Key Points

- Developing countries are facing challenges, such as climate change and digital disruption, which force governments to improve their revenue efforts.
- In order to help countries address challenges in revenue efforts, many international frameworks have been developed and implemented by different international organizations and agencies.
- To help tax authorities, particularly in developing countries, to deal with the current challenges and boost revenue efforts, international organizations and bodies have developed international frameworks, guidelines, and toolkits for awareness-raising, knowledge-sharing, and tax-educational purposes. These include Tax Administration 3.0, Tax Administration Diagnostic Assessment Tool, Framework on Base Erosion Profit Shifting, and Value-Added Tax Digital Toolkit, among others.
- Policy implications for innovative tax administration cover (i) the establishment of comprehensive taxpayer databases, (ii) the modernization of tax administration through technological advances and digital transformation, and (iii) strengthening tax cooperation at both the domestic and international levels.

Introducion

Tax revenues are one of the most important drivers of economic growth and development, particularly in developing economies. Sufficient tax revenues provide fiscal space to support a country’s development for hard and soft capital. Records for the past decades, however, show relatively weak revenue performance and tax yields in developing Asia. According to the Organisation for Economic Co-operation and Development (OECD, 2022), the tax-to-gross domestic product (GDP) ratio of many developing countries in Asia and the Pacific is lower than the 15% international benchmark, which is widely considered to be the minimum level required for sustainable development and inclusive growth. Although the average tax-to-GDP ratio of the region was 19.1% in 2020, the ratios of many developing countries in Asia were significantly lower (Figure 1).

As a result, there is an urgency for governments in Asia and the Pacific to improve their revenue efforts for continuous development in achieving the 17 United Nations Sustainable Development Goals (SDGs). Among the major approaches, improving tax administration toward a user-friendly system and achieving wider coverage will boost governments’ revenue efforts. Better tax administration and services will advance domestic resource mobilization along with an increase in government revenues. This policy brief discusses the challenges and policy implications of strengthening tax administration through digital transformation and tax reforms. It also shares the available international tax cooperation frameworks and related initiatives that help to deliver effective and transparent tax administration.

Challenges

Balancing Developmental Goals and Debt Sustainability

The impacts of the coronavirus disease (COVID-19) pandemic have created fiscal challenges for governments around the world. Many developing Asian countries have experienced substantially increased debt levels. The statistics show high and rising debt-to-GDP ratios since 2019 (Figure 2) as a result of (i) unprecedented policy responses and output losses caused by the pandemic and (ii) fiscal responses to increases in energy and food prices due to the Russian invasion of Ukraine.
Given the high and rising debt ratio, along with the low tax-to-GDP ratio, in a highly uncertain environment, developing countries in Asia have been struggling to deliver their SDG commitments. There is an urgent need for governments to improve revenue efforts in order to create enough fiscal space for their developmental goals. The revenue efforts must be accelerated in both policy and compliance directions as improved revenues depend on a broad revenue (tax) base, appropriate tax policy, and the efficiency of tax administration and services.

Addressing Climate Change Revenue Efforts

Climate change is an existential threat as countries around the world are evidently facing the dramatic impacts of global warming. To mitigate climate change impacts and the substantial costs associated with climate change, many countries are increasingly adopting policy instruments and frameworks to address climate change revenue efforts. Asia, on the other hand, has ranked top among global carbon-emissions producers since 2000. While other regions have either reduced their fossil carbon emissions or are producing them at decreasing rates, Asia has continuously produced the fossil CO\textsubscript{2} emissions at an increasing rate (Figure 3). There is an urgent need for Asia to cut down on the use of fossil fuels in the region and switch to greener sources of energy to achieve the climate-related SDGs by 2030.

To support and facilitate the process, environmental taxes are important fiscal instruments that provide the double benefit of enhancing revenue gains to finance quality infrastructure investment toward green transition. Together, environmental taxes also incentivize reductions in emissions and pollution. Carbon taxation or carbon pricing is a market-based policy instrument.

Figure 1: Tax-to-GDP Ratios in Asia and the Pacific Countries, 2020

Notes: The statistics show the total tax revenue as a percentage of GDP. 2019 data are used for the Africa (30) average, Australia, and Japan, as 2020 data are not available.
Source: OECD (2022).

