesh are trying to foster economic growth with the advent of rapid digitalization. This raises the emerging concept of digital citizenship, which is becoming increasingly normalized within advanced democratic states (Schou and Hjelholt 2018) and gaining momentum in developing countries (Busch 2011). This provides a conceptual framework to study the relationship between digitalization and economic growth in the era of a digital economy. In this study, we propose that the digital transformation of a tax system will lead to digital citizenship where taxpayers embrace engagement, which will in turn result in acceptance. The acceptance stage helps its way into new forms of “e-government” and “digital governance” by building the trust necessary to establish citizen–state partnerships.

11.4 Digitalization of Income Tax in Bangladesh

This section presents the history and trends of the digitalization process in Bangladesh's NBR income tax department, which gathers and verifies electronic information for tax credits and refunds for over 4.9 million taxpayers. The NBR is an attractive organization through which to study the role of government reforms

concerning digitalization and automation, for several reasons. First, as the apex authority for tax administration in Bangladesh, the organization is responsible for collecting tax revenues (primarily value-added tax, customs duty, excise duty, and income tax), and is a pioneer in adopting digitalization and automation. Second, the organization has implemented a range of initiatives to modernize the income tax administration, including computerizing tax administration and significantly increasing reliance on an accounts-based audit system to promote tax governance. For example, Liu (2011) suggests that the application of computer-aided audits for tax collection and management can improve the quality of tax collection and management. Third, the organization, with help from development partners, is rapidly strengthening the professional and technical capacity of the tax administration. By using digital technology such as e-registration, e-filing, e-payment, and e-withholding, the organization aims to expand the tax base by monitoring potential taxpayers, countering tax evasion, and providing taxpayers with strengthened and effective services to increase voluntary tax compliance.

11.4.1 Current State of Income Tax in Bangladesh

The NBR's income tax department is responsible for collecting direct taxes throughout the 31 tax zones in Bangladesh. Bangladesh has one of the lowest direct tax–GDP ratios in the region (2.86 as of fiscal year [FY] 2019). Out of a population of 167 million, only around five million people (2.9%) are registered taxpayers. A low ratio of return filing is another major problem when it comes to tax compliance. In FY2019, only 2.2 million taxpayers filed tax returns, resulting in one of the lowest filer–population ratios in the world. Although an electronic return filing system is in place, most taxpayers choose to file their taxes manually. The most common reason cited by taxpayers for not opting for electronic filing is that the system to file returns is not easy to understand or user-friendly.

The benefit of digitalization is evident from the sharp increase in tax registration in Bangladesh. Since the introduction of the electronic tax identification number (e-TIN) system in 2014, the number of tax registrations started to increase, tripling from 2015 to 2020 (Figure 11.1).

In developing countries, there is often high potential for revenue collection from large taxpayers (Akhand 2015). Bangladesh, which is no exception, has created a Large Taxpayer Unit to attempt to deal with large taxpayers. However, one of its biggest challenges is weak enforcement actions toward taxpayers in general, and large corporate taxpayers in particular. Increasing tax compliance in a socially cohesive manner is very important for Bangladesh, and digitalization can work as an effective vehicle for this as it emphasizes the application of self-regulatory instruments (e.g., taxpayer education and self-awareness), as opposed to command and control regulations (e.g., penalties and tax audits).

The NBR's first revenue modernization plan (2011–2016) aimed to increase the tax-to-GDP ratio to 13% by 2016 and to widen the use of digitalization in the tax system. The Finance Minister's 2016 budget speech set a target of collecting 50% of total revenue from direct taxes by 2020–2021. The 2016 budget

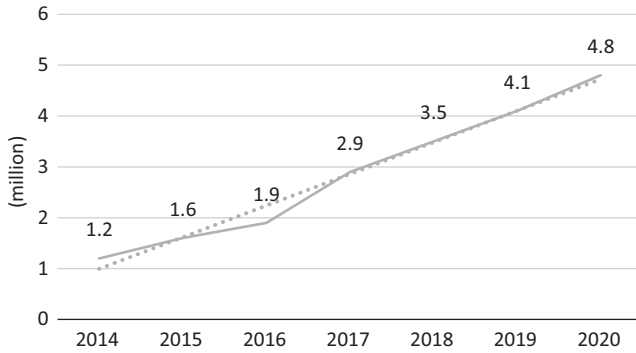


Figure 11.1 E-Registrations of Electronic Tax Identification Numbers in Bangladesh. Source: National Board of Bangladesh; authors.

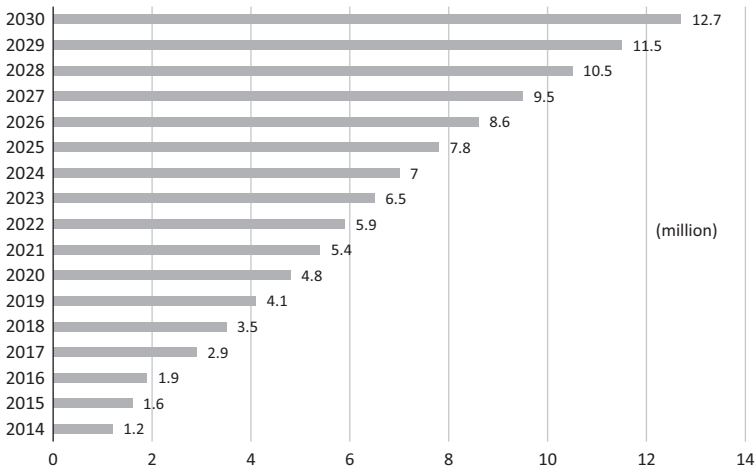


Figure 11.2 Projected Number of Taxpayers by 2030. Sources: National Board of Bangladesh; authors.

document also noted the increased adoption of information technology in the private sector and stressed the need to digitalize the business process in digital gathering and processing of tax information and establish an automated tax information unit. The plan for the digital transformation of tax information and withholding tax management was reiterated in the 2017 and 2018 budget speeches. Under business as usual and given the present growth trend of the tax base, it is projected that there will be 12.7 million registered taxpayers by 2030 (see Figure 11.2).

This figure falls far short of the NBR’s target. The Finance Minister’s 2018 budget speech targeted ten million registered taxpayers by the end of FY2023,

eight million of whom are expected to file tax returns. Digitalization can be a key tool to help reach that goal.

Private sector businesses and individuals are leading to digital innovation. Therefore, it is time for the NBR to adopt digital transformation. However, it is important to note that, for a developing country like Bangladesh, there are potential risks involved in digital transformation without proper attention being given to capacity development, and security fundamentals may pose huge risks as well. Cyber-attacks on the tax system, the leakage of protected information, identity theft, and fraud are commonly faced problems and create huge costs for tax administrations. The NBR has undertaken a comprehensive reform plan to leverage the changes and opportunities inherent in the use of digital technologies, particularly within Bangladesh's income tax system, and it is expected that the NBR will consider all challenges and risks associated with the adoption of digital technologies.

11.5 Materials and Methods

The main purpose of this study is to understand the role of government reforms in relation to the digitalization and automation of the tax system in enhancing voluntary tax compliance in a developing country. More specifically, the study examines the potential impacts of the digitalization and automation initiatives adopted by the NBR in Bangladesh in their pursuit to enhance voluntary compliance with income tax. While the present research is largely qualitative, some descriptive statistics are used. As the digitalization and automation process is still at an early stage in Bangladesh (the NBR introduced its electronic taxation system for income tax in 2014), there are not sufficient data to analyze a longer period of time. Consequently, this research collects qualitative data on five key areas to better understand stakeholders' perspectives on the digitalization of the revenue system, with a focus on personal income taxation in Bangladesh. As COVID-19 has impacted the tax administration's efforts and capability to collect revenue, the role of digitalization of the tax system in coping with the pandemic was also investigated. This study looks at five key areas: (1) Taxpayer awareness, (2) impact of digitalization, (3) taxation and the United Nations (UN) SDGs, (4) the challenges and remedies of digitalization, and (5) tax developments in response to COVID-19.

11.5.1 Data Source

An in-depth, semi-structured, key-informant online survey was used to collect primary data for the research. Hasseldine et al. (2007) argue that such a data collection method allows the researcher to gain an in-depth understanding of the research problem. The survey focused on individual income taxpayers in particular. Survey participants belonged to a wide range of stakeholder categories such as tax officials, tax accountants, civil society members, and students. Participation was voluntary and no monetary incentives were given to the participants for their time in the survey.

11.5.2 Survey Administration

An initial draft of the survey materials was prepared in consultation with the senior NBR officials. A pilot test was then designed and conducted to obtain feedback and improve the survey materials. Three taxpayers and three tax officials were involved in the pilot testing stage in early 2020. The results and feedback of the pilot test stage were used to improve the clarity of the questions and content of the survey materials. After further adjustments, the survey content was submitted to independent readers for checking before the actual survey commenced. Pilot test participants were excluded from the final survey.

The single-stage survey was administered over two weeks (3–17 March 2020), including a follow-up of the procedure for a further two weeks (16–30 July 2020). Taxpayers and tax officials who participated in the survey were from Dhaka (the capital city) and other major cities, ensuring a sound regional distribution with respect to the respondents. The survey collected no personal or identifying information, and participant anonymity and confidentiality were maintained at all times.

The survey received 80 responses: 64 during the survey period, and another 16 elicited by a follow-up request. Two responses were incomplete and thus excluded, leaving 78 valid responses. Table 11.1 summarizes the demographic data.

The participants, 85% of whom were male and 15% female, were picked from a wide range of locations, including Dhaka as well as other regional tax zones and districts. About 40% of the participants were from Dhaka, while 60% were from regional tax zones. Slightly more than half (51%) of the respondents were taxpayers, 21% were tax officials, 13% were tax accountants and tax service providers, 7% were members of civil society, and 6% were students.

Table 11.1 Summary of Sample Participants' Characteristics (N = 78)

	(n)	(%)
Gender		
Male	66	85
Female	12	15
Location		
Dhaka	31	40
Other regions	47	60
Occupation		
Taxpayer	41	53
Tax official	16	21
Tax accountant	10	13
Civil society member	6	7
Student	5	6

Source: Authors.

11.6 Results

11.6.1 *Taxpayer Awareness*

Taxpayer awareness of tax reforms is an important pre-condition to enhancing taxpayers' consciousness of the need to pay taxes (Rahayu et al. 2017). As Jatmiko (2006) explains, consciousness is a state of knowing or understanding. Taxpayer awareness has important implications for enhancing understanding and consciousness that encourage taxpayers to pay taxes (Savitri and Musfiaily 2016). This also helps taxpayers, including civil society, realize that tax is a form of participation in supporting the country's social and economic development.

A large majority of participants (95%) were aware of the NBR's tax automation and digitalization reform, with only 5% either unaware or unsure. Interestingly, female respondents show a higher level of awareness of government reforms relating to the digitalization of the tax system relative to their male counterparts. Respondents who were unsure about the reforms included civil society members and students. Thus, the NBR could take further measures to enhance awareness of its digitalization programs among civil society members, and in educational institutions.

The high level of taxpayer awareness is partly a result of the pro-taxpayer campaign launched by the NBR in 2010 that mainly takes the form of organized annual income tax fairs where taxpayers can pay taxes in a hassle-free environment. The NBR also created a program recognizing the best taxpayers in both individual and corporate categories by awarding crests, tax cards, and certificates. Such motivational programs encourage taxpayers to discharge their tax obligations and enhance voluntary tax compliance. In 2018–2019, the NBR awarded 662 individual and corporate taxpayers for their exemplary tax compliance.

Digitalization has attracted much attention since the early 2010s. In 2014, a mandatory online tax registration program was introduced. In 2012, the NBR introduced e-payment on a limited scale; it extended this further in 2019 by enabling payment through mobile wallets and other financial tools. Online return filing was introduced in 2016, with limited success. These initiatives marked the NBR's seriousness in digitizing its tax management process. More awareness-building initiatives are needed to ensure greater stakeholder participation in these initiatives. Tax seminars and workshops for individual and corporate taxpayers and the use of social media on a greater scale could be some good options. This was mentioned in the response of one survey participant, as follows:

Awareness needs to be built up with round the year tax workshops and seminars. NBR can arrange the workshops and seminars with corporate officials, Tax Practitioners and Lawyers. Presentations can be given to general taxpayers during Income Tax Fair which is now very popular among them. Building awareness will increase taxpayers' education, timely lodgment of return, and timely tax payment.

(Senior private sector official and taxpayer, male)

Another participant echoed this, saying,

The key challenges of digitization and government reform of the income tax system is to make the users of both ends educated and aware of the new system. Awareness program can help to bring people in confidence about the online submission of return and online tax payment.

(Tax accountant, male)

Participants also highlighted the important role of political commitment, which is instrumental in promoting taxpayer awareness of digital transformation efforts. As one participant expressed, “Taxpayers are not always treated well by the tax personnel, and there is a lack of effective governance. To overcome the problem, there is a need for continued political commitment to promote awareness about the digital tax system” (taxpayer, male). Another participant added, “To bring the people in confidence for the new system is a challenge. Awareness program can help to bring people in confidence” (civil society member, male).

The above discussion posits that the NBR has ample room for undertaking measures to build awareness of its digitalization programs among taxpayers, civil society members, academicians, students, and other potential taxpaying groups and educational institutions.

11.6.2 Impact of Digitization

Tax scholars find that digitalizing a tax system has a range of benefits, including fighting corruption, enhancing tax compliance, and achieving the SDGs (Fanea-Ivanovici et al. 2019). In keeping with this, this study also finds that the NBR’s digital transformation initiatives have already impacted the way the NBR collects the majority of internal revenue and engages with its taxpayers and other stakeholders. Regarding the key impacts of government reforms in relation to the digitalization of Bangladesh’s income tax system, participants’ feedback was largely positive. While participants perceived that digitalization and automation of the tax system are still at an early stage, about 60% of respondents thought such initiatives had important implications for improving good governance in Bangladesh’s income tax administration. Other responses included (multiple responses accepted) (1) it has improved public services (59%); (2) it has helped increase the number of new tax e-registrations (57%); (3) it has helped improve the timely lodgement of tax returns, thereby enhancing tax compliance (57%); (4) it has helped improve timely tax payments (56%); (5) it has improved timely and periodic reporting (49%); and (6) it has improved citizen–state (NBR) relationships (44%).

Female respondents in particular, including those belonging to civil society groups, are more convinced than male respondents of the positive impact of digitalizing the income tax system, including improving public service, enhancing good governance, and improving citizen–state (NBR) relationships. One such response read, “It has helped to maintain transparency and reduce corruption. It has also made the tax payment system easier for the taxpayers” (taxpayer, female).

Another participant added, “Because of the digital transformation, income tax collection will be fairer and trustworthy resulting to increase in the number of income taxpayers. It will also lessen public sufferings, thereby can bring the taxpayers and NBR closer to each other” (civil society member, female).

Prior studies find that tax technology can help enhance transparency and accountability by streamlining taxation processes, which can result in good governance in domestic revenue mobilization (Juswanto and Simms 2017; Migai, Jong, Owens 2018; Hodzic 2018). This finding is echoed in the present survey. Many participants underscored the need for a technology-enhanced tax system for enhancing transparency and good governance. Two such responses read as follows:

A digitized tax system will be helpful to mitigate on-field corruption and make the system more transparent and easier. It will also ease the process of tax complexity. It will also help to increase the pace of the income tax submission and will motivate more people to contribute to the economic development of the country.

(Member of civil society, male)

A technology-focused tax administration will provide comfortable ways and means for tax lodgement and tax payment for the taxpayers. The tax collector can also easily collect the tax. Accountability and transparency will be ensured. As a result of automation, there are fewer chances to meet the taxmen and taxpayers, so bribery and harassment will be reduced.

(Taxpayer, male)

According to Moore (2004, 2008), tax administrations in developing countries generally suffer from serious inefficiency and bureaucratically designed corporate governance systems. Prior research on Bangladesh found that “inefficiency, mistrust and lack of mutual understanding” coupled with “complex tax law” discourage taxpayers from being compliant, and indirectly make them unreceptive to coercive actions (Akhand 2015: 614–615). A participant who is a high-level tax official supported online filing, despite describing the existing online filing system as “clumsy,” as follows: “Adoption of tax digitalization will smoothen the process of getting e-TIN [Tax File Number]. Though it is a clumsy and rudimentary approach to submit tax returns online, yet online tax payment is effective” (tax official, male).

Another participant, a civil society member, highlighted the importance of digitalization in rebuilding trust between taxpayers and the tax authority by easing bureaucracy, as follows: “I would say that digitalization of the tax system will provide a remedy for taxpayers from harassment by the tax officials and will ease bureaucracy. Consequently, it will increase taxpayers’ willingness to pay tax” (civil society member, male).

In a recent study in the context of India, Shukla and Kumar (2019) found that trust is a critical factor affecting the successful implementation of tax reform

and that an information technology-enabled system can help develop a sense of trust among taxpayers. This was supported by the following responses: “Because of the introduction of the digital tax system, income tax collection will be fairer and trustworthy resulting to increase in the number of income taxpayers. It will also lessen public sufferings” (civil society member, male), and “Due to the introduction of the IT-enabled tax system, good governance in the income tax can be ensured. It will help establish trust between taxpayers and the tax authorities, which will help mitigate long-pending disputes” (tax official, male).

11.6.3 Taxation and the United Nations Sustainable Development Goals

According to the International Chamber of Commerce (ICC), effective tax policy and administration are instrumental to facilitate economic growth, and in doing so, support the UN SDGs (ICC 2018). In its recent position paper, the ICC (2018) also highlights the importance of modernizing the tax system, particularly in developing countries, through the adoption of digitalization. This was echoed in the first global conference organized by the Platform for Collaboration on Tax at the UN Headquarters in New York in February 2018, focusing on key directions for tax policy and administration needed to achieve the SDGs (World Bank 2018). Table 11.2 summarizes the important role of taxation in this pursuit.

