Chapter 1

Tax revenue trends in Asian and Pacific economies

In light of the United Nations 2030 Agenda for Sustainable Development, awareness of the need to mobilise government revenue in developing countries to fund public goods and services is increasing. Taxation provides a predictable and sustainable source of government revenue, in contrast with official development assistance and the volatility of non-tax revenues with respect to commodity prices.

This report presents detailed and internationally comparable data on tax revenues in 16 Asian and Pacific economies (Australia, the Cook Islands, Fiji, Indonesia, Japan, Kazakhstan, Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, Samoa, Singapore, the Solomon Islands, Thailand and Tokelau) and on non-tax revenues for 4 Pacific economies (the Cook Islands, Papua New Guinea, Samoa and Tokelau). This chapter discusses the key tax indicators for this group of economies: the tax-to-GDP ratio; the tax structure and the share of tax revenue by level of government; and non-tax revenue for selected Pacific economies. The discussion supplements detailed revenue information in Chapters 4 and 5.

1.1. Tax ratios

Tax-to-GDP ratios in 2016

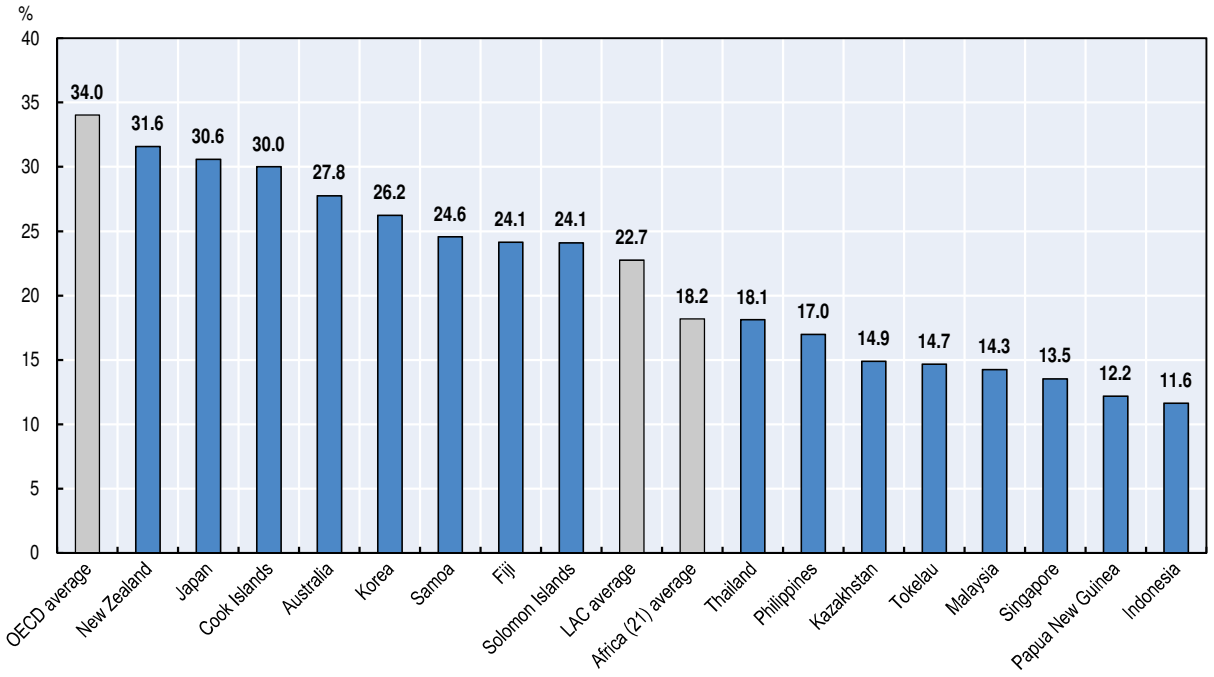
In 2016, tax-to-GDP ratios in the Asia and Pacific region ranged from 11.6% in Indonesia to 31.6% in New Zealand. Eight of the 16 economies covered in this report had tax-to-GDP ratios above the Latin American and the Caribbean (LAC) average of 22.7% in 2016, and all economies in the publication had lower ratios than the OECD average of 34.0%. All of the Asian countries in this publication had a tax-to-GDP ratio below 20% with the exception of Japan and Korea, at 30.6% and 26.2% respectively. Among the Pacific economies, six of the eight economies included in this publication had a tax-to-GDP ratio above 24%. The exceptions in the Pacific are Papua New Guinea and Tokelau, with ratios of 12.2% and 14.7% respectively.

Indonesia had the lowest tax-to-GDP ratio among the Asian and Pacific economies included in this publication in 2016, at 11.6%. A relatively high share of agriculture in the economy (above 10% of GDP) compared to the other Asian countries in this publication as well as a low openness to trade contribute to this low tax-to-GDP ratio, together with high levels of informality (estimated to amount to 70% of employment), tax evasion and narrow tax bases (OECD, 2012[2]). Indonesia has undertaken reforms since 2002 to address these issues and increase tax revenues. These have focused on strengthening its tax administration through modernising processes and systems, building human capacity and enhancing the tax administration's integrity (OECD, 2018[3]). The Economic Survey for Indonesia (OECD, 2018[3]) explains that Indonesia aims to reach tax revenues amounting to 17% of GDP by 2019. The extra revenues will contribute to increasing financial capacity to fund government priorities and will reduce dependence on oil revenues (OECD, 2018[3]).

Structural economic factors are a key determinant of tax-to-GDP ratios across economies. These include the importance of agriculture in the economy, openness to trade and the size of the informal economy, as seen in Indonesia. Agriculture, for example is a challenging sector

to tax: most people in the agriculture sector in developing economies are on low incomes and many are not registered for tax purposes (PEAKS, 2013[4]). In addition, agriculture benefits from numerous tax exemptions. For example, Malaysia allows an agriculture allowance to be deducted from profits of eligible businesses (Inland Revenue Board of Malaysia, 2016[5]) and goods and services related to the agriculture sector are exempt from import duty and excise duty (Ministry of International Trade and Industry, 2016[6]).

Figure 1.1. **Tax-to-GDP ratios (total tax revenue as % of GDP), 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
Source: Table 3.1.