Given the high and rising debt ratio, along with the low tax-to-GDP ratio, in a highly uncertain environment, developing countries in Asia have been struggling to deliver their SDG commitments.
that will help to facilitate climate change mitigation and deliver substantial fiscal revenues. A carbon tax (a carbon pricing instrument) can be an effective tool to reduce carbon emissions and help developing countries achieve climate objectives, with an opportunity for higher fiscal revenues. However, these instruments are sophisticated, and policy makers in developing countries need to be well informed and educated before making policy decisions.

**Improving Revenue Efforts via Digital Transformation**

Digital transformation brings both opportunities and challenges for the development of innovative tax administration. Digitalization transforms the design and implementation of tax systems so they can be more effective. On the other hand, it also brings risks of tax avoidance. Many developing countries in Asia have shown weak revenue performance caused by limited knowledge, capacity, and lack of tax education and digital literacy. Other factors that have caused this ineffective performance include a large informal sector, outdated tax administration, and inadequate international tax cooperation. To improve revenue efforts and address such challenges, digital tools and innovative technology can be explored and adopted.

First, amid the rise of digitalization, governments and tax authorities must learn how to adapt to this rapid change while adopting appropriate digital tools to boost tax collection. The adoption of digitalization can help to broaden the tax base and improve tax policy

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**Figure 2: General Government Debt, 2018–2023 (% of GDP)**

![Graph showing General Government Debt, 2018–2023 (% of GDP)](image)

$p$ = predicted.

Source: International Monetary Fund (2022).

**Figure 3: Annual Fossil CO₂ Emissions by Region**

![Graph showing Annual Fossil CO₂ Emissions by Region](image)

Gt CO₂ = gigatons of carbon dioxide.

and compliance. Better tax compliance drives effective tax administration, resulting in increasing tax revenues and enhancing tax collection. Moreover, advanced and innovative digital technologies are applied in the tax compliance process for the improvement of tax administration and transparency. Opportunities are presented in e-profiling, e-invoicing, artificial intelligence, and data analytics tools, among others. Unfortunately, the adoption rate of digital technologies in developing Asia remains low compared to advanced economies. The real challenge for developing economies lies in the lack of tax and digital education necessary to equip tax officers with the knowledge required to take advantage of this digital transformation.

Second, value-added tax (VAT) and goods and services tax (GST) are the main sources of revenue for many developing countries in Asia. Despite these taxes being major contributors to public finances, there is room for improvement to reduce tax gaps in economies. In the rise of the digital economy, opportunities have increasingly been presented in digital transactions i.e., e-commerce, both domestic and cross-border transactions. According to an OECD, WBG, and ADB (2022) report, Asia and the Pacific has the largest share of global e-commerce transactions, accounting for 60% of the total global e-commerce market in 2020, and e-commerce sales continue to increase across the region. Table 1 shows the growth of digital platform revenue in 2019 in Asia and the Pacific. Digital platform revenue increased by 16.1%, higher than the global average rate. E-commerce transactions registered the highest percentage among others as the growth in developing economies in the region was 28.3%.

Nonetheless, the collection of VAT levies is disproportionately low in the region, compared to the volume of the sales. The surge in online sales of services and digital products through different online platforms, such as streaming music and videos, in-app purchases, gaming, etc., by non-resident suppliers to private consumers in particular (economic activity without physical presence) has caused challenges for tax authorities. Traditional tax rules cannot capture these transactions effectively, leading to extremely low amounts of VAT levied. Consequently, this progressive digital trade growth has led to significant VAT revenue losses while creating unfair business pressures and competition for local firms/companies.

### International Frameworks for Tax Administration and Cooperation

To help tax authorities, particularly in developing countries, to deal with the current challenges and

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**Table 1: Growth of Digital Platform Revenue, 2019 (%)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>World</th>
<th>Asia and the Pacific</th>
<th>Developing Economies in Asia and the Pacific*</th>
<th>People's Republic of China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital media</td>
<td>6.3</td>
<td>7.1</td>
<td>11.0</td>
<td>8.8</td>
</tr>
<tr>
<td>E-commerce</td>
<td>16.4</td>
<td>19.6</td>
<td>28.3</td>
<td>19.7</td>
</tr>
<tr>
<td>E-services</td>
<td>16.0</td>
<td>18.8</td>
<td>22.8</td>
<td>18.7</td>
</tr>
<tr>
<td>Online travel</td>
<td>7.2</td>
<td>9.1</td>
<td>10.2</td>
<td>10.7</td>
</tr>
<tr>
<td>AdTech</td>
<td>14.4</td>
<td>14.3</td>
<td>15.4</td>
<td>16.2</td>
</tr>
<tr>
<td>Transportation</td>
<td>8.0</td>
<td>12.4</td>
<td>12.4</td>
<td>13.6</td>
</tr>
<tr>
<td>Total</td>
<td>12.7</td>
<td>16.1</td>
<td>18.3</td>
<td>17.5</td>
</tr>
</tbody>
</table>