For this survey, participants were asked to indicate whether government reforms relating to the digitalization of the tax system have a role to play in achieving key SDGs. Most participants indicated that such reforms have significant socioeconomic impacts and can help achieve key SDGs. More than three-quarters (78%) said that digitalizing the tax system can play an important role in enhancing inclusive and sustained economic growth, which is aligned with SDG 8. Other responses included the following: (1) It can enhance pro-poor services (32%) (SDG 1), (2) it promotes accountable and inclusive institutions (58%) (SDG 16), (3) it promotes peaceful and inclusive societies (42%) (SDG 16), and (4) it supports female entrepreneurship and enhances women’s empowerment (28%) (SDG 5).

In particular, female participants in the taxpayer and civil society groups indicate that digitalizing the tax system can play an important role in promoting accountable and inclusive institutions through enhancing transparency in tax administration with the adoption of the e-TIN. Further, they posit that such initiatives can encourage female entrepreneurship by enhancing women’s empowerment, which has long been a subject of discussion as affecting development outcomes in rural Bangladesh (Mahmud, Shah, and Becker 2012; Kabir, Aziz, and Shati 2018). Some of the responses included, “It will help to increase the pace of the income tax submission and will motivate more people to contribute to the economic development of our country” (civil society, female), and “Actually, it will increase the accountability of the Government and we hope that our Government will ensure the development of the entire community” (taxpayer, male).

Table 11.2 Role of Taxation in Achieving the Sustainable Development Goals

<i>Goals</i>	<i>Targets</i>	<i>Key indicators</i>
Goal 1: No poverty.	Target 1-A: Mobilize resources to implement policies to end poverty.	Poverty eradication A pro-poor and gender-sensitive tax system
Goal 8: Promote sustained, inclusive, and sustainable economic growth.	Target 8-3: Promote policies to support job creation and growing enterprises.	Creating employment opportunities Sustainable economic growth
Goal 10: Reduce inequality within and among countries.	Target 10-4: Adopt fiscal and social policies that promote equality.	Improved efficiency and allocation of resources
Goal 16: Promote peaceful and inclusive societies.	Target 16-6: Develop effective, accountable, and transparent institutions.	E-registration, e-payment, and e-withholding system Promoting digital transactions
Goal 17: Strengthen partnership for sustainable development.	Target 17-1: Mobilize resources to improve domestic revenue collection.	Improving institutional capacity through partnerships among government departments and between governments and the private sector

Sources: International Chamber of Commerce (ICC). 2018. Tax and the UN Sustainable Development Goals. ICC Position Paper. February. Paris: ICC. <https://iccwbo.org/content/uploads/sites/3/2018/02/icc-position-paper-on-tax-and-the-un-sdgs.pdf> (accessed 9 December 2020); World Bank. 2018. First Global Conference of the Platform for Collaboration on Tax—Taxation and the Sustainable Development Goals, 14–16 February. New York. Washington, DC: World Bank. www.worldbank.org/en/events/2017/06/06/first-global-conference-of-the-platform-for-collaboration-on-tax (accessed 9 December 2020).

11.6.4 Challenges of Digitalization and Their Remedies

The shift to a data-based digital economy and, more importantly, a shift from a manual to an online tax system can pose many challenges for taxpayers as well as the tax administration (Chen et al. 2019). Previously, Shukla and Kumar (2019) found that small and medium-sized enterprises in particular face challenges in filing their tax returns online, notwithstanding the promotional and educational efforts of the government and tax authority. Digitalization poses challenges for tax authorities as well. As Gupta et al. (2017) suggest in a recent IMF report, digitalization has intensified challenges for the tax authorities by enabling an increasing number of companies, including many household names, to operate and sell electronically in multiple jurisdictions without having much of a physical presence there. Thus, cooperative compliance could be an effective response to address these challenges, which are anchored more on mutual trust than on enforceable obligations (OECD 2013).

In our study, respondents were asked for their opinions on the challenges of digitalizing the income tax system and their remedies, particularly in a developing country like Bangladesh. A range of challenges was identified, including (1) the low level of computer literacy and technological knowledge among taxpayers, particularly senior citizens; (2) a lack of proper collaboration between the tax authority and taxpayers; (3) a lack of manpower and equipment; (4) corruption in the tax system; (5) tax officials' lack of knowledge and expertise with respect to digital tools and instruments; (6) tax officials' mindset toward digitalization and reforms, which discourages officials to adopt any kind of automation initiative; (7) inadequate outreach awareness programs to educate taxpayers and tax officials about digitalization and reforms; and (8) a lack of trust and fear of disclosure.

One participant elaborated:

Most of the people have fears of technology. I mean they do not know how to use a computer or a technological device properly. To educate the people about the benefit of paying tax and about the technologies will be the key challenge in my view.

(Taxpayer, male)

This view was supported by a senior tax official as well, who stated:

NBR did not get an integrated automation system yet. All are piecemeal. Taxmen are not technology-friendly. Other stakeholders like income tax professionals (e.g., accountants and aides) are not also technology-friendly. Many of the taxpayers have no access to the internet. Many tax men outside the capital city have not minimum technical knowledge. NBR has no server. Actually, automation of the income tax system is in a very primary stage. Have miles to go.

(Tax official, male)

To remedy these challenges, respondents suggested several options, from formulating a long-term plan to make the tax system more user-friendly to promoting awareness through education. One participant added:

There is a need for proper planning to integrate different stakeholders and sectors and within the business environment a place of commitment to adopt the process alongside the tax officials for the change in the business process due to digitization. Policy-makers also require long term vision to create an example for corruption-free revenue system.

(Tax official, male)

11.6.5 Tax Developments in Response to the Coronavirus Disease Pandemic

In most countries, the COVID-19 pandemic has caused a major decline in tax revenue (IMF 2020). Developing countries are particularly likely to see a significant

decline in their average tax-to-GDP ratio because of cross-border disruptions in supply chains, tourism, remittances, and commodity prices (Gasper et al. 2020). In Bangladesh, health measures like social distancing have had distinct effects on income, tax base, tax administration, and taxpayer compliance. Workers in the export-oriented readymade garment and manufacturing sectors, among others, were severely impacted and suffered employment loss (Kabir, Maple, and Usher 2020).

This study also aims to contribute to a better understanding of the impact of COVID-19 on Bangladesh's tax system. More importantly, it aims to shed light on whether or not a digital tax administration can help in collecting tax revenues during a situation like the COVID-19 pandemic. Overall, participants have positive views of the potential role of a digitalized tax system, suggesting that such a system will reduce human interactions and create a hassle-free tax system. One participant elaborated, "Tax returns can be lodged through online system ensuring social distance" (taxpayer, male). Another participant echoed, "It is a great advantage of the digitalized tax system that we can fulfil our tax obligations online during a pandemic like COVID-19. As a taxpayer, I am happy that I don't have to go to the tax office and I can pay my taxes online" (taxpayer, male).

11.7 Conclusions

The main purpose of this study was to examine the role of government reforms concerning digitalization and automation of the tax system in enhancing voluntary tax compliance in a developing country. We used as a case study the income tax system of Bangladesh's NBR, which is at an early stage of implementing reforms in domestic revenue mobilization. We used an online key-informant survey comprising a range of stakeholders including taxpayers, tax officials, tax service providers, civil society members, and others (e.g., students). Key findings from the study indicate that digitalization of the tax system, and of the income tax system, in particular, is seen as a major government reform adopted by the Government of Bangladesh. Study participants demonstrated high levels of awareness of the government reforms undertaken by the NBR in relation to tax automation and digitalization. Participants identified a range of challenges that can pose threats to the NBR in the successful implementation of the reforms, including the need for education and to change the mindset of officials with regard to digitalization and reforms, that discourage them from adopting automation initiatives. Participants also suggested practical solutions to address key challenges in the reform process and indicated a strong desire to push forward the reforms to enhance the governance of Bangladesh's tax system.

Overall, as the study reveals, participants perceive that, while digitalization and automation of the tax system are still at an early stage, such initiatives have important implications for improving good governance in the income tax administration of Bangladesh. Furthermore, participants perceive that the reforms have an impact on enhancing inclusive and sustained economic growth in Bangladesh in the pursuit of SDGs 5, 10, and 16.

As the IMF (2020) suggests, the implementation of new technology by governments must be appropriate to their capacity. This is true for Bangladesh, which is in the early stages of its journey to digitalize its tax system. While Bangladesh's tax system has many administrative capacity gaps, including in the area of digitalization, these study results can be useful for policymakers in many ways by helping them understand stakeholder perceptions of the NBR's digitalization efforts. First, the study outlined the factors influencing various taxpayer groups in meeting their tax obligations in the face of a growing digital economy. Second, from a tax administration point of view, the study summarized the opportunities and challenges of using digital technologies to provide tax services and thereby enhance tax compliance. Finally, from a policy perspective, the study provided insights on and offered multidimensional perspectives of future reforms in tax policy and administration to keep pace with the digital economy in developing and transitioning economies, particularly in Asia and the Pacific. This would help develop a well-functioning revenue system, which is necessary for strong, sustained, and inclusive economic development in the region.

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12 Future Vision of Japan's Tax Administration

Aspirations for a Smart Administration

*Naofumi Kosugi*¹

12.1 Introduction

In June 2017, Japan's National Tax Agency (NTA) announced the Future Vision of Japan's Tax Administration: Aspirations for a Smart Administration to ensure proper tax filing and payment based on taxpayer understanding and trust. The NTA is highly aware of the importance of maintaining steady progress toward the vision of the future to which it aspires, in particular the goal of a transparent tax administration.

12.2 Circumstances Leading Up to the Proclamation of the Future Vision

As the circumstances surrounding tax administration continue to evolve dramatically, the NTA has become convinced that, to continue fulfilling its mission with the understanding and trust of taxpayers, and to address current issues concerning taxation and collection, it must adopt a mid- to long-term policy vision of the future for tax administration to adapt appropriately to rapid economic change. Given the importance of this goal, the NTA has compiled and announced its Future Vision of Japan's Tax Administration.

Figure 12.1 presents the comprehensive Future Vision illustration, which depicts the roadmap toward a "smart" tax administration approximately ten years in the future. This comprises two pillars: Improved taxpayer convenience, and efficient and sophisticated taxation and collection. As indicated in the upper part of Figure 12.1, the NTA is facing radical environmental changes such as the promotion of information and communication technology (ICT) and artificial intelligence, as well as the introduction of the My Number System in 2015, the official universal number allocated to all Japanese people and corporations for use in most government administrative procedures.² The My Number serves as a Taxpayer Identification Number, the introduction of which Japan has long aspired to. The recent globalization of economic transactions is also a major challenge for tax authorities.

The NTA has been facing the critical issue of a declining number of tax officials since 1997, while the number of returns filed is rapidly increasing year on year (Figure 12.2).

“Future Vision of Tax Administration ~ Achieving a Smart Tax System ~”

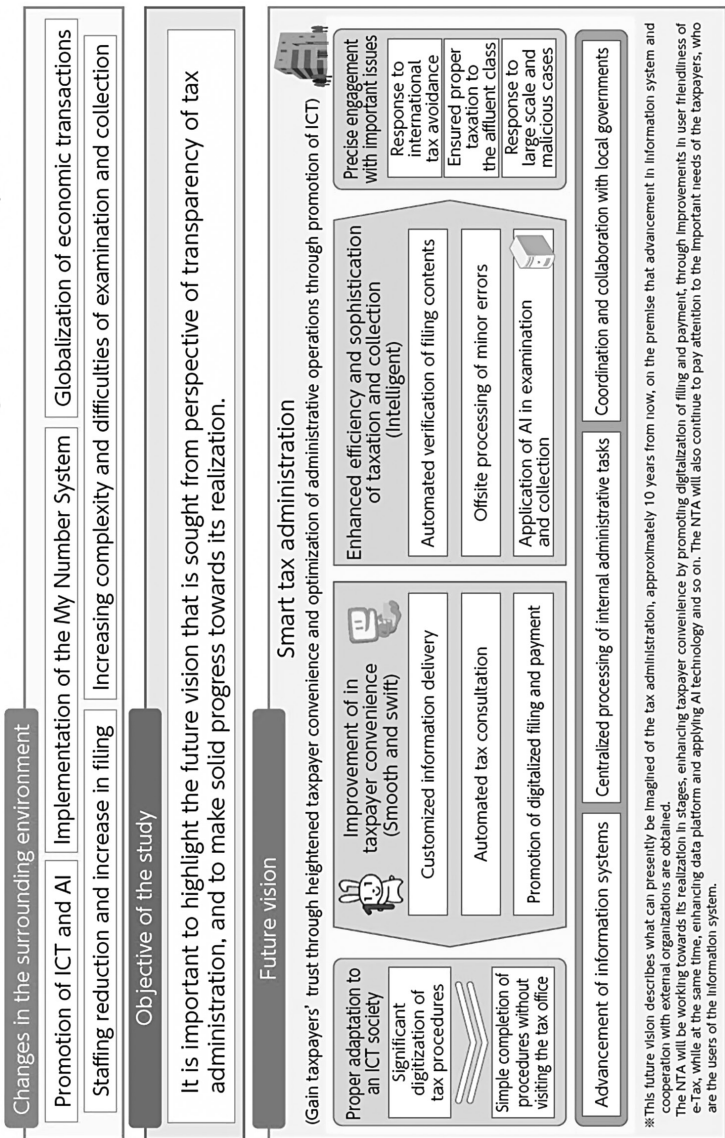


Figure 12.1 Future Vision of Japan's Tax Administration. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouzaizou/pdf/syouzaizou_r0106.pdf (accessed 16 April 2021).

Specifically, the NTA is pursuing digitalization with the use of ICT and the My Number system to make tax consultation, filing, and payment procedures smoother and faster and to enhance taxpayer convenience. This initiative will make taxation and collection more intelligent, efficient, and sophisticated while driving operational reform through the centralized processing of internal administrative work within the tax office. As a result, the NTA will be able to leverage human resources assigned under these initiatives to deal with priority issues, such as international tax avoidance.

This Future Vision is based on the premise of advanced information systems such as artificial intelligence technology and cooperation with external agencies. The NTA is set to take incremental steps to realize this initiative.

The first pillar, improved taxpayer convenience, will encompass the digitalization of tax procedures, efficient and sophisticated tax consultation, and a smart tax office consultation booth. Similarly, the second pillar, efficient and sophisticated taxation and collection, will encompass tax examination and collection procedures. The NTA is seeking “advanced analysis of information” to achieve a “wider collection of information” to deal appropriately with “cases of significant complexity and difficulty.”

As indicated in the lower part of Figure 12.3, as a platform to support these undertakings, the NTA will install infrastructure and operational reforms, such

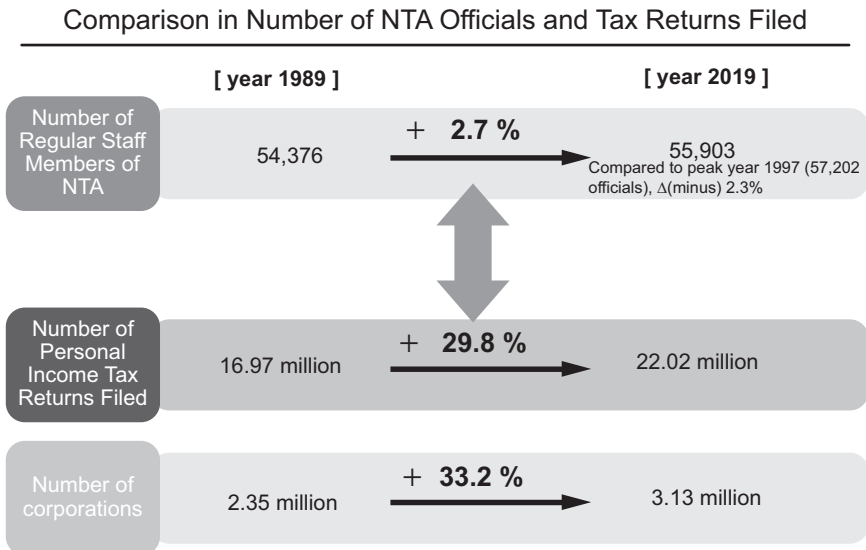


Figure 12.2 Comparison of the Numbers of National Tax Agency Officials, and Tax Returns Filed (1989 versus 2019). NTA=National Tax Agency. Source: NTA. 2019. Present Status of Tax Administration and Future Vision. September (in Japanese). www.cao.go.jp/zei-cho/content/20170927_29zen11kai3_2.pdf (accessed 16 April 2021).

June 2019

“Achieving a Smart Tax System”

The NTA will strive to realize a smart tax administration by organizing initiatives that have been accomplished or realized since the announcement of “Future Vision of Tax Administration (June 2017)” until June 2019 and remaining issues for the future, and continue to make progress towards its realization in a systematic and concrete manner.

Improvement of taxpayer convenience

Digitization of tax procedures

- Promotion of e-Tax
 - Further enhancement in ease of use of e-Tax
 - Digitization of final tax return filing process through utilization of the Mynportal.
- Digitization of year-end tax adjustment procedure

Enhanced efficiency and sophistication of tax consultation

- Installation of telephone consultation and self-serve booths at the counter through ICT
- Introduction of a chatbot
- Enhancement of information published on the NTA website

Smart counter service

- Diversifying tax payment methods and promotion of cashless transactions
- Digitization and simplification of issuance of tax payment certificate
- Telephone consultation and self-serve booths at the counter through ICT (redisplay)

More efficient and sophisticated taxation and collection

Sophistication of tax examination

- Broadening collection of information
 - Active utilization of CRS information, accurate collection of information through information query procedure, etc.
- Sophistication of data analysis
 - Considering sophistication of selection through machine learning technique, mass data matching analysis, etc.

Addressing complex and difficult cases

- Addressing international tax avoidances
- Ensuring proper taxation of the affluent class
- Ensuring proper taxation of consumption tax
- Addressing large-scale and malicious cases
- Addressing new forms of economic transaction

Enhancement and sophistication of collection

Infrastructure improvement and BPR

Sophistication of information system (in conjunction with BPR)

Centralized processing of internal administrative tasks

Strengthening coordination with external organs (local governments, CPTAs' Associations and relevant private organizations, foreign tax authorities)

Figure 12.3 Toward the Realization of a Smart Tax Administration. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

as improving the “sophistication of the information system” and implementing “centralized processing of internal administrative work.” It will also reinforce “cooperative relationships with external agencies” such as local governments, certified public tax accountant (CPTA) associations, cooperative private organizations, and foreign tax authorities.