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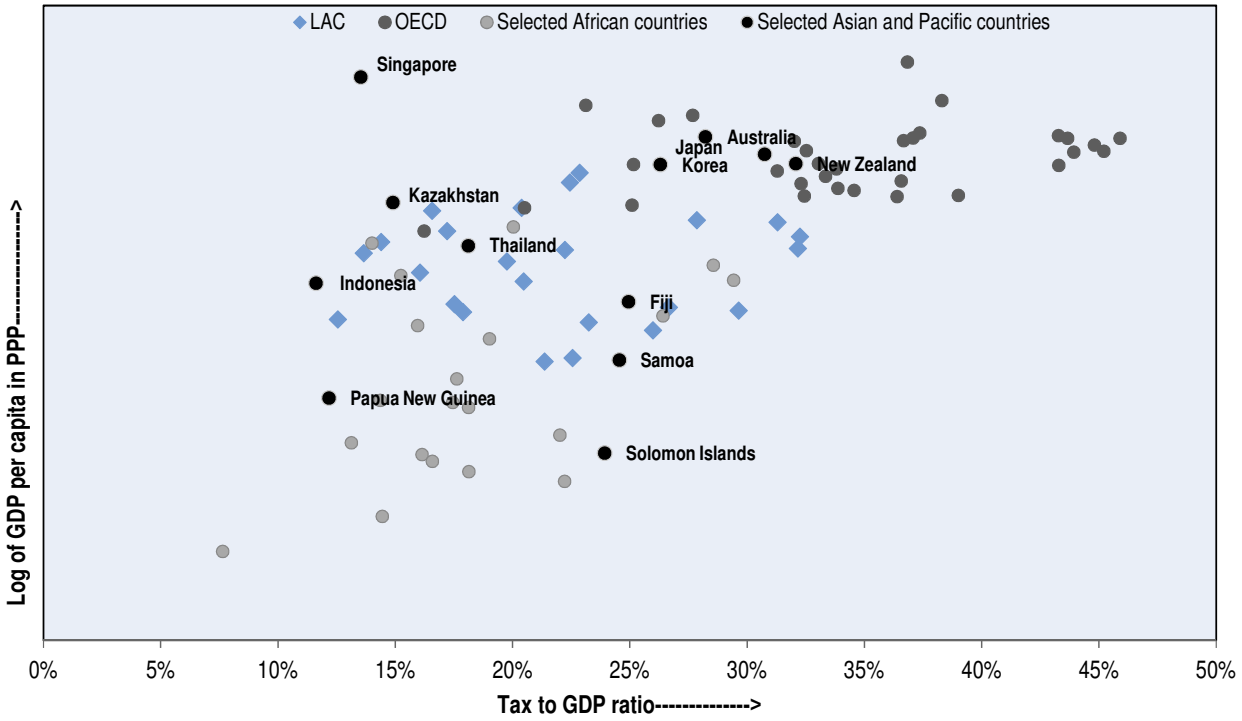
In addition to structural economic factors, tax policy and tax administration settings also strongly influence the level of tax revenues. These include the power of tax administrations, the levels of corruption within these administrations and tax morale (i.e. willingness of people to pay taxes) (OECD, 2014[7]). For example, Aizenman (2015[8]) found that in Asia, government effectiveness and institution quality are positively correlated with the level of tax-to-GDP ratio. Finally, in general, GDP per capita is also related to tax-to-GDP ratios. Tax-to-GDP ratios tend to be higher in high-income economies, although the relationship is not direct and is less pronounced at lower levels of income due to the influence of other factors.

The relationship between GDP-per-capita and tax levels across the Asian and Pacific economies in this publication is more varied and less direct than seen across the groups of LAC or OECD countries. Five Asian and Pacific economies have broadly similar GDP per capita and tax-to-GDP ratios as the majority of LAC countries. Papua New Guinea and the Solomon Islands have lower, and similar, per capita levels of income, but their tax-to-GDP ratios differ markedly. In contrast, Australia, Japan, Korea and New Zealand have higher

per capita income and tax-to-GDP ratios. Finally, Singapore has the highest GDP per-capita of the 16 economies and one of the lowest tax-to-GDP ratios. The high GDP per capita in Singapore results from significant inward flows of foreign direct investment (FDI) due to its attractive business climate and stable political environment (UNCTAD, 2012[15]); whereas the tax-to-GDP ratio is explained by lower income tax rates (particularly on corporate income) and VAT rates, compared to other Asian and Pacific economies (UNESCAP, 2014[16]).

Figure 1.2. **Tax-to-GDP ratios and GDP per capita (in PPP) in Asian and Pacific economies, Latin America and the Caribbean, OECD and African countries, 2016**



Note: The y-axis is on a logarithmic scale. The Cook Islands and Tokelau are excluded as GDP per capita data were unavailable for these countries. The purchasing-power-parity (PPP) between two countries is the rate at which the currency of one country needs to be converted into that of a second country to ensure that a given amount of the first country's currency will purchase the same volume of goods and services in the second country as it does in the first. The implied PPP conversion rate is expressed as national currency per current international dollar. An international dollar has the same purchasing power as the US dollar has in the United States. An international dollar is a hypothetical currency that is used as a means of translating and comparing costs from one country to the other using a common reference point, the US dollar [definitions derived from IMF (2016[9]) and WHO (2015[10])].

Source: IMF (2018[11]) *World Economic Outlook*, April 2018, International Monetary Fund for figures of GDP per capita. Tax-to-GDP ratios are sourced from the OECD (2018[1]) database (*www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm*).

Box 1.1. **Enhancing domestic resource mobilisation in small island developing states through revenue statistics**

Small island developing states (SIDS) comprise a diverse group of the smallest and most remote economies in the world. They are located across the African, Asian, Latin American and the Caribbean, and Pacific regions. They share a common and unique set of development challenges, owing to their small populations and landmasses, spatial dispersion and remoteness from major markets, and exposure to severe climate-related events and natural disasters. With small and undiversified economies, SIDS are highly vulnerable to external shocks, as they rely strongly on the global economy for financial services, tourism, remittances and concessional finance.

Box 1.1. **Enhancing domestic resource mobilisation in small island developing states through revenue statistics** *(cont.)*

Common challenges faced by SIDS are the achievement of adequate domestic resource mobilisation and debt sustainability. Domestic revenues are often erratic due to narrow economic productive bases, often concentrated in sectors that are exposed to external fluctuations, such as natural resources or tourism. At the same time, SIDS typically have large current expenditures, as the high unit costs of providing services to small and scattered populations increase public sector spending above the average levels of other developing countries [29% of GDP in SIDS, compared to 22% in other developing countries in 2014 (Horscroft, 2014[12])]. Severe climate events and natural disasters also tend to have heavy fiscal and economic impacts. These combined factors lead to high levels of public debt for many SIDS (57% of GDP compared to 47% for all developing countries in 2015) and reduce the fiscal space to invest in development.

Taxes are an important and stable source of revenues in many SIDS economies, although their ability to raise domestic revenues varies significantly. The *Global Revenue Statistics* publications and database (OECD, 2018[13]) shows that among the Pacific SIDS, tax-to-GDP ratios ranged from 12.2% in Papua New Guinea to 30% in the Cook Islands in 2016. Among African SIDS, Cabo Verde had a tax-to-GDP ratio of 19% and Mauritius of 20% in 2016. Finally, SIDS in Latin America and the Caribbean displayed the biggest variation, from Dominican Republic's tax-to-GDP ratio of 13.7% to Cuba's ratio of 41.7%.

Tangible opportunities exist in many SIDS to expand domestic resource mobilisation and improve the stability of domestic revenues through enhanced management of key sectors, including fisheries, tourism and natural resource extraction. Policies to reduce "leakages" from these sectors – especially tourism – and to support backward and forward linkages with other domestic sectors (e.g. food and agriculture, consumer goods and construction) could expand the taxable production base.

Improving the efficiency of revenue collection, enlarging the tax base and employing efficient tax policies are also essential to increase the resources required to sustain development. The *Global Revenue Statistics* project supports 16 SIDS[1] in these efforts by providing accurate, comparable and detailed data on their tax revenues. This information is essential for tax policy making and administrative reforms, and forms a common evidence base for mutual learning across SIDS on how to scale up domestic resource mobilisation. This will be an important area for dialogue and collaboration across SIDS going forward.

1. SIDS in *Global Revenue Statistics* in 2018 are: Bahamas, Barbados, Belize, Cabo Verde, the Cook Islands, Cuba, the Dominican Republic, Fiji, Guyana, Jamaica, Mauritius, Papua New Guinea, Samoa, Singapore, the Solomon Islands, and Trinidad and Tobago.