Note: * excluding the People’s Republic of China.

Developing economies in Asia and the Pacific include Armenia; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; Fiji; Georgia; Hong Kong, China; India; Indonesia; Kazakhstan; the Kyrgyz Republic; the Lao People’s Democratic Republic; Malaysia; Mongolia; Myanmar; Nepal; Pakistan; Papua New Guinea; the People’s Republic of China; the Philippines; the Republic of Korea; Singapore; Sri Lanka; Tajikistan; Thailand; Timor-Leste; Turkmenistan; Uzbekistan; and Viet Nam.

Source: OECD, WBG, and ADB (2022).
boost revenue efforts, international organizations like the OECD, World Bank Group, and Asian Development Bank (ADB), and intergovernmental bodies like the Group of Twenty (G20), have developed international frameworks, guidelines, and toolkits for awareness-raising, knowledge-sharing, and tax education purposes. To accommodate the implementation of these frameworks and initiatives, many international tax cooperation frameworks have been developed or are being developed.

Tax Administration 1.0–3.0

The first generation of tax administration—Tax Administration 1.0—started with paper-based operations with an administration-centric concept and limited interaction with taxpayers.

A digital shift was shown in Tax Administration 2.0, when operations became digitalized with the goal of more effective tax administration i.e., increasing tax collection with fewer resources and minimizing compliance burdens. Tax Administration 2.0 was developed based on a taxpayer-centric concept with data availability and tracing systems for tax compliance. These functions allow for two-way interactions with taxpayers and enhance the ability of tax authorities to check compliance.

The more advanced idea of Tax Administration 3.0 has been introduced recently to embed taxation in the systems of everyday life, with the increasing use of digital data and the paradigm shift caused by digitalization. The framework is visualized to provide a common and standard language for simplicity and more interconnected systems as well as frictionless and seamless taxation. Tax Administration 3.0 aims for built-in compliance in various areas that can bring taxation closer to taxable events while reducing compliance burdens and streamlining taxation processes for both tax officers and taxpayers. In other words, tax administration can be conducted within a resilient network of seamlessly interacting trusted actors in order to achieve the quality, robustness, and reliability of tax operations (OECD 2020).

Tax Administration Diagnostic Assessment Tool

For monitoring and evaluating purposes, the OECD has developed the Tax Administration Diagnostic Assessment Tool (TADAT) for the assessment of tax performance, covering tax administration functions, processes, and institutions. The tool is designed for 9 outcome areas with 32 high-level indicators and 55 measurement dimensions (Figure 4). The TADAT assessments can help to identify strengths and weaknesses in tax administration systems and processes against international good practices and benchmarks. A performance assessment report is produced for assessed countries. The results of the assessment can be used to prioritize the areas and sequence of the country’s tax reforms. Moreover, the results can be used to strategize actions for the management and coordination of external support for reforms and more efficient implementation. They are also useful for the design of technical support for development plans, mapping methods for administrative improvements in relation to fiscal outcomes, and providing effective platforms for partner support.

Framework on Base Erosion Profit Shifting

Base Erosion Profit Shifting (BEPS) refers to tax-avoidance tactics, mostly of cross-border multinational enterprises, by exploiting gaps and mismatches in tax rules to artificially shift profits to low-tax or no-tax locations where there is little or no economic activity. It also refers to the intention to erode tax bases through deductible payments, such as interest or royalties. These behaviors undermine the fairness and integrity of tax systems because multinational enterprises can exercise BEPS for business advantages over domestic companies. Moreover, developing countries rely heavily on corporate income tax for their fiscal revenue, which means they experience significantly disproportionate tax losses from BEPS.