12.3 Status of Recent Undertakings

Since its announcement, the Future Vision has served as a compass for the NTA, which has undertaken operational reform and developed infrastructure to realize each initiative set out therein. In the four years since its release, the NTA has realized many of the targeted undertakings and identified new issues for future attention (Figure 12.3), and updated the public as to the current status of these undertakings in June 2019 (NTA 2019).

12.4 Improved Taxpayer Convenience

12.4.1 *Electronic Filing (e-Tax)*

The introduction of e-Tax has been advantageous for both taxpayers and the tax authorities. Local governments have also introduced an e-filing system called eLTax, which is connected to the e-Tax system by data linkage.

Taxpayers and tax accountants can complete tax procedures from their personal computers, saving filing time and preventing errors through a streamlined and paperless process. E-Tax also reduces drastically administrative work for tax authorities because they no longer need to input figures into a return or check for errors by hand. Also, because data are saved electronically, the costs of paper management and storage are reduced, as well as the risk of missing documents.

To use e-Tax, taxpayers must obtain a digital certificate, which is embedded in the My Number card to prevent fraud. Taxpayers can then prepare their tax returns through the filing return assistance link on the NTA website or compatible e-Tax software. The e-Tax filing must be authorized by the digital certificate or a signature to identify the taxpayer before the data are transmitted to the e-Tax system via the internet. A digital taxpayer signature can be omitted when a tax accountant files the e-Tax on behalf of the taxpayer.

When e-Tax was first introduced in 2004, the usage rate was only 0.2%. Since then, the NTA has taken several measures to promote the use of e-Tax in accordance with e-government policy (Figure 12.5). The e-Tax rate of corporations is much higher than that of individuals. There are several reasons for this.

In Japan, over 90% of corporations retain CPTAs as advisors. The NTA and the CPTA Association³ work collaboratively to encourage the CPTAs' clients to use e-Tax. Further, accounting software used widely among corporations is compatible with the e-Tax system and makes e-Tax easier to use. On the other hand, individual taxpayers are required to prepare digital certificates and obtain

Outline of e-Tax

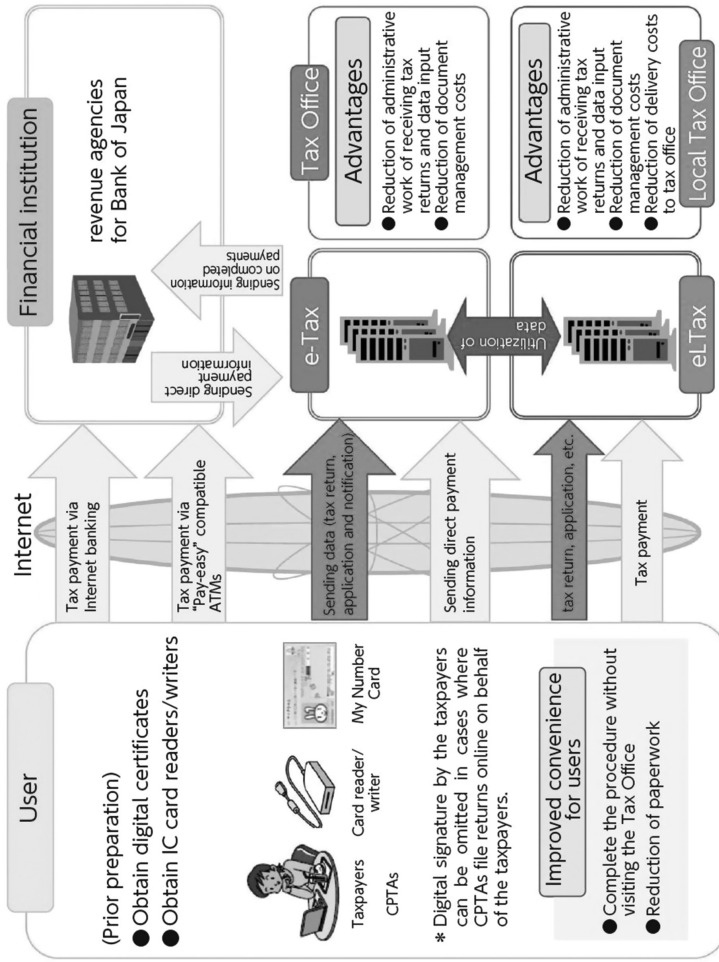


Figure 12.4 Outline of the e-Tax System. Source: National Tax Agency. 2020. National Tax Agency Report 2020. June. www.nta.go.jp/english/Report_pdf/2020e.pdf (accessed 16 April 2021).

Trends in e-Tax Usage Rates and Past Efforts

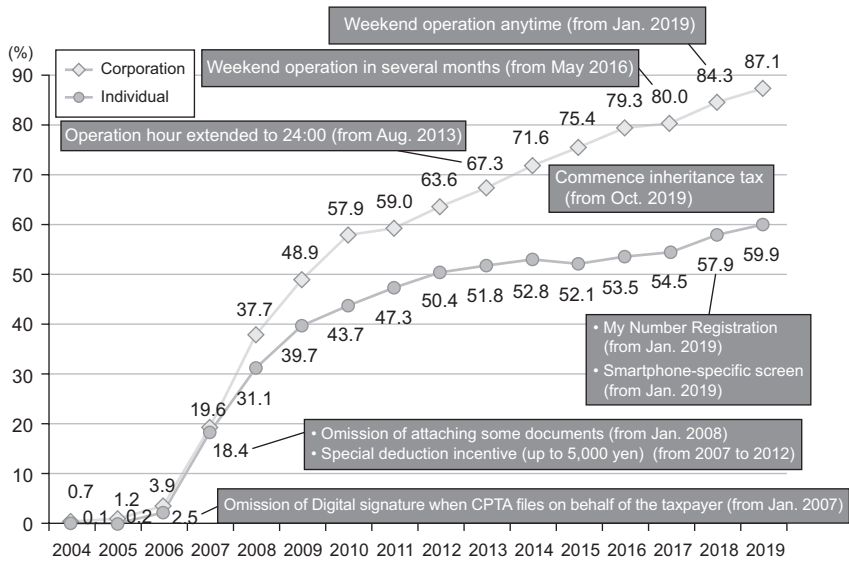


Figure 12.5 Trends in e-Tax Usage Rates and Past Efforts. Source: National Tax Agency. 2019. Present Status and Challenge of Tax Administration. March (in Japanese). www.nta.go.jp/about/council/shingikai/190313/shiryo/pdf/04-1.pdf (accessed 16 April 2021).

unfamiliar devices such as card readers to file personal income tax. However, since the digital certificate is embedded in the My Number card, the NTA expects the e-Tax rate among individuals to increase in accordance with the prevalence of the My Number card among individual taxpayers.

In accordance with the tax reform of fiscal year (FY) 2018, large-scale corporations that meet certain criteria, such as more than ¥100 million in capital, are obligated to e-file their corporate income tax and consumption tax for all business years after 1 April 2020.

12.4.2 Electronic Filing via Smartphones and Tablets

To enhance taxpayer convenience, the NTA has introduced new filing measures accessible through smartphones and tablets with the aim of moving toward more digitalized tax procedures (Figure 12.6).

Since January 2019, the filing return assistance link on the NTA website has offered a smartphone-specific screen, the layout of which is optimized for smartphone users. The NTA also introduced a simpler and less complicated e-Tax filing procedure for taxpayers using an identification number or password as opposed

■ Filing an income tax return using a smartphone



A smartphone-friendly dedicated site

Taxpayers with employment income as well as those with pension income, miscellaneous income from a sideline, etc. may prepare income tax returns using the site designed and optimized for smartphone and tablet touchscreens (the dedicated site for smartphones).

※Dedicated site for smartphones is available for filing 2019 tax returns only.

Completing filing procedures on e-Tax

Taxpayers who possess a My Number Card and a smartphone compatible with the My Number Card may transmit data via e-Tax.

Those taxpayers who do not own a smartphone compatible with the My Number Card may also transmit data via e-Tax using an ID and password issued by the NTA after verifying their identity through a face-to-face meeting with a tax official.

○Taxpayers eligible for use of the dedicated site for smartphones

※The underlined parts were added in 2019.

Item	2019 tax return
Income	All types of employment incomes (one source with completed year-end adjustment, <u>one source with uncompleted year-end adjustment, income from two or more sources</u>), miscellaneous incomes (pension income, income from a sideline, etc.), <u>occasional incomes</u> (lump sum payout from a life insurance contract, etc.)
Income deduction	All income deductions
Tax credit	Special credit for contributions, etc. to political parties, etc., <u>reduction or exemption of income tax due to disasters</u>

Figure 12.6 Filing Income Tax Returns by Smartphone. Source: National Tax Agency, 2020. National Tax Agency Report 2020. June. www.nta.go.jp/english/Report_pdf/2020e.pdf (accessed 16 April 2021).

to the My Number card. For security purposes, the identification number or password is provided after a strict screening process to identify the taxpayer.

Since January 2020, smartphone users have been able to e-file income such as salaries, wages, and pensions. There is also no more need for an integrated circuit card-reader device for the My Number card since smartphones come equipped with a card-reading function. In January 2021, the smartphone filing service was also expanded to tablet terminals. The NTA plans to continue expanding services for smartphone users in the future; for example, automatic data entry of withholding slips using the smartphone camera function will be introduced in January 2022 (Figure 12.7).

Past and Future Efforts for Filing Procedure Digitization

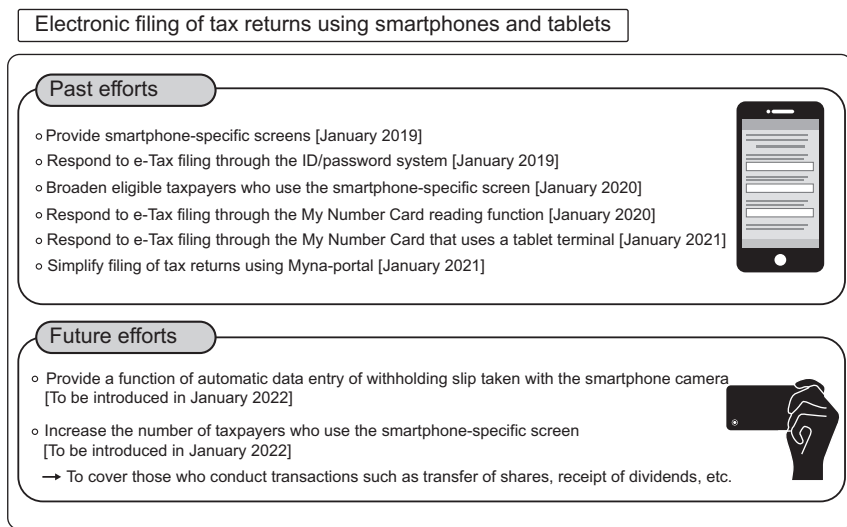


Figure 12.7 Past and Future Efforts to Digitalize Filing Procedures. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

12.4.3 Simplification of the Year-End Adjustment Procedure

Japan uses a unique “year-end adjustment system” whereby only a small percent of the population file a final tax return for their business income, since most salary earners need not file tax returns. At the end of the year, employees simply submit their tax-related documents and data to their employer, who then calculates each employee’s annual tax amount as a withholding tax agent. Under this system, as stipulated by Japanese income tax law, employees need not carry out any tax procedures because their taxes are automatically adjusted in the calculation of the following month’s withholding tax procedure by the withholding agent (Figure 12.8).

Under the previous year-end adjustment process, to apply to deduct life insurance premiums, for example, an employee had to complete a deduction application form manually based on a paper deduction certificate issued by the insurance company, and submit the form to their employer, together with the certificate. The employer was then required to retain the paper documents for future reference when reconciling the figures on the paper deduction certificate and deduction application, and recalculate the deduction amount to ensure that it was correct. Now, as a result of the FY2018 tax reform, digital deduction certificates

Digitization of Year-end Adjustment Procedure

Simplification by year-end adjustment software

NTA provides **free software for preparing forms for year-end income tax adjustment (Year-end Adjustment Software)** [Released in October 2020]

- The year-end adjustment-related documents that can be prepared using the software are: (1) Application for Exemption for Insurance Premiums; (2) Application for Special Exemption for Housing Loan; (3) Application for (Change in) Exemption for Dependents; and (4) Application for Exemption for Spouse, etc.
- Employees can download and use the Year-end Adjustment Software from the NTA website (employees can also use the software downloaded and distributed by their employer).
 → As for the documents (1) and (2) above, when the employee imports data such as that contained in a certificate of deduction obtained from an insurance company into the Year-end Adjustment Software, the software automatically fills in the prescribed fields of the application for exemption (simple and accurate data preparation for the application for exemption).
 → After checking calculation, the employee provides the data contained in the application to his/her employer, and the employer calculates the annual tax amount for him/her using the provided data as a withholding agent.
 (*) The development of payroll and other systems provided by private vendors expected to be promoted through the release of the Year-end Adjustment Software specifications.

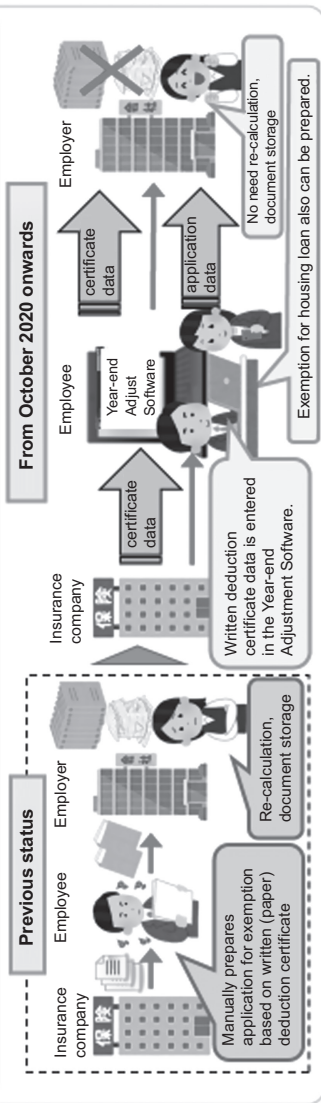


Figure 12.8 Digitalization of the Year-End Adjustment Procedure. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

issued electronically by the insurance company are submitted to employers in a digital format.

In October 2020, the NTA released new free software for the year-end adjustment form to enable online submission to the employer once the employee has downloaded the deduction certification data issued by the insurance company. This has made it easier to prepare an accurate deduction application.

12.4.4 MynaPortal for Tax Procedures

MynaPortal, an online service introduced together with the My Number system,⁴ is a one-stop website portal that enables users to complete administrative procedures and confirm notifications from government organizations (Figure 12.9). The filing return assistance link on the NTA website will be connected with MynaPortal to make the e-Tax procedure easier. For example, the system automatically enters insurance premium deduction certificate data issued by insurance companies into the appropriate columns in the tax return form. The feasibility of this system depends on alignment with external parties such as the insurance companies to which they digitally issue data concerning various certifications, and the NTA is facilitating cooperation with related parties to actualize this.

Before the introduction of the My Number system in January 2016, each government agency in Japan issued different numbers to everyone. The My Number system efficiently integrates these different numbers from government agencies, as well as enabling effective management in the areas of social security, taxation, and disaster response through the use of a single individual number.

The My Number system also includes Corporate Numbers. The NTA asks corporations to provide their Corporate Number on their tax return and related forms so that the NTA can accurately identify each corporation and efficiently administer corporate taxes. With respect to personal income tax, My Number eliminates the need to attach a copy of a certificate of residence in filing procedures, because government agencies can share residential information through the My Number database. It also enhances convenience for taxpayers who no longer need to attach a certificate of residence. Corporations are also no longer required to attach a copy of a certificate of registered information.

My Number is a 12-digit number assigned to anyone registered as a resident in Japan, including newborn babies and foreign-born registered residents of Japan. Once a My Number is assigned, it is unchangeable from birth to death. To protect the privacy of individuals, the use of a My Number is limited to procedures prescribed by law or municipal regulation in the areas of social security, taxation, and disaster response.

Corporate Number is a 13-digit number assigned to each corporation from the NTA. Unlike My Number, Corporate Number is publicly available online and there are no limitations to using it. The corporation's name and address are also available in English from the NTA Corporate Number Publication Site.

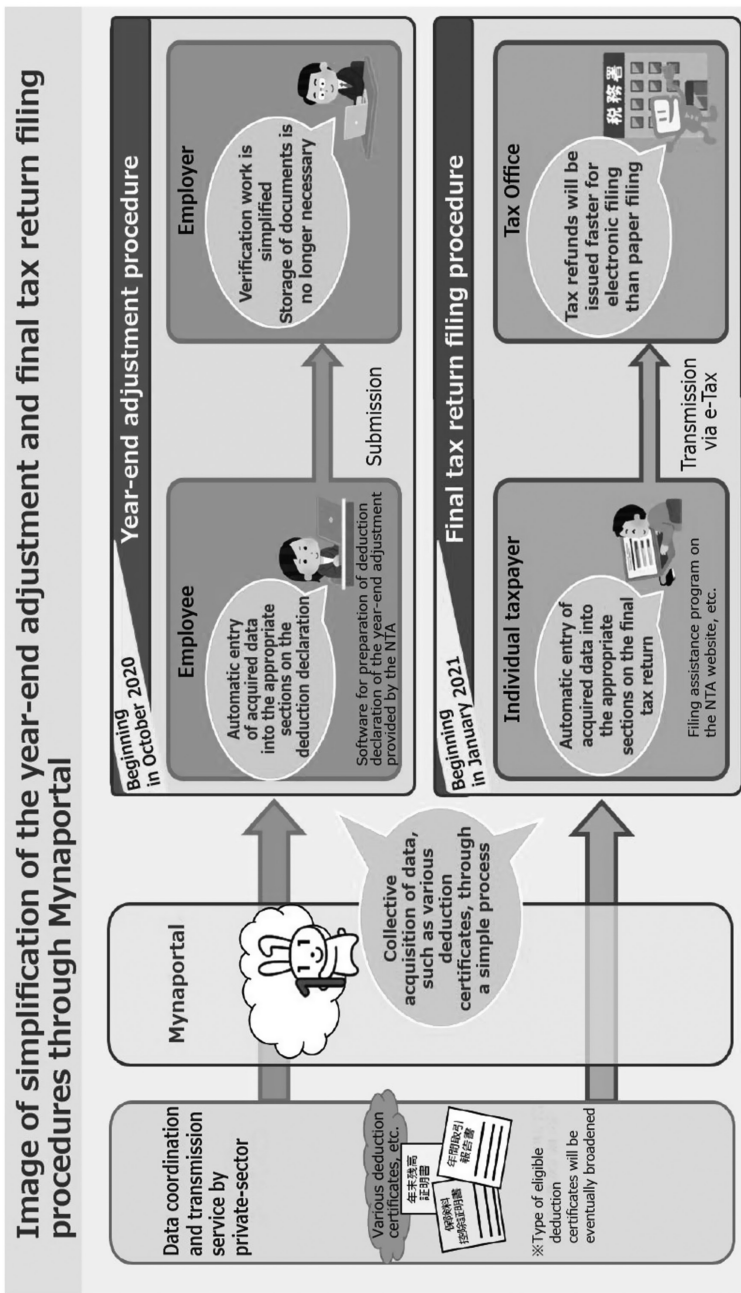



Figure 12.9 Mynportal for Individual Taxpayers. Source: National Tax Agency, 2020. National Tax Agency Report 2020. June. www.nta.go.jp/english/Report_pdf/2020c.pdf (accessed 16 April 2021).