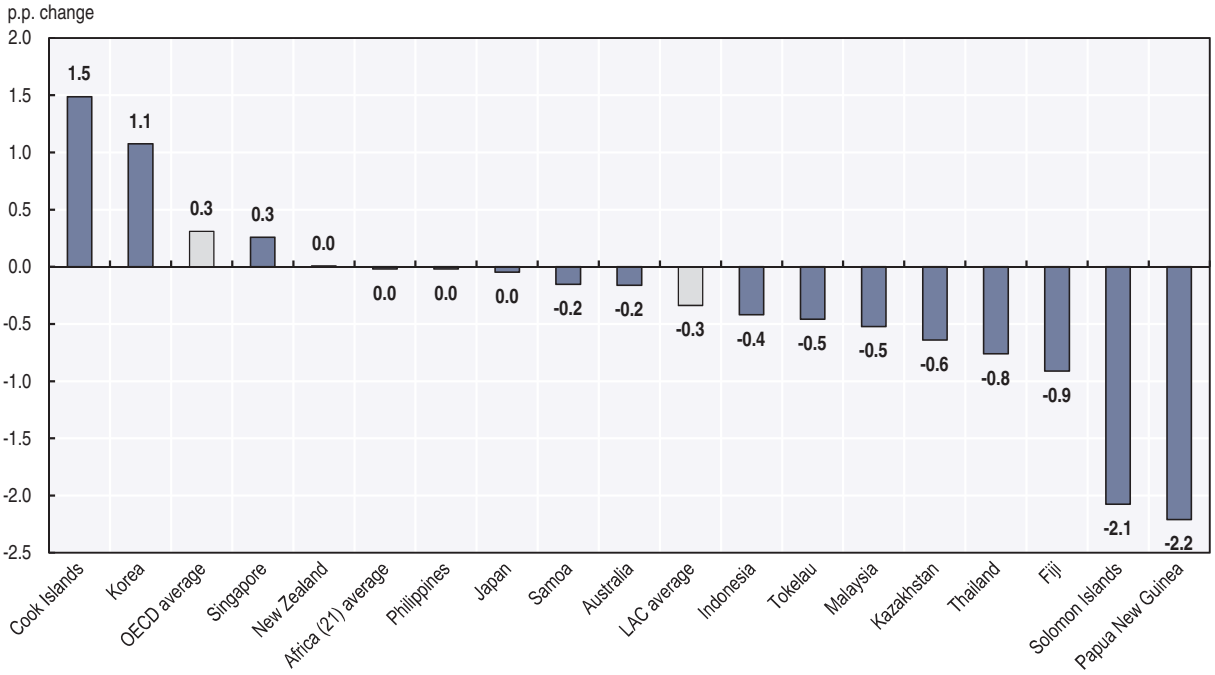
Source: By Piera Tortora and Talita Yamashiro Fordelone, based on Making Development Cooperation Work for Small Island Developing States (OECD, 2018[14])

Changes in tax-to-GDP ratios in 2016

Since 2015, nearly two-thirds of the economies in this publication have experienced decreases in their tax-to-GDP ratios (Figure 1.3). Ten economies had lower tax-to-GDP ratios in 2016, relative to 2015, whereas only three economies (the Cook Islands, Korea and Singapore) had higher ratios in 2016. The ratios in the three remaining countries (Japan, New Zealand and the Philippines) remained stable. The scale of the changes in tax-to-GDP ratios, and in particular of the decreases in these ratios, was more pronounced in the Pacific economies covered in this publication; the three economies that experienced the largest decreases were all Pacific economies.

Although most economies saw decreases in their tax-to-GDP ratios between 2015 and 2016, all but four economies experienced changes that were comparatively small, at less than one percentage point of GDP. Changes larger than one percentage point were observed in the Cook Islands and Korea (both of which increased their tax-to-GDP ratios) and Papua New Guinea and the Solomon Islands (both of which decreased tax-to-GDP ratios).

Figure 1.3. **Annual changes in tax-to-GDP ratios (p.p.), 2016**



Note: The figures do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted.
Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
Source: Authors' calculations based on Table 3.1.

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The Cook Islands and Korea had the highest increases of tax-to-GDP ratios between 2015 and 2016, at 1.5 percentage points (p.p.) and 1.1 p.p., respectively. The increase of the tax-to-GDP ratio in Korea was primarily the result of higher revenues from corporate income taxes (CIT) due to higher business activity, and of an increase in revenues from value-added tax (VAT) due to higher consumption (Reuters, 2017[17]). The increase of the tax-to-GDP ratio of the Cook Islands was the result of greater revenues from custom and import duties and from the departure tax, the latter reflecting increased activity in the tourism sector (ADB, 2017[18]).

The Solomon Islands and Papua New Guinea recorded the largest decreases among Asian and Pacific economies, at 2.1 p.p. and 2.2 p.p. between 2015 and 2016. These are also the only two economies that recorded a decrease in nominal tax revenues (1.3% and 7.9% respectively) between 2015 and 2016, in contrast to their GDP, which increased.

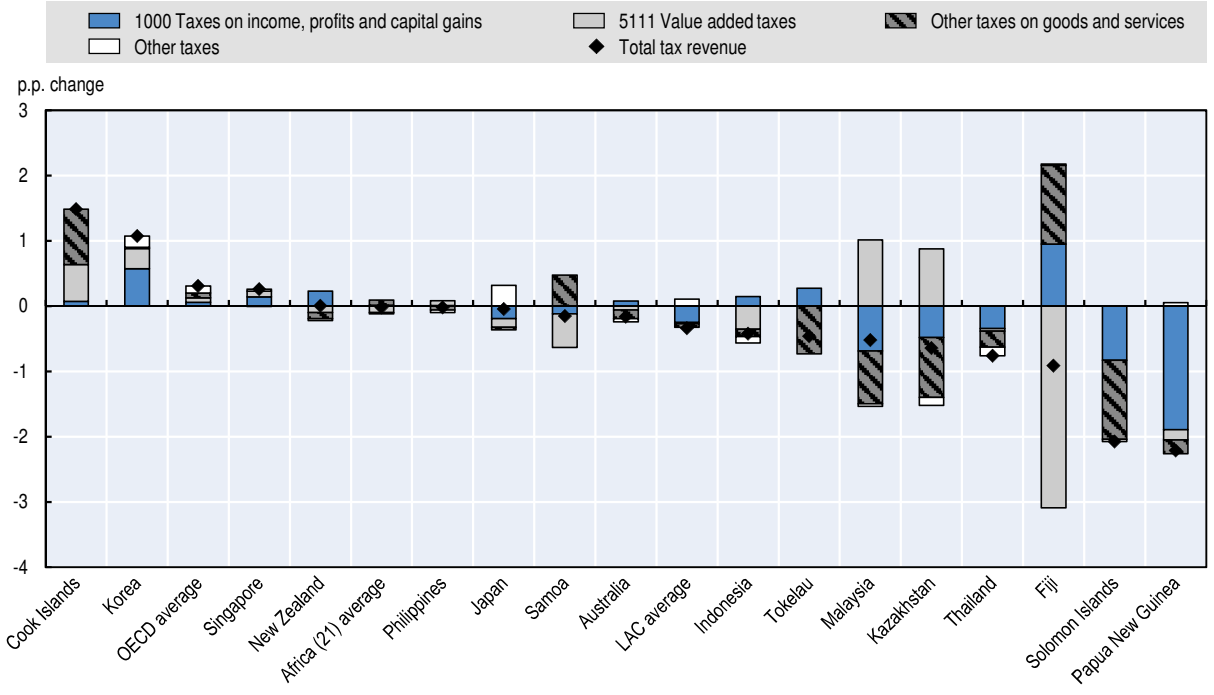
The decrease of the tax-to-GDP ratio in Papua New Guinea was the result of lower revenue from income taxes. Between 2015 and 2016, personal income taxes (PIT) decreased by 0.8 p.p. and CIT by 1.1 p.p., in both cases due to a general decline in business activity. As the economy of Papua New Guinea depends highly on natural resources, such as gold, liquefied natural gas (LNG), copper and oil, the global decline of prices for natural resources affected the business activity in the country in 2016 (ADB, 2017[18]). As a result, low business profitability contributed to the decline in CIT revenue while an unforeseen reduction in employment led to the decline in PIT revenues (Deloitte, 2018[19]; ADB, 2017[18]).

By contrast, the decline in the tax-to-GDP ratio in the Solomon Islands resulted from a decrease in revenues from non-VAT taxes on goods and services of 1.2 p.p. In addition, revenues from PIT decreased by 0.6 p.p. and from CIT by 0.3 p.p. between 2015 and 2016.