In response to this challenge, the OECD/G20 Inclusive Framework on BEPS developed the BEPS package with 15 actions to help equip tax authorities with domestic
and international instruments and collaborate on their implementation. The BEPS package will provide the tools to tackle tax avoidance for governments while offering better transparency and confidence for businesses by reducing disputes over the application of international tax rules and standardizing compliance requirements (OECD, n.d.)

The evolution of BEPS 1.0 to BEPS 2.0 was to address the challenges arising from the taxation of the digital economy. The BEPS 2.0 Package is being reformed on both Pillar 1 and Pillar 2 to create more benefits in low-income jurisdictions while revenue gains are expected to increase. Pillar 1 covers profit allocation and the nexus applying to large multinational enterprises. This will cause a change in the effective tax rate and cash tax obligations. At the same time, evidence shows that low- and middle-income jurisdictions gain more revenue through the new features of the BEPS 2.0 package. In December 2021, the OECD released the GloBE Model Rules under Pillar 2 to launch a common approach for a global minimum tax of 15% for multinational enterprises. Many economies in Asia, such as Indonesia; Japan; the Republic of Korea; Malaysia, Hong Kong, China; and Singapore, have kick-started implementation along with public consultations for the GloBE Model.

**Value-Added Tax Digital Toolkit**

To address the rapid growth of digital transactions and its challenge for VAT collection, the International VAT/GST Guidelines and the VAT Digital Toolkit for Asia-Pacific were developed by the OECD, World Bank Group, and ADB, respectively. The guidelines include the core standards, principles, and policy strategies that lay the foundation for policy design and policy frameworks. These cover crucial areas of detailed

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1 This nexus refers to the connection between a seller and a country/state that requires the seller to register then collect and remit tax in the country/state.
technical guidance on the design and implementation mechanisms for VAT collection from non-resident online suppliers, the role of online marketplaces and other digital platforms in relation to VAT collection, and the VAT treatment of the sharing and gig economy (OECD, WBG, and ADB 2022).

In order to make digital tax work, an effective policy framework must be in place, operational implementation must be ensured, compliance must be simplified while enforcement is warranted, and roadmaps for reforms must be developed. The toolkit provides comprehensive recommendations on these essential elements as follows.

- For the policy framework, the appropriate legal basis for asserting taxing rights to impose VAT on digital products and services provided by non-resident businesses to private customers should be included, consistent with the VAT destination principles and domestic legislation. This will help to implement effective and efficient collection mechanisms.

- For operative implementation, a well-designed, simple, easy-to-use registration and compliance regime for non-resident suppliers and digital platforms is recommended through a series of strategic uses, a compliance management framework, and international administrative cooperation. Regular and extensive consultations with stakeholders are necessary for better reforms in the future.

- For effectiveness, the simplification of registration procedures and collection mechanisms will allow better revenue gains. The adoption of technological and innovative tools and the exemption of unnecessary paperwork will reduce processing times and improve efficiency in tax compliance and administration.

**Carbon Taxation/Carbon Pricing**

Environmental taxes are developed to address climate-change revenue efforts. At the same time, well-designed and implemented carbon taxes can play an important role in establishing fairer and more resilient societies. Many developing countries have included environmental taxes in their agenda to improve fiscal revenues and to achieve the countries’ commitments on climate change and sustainable development goals. Developing countries can take a crucial fundamental role in the green and energy transition. Countries in every region and at all levels of development can take action to reorient their domestic tax policies to raise revenues while fighting climate change. Multilateral solutions and international cooperation can amplify and support these individual endeavors (United Nations 2021).

According to the *UN Handbook on Carbon Taxation* (United Nations 2021), carbon taxes refer to compulsory, unrequited payments to general government levied on carbon emissions or their proxy that can confer a reduction in corresponding carbon-based (equivalent) emissions in the atmosphere. Many countries in Asia have adopted excise taxes on fuels as an implicit form of carbon tax. Following this development, a prospect for transforming such taxes into a more comprehensive and consistent framework of carbon taxation is apparent. The *UN Handbook* offers clearer practical guidance on the policy and administrative aspects of designing and implementing these taxes for developing countries. The key policy considerations when a country introduces a carbon tax into the economy are described as follows.

- Four core principles of environmental policy should be applied: (i) polluter-pays principle, (ii) prevention principle, (iii) precautionary principle, and (iv) principle of common but differentiated levels of responsibilities.