Social Security and Tax Number System (My Number)

Outline of Social Security and Tax Number System

- Purpose is for a fair, equitable, and beneficial society for citizens by enhancing transparency and efficiency of the social security and taxation system
- Numbers have been assigned since October 2015, and their use started in January 2016
- Improvement of tax administration and taxpayer convenience by filling in Numbers on tax-related documents



Character
Maina-chan

My Number(Individual Number)

- 12-digit number is assigned to each and every person who holds resident registration. The number is notified by each municipal authority. The number is also assigned to a foreign person who is a mid/long-term, or special permanent resident and holds residential registration
- Notification letter is sent to the address of the resident registration
- The use of My Number is limited to office work regarding social security, taxation, and disaster response stipulated in the "Act on the Use of Numbers to Identify a Specific Individual in the Administrative Procedure"

Corporate Number

- 13-digit number is assigned by NTA to a legal entity such as an established and registered company
- Different from My Number, the Corporate Number is open to the public and can be used by everybody freely
- Corporations' information in English is publicized upon request from corporations on the NTA Corporate Number Publication site (<https://www.houjin-bangou.nta.go.jp/>)

Figure 12.10 Social Security and Tax Number System (My Number). Source: National Tax Agency. 2014. Social Security and Tax Number System (My Number) in a nutshell. October (in Japanese). www.nta.go.jp/taxes/tetsuzuki/mynumberinfo/pdf/hayawakari.pdf (accessed 16 April 2021).

12.4.5 Online One-Stop Service for Corporations

Previously, to establish a corporation, the applicant corporation had to file the required forms separately with many government agencies, including the registration office, tax office, and municipal office.

In January 2021, all procedures required for incorporation were combined into a single process using MynaPortal, where corporate information is shared and integrated among all related government agencies. The slogan of the new process is "Once Only" and "Connected One-Stop." MynaPortal will also be a one-stop service for administrative procedures, such as social insurance and tax procedures, relating to employee life events like hiring and retirement. The NTA is currently working to develop this system further through MynaPortal's application programming interface, in cooperation with related ministries, agencies, and stakeholders (Figure 12.11).

12.4.6 Efficient and Sophisticated Tax Consultation

A good tax consultation system for taxpayers is key to maintaining the self-assessment system. Accordingly, the NTA has provided a comprehensive tax consultation link called Tax Answer on the NTA website. The number of people accessing

MynaPortal for Corporate Taxpayers

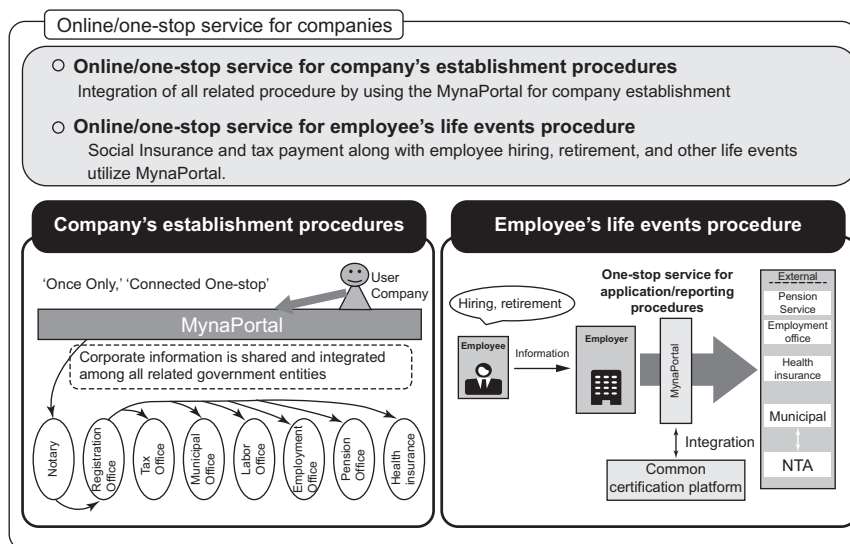


Figure 12.11 MynaPortal for Corporate Taxpayers. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

Tax Answer has been increasing every year and reached 7.3 million in FY2019. It enhances taxpayer convenience because taxpayers can resolve simple tax questions by themselves by accessing Tax Answer, and also reduces the NTA's tax consultation workload by lessening officials' face-to-face or telephone consultation work.

12.4.7 Introduction of the Artificial Intelligence Chatbot

To improve taxpayer convenience, in January 2020, the NTA provided a new tax consultation tool called Chatbot, which uses artificial intelligence to generate an automatic response to taxpayer questions. Artificial intelligence can answer common tax-related questions from the taxpayer's smartphone, such as "location of the Tax Office," "deduction for medical expenses or a housing loan," and "how to file e-Tax." Chatbot was introduced as a consultation channel free from constraints such as day of the week or time of day, and is available 24 hours a day, seven days a week, without any locational restrictions. It is expected to reduce the NTA's cost and resource burdens involved in traditional tax consultation work.

A real screen image of Chatbot is shown in Figure 12.12 (this service is currently available in Japanese only). The NTA plans to keep expanding Chatbot's range of services, contents, and posted information, as well as updating its

A chatbot for tax consultation will be introduced.

A "chatbot for tax consultation" that enables consultation 24 hours a day, 365 days a year, for introduction on the NTA website within FY2020.

1. What is a chatbot?

A "chatbot" is a term developed through combination of "chat" and "robot," and refers to a conversation program utilizing artificial intelligence (AI). Questions concerning taxes will be selected from a drop down menu or entered into a free entry box, against which an answer will be generated automatically through AI.

2. What the chatbot for tax consultation will deliver

Through the chatbot for tax consultations, users will be able to casually pose questions concerning taxes at any time of the day, and access information published on the NTA website more immediately.

3. Enhancing simplicity and convenience of a chatbot

A chatbot for tax consultation was experimentally introduced on the NTA website from January 2020.

Simplicity and convenience will be enhanced based on opinions and feedback from users and through learnings of AI, and it is scheduled for reintroduction on the NTA website within FY2020.

■ Image of a chatbot for tax consultation

I am a character of a chatbot, Futaba.
I will answer.



Figure 12.12 Artificial Intelligence Chatbot Tax Consultation. Source: National Tax Agency. 2020. National Tax Agency Report 2020. June. www.nta.go.jp/english/Report_pdf/2020e.pdf (accessed 16 April 2021).

Future Design of Tax Consultation System

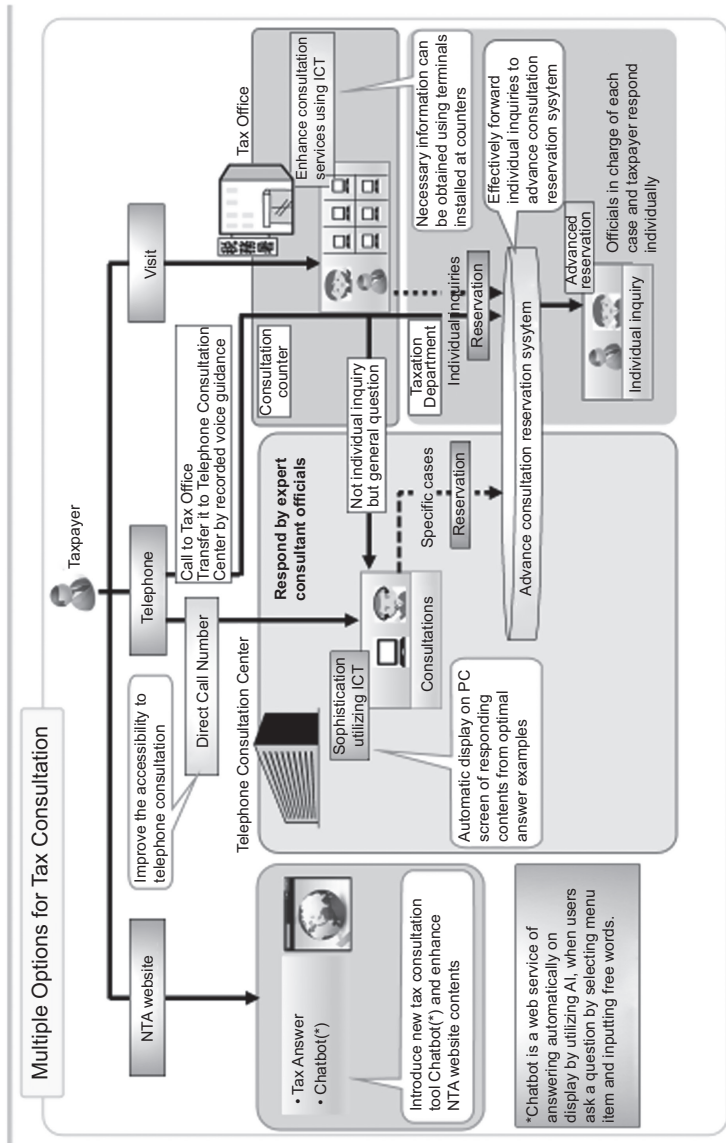


Figure 12.13 Future Design of the Tax Consultation System. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizo/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

function continuously in the future. Preparations are underway to begin full-scale operations in January 2021.

12.4.8 Future Design of the Tax Consultation System

Common and general inquiry consultations are provided collectively through the Telephone Consultation Center (TCC) in addition to the provision of answers to frequently asked questions through the Tax Answer link on the NTA website. Specific case-related inquiries are dealt with through face-to-face meetings at the Tax Office once an appointment is made. Although the basic consultation procedure will not change in the future, the NTA aims to optimize and improve the future method of tax consultation.

Under the current TCC function, taxpayers first call the tax office to place a general inquiry, then press “1” in accordance with the audio guidance to connect to the TCC. In the future, the NTA will enable taxpayers to call the TCC directly. However, since taxpayers may be unsure whether their inquiries are general or specific, the introduction of the direct number will direct all inquiries, whether general or specific, to the TCC.

Further, in addition to integrating the operation of inquiries to the TCC, the NTA will upgrade the system to display examples of the most appropriate answers automatically to expedite the response speed. In the case of specific inquiries that can only be handled at the tax office, the TCC will arrange appointments with case officials at the tax office in an efficient manner. When the taxpayer visits a tax office directly, a booth with a dedicated terminal will be provided at the consultation counter, where the taxpayer can access Tax Answer or the chatbot on the NTA website. The terminal will provide updated information and enable the taxpayer to reach out to expert consultant officials at the TCC via a videophone meeting from the booth.

12.4.9 Diversifying Methods to Settle Tax Payment

The NTA has already introduced many options for tax payments, such as bank account transfers, electronic payments, credit card payments, and payments at convenience stores.

However, as shown in Figure 12.14, most payments are still made using cash. It is necessary to consider advancements in information technology and taxpayer needs to develop an environment in which taxpayers can settle their tax due at their own convenience, without physically visiting the tax office or a financial institution. In response to the development of a cashless economy, the NTA will also implement other methods to diversify tax payments further and promote cashless tax payments. As a new undertaking, in January 2019, a method to make payments at convenience stores using a quick response (QR) code was introduced. Through this method, the taxpayer prepares a tax return on the NTA website and prints out a QR code for the settlement through a dedicated page on the NTA website. With this QR code, the taxpayer is able to settle the tax payment at a convenience store after scanning the code at a kiosk terminal.

Diversifying Tax Payment Methods

- Various tax payment methods, such as account transfer, electronic payment, payment by credit card, and payment at convenience stores, have been developed in accordance with the needs of taxpayers.
- Over-the-counter payment by cash is time-consuming for taxpayers as well as it put a burden for tax offices since it bears the cost of cash management. As cashless economy is developed, it is necessary to promote cashless tax payment to improve the convenience for taxpayers.

Number of payments by each method (FY2018)

Payment method	Number of cases (10K)	%
Over-the-counter payment by cash	3,258	72.2
At financial institutions	3,110	68.9
At tax offices	148	3.3
Payment at convenience stores	207	4.6
Bar code	182	4.0
QR code	25	0.6
Payment by credit card	24	0.5
Account transfer (for individual)	623	13.8
Electronic payment	402	8.9
Online banking, etc.	273	6.0
Direct payment	129	2.9
Total	4,514	100.0

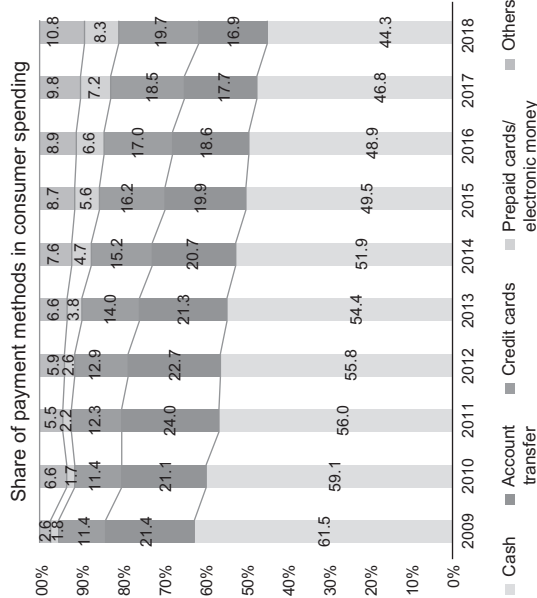


Figure 12.14 Diversifying Tax Payment Methods. Source: National Tax Agency. 2019. Present Status and Challenge of Tax Administration. March (in Japanese). www.nta.go.jp/about/council/shingikai/190313/shiryo/pdf/04-1.pdf (accessed 16 April 2021).

Past and Future Efforts for Smart Tax Payment

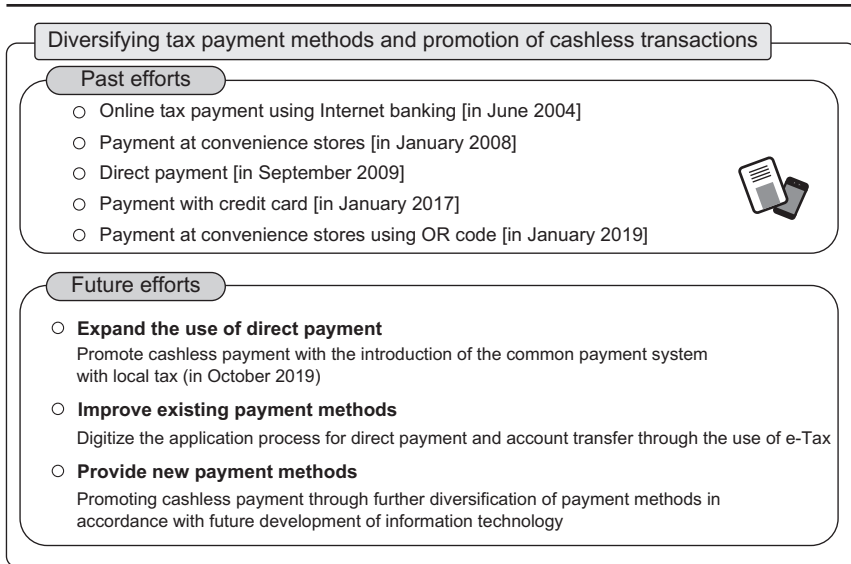


Figure 12.15 Past and Future Efforts to Implement Smart Tax Payment. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizo_r0106.pdf (accessed 16 April 2021).

12.5 Efficient and Sophisticated Taxation and Collection

12.5.1 Data-Centric Tax Administrative Work

To achieve the other pillar of a smart tax administration—efficient and sophisticated taxation and collection—the NTA will further promote the development of a system and organization that actively utilizes and centralizes data. Previously, NTA officials had to print out information from each database using various forms, before entering the data into spreadsheet software to use in tax examination and collection. This inevitably led to inefficient administrative operations.

In the future, the NTA will be able to obtain richer information by collecting it from the internet and other external agencies, and by utilizing ICT tools to analyze and evaluate this digital data, thereby optimizing and advancing the administrative operations of examinations and collection of delinquent taxes. The NTA also aims to automate the verification of declaration contents or financial statements and refine its method of determining tax examination targets. This will allow the NTA to focus on high-priority issues, such as cases of international tax avoidance, ensuring the appropriate taxation of wealthy or high-net-worth individuals, and to address large-scale and malicious tax avoidance.