In addition to the decreases observed in the Solomon Islands and Papua New Guinea, Fiji also experienced a smaller decrease in its tax-to-GDP ratio, of 0.9 p.p., between 2015 and 2016. This was accompanied by a change in tax structure, as Fiji shifted away from revenues from VAT towards revenues from direct taxes and from other goods and services taxes. The large decrease in VAT revenues (3.1 p.p. of GDP) resulted from a decrease in the VAT rate from 16% in 2015 to 9% in 2016 (VAT Life, 2015[20]). This fall in revenues was partially offset by higher revenue from income taxes (0.9 p.p.) and other taxes on goods and services (1.2 p.p.). The latter can be partially explained by an increase of the service turnover tax rate from 5% to 10% in 2016, increasing total tax revenue by 0.5% of GDP, and by the introduction of a new environmental levy for service providers, which generated revenues equivalent to 0.7% of GDP (FRCS, 2018[21]).

Across all the Asian and Pacific economies in this publication, one of the main drivers of change in the tax-to-GDP ratio between 2015 and 2016 was revenue from taxes on goods and services, including both VAT (which mostly recorded increases) and other taxes on goods and services (mostly decreases). Income taxes were also an important cause of decreases observed between 2015 and 2016 (Figure 1.4). Taken together, the Asian and Pacific economies have, as a group, tended to shift toward revenues from value-added taxes and away from revenues from other goods and services taxes, as well as away from income taxes.

Figure 1.4. **Net changes in tax-to-GDP ratios between 2015 and 2016 by main type of taxes (p.p.)**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted.
Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
Source: Authors' calculations based on OECD (2018[22]) "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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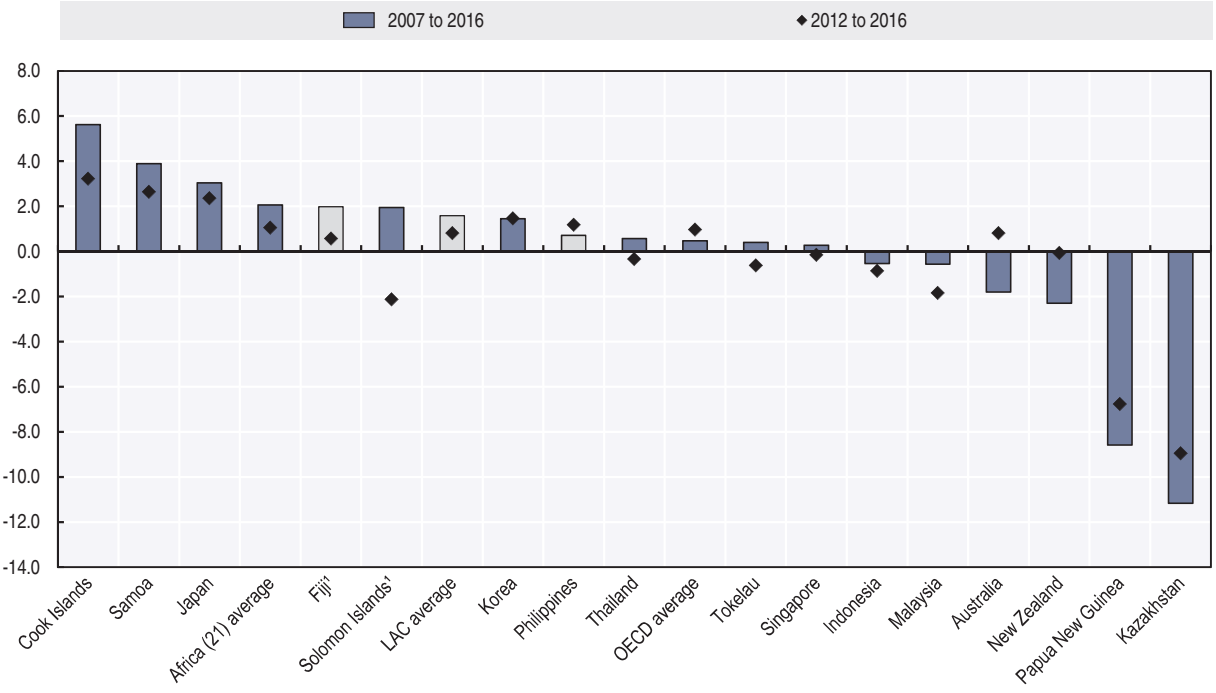
Evolution of tax-to-GDP ratios since 2007

Across a longer time horizon, most economies in the publication have increased their tax-to-GDP ratios since 2007, with six exceptions (Australia, Indonesia, Kazakhstan, Malaysia, New Zealand and Papua New Guinea).

Figure 1.5. **Changes in tax-to-GDP ratios (p.p.), 2007-16 and 2012-16**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
Data for Fiji and the Solomon Islands start in 2008.

Source: Authors' calculations based on Table 3.1

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Kazakhstan and Papua New Guinea, which were both affected by the recent fall in mineral resource prices, experienced the largest decreases in their tax-to-GDP ratio (respectively by 11.2 p.p. and 8.6 p.p.) between 2007 and 2016. The tax-to-GDP ratio of Samoa and the Cook Islands grew by 3.9 and 5.6 p.p. over the same period. The change in the tax-to-GDP ratio for the remaining economies ranged from a decrease of 1.8 p.p. in New Zealand to an increase of 3.0 p.p. in Japan.

Across the Asian countries included in the publication, the change in tax-to-GDP ratios ranged from -11.2 p.p. in Kazakhstan to 3.0 p.p. in Japan, with half of the Asian countries covered in this publication decreasing and the other half increasing. Across the Pacific economies in this publication, tax-to-GDP ratio changes ranged from -8.6 p.p. in Papua New Guinea and 5.6 p.p. in the Cook Islands.

Most economies maintained a consistent trajectory of change throughout the decade from 2007-2016, although in four economies trends differed in the first and second five-year periods. In the Solomon Islands, Tokelau and Singapore, tax-to-GDP ratios increased

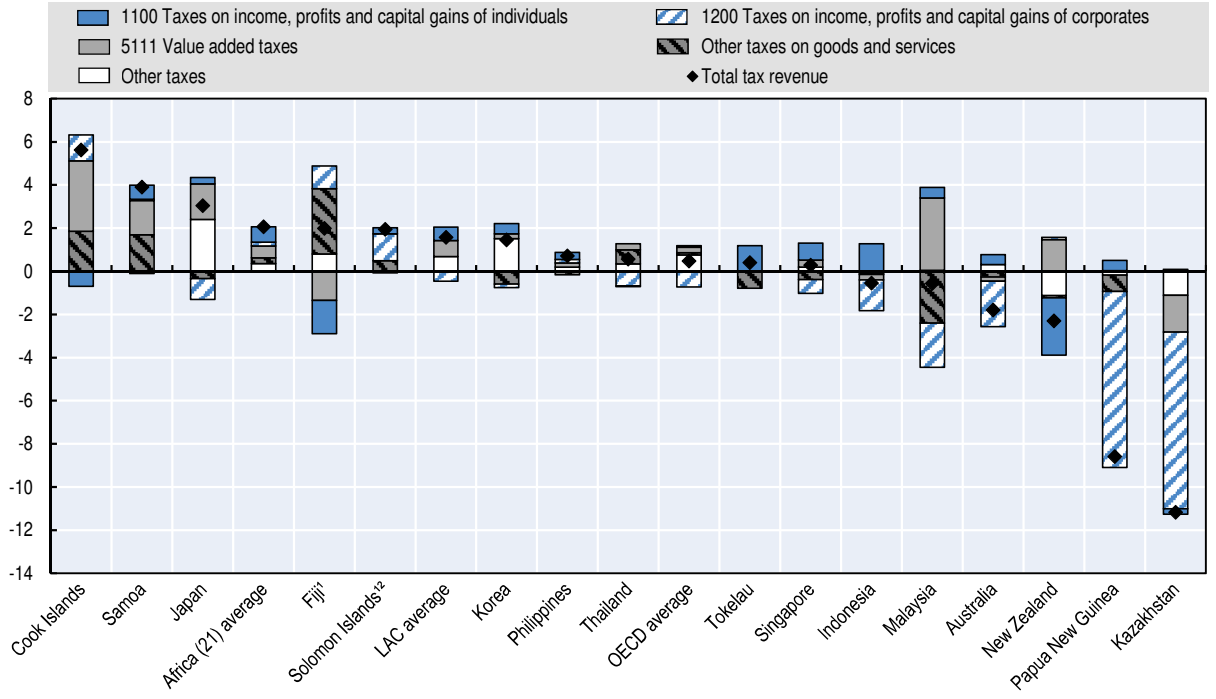
between 2007 and 2012 but declined (by 2.1, 0.6 and 0.1 p.p., respectively) between 2012 and 2016. In Australia, the tax-to-GDP ratio decreased between 2007 and 2012 but increased by 1.3 p.p. in the period up to 2016.