- The pricing (tax rate) must reflect cost certainty. A carbon tax should offer stable and predictable carbon prices and the cost cannot rise above these prices.

- The administration of carbon taxes should be simple and quick to implement. A carbon-pricing mechanism should be designed for the ease of the user i.e., easy for the administrator to operate and collect the taxes at low costs. However, complexity remains with additional features e.g., tax exemptions, subsidies, and refund mechanisms. Thus, it is important to ensure that the existing overall fiscal framework is compatible with a carbon-tax introduction and its administrative interactions.

- Governments should be mindful of distributional effects on low-income households and consumers. Certain policy measures may be adopted to alleviate these effects.

- Generally, local producers or companies have to internalize carbon taxes in their production costs. It is then important to balance the competitive disadvantage between domestic and foreign companies caused by carbon taxes imposed only on local companies.
Enhancing tax revenues in developing Asia is not an easy job—however, it is possible.

Policy Implications

Enhancing tax revenues in developing Asia is not an easy job—however, it is possible. Despite the abovementioned emerging challenges, new possibilities are presented for tax authorities’ consideration for the improvement of their tax administration and tax compliance, thus, enhancing revenue efforts. Conceptually, better and faster taxpayer services, carried out through the optimal use of information and data, will improve tax revenues. This process reduces administrative tasks and provides ease of tax compliance to taxpayers, resulting in increased voluntary compliance. A number of policy implications are drawn for the improvement of tax administration and revenue efforts.

First, the establishment of a comprehensive database is required as a critical foundation for effective tax administration and revenue compliance. Taxpayer registration plays a vital role in building this database. Data integrity is included as one of the nine TADAT outcome areas. To deliver good practices in tax registration, the collected taxpayer information must be accurate and reliable, and maintenance must be carried out to ensure databases remain up-to-date. Another crucial element is knowledge of the potential taxpayer base. Policy actions and initiatives can be developed in a way to capture or detect businesses and individuals who are required to register but fail to do so. Moreover, a data cleansing process for is needed for accurate information.

Second, it is important to modernize tax administration to establish user-friendly tax compliance and effective tax administration and, thus, achieve greater fiscal revenues. The main drivers of tax modernization are technological advances and digital transformation. Digitalization changes the way tax systems are designed and implemented (Chongvilaivan 2023). With digital technology, new opportunities are offered to tax authorities. For example, more effective tax administration can be developed, with fewer required steps and quicker processing time. Instead of the traditional manual paperwork procedures, the digital mechanism covers user-friendly processes, such as e-filing, e-invoicing, and e-registration of taxpayers.

Digital technology also carries out better and more targeted delivery of public services through biometric technology and e-government services. For data analytics, real-time and high-frequency data improve fiscal policy formulation toward inclusive and sustainable approaches. Additionally, to accommodate national efforts in achieving global standards, digitalization can be adopted for the enhancement of transparency of budgets through better public access to informative budget data.

In the context of VAT/GST on digital cross-border transactions, the adoption of digital technology can help to simplify the collection mechanisms, which include the functions of tax return, electronic payment methods, e-recording and e-tracking for requirements, and the elimination of invoice requirements. Together, digital technology helps to promote tax compliance by enlisting marketplaces of cross-border transactions and digital platforms in VAT collection.

Lastly, to achieve the successful development of innovative tax administration, robust tax cooperation is necessary at both the regional and international levels. Strengthening tax cooperation is not an easy job, but it is mandatory. This policy brief has presented some of the major international tax cooperation initiatives by the OECD and G20. However, due to diverse levels of development in Asia and the Pacific, we have witnessed knowledge gaps and a lack of awareness of these international frameworks across the region. ADB, in collaboration with international and local organizations, supports initiatives and programs to strengthen tax cooperation among ADB member countries. These programs are designed to cover a wide range of activities, for example, regional consultations on BEPS 2.0 Pillar 1 and Pillar 2; the joint publication of the VAT Digital Toolkit for Asia-Pacific by the OECD, WBG, and ADB; joint seminars with the Global Forum on Transparency and Exchange of Information for Tax Purposes; and carbon pricing strategies, which include emissions trading systems and carbon taxes. Moreover, ADB has provided tailored assistance, in terms of both financial support and capacity-building programs, to 21 ADB member countries since 2018 (Carrasco 2023).
References