Future Image of Data-centric Administration

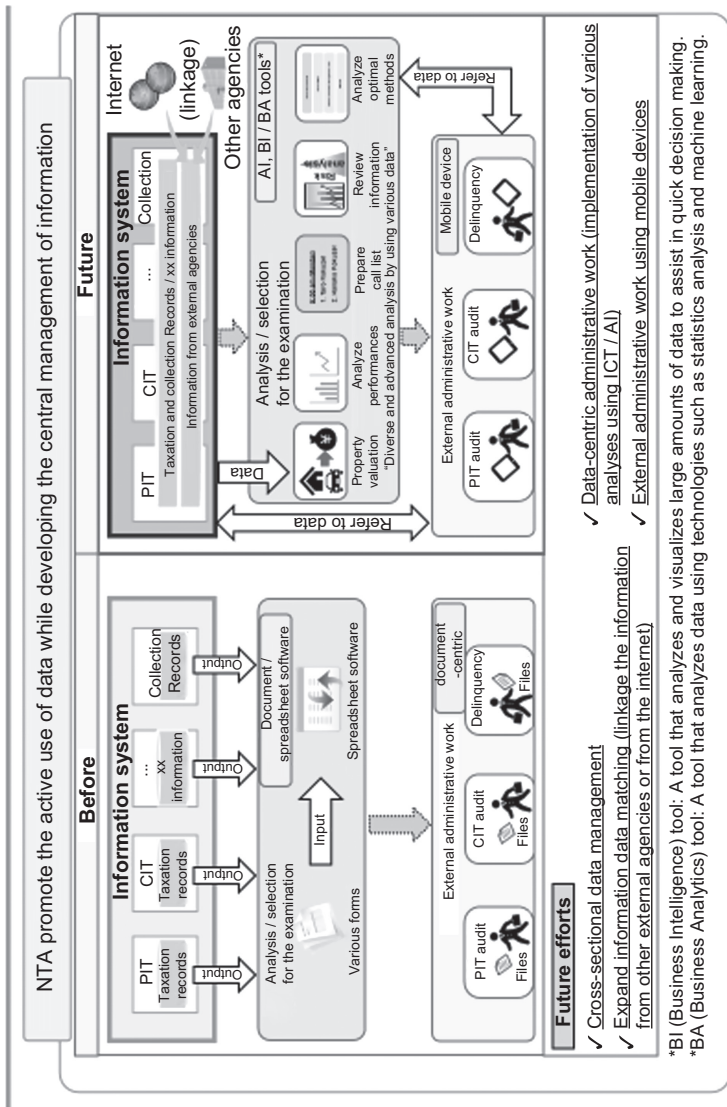


Figure 12.16 Figure Image of a Data-centric Administration. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouzaizou/pdf/syouzaizou_r0106.pdf (accessed 16 April 2021).

More Efficient and Sophisticated Taxation and Collection

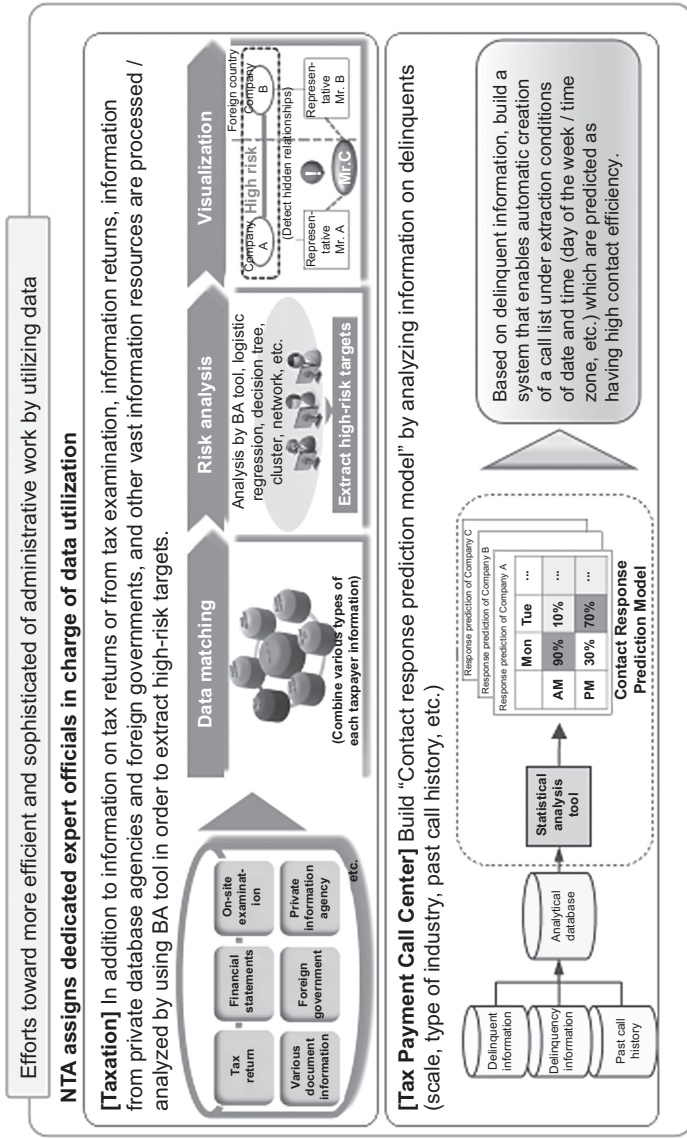


Figure 12.17 More Efficient and Sophisticated Taxation and Collection. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzai/2017/syouzaizou/pdf/syouzaizo_r0106.pdf (accessed 16 April 2021).

The NTA assigns dedicated expert officials to headquarters and regional taxation bureaus for data utilization purposes. For taxation, the NTA has been utilizing information obtained for tax returns, various documents, private information agencies, and foreign governments. It is also promoting the optimization and advancement of administrative operations to cope with the enormous amounts of information received. For example, business analytics tools have been introduced to process and analyze the information to identify high-risk taxpayers for the selection of tax audit targets.

Furthermore, the NTA has made efforts to enhance the efficient operation of the Tax Payment Call Center, where the system automatically makes a phone call to each delinquent taxpayer. When they answer the phone, the call is automatically forwarded to an NTA operator who asks the delinquent taxpayer to pay their tax due. Thus, it is important to achieve a higher contact rate while decreasing the number of calls made.

The operation of collective phone notification reminders at the Tax Payment Call Center is described in Figure 12.18. Specifically, a contact response prediction model was built using a statistical analysis tool to analyze the various sources of information on delinquent taxpayers and past call history. The contact response prediction model is being continuously improved through the analysis and evaluation of responses, and as a result, the response rate has gradually

Operation of Collective Phone Notification Reminders

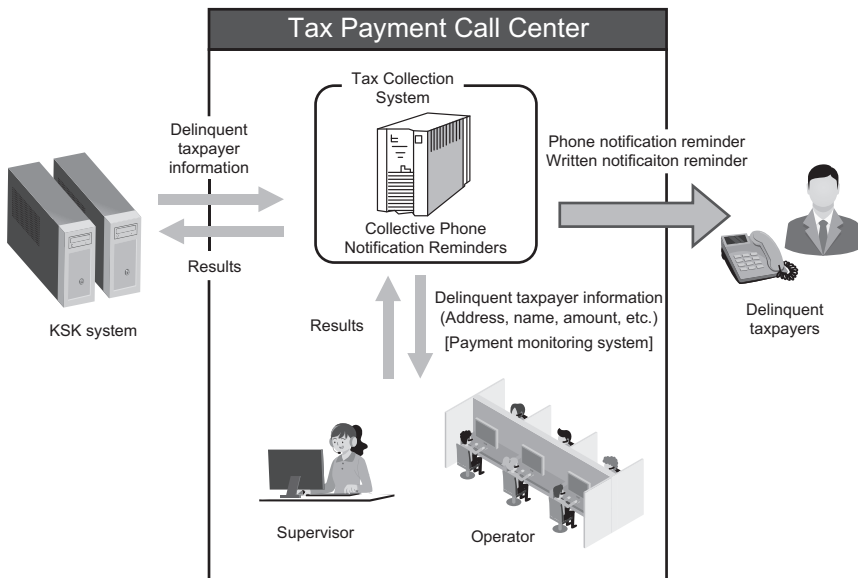


Figure 12.18 Operation of Collective Phone Notification Reminders. Source: National Tax Agency. 2001. Operation of Collective Phone Notification Reminders. April (in Japanese). www.nta.go.jp/about/council/shingikai/010409/shiryo/p27.htm (accessed 16 April 2021).

Response to New Digital Economy

NTA will ensure appropriate taxation of new economic activities, such as sharing economy

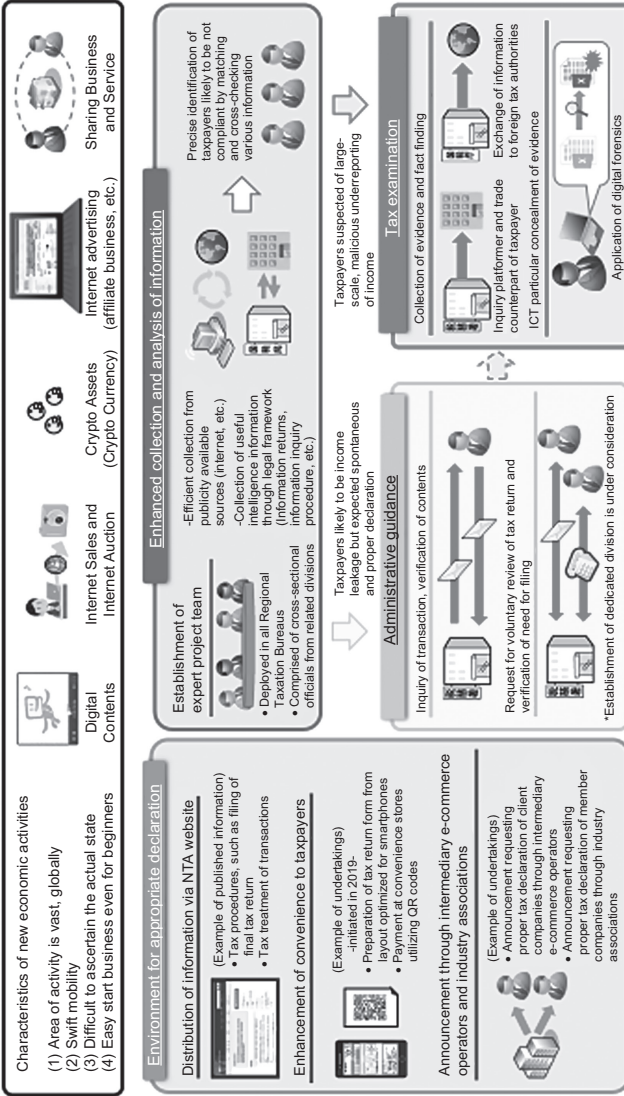


Figure 12.19 Response to the New Digital Economy. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouzaizo/pdf/syouzaizo_r0106.pdf (accessed 16 April 2021).

improved year by year. The NTA plans to develop a system to automate all work related to predicting responses in the future.

12.5.2 Expanding the Scope of Intelligence Collection

To address international tax avoidance and evasion through overseas financial institutions, the Common Reporting Standard (CRS) was announced as the international standard for the automatic exchange of information on financial assets at the Organisation for Economic Co-operation and Development (OECD) council in July 2014. Afterward, OECD provided the international legal framework as well as the transmission format for the CRS. In September 2018, Japan commenced automatic exchange of information under the CRS concerning the financial assets of nonresidents with foreign tax authorities based on the tax treaties.

CRS information plays an important role in supporting the traditional exchange of information by request in both quality and quantity, and its introduction has significantly enhanced and enriched the information relating to overseas financial assets. It is believed that this will greatly contribute to fair and proper taxation.

12.5.3 Organizing Procedures for Information Queries

Since the early 2010s, given the rise in progressively diverse and global economic transactions such as crypto assets (cryptocurrencies), and the proliferation of work consigned via the internet, ensuring proper taxation has become a pressing issue. In response, the FY2019 tax reform was enacted to organize information query procedures properly. Previously, because of a lack of related provisions in tax laws, business operators of such transactions hesitated to provide the requested information to the NTA out of concern that providing such information without the consent of the holders would violate the Act for Protection of Personal Data and lead to contention with their customers. However, under the tax reform, information requests from the NTA to related business operators are justified by the tax laws, making it easier for the NTA to obtain the cooperation of business operators who had so far refused to provide the tax authority with the required information based on their previous concerns. In this way, the NTA hopes to cope with diversifying economic transactions by properly utilizing a framework to request information from business operators.

12.5.4 Addressing New Economic Activities

Since the early 2010s, economic activities have been expanding in new fields such as digital content, internet malls and auctions, crypto assets, internet advertising, and the sharing economy. The NTA must ensure proper taxation of these activities, both domestically and internationally. Therefore, efforts are being made to

create an environment to promote appropriate declarations from the new digital economy through (1) the distribution of information through the NTA website, (2) enhanced taxpayer convenience, and (3) calls for proper tax declaration through intermediary e-commerce operators or industry associations. To broaden its sources of intelligence information collection, the NTA deployed a Professional Team for E-Commerce Taxation in all regional taxation bureaus to collect and analyze information, which is then used for administrative guidance and tax examination, among other things. The NTA also released material regarding the Proper Response to New Economic Activities such as Sharing Economy to the public through its website in June 2019.

12.6 Efforts to Realize the Future Vision

The NTA continues to make efforts to improve the sophistication of information systems to realize the Future Vision. For example, given the enhanced sharing of information with other external agencies, MynaPortal will support the timely distribution of information to taxpayers and data linkage for tax processes (point 1 in Figure 12.20). It also enables taxpayers to access data required for filing, such as certificates for the deduction of life insurance premiums, through their own personal computer, smartphone, or tablet device.

The augmentation of electronic data or information through data linkage will also be realized (2). Since data and information are now shared with related entities, paper documents attached to tax returns are no longer required, enhancing the convenience of taxpayers as well as the tax authorities by reducing paperwork and the cost of obtaining documents. Further, the NTA will strive to achieve proper taxation and collection by obtaining financial account information from foreign tax authorities via the CRS. The NTA will also work continuously to achieve a smart tax administration by enhancing system checks (3), automating mass repetitive work (4), reviewing tax returns or tax audit selection using artificial intelligence and analysis tools (5), and utilizing ICT technology for work outside the office using mobile devices (6).

12.7 Conclusion

In response to the coronavirus disease pandemic, the NTA recommended that taxpayers use online tax processing from home, and granted special relief treatment for filing extensions and payment due dates. During the state of emergency, the Government of Japan requested an 80% reduction in the number of staff working at offices, which happened to facilitate the digitalization of administrative work processes, as described in the Future Vision. Finally, the NTA will continue to pursue the realization of the two pillars of a smart tax administration—improved taxpayer convenience, and efficient and sophisticated taxation and collection—while paying close attention to advancements in technical trends in ICT and the digital economy.

Efforts for Realizing Future Vision

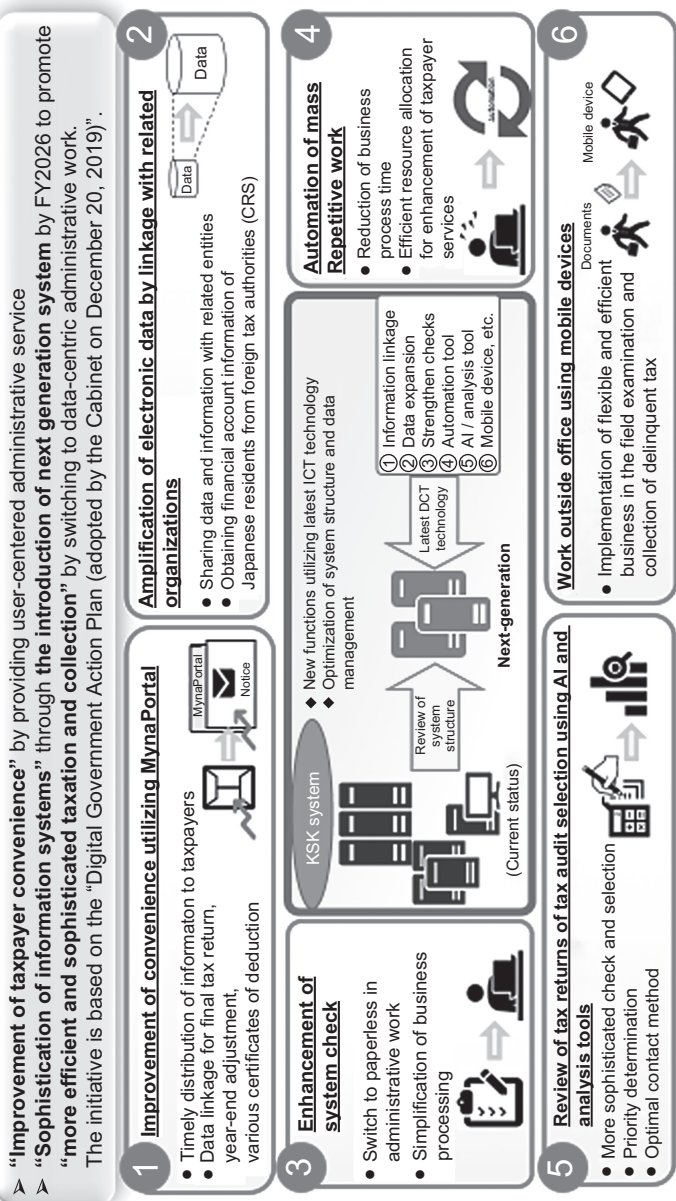


Figure 12.20 Efforts to Realize the Future Vision. Source: National Tax Agency. 2019. Status of Recent Undertakings Regarding Future Vision. June (in Japanese). www.nta.go.jp/information/release/kokuzeicho/2017/syouraizou/pdf/syouraizou_r01106.pdf (accessed 16 April 2021).

Notes

- 1 This chapter reflects the personal views of the author, and does not reflect those of an organization to which the author belongs.
- 2 The legal basis for this measure is the Act on the Use of Numbers to Identify a Specific Individual in Administrative Procedures.
- 3 Japan Federation of CPTA Associations (www.nichizeiren.or.jp/eng/).
- 4 MynaPortal login (in English): https://myna.go.jp/SCK0101_01_001/SCK0101_01_001_InitDiscsys.form.