Changes in tax-to-GDP ratios from 2007 to 2016 by tax category

Between 2007 and 2016, CIT revenues were the driver for the major decreases observed in tax-to-GDP ratios experienced in many economies, whereas VAT contributed to several of the increases, although to a lesser extent. These changes reflect a diverse range of policy measures and economic developments in Asian and Pacific economies.

Of the six economies where tax-to-GDP ratios declined between 2007 and 2016, decreasing CIT revenues contributed to the decline in five of them (the exception being New Zealand). The declines in the tax-to-GDP ratio in Papua New Guinea (8.6 p.p.) and Kazakhstan (11.2 p.p.) both resulted from lower CIT revenues, which declined by around 8 p.p. in both. As noted, both economies were strongly affected by declines in natural resource prices. Kazakhstan also reduced its corporate tax rate from 30% in 2008 to 20% in 2009.

Figure 1.6. **Net changes in tax-to-GDP ratios between 2007 and 2016 by main type of taxes (p.p.)**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
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1. Data for Fiji and the Solomon Islands start in 2008.
2. Data on import duties for the Solomon Islands are estimated for 2008.

Source: Authors' calculations based on OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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Malaysia's overall tax-to-GDP ratio declined by 0.6 p.p. between 2007 and 2016 due to a decrease in income tax revenues over that period caused by a fall in petroleum prices and the sustained decrease of the CIT rate over several years, which has come down from 27% in 2007 to 24% in 2016 (World Bank, 2016[23]). Between 2015 and 2016, the structure of Malaysia's revenues from goods and services taxes changed due to the introduction of the VAT system; however, this has subsequently been reversed by the new government.[1]

Ten economies recorded increases in their tax-to-GDP ratios between 2007 and 2016. The highest increases were seen in the Cook Islands and Samoa, where VAT and other taxes on goods and services were the main contributor. Higher VAT revenues in the Cook Islands (by 3.2 p.p.) are partially explained by an increase of the VAT rate from 12.5% to 15% in April 2014 (Cook Islands News, 2013[24]) and were supplemented with higher revenues from the departure tax (1.5 p.p.) following an increase in tourism (Ministry of Finance of the Cook Islands, 2017[25]).

The increase of 3.9 p.p. in the tax-to-GDP ratio for Samoa was mainly driven by increases in VAT (1.6 p.p.) and other taxes from goods and services (1.7 p.p.). These increases followed major tax policy and administrative reforms, including: a review of the principal taxation acts; the creation of new units for effective administration and improved services for responding to taxpayers in a timely manner; an increase of excise tax rates; an increase in the threshold of VAT; an upgrade of taxation systems; and the implementation of an online system for registration, filing and payment.

Japan recorded an increase between 2007 and 2016 of 3.0 p.p. This was largely caused by higher revenues from social security contributions (Figure 1.6 under "Other taxes") and VAT (1.8 p.p.). The increase in VAT revenues was due to an increase of the VAT rate from 5% to 8% in 2014 (OECD, 2016[26]) and changes in social security contributions resulting from reforms to secure the sustainability of the social security system in light of an ageing population. These reforms included increases to premiums and the pensionable age (IPSS, 2014[27]).

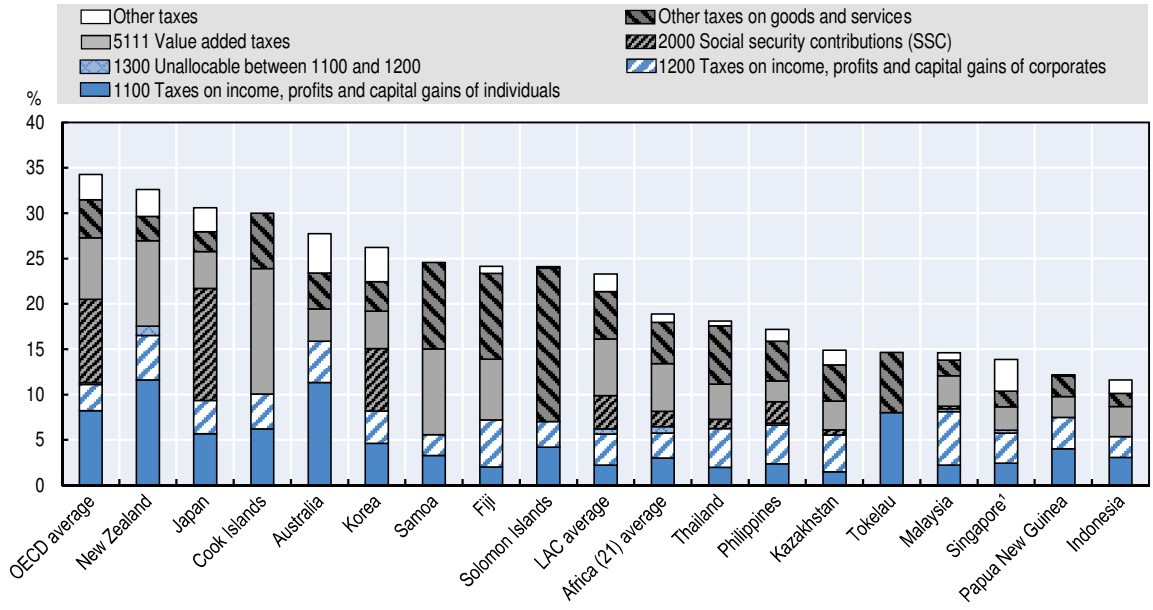
Levels of revenues from tax categories in 2016 (percentage of GDP)

Among the Asian and Pacific economies in the publication, Australia, New Zealand and Tokelau had the highest levels of PIT revenues as a percentage of GDP in 2016. Revenue from PIT equated to 11.6% of GDP in New Zealand and 11.3% of GDP in Australia. Tokelau, with a ratio of 8.0% of GDP, had a similar level of PIT revenues as the OECD average in 2016 (8.2%). In all other Pacific economies covered in this publication, revenue from PIT was 2.0% of GDP or higher in 2016, with all but Fiji above 3.0% of GDP. In the Asian countries included in this publication, with the exception of Japan and Korea, revenue from PIT ranged between 1.5% of GDP in Kazakhstan and 3.1% of GDP in Indonesia in 2016.

Revenues from CIT were lower than revenues from PIT in almost all economies included in this publication. In 2016, CIT revenues ranged from 2.3% of GDP in Indonesia to 5.9% of GDP in Malaysia (excluding Tokelau, which does not have a corporate tax). Only Fiji and Malaysia had corporate tax revenues that amounted to more than 5% of GDP.

Social security contributions play a small role in the tax revenues of Asian and Pacific economies. Ten of the economies in this publication, and all of the Pacific economies, do not levy social security contributions. In the remaining economies, revenue from social security contributions are relatively low in Malaysia (0.3% of GDP), Kazakhstan (0.5% of GDP) and Thailand (1.0% of GDP), the Philippines (2.4% of GDP), significantly below the LAC and OECD averages (3.7% and 9.2% of GDP, respectively). Among of the Asian and Pacific economies in this publication, only Korea and Japan have high shares of revenue from social security contributions (6.9% and 12.4% of GDP, respectively).

Figure 1.7. **Tax structures as percentage of GDP, 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
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1. Social security contributions in Singapore are estimated for 2016.

Source: OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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Revenue from taxes on goods and services is below 8.0% of GDP in most Asian countries in the publication, ranging from 4.3% of GDP in Singapore to 7.4% in Korea. The exception is Thailand, which raises revenues equivalent to 10.3% of GDP. Revenues from taxes on goods and services are therefore lower than in other regions, as represented by the Africa, LAC and OECD averages. By contrast, taxes on goods and services raise higher levels of revenues in most Pacific economies, ranging from 12.1% of GDP (New Zealand) and 20.0% of GDP (the Cook Islands). Among Pacific economies, only Australia (7.5% of GDP) and Tokelau (6.7% of GDP) have revenues from goods and services taxes below 10% of GDP.

1.2. Tax structures

The tax structure, measured as the composition of tax revenues of different types, is the second key indicator in *Revenue Statistics*, since different taxes have different economic and social effects. Across the 16 economies in this publication, the composition of taxes varies widely, reflecting their different policy choices, economic structures and conditions, tax administration capabilities and historical factors.

Tax structures in 2016 and evolution since 2007

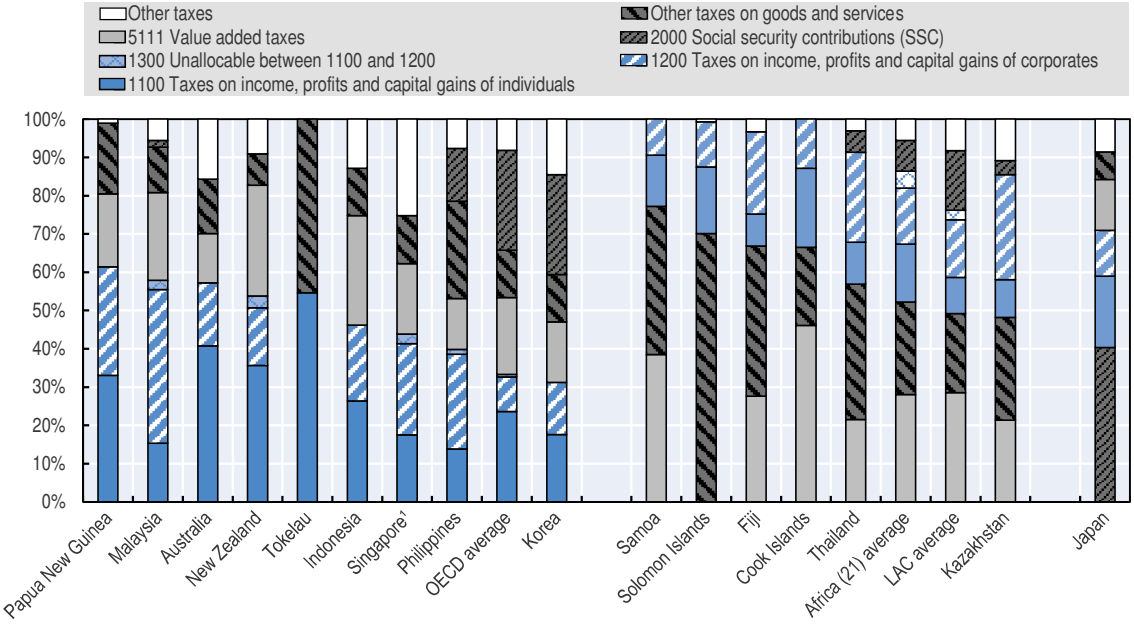
The tax structure of the economies covered in this publication varied greatly in 2016: in nine economies, the main source of tax revenue was income taxes, while six economies mainly obtained tax revenues from taxes on goods and services. Japan is the only country in this group in which the greatest share of revenues was derived from social security contributions.

In 2016, income taxes were the predominant source of revenue for Australia, Indonesia. Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, Singapore and Tokelau. Among these economies, the share of income tax revenues varied from 31.2% in Korea to 61.5% in Papua New Guinea. CIT revenues were higher than PIT revenues in several Asian countries (Malaysia, the Philippines and Singapore), while the Pacific economies in this group (Australia, New Zealand and Tokelau) and some Asian countries (Korea and Indonesia) raised higher shares of revenue from PIT.

Taxes on goods and services were the main source of tax revenue in Kazakhstan, Thailand, Fiji, the Cook Islands, the Solomon Islands and Samoa in 2016, contributing between 48.2% (Kazakhstan) and 77.2% (Samoa) of total tax revenue. Taxes on goods and services also contributed the largest share for the LAC and the Africa average, amounting to just over 50% of total tax revenue. Within this group, taxes from goods and services other than VAT, such as excises and import duties, were typically higher than VAT, ranging from 20.4% of total tax revenues in the Cook Islands to 70.1% in the Solomon Islands. Among these economies, only the Cook Islands received a larger share of revenue from VAT (46.1% of total tax), while VAT's contribution to total tax revenue (38.5%) was similar to that of other taxes on goods and services (38.7%) in Samoa.

As discussed earlier, social security contributions play a small role in revenues for most Asian and Pacific economies, with a few exceptions. In 2016, Japan derived the largest share of revenues from social security contributions, at 40.4% of total tax revenues. Social security contributions also play a significant role in revenues in Korea (26.2%) and the OECD average (26.2%).

Figure 1.8. **Tax structures as a percentage of total tax revenue, 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands as well as social security contributions for Indonesia.
The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
Social security contributions in Singapore are estimated for 2016.

Source: OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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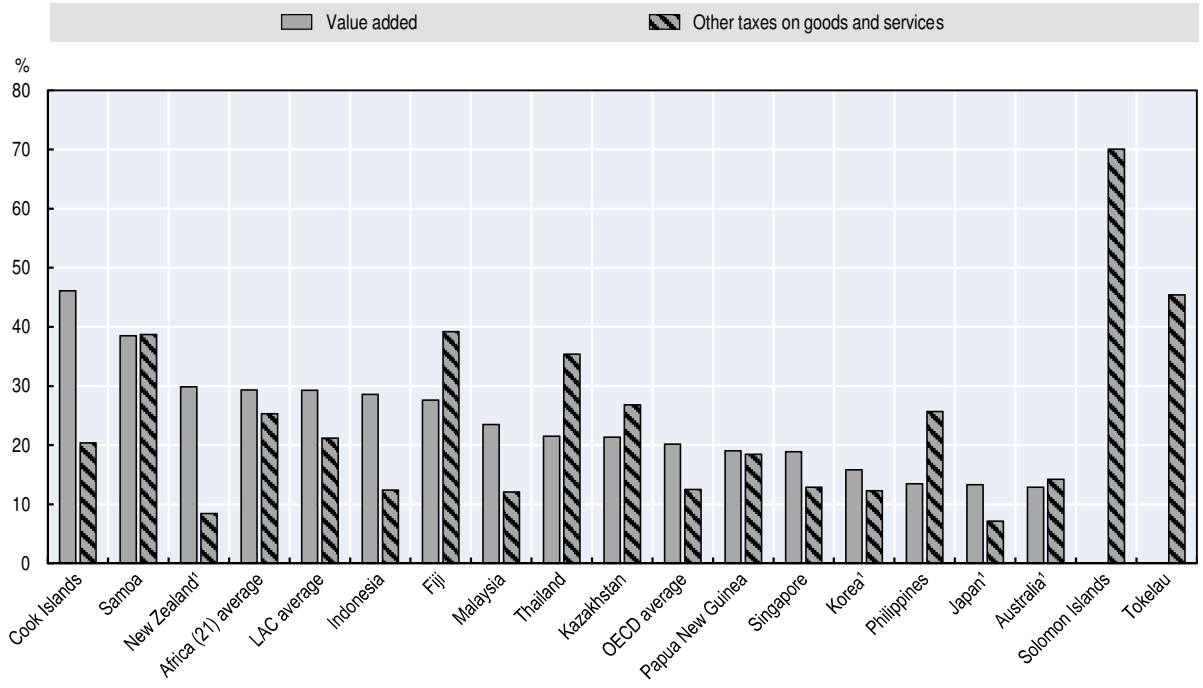
Across the full group of economies in this publication, VAT is an important and increasing source of revenues in most. In 2016, VAT revenue ranged from 12.9% of total tax revenue in Australia to 46.1% of total tax revenue in the Cook Islands. Tokelau and the Solomon Islands do not have value added taxes. Levels of VAT as a share of total taxes are higher in Pacific than in Asian economies. In the Asian countries, VAT revenue was less than 25% of total tax revenue in 2016 in all countries except Indonesia, ranging from 13.5% in the Philippines to 23.5% in Malaysia. In the Pacific economies that apply a VAT system, only Australia and Papua New Guinea had shares of VAT of less than 25% in 2016 (12.9% and 19.0%, respectively); Samoa and the Cook Islands had the largest shares (38.5% and 46.1% of total tax revenues, respectively).