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13 Resolving Disputed Tax Issues through an Online Negotiation Platform

The Influence of Partner Negotiation Objectives and Communication Style on Negotiation Outcome

*Fauzan Misra, Rahmat Kurniawan,
and Efa Yonnedi*

13.1 Introduction

In the follow-up to a tax audit, disputes often occur between taxpayers and their consultants, and the tax authorities (tax officials) regarding specific tax issues. Disputes are an inevitable feature of any tax system. Hidayah (2018) states that since 2012, the Indonesian tax court's statistical data show a growing number of tax disputes. The potential for disputes is especially increasing in e-commerce transactions. Accordingly, revenue authorities have become aware of the need to manage disputes promptly, both for the benefit of the taxpayer involved and to maintain public trust and confidence in the broader tax system (Jones 2017). Under applicable tax law, taxpayers are provided with legal means in tax disputes, namely objection, appeal, lawsuit, and review. However, the alternative is usually expensive not only for taxpayers but also for the state. Hidayah (2018) suggests that Indonesian tax dispute resolution requires more than 36 months to get legal assurance. It is crucial to solve the problem immediately. Love and Manisero (2017) state that traditional litigation is often more expensive, time-consuming, and public. Moreover, a 1993 study by McDonough showed that deficiencies disputed before the United States (US) tax court totaled nearly \$34 billion. The situation is not different under current conditions. Thus, a solution through legal negotiation can be the best alternative for both parties. With respect to tax cases during the current coronavirus disease pandemic, Cano (2020) indicated that tax authorities are more open to audit negotiation. Specifically, he posits that some cash-strapped tax administrations are choosing to close audits and settle disputes instead of pursuing court battles, suggesting that collaboration through negotiation will trump confrontation.

Cooperation between the taxpayer and tax authority is a new trend being adopted by many countries. The development of an alternative dispute resolution (ADR) program consisting of negotiation, mediation, and arbitration implies the importance of managing negotiations comprehensively. ADR aims to resolve

controversies in the federal tax dispute process without sacrificing taxpayers' right to due process (McDonough 1993). Australia's ADR program is managed digitally through software that can facilitate negotiation, mediation, and arbitration. This use of digitalization will improve the efficiency of tax administration. Jone (2019) states that the implementation of this program is expected to position the Australian Taxation Office (ATO) to be more contemporary, innovate with technology, and meet taxpayer expectations.

Spaho (2013) suggests that if a negotiation strategy does not improve the negotiations' outcome, the negotiator could involve an external consultant. Tax practitioners act as mediators for taxpayers in the tax audit negotiation phase. Misra et al. (2020) state that tax consultants play an essential role in supporting taxpayers in tax compliance, planning, and audits. Nichols and Price (2004) found that representation by a tax practitioner can reduce a taxpayer's final tax assessment during an Internal Revenue Service (IRS) audit.

In various countries, different forms of negotiation take place between taxpayers and tax authorities. In the People's Republic of China (PRC), Chan and Lan Mo (2000) find that taxpayers will negotiate with tax authorities when they want to claim more significant expenditure during the tax holiday period when tax rates are high. Antle and Nalebuff (1991) comment that although the Government of the US benefits from overstatements and incurs losses from understatements, the IRS is mandated to perform unbiased audits. If the IRS disputes any of a firm's representations, the IRS will traditionally make a settlement offer before going to tax court. Although these studies mention some form of negotiation between the taxpayer and tax authority during the audit period, no mention is made of the processes and procedures that taxpayers and the tax authorities undergo to reach a "win-win" resolution for both parties. Thus, the literature is still limited in explaining how such negotiation occurred between the tax authority and the taxpayers' representation (tax consultant) appointed during the tax audit.

Psychological research suggests that the key to understanding how people make negotiation judgments is to examine how they define their negotiation context, and their perception of variables that are critical and endogenous to the negotiation process (Bazerman Curhan, Moore, and Valley 2000; Kristensen and Garling 1997; Neale and Bazerman 1992). Neale and Bazerman (1992), in particular, argue that,

Rather than focus only on external factors [to the negotiation process], it may be most useful to view situations from an interpretive perspective. It may not be the objective, external aspects of the situation that directly affect negotiator judgment; instead, it may be the way that the negotiator perceives these features and uses those perceptions to interpret and screen information.
(Neale and Bazerman 1992: 16)

Two factors of particular interest in the current study are the negotiation partner's objective (social concern), which affects how the tax consultant perceives the

negotiation partner, and the communication style adopted by the partner, which affects how the consultant perceives the negotiation outcome. The psychology and economics literature finds both variables to be important. It is still unknown how social psychological factors, such as partner objectives and communication styles, influence the negotiation process and outcome. Negotiation research in accounting (mainly in management accounting and auditing) mostly focuses on economic incentives, the risk of assignment from clients, and issues related to standards and regulations (Brown and Wright 2008). Moreover, tax audit negotiations between the auditor and the client and negotiations between divisions on the transfer pricing settings involve different psychological states. In the tax audit context, there are direct financial consequences for both parties. During the tax audit period, taxpayers and tax practitioners are interested in lowering reported taxable profits while tax authorities would like to ensure that taxpayers' reported taxable profits are calculated according to existing tax laws and regulations (Antle and Nalebuff 1991). Negotiation minimizes the prospect of either the taxpayers or tax authorities resorting to tax litigation to resolve any dissatisfaction with the audit findings. Hence, there is a need to improve our understanding of negotiation in the tax audit situation.

The dual concern model implies that humans do not always prioritize their interests and consider their negotiating partners' goals in negotiating. Chang, Cheng, and Trotman (2008) found that consideration of partner goals and the role and framing of information significantly influence negotiated transfer pricing between sales department managers and purchasing department managers in a transfer pricing negotiation. Their findings confirm that negotiation processes and outcomes are influenced by economic factors (such as market prices) and behavioral factors (such as fairness). Brown and Johnstone (2009) found that economic factors and sociopsychological factors influence negotiation. The communication style in the negotiations also influences the process and outcome of the negotiation. Perreault and Kida (2011) concluded that these two social psychology variables in auditor–client negotiations were useful in convincing clients to accept audit adjustments according to the auditor's position.

The current study examines the influence of the tax consultant's perception of the other negotiation party's objective (i.e., whether their partner's objective involves high or low concern-for-other [CFO]) and the tax authority's communication style on the negotiation outcome. This investigation is crucial because taxation requires a negotiation process between taxpayers (and their consultants) and the tax authorities to resolve disputed tax issues. These negotiations impact taxpayers' willingness to meet their tax obligations (subsequently affecting state revenue) and/or influence the selection of the next legal steps. Successful negotiations reduce contention and litigation between the two parties. Jone (2017) comments that how tax disputes are managed and resolved can significantly impact taxpayers' overall experience in interacting with revenue authorities. This may, in turn, enhance or diminish voluntary taxpayer compliance.

This research contributes to the existing literature in several ways. First, it complements previous studies by providing an overview of sociopsychological

variables in negotiating tax issues with reference to social identity theory, dual concern models, and communicational psychology. Previous research on accounting negotiations has focused on economic incentives (such as market prices, income, or financial reporting). Second, this research complements the negotiation literature on accounting by extending its scope to the area of taxation, which is also characterized by a variety of negotiations that may occur between the parties. Third, this research enriches negotiation research in accounting previously conducted through a survey approach using web-based experiments where a tax consultant, as the taxpayer's representative, negotiates with a computer-simulated tax official (e.g., Gibbins, Salterio, and Webb 2001). Finally, this research is expected to provide a solution for resolving disputed tax issues to reach a mutually beneficial program between the tax authorities and the taxpayer by saving unnecessary compliance and audit costs (see, e.g., De Simone, Sansing, and Seidman 2013).

13.2 Literature Review

13.2.1 Overview of Tax Administration Digitalization in Indonesia

Tax authorities have several means of carrying out their supervisory functions, including tax research, tax audits, and tax investigations. The legal products of the tax authority can be subdivided into two different types. First, in the area of administrative law, tax assessments are issued in the form of notices of tax assessment. Second, in the area of criminal law, this can have consequences in the form of criminal sanctions such as confinement, imprisonment, and other penalties. However, a unique point of the tax law is that the imposition of criminal sanctions is the last step because of the primacy of fiscal compromise. This situation is in line with tax's primary function as the main source of state revenue, since securing state revenue is more critical than criminalizing taxpayers.

The issuance of tax assessments through tax assessment letters (TALs) or tax collection letters (TCLs) can cause future tax disputes between taxpayers and the tax authorities. The consequence of TALs and TCLs is tax debt that taxpayers must pay for underpayment of tax and the imposition of administrative sanctions in the form of fines, interest, and tax increases by the tax authorities. Taxpayers who are not satisfied with the TALs or TCLs can object by submitting a protest letter to the tax authorities to reduce or cancel incorrect TALs or TCLs, and reduce or eliminate administrative sanctions. If the fiscal decision on these measures still does not satisfy the taxpayer's sense of justice, the taxpayer may submit an appeal or lawsuit to the tax court. Tax officials can also carry out a series of tax collection actions by issuing a coerce warrant (Surat Paksa) if the taxpayer or tax bearer does not show good intent or willingness to pay tax owed.

Technological innovation in tax administration is having a positive impact on tax authorities. In Indonesia, technological innovation through digitalization can make it easier for the Directorate General of Tax (DGT) to carry out its functions.

It is hoped that an effective and efficient tax service and supervision function to realize tax revenue targets can be achieved. In 2007, DGT released e-Filing, a government-owned web-based application for submitting annual tax returns online. In 2008, one year after its release, 93% of individual taxpayers and 73% of corporate taxpayers submitted annual tax returns using e-Filing. The catchphrases “anywhere, anytime” and “earlier, more comfortable” were widely used.

In 2014, the DGT released e-Invoice for value-added tax, an application that aims to issue tax invoices electronically and administer them in the form of periodic tax returns (*Surat Pemberitahuan Masa*). e-Invoice aims to help taxable entrepreneurs issue and administer tax invoices and make it easier for the DGT to carry out its tax supervision function, mainly by preventing fictitious invoices and minimizing misuse. The implementation of e-Invoice has been carried out in stages, starting with 45 specific taxable entrepreneurs registered at certain tax service offices, before being implemented throughout Indonesia in 2016.

In 2016, the DGT launched an online tax payment application called e-Billing, which replaced the manual tax payment system using tax payment slips (*Surat Setoran Pajak*). Following the 2016 and 2017 tax amnesty program, DGT released the e-Reporting application, which is used by taxpayers participating in the tax amnesty program to submit reports on the placement and transfer of assets for three consecutive years after the program. Starting in mid-2020, the function of the e-reporting application was expanded to submit reports on the use of tax incentives provided by the government to certain taxpayers in the context of handling the impact of the coronavirus disease pandemic.

The DGT also cooperates with third-party application service providers such as *online-pajak.com*, *spt.co.id*, and *Pajakku.com*. Application service providers are developing applications to optimize tax compliance, including withholding and calculation, payment, and reporting. Furthermore, in May 2019, the DGT launched the e-Bupot application, which aims to publish proof of withholding online used by taxpayers, in keeping with Income Tax Articles 23 and 26. In August 2019, the DGT launched the e-Objection application, which aims to provide electronic tax objections.

In June 2019, the DGT also carried out an organizational transformation by forming two new units: The Directorate of Data and Information, and the Directorate of Information and Communication Technology. This is a strategic step to enable the DGT to face the digital era. The DGT is also developing a technology-based core tax system, to be completed in 2021. Implementation of the core tax system is expected to close the digitalization gap. Digitalizing the tax system will improve time certainty, efficiency, and transparency. This is expected to make tax compliance and tax revenue targets easier to achieve.

13.2.2 Tax Disputes and Litigation

During tax collection by the government or tax authority, tax disputes can occur because of differences in opinion between taxpayers or tax bearers and the government regarding the amount of tax paid. Article 1 point 5 of Law Number 14 of 2002 concerning the tax court defines tax disputes as follows:

Tax Disputes are disputes arising in the field of taxation between a taxpayer or tax bearer and an authorized official as a result of the issuance of a decision which can be filed for an appeal or lawsuit to the tax court based on taxation laws and regulations, including lawsuits on the implementation of tax billing under Tax Collection with Enforcement letter.

Thus, tax disputes occur between the government or tax authority and taxpayers as a result of a decision by an authorized official, or the DGT's collection actions. This situation may arise if the tax collection action taken does not follow procedures stipulated by law.

Conflicts between taxpayers and tax authorities generally begin during the audit process. Mathews (2004) states that disputes between the IRS and taxpayers arise when a taxpayer disagrees with an IRS finding, refuses to file a tax return, or refuses to comply with an IRS request for information. Similarly, McDonough (1993) states that a taxpayer is first notified of a tax dispute when an examination letter arrives in the mail stating that tax is due because of specific tax return errors, or requesting information on specific items. If an audit result is not followed by an agreement between the taxpayer and the tax authority concerning the amount of tax owed, the taxpayer may file an objection letter or pursue his claim legally (i.e., in court).

Mathews (2004) also suggests that the IRS's stated mission to provide a top-quality service is seen in both taxpayer understanding of the law and the service's dispute resolution process. The IRS aims to resolve taxpayer disputes as quickly as possible. Since the late 2000s, the IRS has developed other more formal and narrowly focused ADR programs designed to facilitate the efficient resolution of disputes. These programs include negotiation, mediation, and arbitration, and are aimed at both preventing and resolving disputes.

Similarly, the ATO is currently undergoing a broad transformational change program, "Reinventing the ATO," which is focused on achieving the ATO's vision of being "a contemporary, service-oriented organization." According to Jone (2019), this program also incorporates the ATO's adoption of the Digital by Default initiative, which requires most people to use digital services to send and receive information to and from, and interact with, the ATO.

Indonesia's DGT has also built a mechanism to resolve tax disputes. To this end, it has an appeals department with a longstanding record of settling taxpayer disputes outside of a courtroom. Hidayah (2018) believes that in accordance with the tax dispute resolution experience in the tax court and to enhance relationships after disputes, Indonesia should encourage dispute settlements using ADR, which provides room for negotiations between taxpayers and tax authorities. Negotiation is a form of conflict resolution in tax disputes between taxpayers and tax authorities (Mathews 2004). The US's experience shows that negotiation, mediation, and arbitration through ADR enable all parties to save time and money. The ATO's experience also demonstrates the effectiveness of ADR in resolving tax disputes. Table 13.1 outlines the experience of Australia, the United Kingdom (UK), and the US in building and implementing ADR.

Table 13.1 Alternative Dispute Resolution Implementation in Several Countries

<i>Key points/ countries</i>	<i>Australia (ATO)</i>	<i>United States (IRS)</i>	<i>United Kingdom (HMRC)</i>
Vision or mission of the tax authority office	<p>Vision: To be “a contemporary, service-oriented organization”</p> <p>Mission: To “contribute to the economic and social wellbeing of Australians by fostering willing participation in our tax and superannuation systems”</p>	<p>Mission: Provide the US’s taxpayers with top-quality service by helping them understand and meet their tax responsibilities, and by applying the tax law with integrity and fairness to all</p>	<p>Mission: “We are the United Kingdom’s tax, payments, and customs authority, and we have a vital purpose: we collect the money that pays for the United Kingdom’s public services and helps families and individuals with targeted financial support. We do this by being impartial and increasingly effective and efficient in our administration. We help the honest majority to get their tax right and make it hard for the dishonest minority to cheat the system”</p>
Modernization program	<p>The Digital by Default initiative, “a proposal that will progressively make the method of interacting with the ATO, in a digital manner, with support for those unable to transition”</p>	<p>The “future state” initiative for tax administration seeks to “take advantage of the latest technology to move the entire taxpayer experience to a new level ... in a way that meets the needs of taxpayers and the tax community efficiently and effectively while respecting taxpayer rights”</p>	<p>- The first program provides ADR for large companies and taxpayers with complex tax problems</p> <p>- The second program is intended to provide ADR for SMEs and individual taxpayers</p>

- Successful experiences
- The reinvention program enhances the Australian tax dispute resolution system through aspects such as emphasizing additional options for dispute resolution; providing additional access points to the dispute resolution system; enhancing the provision of independent, confidential neutrals and process advice within the system; and digitally improving taxpayer notifications and the provision of information
 - ADR processes resulted in a 61% reduction in the number of appeals to the AAT since 2013–2014, and decreased the average cycle time through the objection process by more than 30% in 2016–2017
 - Every dispute resolved through the ATO's in-house facilitation saves taxpayers more than \$50,000 on average
- Negotiation, mediation, and arbitration through ADR demonstrated how all parties could save time and money, and can provide even greater efficiency and quality improvements
- The program has been considered successful and frequently used to overcome the cases of individual taxpayers and SMEs. The mediation is proven to reduce the time and cost required to overcome tax disputes (especially for SMEs and individual taxpayers)
 - ADR can achieve settlement at an efficient cost and quickly resolve disputes by agreement

AAT = Administrative Appeals Tribunal, ADR = alternative dispute resolution, ATO = Australian Taxation Office, HMRC = Her Majesty's Revenue and Customs, IRS = Internal Revenue Service, SMEs = small and medium-sized enterprises.
 Source: Data were summarized from many sources, including Jone, M. 2017. What Can the United Kingdom's Tax Dispute Resolution System Learn from Australia? An Evaluation and Recommendations from a Dispute Systems Design Perspective. *Australian Tax Forum* 32: 59–94; 2019. A Preliminary Evaluation of Australia's Tax Dispute Resolution System in the Context of the ATO's Reintervention Program. *Australian Tax Forum* 34(3): 513–550; Hidayah, K. 2018. Indonesian Tax Dispute Resolution in Cooperative Paradigm Compared to the United Kingdom and Australia. In *IOP Conference Series: Earth and Environmental Science* 175: 012203; and Mathews, G. W. 2004. Using Negotiation, Mediation, and Arbitration to Resolve IRS-Taxpayer Disputes. *Ohio State Journal on Dispute Resolution* 19(2): 709–737.

13.2.3 E-Commerce Tax and Potential Disputes

Electronic commerce (e-commerce) has exploded in magnitude and importance since the early 2000s. In Southeast Asia, digital transactions have reached enormous value. For example, in their e-Conomy SEA 2019 report, Google, Temasek, and Bain & Company report that digital transactions in Indonesia reached \$21 billion in 2019, and are expected to reach \$82 billion by 2025 (Google and Temasek 2019). Taxing e-commerce can help the Government of Indonesia realize its tax revenue target, which has not been achieved since the late 2000s. The government needs an appropriate strategy to optimize e-commerce tax revenue by strengthening regulations, digital infrastructure, and human resources.