Figure 1.9. **Revenue from value added tax and other taxes on goods and services as a percentage of total tax revenue, 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands.

The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.

Source: OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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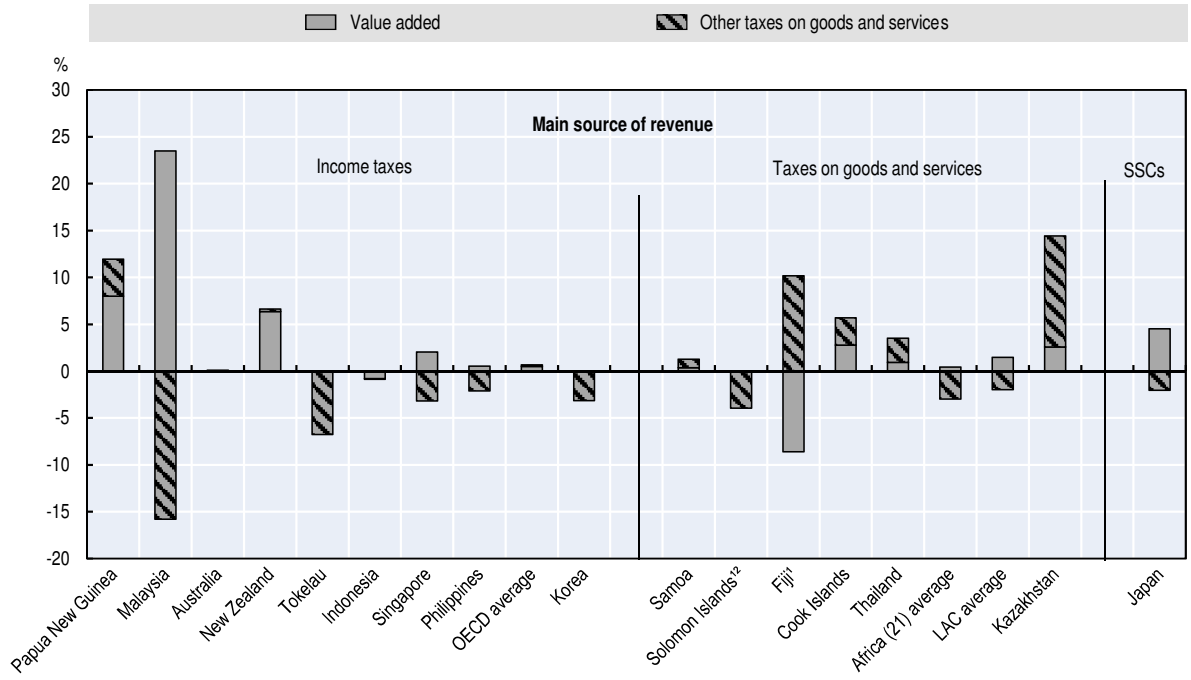
Revenues from other taxes on goods and services contributed between 7.1% of total tax revenue in Japan and 70.0% in the Solomon Islands in 2016. The high share in the Solomon Islands is derived from general taxes on goods and services, such as the goods tax and the sales tax, as the Solomon Islands does not apply a VAT. Shares of non-VAT taxes in total revenue are also comparatively high in Thailand, Fiji, Samoa and Tokelau, where they are larger than 35.0%.

In 2016, revenue from other taxes on goods and services played a more prominent role in the Pacific economies than in Asian countries covered in this publication. Five of the eight Pacific economies generated more revenue from other taxes on goods and services than from VAT, whereas five of the eight Asian countries received more revenue from VAT. For the Africa, LAC and the OECD averages, revenue from VAT contributed a larger share to total tax revenue than other taxes on goods and services.

Figure 1.10. **Changes in revenue from value added tax and other taxes on goods and services as a percentage of total tax revenue between 2007 and 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands.

The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.

1. Data for Fiji and the Solomon Islands start in 2008.

2. Data of import duties for the Solomon Islands are estimated for 2008.

Source: Authors' calculations based on OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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In the period between 2007 and 2016, revenue from other taxes on goods and services was more variable than revenue from VAT in all economies covered in this publication. The change between 2016 and 2007 varied from a decrease of 6.7 p.p. in Tokelau to an increase of 11.8 p.p. in Kazakhstan.

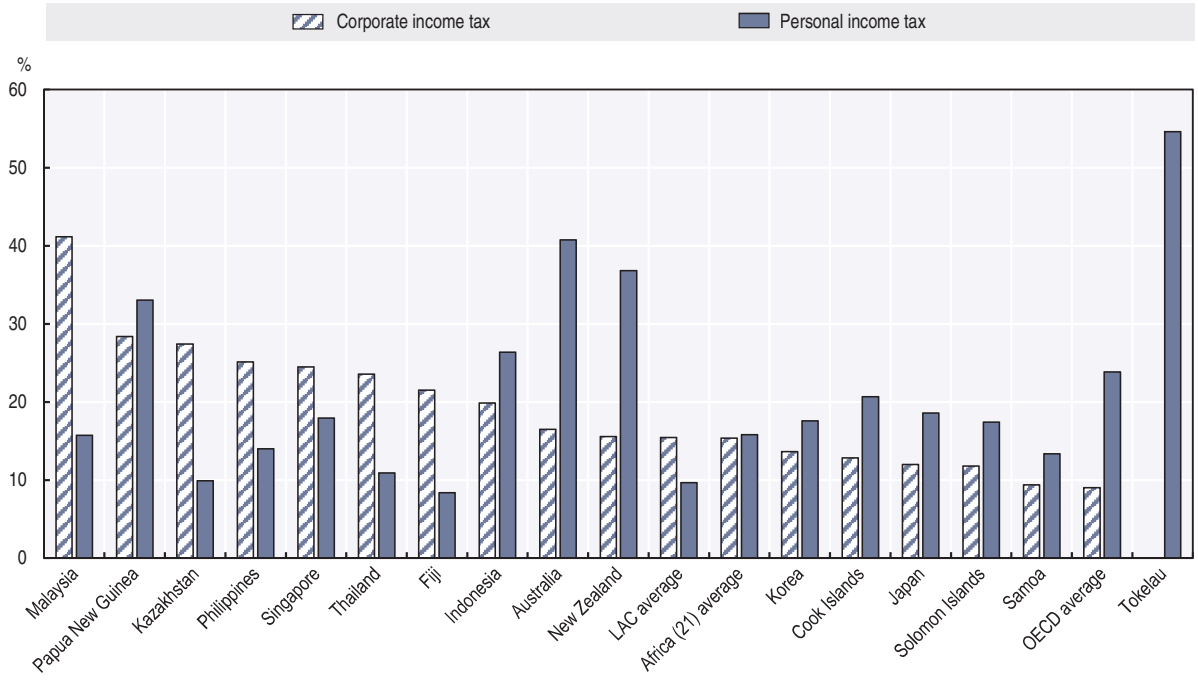
Figure 1.10 shows the change in revenue from value added taxes and other taxes on goods and services between 2007 and 2016. In this figure, countries are ordered by their main source of revenue (i.e. taxes on goods and services, income taxes, social security contributions, as shown in Figure 1.8).