First, the government needs effective, efficient regulation that provides legal certainty for e-commerce taxpayers. E-commerce tax collection is regulated in the Minister of Finance Regulation (Peraturan Menteri Keuangan) Number 210 of 2018 concerning Taxation Treatment of Trade Transactions through Electronic Systems (e-commerce). This Peraturan Menteri Keuangan was supposed to take effect on 1 April 2019, but was repealed before implementation because it was thought to have created ambiguity as to whether the government had issued a new type of tax that would harm digital businesses. In 2019, the government also issued Government Regulation Number 80 of 2019 concerning Trade through Electronic Systems, focusing on Netflix-like companies that do not have a permanent establishment (Bentuk Usaha Tetap), but whose income comes from Indonesia.

Next, the DGT must strengthen digital infrastructure and human resources by adopting the latest technologies, such as big data analysis and artificial intelligence, to help the e-commerce tax supervision function run effectively and efficiently. Big data analysis will improve the DGT's data visualization, making it easier to understand the financial characteristics and business processes of e-commerce transactions. Artificial intelligence is needed to analyze big data quickly and accurately.

Tax challenges presented by cross-border electronic commerce have been an important issue since the late 1990s when tax observers began to question whether traditional tax laws and principles would need to be reformed to capture the new commercial environment. A decade after these challenges were first identified, a survey of national government reactions showed that many countries had not passed any significant tax legislation or administrative guidance concerning the taxation of global e-commerce (Cockfield 2005). Countries must design taxation framework principles to apply to e-commerce taxation, including neutrality, efficiency, certainty, simplicity, effectiveness, fairness, and flexibility (Azam 2011). A lack of regulation may trigger disputes and conflicts between parties, including in taxation. One quite prominent case concerns the application of "use" tax, or the tax on internet purchases, in North Carolina. Use tax applies the same rate as sales tax. Data show that total unpaid

use taxes owed by North Carolinians on internet purchases is estimated at more than \$160 million per year. The problem in North Carolina and other states is that most consumers do not comply with existing use tax laws. As a result, North Carolina is confronted with trying to capture substantial amounts of lost use tax revenues, while simultaneously being constrained in its ability to do so under Supreme Court precedent, which holds that states may not constitutionally require retailers to collect sales or use tax if the retailers have no in-state physical presence. Gamage and Heckman (2012) suggest that the rapid growth of e-commerce has eroded states' sales and use tax bases, depriving them of much-needed revenue.

13.2.4 Negotiation Process and Outcome

Negotiation is a process that occurs when two or more people with different goals gather to discuss a solution to reach an agreement that meets their goals (Murnighan and Bazerman 1990). In general, the parties talk to each other to convey contradictory demands, then resolve their interests to reach an agreement using one of three various possible negotiation strategies (Pruitt 1983; Neale and Bazerman 1985; Bazerman and Neale 1986; Pruitt and Carnevale 1993). One of these is a competitive strategy, where competing parties require the other party to make concessions using threats, irrevocable commitments, or persuasive arguments to produce a "win-lose" result that benefits the competing party. The second is the concession strategy, in which the concessionaire acknowledges the other party, producing a "lose-win" result that benefits the other party. The third is a compromise strategy, where negotiators look for the "middle of the road" to achieve the desired results. Negotiations between tax consultants as the taxpayer's representation and the tax authority can also be defined as a process that involves both parties to resolve disputed tax issues.

Negotiation is a pervasive feature of tax audits in Indonesia, especially tax field audits and investigations. Negotiation in taxation happens during the tax audit period when the tax authorities offer their concessions after their tax audit visit. Similar to the tax audit process in Malaysia, as suggested by Azmi and Hoong (2014), Indonesian taxpayers may also negotiate with the tax authorities if their potential tax liabilities are substantial. In normal circumstances, the tax authorities may raise some tax issues after the tax audit visit, and taxpayers or their representatives who are tax practitioners will respond to these issues with their justification, according to the existing tax regulations or preceding case laws, together with the relevant supporting documents (if any) to substantiate their claims. The outcomes of the negotiations affect the finalization of tax adjustments after a tax audit. In the US, Mathews (2004) shows that the current structure of appeals relies on negotiation to bring the taxpayer and IRS appeals officer to an agreement, as every case that enters appeals must go through the negotiation process.

In many countries' current tax environments, negotiation may take place on an online platform called the ADR program. The country's tax administration is expected not only to empower the law but also to improve taxpayer services (Hauptman et al. 2014). Recently, Her Majesty's Revenue and Customs in the UK and the ATO in Australia have adopted various forms of in-house facilitation of ADR processes following pilot trials (Jone 2017).

13.2.5 Social Identity Theory

Negotiations are generally mixed-motive situations characterized by an inherent tension between cooperative and competitive motives (Thompson, Mannix, and Bazerman 1988). Negotiators may be internally or externally motivated to work together to develop "fair" arrangements for both parties. However, at the same time, they are motivated to maximize their results. As a result, the negotiator's motivational orientation is an essential determinant of negotiation behavior and outcomes (Pruitt and Carnevale 1993). Motivational orientation is the negotiators' preference with respect to the results for themselves and others (Messick and McClintock 1968).

Social identity theory, which implies that social identity can be used to evaluate one's orientation and motivation in negotiations, can be used to evaluate why motivational orientation is crucial in negotiations. This theory is based on the idea that individuals categorize themselves into various social groups, such as gender, nationality, ethnicity, and organizational and professional membership, to define themselves in their social environment (Leboeuf, Shafir, and Bayuk 2010; Markus and Kunda 1986; Turner 1985). Coexisting identities and the salience of identity in a particular environment depends on international and subjective identity. The importance of particular identities is considered not to fluctuate in response to situational cues (Turner 1987), and identities may be compatible or compete with one another (Scott 1997; Wallace 1995). The adoption of a particular identity influences how individuals process information and make decisions (Lembke and Wilson 1998).

13.2.6 Dual Concern Model

Chang, Cheng, and Trotman (2008) suggest that the dual concern model can explain the nature of negotiation. The framework implies that in negotiating, human beings as agents are not fully influenced by their own interests but also consider their partner's objective to attain the best outcome for both parties. The dual concern model shows that conflict requires a balance between caring about fulfilling one's own goals and caring for others by maintaining a good relationship with that person. In this model, self-interest concern explains high or low effort to fulfill one's interests. In contrast, CFO's objectives explain high or low efforts to fulfill the desires of others.

The negotiating party is expected to pay attention to the objectives of the negotiating partners. According to the principle of reciprocity, an individual will act in a

certain way and expect unbiased feedback from his negotiation partner (Maxwell, Nye, and Maxwell 2003). The norm of reciprocity expresses expectations about how one should behave in social interactions. Maxwell, Nye, and Maxwell (2003) found that negotiators tend to reciprocate their negotiating partners' motives.

Concern for one's output is called "assertive" while concern for others' output is called "cooperative." According to Pruitt (1983), concern for other parties' output can be induced by two factors: Genuine care that sincerely wants to help others, and strategic care that aims to help other parties advance one's self-interest. Concern for the other person's goals can also be triggered by factors such as interpersonal attractiveness, group identity, and good mood.

According to Thomas in Pruitt (1983), five strategies are used to manage conflict in the dual concern model. First, the accommodation strategy is a lose-win strategy (there is a losing party and a winning party). This categorization is low in assertiveness and high in cooperation. Second, the competition strategy is in contrast to the accommodation strategy, where assertiveness is high and cooperation low. This strategy is a win-lose strategy (some win and some lose). Third, the compromise strategy seeks a middle ground, where the parties win in some cases and lose in some cases. The fourth strategy is conflict management, which indicates a lack of order and cooperation. In this strategy, both parties lose (lose-lose). The fifth strategy, collaboration or integration, is the best because it contains a shared understanding and commitment of both parties, as well as their benefits and satisfaction. In a collaborative strategy, both parties win (win-win), and assertive and cooperative concern are equally high.

13.2.7 Communication Style

The term "communication style" was first introduced by Norton (1978), who defined it as a way for someone to interact verbally or nonverbally to signal how literal meaning must be taken, interpreted, filtered, and understood. This refers to the specific ways individuals receive and interpret messages, as well as express responses or feedback. Verbal messages used by an individual to communicate comprise the specific types of language or words that characterize communication styles, and can include the tone, volume, and speech level that accompanies these messages (Raynes 2001).

Communication style also indicates how to interpret the information and transform it into active behavior based on social judgment (Panisoara et al. 2014). Each individual uses a particular communication style to establish social relations with other individuals. According to Ibrahim and Ismail (2016), identifying an individual's communication styles allows us to understand the individual in terms of their background, way of thinking, and perception of the social reality. Individuals use various communication styles to correspond to different settings, goals, and groups.

Perreault and Kida (2011) point out that auditors can use cooperative or contentious communication styles to persuade clients to adopt their preferred accounting treatment. Similarly, Hatfield, Agoglia, and Sanchez (2008) suggest

that financial managers representing the audit client can be either contentious or collaborative in negotiating with auditors. A communication style can involve emotions through the use of affective statements. For example, cooperative communication styles can use statements with positive effects such as “I truly believe we can make progress here.” In contrast, contentious communication styles use statements that can connote negativity, such as “Let us stop wasting time with one another.” A cooperative communication style uses more positive language, while a contentious communication style uses aggressive and harsher language.

Psychological research has found that a cooperative communication style can help people achieve the desired negotiation results more effectively, and can be more beneficial than a contentious communication style. According to Lovelace in Schaubroeck et al. (2016), contentious communication refers to a pattern of weak interactions between two or more people. This often occurs when someone cannot regulate their emotions. People who use contentious communication styles are not afraid to challenge others, especially if they have evidence that supports their position. Individuals who interact with someone using this style of communication may feel the need to defend themselves. Schaubroeck et al. (2016) suggest that to prevent contentious communication, the negotiating party should direct their attention to identifying and solving problems.

13.3 Hypothesis Development

Many previous studies on negotiations in accounting imply that social care influences negotiation processes and outcomes in the form of transfer price negotiations (e.g., Kachelmeier and Towry 2002; Luft and Libby 1997) as well as negotiations between auditors and clients (Brown and Johnstone 2009). Luft and Libby (1997) and Kachelmeier and Towry (2002) found that when economic rationality is considered decisive, negotiators must expect market-based transfer prices. Brown and Johnstone (2009) imply that negotiations between auditors and client should consider economic factors (such as the quality of financial reporting and the risk of assignment from clients) and behavioral factors (such as negotiation experience). Chang, Cheng, and Trotman (2008) suggest that negotiation is not only influenced by economic incentives (such as profit sharing and the role of divisions) but also by treatment factors. In tax audit negotiations, timing and negotiation strategy influence satisfactory negotiation outcomes (Azmi and Hong 2014).

Luft and Libby (1997) and Kachelmeier and Towry (2002) showed that while economic reality would dictate that negotiators should expect market-based transfer price, negotiators have an aversion to unequal profit. As mentioned in Chang et al. (2008), both studies attributed this aversion to profit sharing and satisfactory issues. Their examination did not test the effects of social concern care directly. In this study, the researchers sought to complement previous research by investigating the effects of social awareness on the proposed agreement value.

The dual concern model is an established framework used to explain negotiators' objectives (e.g., Lewicki, Saunders, and Barry 2005; Pruitt 1983; Sorenson, Morse, and Savage 1999). This framework postulates that the negotiator's

objective is influenced by two independent types of concern: Concern for their outcome (concern-for-self), and concern for the other party's outcome (CFO). This study focuses on the tax consultant's perception of their negotiation partner's degree of CFO. The manipulation is consistent with significant variations of CFO in accounting negotiation situations. For example, in transfer pricing negotiations, the level of concern for the other divisions' profits is likely to vary in quasi-market organizations compared to quasi-family organizations.

Chang, Cheng, and Trotman (2008) state that negotiating parties are expected to pay attention to their opponents' objectives. Individuals will act differently and expect similar countermeasures from their negotiation partners (Maxwell, Nye, and Maxwell 2003). The norm of reciprocity expresses expectations about how one should behave in asocial interactions. Chang et al. (2008) found that negotiated transfer prices produce satisfactory outcomes for both parties when negotiators (sales division managers and buyer division managers) pay attention to their negotiating partners' goals and concerns. Negotiators also tend to reciprocate their negotiation partner's negotiation motives (Maxwell, Nye, and Maxwell 2003).

Tax practitioners adopt aggressive strategies under certain circumstances when defending their clients (O'Donnell, Koch, and Boone 2005). Leviner (2012) commented that taxpayers, whether aggressive or passive, are likely to agree with their tax advisor's recommendation. However, as Maxwell, Nye, and Maxwell (2003) suggested, a similar situation may occur in negotiations between taxpayers represented by their consultants when negotiating with the tax authority about disputed issues. Tax authorities concerned with taxpayers' interests will consider the time and cost required, the psychological condition of the taxpayer, and other taxpayer interests when dealing with taxation cases. On the other hand, a tax consultant representing a taxpayer will also understand, pay more attention to, and care about the tax authorities' interests regarding the state apparatus in charge of maintaining state revenue properly and their commitment to the law. Therefore, negotiating consultants who perceive that their negotiating partner has high CFO will reciprocate with a similar objective, and then take a more conservative position.

In contrast, negotiating consultants who perceive that their partner has low CFO are expected to reciprocate by taking a more aggressive position. As a result, we hypothesize that tax consultants propose more conservative positions (as opposed to an aggressive stance) when they realize that their negotiating partner is considering their interests and objectives. The conservative position refers to choosing an option that results in paying more tax to the tax authority. Thus, hypothesis 1 can be formulated as follows: Tax consultants will take a more conservative agreement proposal position when negotiating with tax authorities who show a high CFO than when negotiating with tax authorities with low CFO.

As discussed earlier, Perreault and Kida (2011) state that accounting professionals may adopt either a cooperative communication style or a contentious communication style in negotiating. An auditor can also use both styles to persuade the client to adopt the auditor's accounting treatment after carrying out the audit assignment. Individual communication styles can also involve emotions through the use of affective statements.

Previous psychological research (such as by Levy and Nail 1993) suggests that cooperative communication styles may help people achieve their desired negotiation outcome. In particular, it was found that clients were affected by an auditor's cooperative communication style, suggesting that cooperative communication styles during negotiations are more beneficial than contentious communication styles. In this interaction, each party tries to show that he is right and the other party is wrong.

This study investigates the effect of a tax authorities' communication style on consultant concessions. Many previous researchers found that communication style influences negotiation outcomes through its effect on negotiation partners. For example, the social contagion theory suggests that emotion can spread freely from one negotiator to another (Levy and Nail 1993). This theory suggests that tax consultants who negotiate with a tax official who expresses positive emotion will themselves experience positive emotion and offer greater concessions. Perreault and Kida (2011) found that auditors who use contentious communication styles will get fewer concessions from clients, while auditors who use cooperative communication can obtain more concessions from clients. Clients who negotiate with auditors with a contentious communication style will feel less satisfied with that auditor, and clients will also feel less satisfied with the negotiations carried out. Kopelman, Rosette, and Thompson (2006) found that Master of Business Administration students participating in a negotiation over catering services prices were more likely to make concessions to a negotiator expressing positive emotion, as opposed to negative emotion. These findings suggest that induced positive emotion leads to greater concession-making and a more favorable negotiation experience. As a result, we test hypothesis 2, as follows: The tax consultant will make a more conservative agreement proposal when negotiating with tax authorities who have a cooperative communication style than when negotiating with tax authorities with a contentious communication style.

Building on the possibility that tax officials' communication styles may affect how tax consultants perceive their decision, this study investigates the interactive effects of partners' negotiation objectives and communication styles. Perreault and Kida (2011) found that communication style moderates the influence of auditor persuasion tactics on auditor–client negotiation outcomes, even when clients severely dislike the persuasion tactics. Similarly, communication style in tax negotiations will have different effects on the outcome because of the difference in the objectives of the negotiating partners. This explanation leads to the following hypothesis 3: The communication style moderates the relationship between the negotiating partner's objectives and the negotiation outcome. Hatfield, Agoglia, and Sanchez (2008) find that client negotiation style influences auditors' propensity to use a reciprocity-based strategy. This implies that negotiation communication style may have a different effect on the relationship between CFO as representing a partner's objectives than it does on the negotiation outcome. Individually, communication style plays a more significant role when dealing with tax authorities with low CFO. On the other hand, communication style has little effect when dealing with a partner with high CFO. Thus, hypothesis 3a

is formulated as follows: The tax consultant will take a more conservative agreement proposal when negotiating with a partner who shows a cooperative communication style than a contention style in a low CFO situation.

13.4 Research Methods

13.4.1 Research Design

The experimental design for this research was adapted from previous studies regarding negotiations in accounting (i.e., Perreault and Kida 2011; Brown and Johnstone 2009). In this study, tax consultants negotiate with the tax authorities regarding tax disputes. This study uses a 2×2 between-subject design to examine whether the negotiation partner's objectives and communication style influence the tax consultant's negotiation outcome in tax audit negotiation. We manipulate the independent variables at two levels: The negotiation partners' objective becomes low CFO versus high CFO, and the communication style becomes cooperative versus contentious. The dependent variable of negotiating outcomes is measured in the range of the conservative–aggressive continuum, as indicated by the amount in the agreement proposal.

Before conducting the experiment, a focus group discussion and serial pilot test were conducted to determine the research instrument's validity and reliability requirements. The tax authority's possible responses to the tax consultant's proposal in the negotiation were formulated in the focus group discussion, which involved experienced tax practitioners and a tax auditor. The focus group discussion also aimed to obtain a suitable response from the tax authority in dealing with a scenario in the experimental task. Finally, a pilot test was carried out to ensure that the participants properly understood the instruments in terms of their sequences, content, and logic. The first pilot tests were carried out using manual instruments, which were repaired after getting input from the first stage. A second pilot test was carried out on the new instrument. When no significant improvement was observed, the instrument was moved online. After this web-based instrument was completed, a third pilot test was conducted.

13.4.2 Experimental Task and Procedures

The experimental task, which was taken from Brown and Johnstone (2009), modified the auditing environment to the taxation environment. While Brown and Johnstone involved the auditor and client in negotiations, this research involved the tax consultant and tax authorities in a tax audit negotiation. The primary task in this study was to complete the negotiation process on disputed tax issues between the taxpayer and the tax authority.

The negotiated case was the audit findings on the taxpayer's corporate income tax. In this case, the examiner found a fiscal correction of Rp370,000,000, which came from the treatment of several accounts. The consultant argued that the findings were not entirely correct because they were related to the imposition of Income Tax Article 21 by taxpayers. According to the consultant, calculating it as

Income Tax Article 21, the tax owed should only be Rp170,000,000. This case reveals a difference of Rp200,000,000 between the calculations of the tax authority and the consultants. This difference is the main object of negotiation between the consultants and tax authorities.

The experiment was conducted online. Participants assumed the tax consultant's role and interacted with a simulated "tax authority" computer program. The program randomly assigned participants to one of four experimental conditions and provided participants with an access code to log in to the instrument website. Participants also received information concerning informed consent, instructions to be followed, and a memorandum explaining the experimental tasks' attributes.

From the instruments' main menu, participants could access the assignment memorandum, client facts, and the negotiation schedules. The assignment memorandum stated that the participant was acting as the taxpayer's representation in negotiation with tax officials. The memorandum also indicated that the participant must not use any information other than that provided. The possible responses of the computer-based simulated tax authority were formulated to respond to the tax consultant's proposals in the negotiation. If the proposed agreement fell below a particular threshold, the system rejected the proposal, and the consultant had to propose another number. After reading the assignment memorandum, subjects were reminded of their purpose before starting the negotiation. The participants were also reminded to negotiate as they usually do when looking for solutions to a legal issue. After finishing the negotiation process, participants were asked to propose an agreement value. Afterward, participants were asked to provide demographic data and answer the manipulation check questions. The final session was a debriefing.

13.4.3 Research Variables

This study involves two independent variables and one dependent variable. Both dependent variables are manipulated while the dependent variable is measured. The first independent variable is the goal of the negotiating partner. As mentioned in section 13.4.2, partners' goals are divided into two: Concern for their own outcome (low CFO) and concern for the other party's outcome (high CFO). This variable is manipulated by referring to the treatment used by Chang, Cheng, and Trotman (2008), that is, we manipulate the tax authorities' attitude to be high CFO with respect to the tax consultant's objective, and low CFO with respect to the partner's interest by weighting their desired outcome more heavily.

Meanwhile, communication style is manipulated into a cooperative style versus a contentious style. Manipulation for this variable refers to Perreault and Kida (2011). The cooperative communication style uses statements that sound positive, such as "I truly believe we can make progress here." On the other hand, the contentious communication style uses more statements with negative tones such as "Let us stop wasting time with each other. If we fail to reach an agreement, you can choose to object." The cooperative communication style uses more positive language, while the contentious communication style uses aggressive and harsher

language. Finally, the dependent variable, the negotiation outcome, is measured by the amount in the tax consultants' final agreement proposal. The higher this amount, the more conservative they are, and vice versa. This study also considers task complexity as a covariate, as task complexity significantly influences tax professional decision-making (O'Donnell, Koch, and Boone 2005).

13.4.4 Participants and Manipulation Checks

Libby, Bloomfield, and Nelson (2002); Cook, Campbell, and Shadish (2002); and Nahartyo (2013) suggest that researchers must consider the experimental requirements to determine the level of a suitable subject. Professional tax consultants working at the Tax Consultant Office and certified public accounting firms (CPAFs) are ideal subjects for this experiment. Participants were selected from CPAFs based on data showing that 20–22% of total CPAF revenue comes from taxation services and that this share increased from 13.9% in 1997 to 22.4% in 2012 (Lee 2015). In 2019, the Indonesian Institute of Public Accountants formed the Taxation Committee with the primary aim of expanding the taxation services of public accounting firms. The data indicate that taxation services are an essential and significant part of CPAFs, and contribute 20–25% (with an average of 23%) of CPAFs' total revenue (Lee 2015).

Participants were recruited by email and telephone. Potential participants' data were obtained from the Indonesia Tax Consultants Association and CPAF directory. The study required participants to have at least one year of work experience to capture subjects' experience in solving clients' tax issues. Consultants who responded to the invitations were given identification tokens and access codes to log in to the instrument. To ensure proper control of this experiment and avoid maturation or attrition threats, participants were asked to complete the experimental task within 40 uninterrupted minutes. A manipulation check was conducted by asking participants about their experiences during the experiment session. Lastly, all committed participants were given a debriefing.

13.4.5 Data Analysis

This study contains three hypotheses testing two main effects and one interaction effect. Since the research model involves task complexity as a covariate, hypothesis testing was conducted using analysis of covariance (ANCOVA).

13.5 Results and Discussion

13.5.1 Participants and Randomization Check

The study participants were tax professionals at the Tax Consultant Office, CPAF, and Accountant Services Office. The subjects participated by completing an online experimental task. They started by opening the task website and logging in using a specified username and password. Sixty-seven participants

completed the assignment. Based on the manipulation check test, five failed to give a proper response, and their data were eliminated, yielding 62 usable responses.

Of these 62 participants, 31 were male (50%) and 31 were female (50%). The average work experience was 56.33 months (4.7 years), and the average age was 34.61 years. With respect to affiliation, 41 (66.12%) were CPAF employees, 15 (24.19%) were Tax Consultant Office employees, and six (9.69%) were Accounting Services Office employees. The randomization test shows no significant difference in participants' demographic characteristics among experimental treatments. Table 13.2 presents the test results.

13.5.2 *Descriptive Statistics and the Hypothesis Testing*

One assumption of the ANCOVA test is that each dependent variable has the same variance for all groups. Levene's test is used to test this assumption. The test results support this assumption with values of $F=4.031$ and $p=0.011$. Descriptive statistics and ANCOVA models are presented in Tables 13.3 and 13.4.

The ANCOVA model with the amount of agreement as a negotiation outcome measure of the dependent variable is shown in Table 13.4.

Hypothesis 1 predicts that tax consultants' agreement will be more conservative when they negotiate with tax authorities with high CFO than when they negotiate with tax authorities with low CFO. Table 13.2 shows that consultants who negotiate with tax authorities with high CFO act more conservatively (mean=0.6480) than when negotiating with tax authorities with low CFO (mean=0.5604). As shown in the ANCOVA model (Table 13.3), the difference (the main effect of partner objective) is statistically significant ($F=7.123$; $p=0.010$), which supports hypothesis 1.

Furthermore, Table 13.3 also shows that consultants who negotiate with tax authorities who use a cooperative communication style act more conservatively (mean=0.6539) than when negotiating with tax authorities who used a

Table 13.2 Result of Randomization Test

<i>Characteristics</i>		<i>Sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig</i>
Working experience	Between-groups	43.242	39	1.109	0.762	0.775
	Within-groups	32.000	22	1.455		
	Total	75.242	61			
Affiliation	Between-groups	2.854	2	1.142	1.163	0.320
	Within-groups	72.389	59	1.227		
	Total	75.253	61			
Education level	Between-groups	0.860	1	0.860	0.694	0.408
	Within-groups	74.381	60	1.240		
	Total	74,242	61			

df= degree of freedom, Sig. = significance.
Source: Authors (2020).

Table 13.3 Mean (Standard Deviation) Percentage of Agreement

<i>Partner objectives (CFO)</i>	<i>Communication style</i>		
	<i>Cooperation</i>	<i>Contention</i>	<i>Total</i>
High	0.6542 (0.1783) n = 16	0.6412 (0.0910) n = 17	0.6480 (0.1381) n = 33
Low	0.6535 (0.0978) n = 15	0.4607 (0.1413) n = 14	0.5604 (0.1539) n = 29
Total	0.6539 (0.1426) n = 31	0.5602 (0.1466) n = 31	0.6070 (0.1510) n = 62

CFO = concern-for-other.
Source: Authors (2019).

Table 13.4 Analysis of Covariance Model of Percentage of Agreement

<i>Source</i>	<i>Type III sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
Intercept	0.323	1	0.323	18.578	0.000
Complexity	0.012	1	0.012	0.663	0.419
CFO	0.124	1	0.124	7.123	0.010
ComStyle	0.146	1	0.146	8.387	0.005
CFO*ComStyle	0.123	1	0.123	7.064	0.010

CFO = concern-for-other, df = degree of freedom, Sig. = significance.
Source: Authors (2019).

contentious style (mean = 0.5602). As shown in the ANCOVA model (Table 13.4), the difference (the main effect of communication style) is statistically significant ($F = 8.387$; $p = 0.005$), which supports hypothesis 2. Moreover, Table 13.4 shows a significant interaction effect between partner objectives and communication style ($F = 7.064$; $p = 0.010$). This finding indicates support for hypothesis 3. Since there are significant interaction effects, the examination continues with the simple effect test, the results of which focus on testing the effects of communication styles under different partner objective (high vs. low CFO) conditions (Table 13.5)

As shown in Table 13.5, there are significant differences in the effects of communication styles under low CFO conditions, while there is no significant difference in high CFO conditions. These results indicate the influence of differences in the partners' communication styles on the outcome of negotiations when a negotiating partner has low concern for their opponent's interests. Conversely, when negotiating with partners who pay close attention to the other party's interests, the communication style becomes insignificant. This finding indicates that communication style is an essential factor in negotiating, especially when dealing with partners who show a low CFO.

Table 13.5 Univariate Test

<i>CFO</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
0 Contrast	0.245	1	0.245	14.102	0.000
Error	0.992	57	0.017		
1 Contrast	1.336	1	1.336	0.003	0.982
Error	0.992	57	0.017		

CFO = concern-for-other, Sig. = significance.
Source: Authors (2019).

13.5.3 Discussion

Disagreement within the tax system involves issues unlike those in typical commercial disputes between litigants. In the US tax environment, the federal government being a party involves essential ramifications. McDonough (1993) states that although the government is interested in collecting revenue, it also has an interest in retribution, deterring others from tax misbehavior, and setting an example for the public. In its ADR program, the appeals process's primary focus is negotiation. That is, the taxpayer and appeals officer try to settle the dispute "through persuasion regarding the merits of their respective positions." Love and Manisero (2017) suggest that as a general rule, the parties should make an effort to resolve a dispute through reasonable negotiations before litigation is considered. Another benefit of a negotiated settlement is that the parties can be creative in designing the settlement, which could, for example, involve extended payment periods for unpaid taxes.

In many countries, practices involved various forms of negotiation between taxpayers and the tax authorities, including in the tax audit phase. Negotiation plays a crucial role in tax audits as it facilitates the interaction between taxpayers, tax practitioners, and tax authorities. The role of negotiation in tax audits is to align taxpayers' or tax practitioners' different motivations with that of the tax authorities (Azmi and Hoong 2014). Formally, taxpayers may take legal action, such as filing an objection and proposing an appeal to the tax court to respond to the specific tax audit finding. However, such action is costly for both parties (taxpayers and the country). Thus, a legal negotiation is considered a rational solution to resolve disputes. Negotiation can minimize the prospect of either the taxpayers or tax authorities resorting to tax litigation to resolve any dissatisfaction with the audit findings. Thus, negotiation skills are very important for solving tax disputes, especially in a hostile tax environment (Cano 2020).

Spaho (2013) posits that the negotiator could involve an external tax consultant to solve the dispute. Tax practitioners act as the taxpayer's representation in negotiating with the tax authority during the tax audit. Nichols and Price (2004) found that representation by a tax practitioner can reduce the taxpayer's final tax assessment during the IRS audit.

This study found that partner negotiation objectives, as indicated by CFO, influence the negotiation outcome. In this regard, the tax consultant considers

both parties' positions without ignoring their client's best interest. This finding supports the social identity theory, which states that social identity can be used to evaluate one's orientation and motivation in negotiations. Moreover, this finding confirmed the dual concern model, which suggests that people do not always prioritize their interests in negotiating but also consider the goals of their negotiating partners. Maxwell, Nye, and Maxwell (2003) suggest that based on the principle of "reciprocity," an individual will act in a particular manner and expect a similar response from his negotiation partner. Tax authorities concerned with taxpayers' interests during the negotiation process will elicit positive perceptions from taxpayers. In particular, taxpayers will be more understanding, pay more attention, and be aware of the tax authorities' interests as to the state apparatus in charge of maintaining state revenue correctly and according to the regulations. The collaboration formed through negotiations will help the government foster public trust and prevent future litigation. Moreover, an open-minded negotiation process and genuine interest in working out a mutually acceptable agreement will increase the parties' satisfaction in the negotiation. These benefits are expected to enhance future compliance and optimize state revenue from taxes.

Perreault and Kida (2011) assert that professional accountants can use communication style (i.e., cooperative or contentious) to persuade other parties to adopt their preferred treatment. The communication style may involve emotions through the use of affective statements. This study found that communication style significantly influenced negotiation outcome, suggesting that communication style may effectively establish good social relations with other individuals, even with a negotiation partner in a tax audit environment. It implies the importance of communication style in a negotiation, primarily when negotiating with a challenging partner. This finding supports Perreault and Kida (2011), who found that auditors who use contentious communication styles will get fewer concessions from clients, while auditors who use cooperative communication styles can obtain more significant concessions from clients. It also supports Cano (2020), who found that in an uncertain tax environment, the conversation during the negotiation process significantly influences the penalty or total tax liability.

Moreover, this study found that the communication style moderates the relationship between the negotiation partner objectives and negotiation outcome. This finding is consistent with Hatfield, Agoglia, and Sanchez (2008), who found that client negotiation style influences auditors' propensity to use a reciprocity-based strategy. Fu, Tan, and Zhang (2011) also suggest the importance of negotiation style. These findings indicate that the negotiation outcome is influenced by both communication style and partner negotiation objectives. Understanding the nature of disputes and settlement through negotiation will benefit both parties involved.

Furthermore, as Perreault and Kida (2011) pointed out, communication style becomes more critical when dealing with situations that are not ideal for the negotiator. In this regard, negotiating with partners with low CFO will make the negotiation process more complicated. This study found that tax consultants' agreement proposals are more conservative when dealing with a tax authority

with a cooperative communication style than when negotiating with one with a contentious communication style in a low CFO situation. Thus, the study findings underscore that aggressive proposals only occur when the tax consultant negotiates with a partner with low CFO.

These results demonstrate the complexity of social concern and communication style and highlight the importance of studying negotiation processes and outcomes. Considering the importance of negotiation in professional tax work, the findings of this research reaffirm the need to know the process that tax consultants use to negotiate with tax authorities in resolving any tax dispute. As mentioned by Mažeikienė, Peleckis, and Peleckienė (2012), the ability to communicate efficiently and understand the psychology of the other person or negotiating partner, as well as the interests of the organization they represent largely determines the success of business meetings and negotiations.

13.6 Conclusion and Policy Recommendation

Some researchers have previously suggested negotiation as an alternative way to solve disputes between parties (Brown and Johnston 2009; Perrault and Kida 2011). Tax consultants and tax authorities bring to negotiations their own particular characteristics, which influence judgments made during these negotiations. In this study, we examine the influence of partner negotiation objectives and their communication styles on negotiation outcomes. The results show that consultant negotiation proposals are more conservative when negotiating with a partner with higher CFO than with a partner with lower CFO. A similar result was found when negotiating with tax authorities with a cooperative communication style than when negotiating with tax authorities with a contentious communication style. Furthermore, this study found a significant interaction effect between negotiation partner objectives and communication style on negotiation outcomes.

This implies that communication style is critical when a tax professional negotiates with a tax official to solve a tax dispute. These findings suggest that others' concerns and communication styles play an essential role in settling various tax disputes. The findings also indicate the importance of cooperation and mutual understanding between parties. Hidayah (2018) suggests a new cooperative compliance model to increase compliance using cooperative relationships. The model of a cooperative relationship between taxpayers and the tax authority is a novel trend being adopted by many countries. Since the early 2000s, some governments have been changing their tax systems to incorporate friendly cooperative relations and support for entrepreneurship.

McDonough (1993) stated that understanding how a tax dispute arises and the entire process through which it proceeds is necessary before examining the role of ADR methods in the system. Following this suggestion, this study provides some policy recommendations for Indonesia's tax system. First, a formal communication channel should be opened with taxpayers and their consultants, as positive communication will improve public trust in the government. Second, a comprehensive ADR program as implemented in the US, UK, and Australia should be

built deliberately to identify and improve how an organization addresses conflict by arranging its dispute resolution processes decisively and strategically. The program should provide a follow-up mechanism for failed negotiations by providing a comprehensive and systematic mediation and arbitration mechanism to minimize tax litigation. Further, the DGT should build an online ADR system. The term “online dispute resolution” refers to the use of information technology and telecommunications via the internet (online technology) as applied to ADR. In this context, ADR refers to dispute resolution other than litigation in courts and includes negotiation, mediation, and arbitration.

The context of online negotiation in this study also suggests the potential development of a formal ADR program in Indonesia. According to this study result, Indonesia can achieve a legal breakthrough in tax dispute resolution using ADR. Hidayah (2018) suggests that Indonesia can transform the cooperative paradigm to support ADR planning. ADR should be able to create a good relationship right after the dispute is solved, and can control tax dispute resolution in Indonesia through administrative effort in the form of objection. According to the review of Acts of General Provision and Tax Procedures, the proposal of an objection is an opportunity to implement ADR as mediation. This situation aligns with the DGT’s launch of the e-objection platform as a starting point. Indonesia can begin by adopting the principles of Australia’s ADR program. Jone (2017, 2019) provides an insightful evaluation of the implementation of ADR principles in Australia and the UK.

This study has several limitations. First, it did not use actual negotiation partners, which may affect the negotiation outcome. Negotiations are iterative strategic endeavors. Without a face-to-face negotiation, this study could not capture the richness and complexity of actual tax consultant–tax authority negotiations. As Fu, Tan, and Zhang (2011) suggest, unraveling the complex interactions between parties is a promising area for future research. Second, it ignores the effect of negotiation experience during a tax audit, which likely affects negotiation outcomes. Third, this study did not consider the scale of tax disputes in experimental cases. Mathews (2004) stated that negotiation is not particularly conducive to the settlement of large tax disputes. Future research should consider these critical factors.

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