- Out of the six Asian and Pacific economies that obtain the majority of their tax revenues from taxes on goods and services, five experienced an increase in revenue from non-VAT taxes on goods and services over the period 2007 to 2016. This contrasts with the changes between 2007 and 2016 observed for the Africa average and the LAC average, whose revenue from non-VAT taxes on goods and services declined over the same period. It also contrasts with trends observed in the economies whose main share of revenue is derived from income taxes or social security contributions, where revenue from non-VAT taxes also declined in most cases.
- Among the nine economies that received the majority of their tax revenue from taxes on income, changes in the share of VAT revenue were more pronounced than changes in non-VAT goods and services taxes, which can largely be attributed to policy changes.

Four economies introduced VAT or increased their VAT rate between 2007 and 2016: New Zealand, from 12.5% to 15% in 2011 (OECD, 2012[28]); Japan, from 5% to 8% in 2014 (OECD, 2016[26]); the Cook Islands, from 12.5% in to 15% in 2014 (Cook Islands News, 2013[24]); and Malaysia, which replaced its sales tax with a VAT at 10% in 2015 (Bloomberg, 2015[29]). Since the introduction of VAT in 2015, VAT revenues in Malaysia have strongly increased from 15.8% of total taxation to 23.5% in 2016.

The only economies in this publication that experienced a decline in VAT revenues over this period were Fiji and Indonesia. Fiji's VAT revenue declined by 8.6 p.p. in 2016 to 27.6% of total tax revenue, following a decrease of the VAT rate from 15% to 9%. VAT revenues in Indonesia declined more slightly, by 0.8 p.p., between 2007 and 2016.

Figure 1.11. **Revenue from corporate income tax and personal income tax as a percentage of total tax revenue, 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands.

The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.

A small amount of income tax revenue (less than 5%) cannot be allocated to either personal or corporate tax in Malaysia, New Zealand, the Philippines and Singapore as well as the three regional averages [Africa (21) average, LAC average, OECD average].

Source: Authors' calculations based on OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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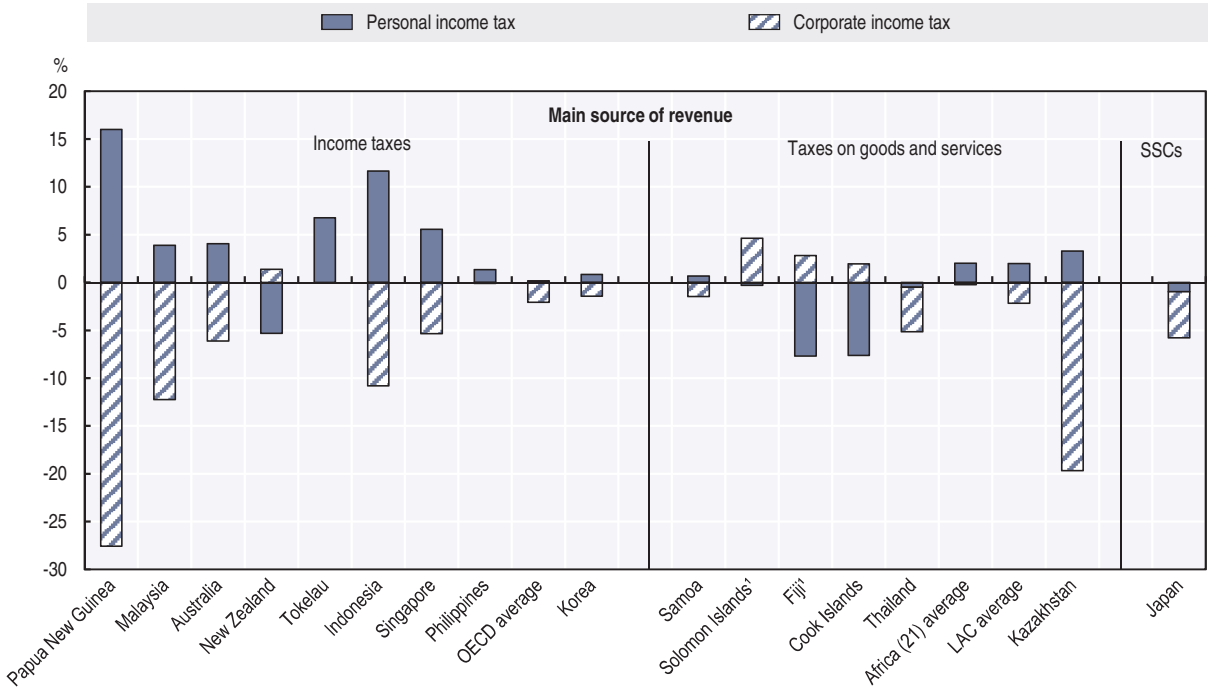
Within income taxes, differences were observed between trends in corporate and personal income taxes across the period, as shown in Figure 1.11. In 2016, revenues from CIT varied between 9.4% of total tax revenue in Samoa and 41.1% of total tax revenue in Malaysia. The three economies with the highest share of revenue from CIT, Kazakhstan (27.4%), Papua New Guinea (28.4%) and Malaysia, received most CIT revenue from companies in the oil and mining sector. By contrast, revenues from PIT ranged between 8.4% of total tax revenues in Fiji to 40.8% in Australia and 54.6% in Tokelau in 2016. Tokelau does not have a CIT and obtains the majority of its tax revenue from PIT.

All Asian countries except Indonesia, Japan and Korea had a greater share of corporate relative to personal income taxes in 2016. In contrast, all Pacific economies covered in this publication except Fiji had a greater share of PIT than CIT.

Figure 1.12. **Changes in revenue from corporate income tax and personal income tax as a percentage of total tax revenue between 2007 and 2016**



Note: The data do not include sub-national tax revenue for the Cook Islands, Fiji, Malaysia, Papua New Guinea, Samoa and the Solomon Islands.

The averages for Africa (21 countries), for LAC (25 Latin American and Caribbean countries) and the OECD (36 countries) are unweighted. Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.

Data for Fiji and the Solomon Islands start in 2008.

Source: Authors' calculations based on OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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Between 2007 and 2016, revenues from CIT were more variable as a share of total tax revenues than revenues from PIT in all economies covered in this publication. In most economies, CIT revenues were lower in 2016 than in 2007. Revenue from CIT decreased as a share of total tax revenues in 12 economies, by between 0.1 p.p. in the Philippines and 27.6 p.p. in Papua New Guinea.

The decreases in CIT as a proportion of total revenues were significantly more pronounced in the economies whose main source of revenues were income taxes. In most of these economies, the decreases in CIT revenues were partly offset by increases in PIT revenues. CIT revenues increased as a share of total revenues between 2007 and 2016 in four economies: the Cook Islands (1.9 p.p.), Fiji (2.8 p.p.), New Zealand (1.4 p.p.) and the Solomon Islands (4.6 p.p.).

By contrast, the share of revenues from PIT decreased for only six Asian and Pacific economies between 2007 and 2016, and the scale of the decreases was comparatively small, ranging from 7.7 p.p. in Fiji to 0.3 p.p. in the Solomon Islands. Revenue from PIT increased as a share of total taxation for all other economies in this period, from 0.7 p.p. in Samoa to 16.0 p.p. in Papua New Guinea.

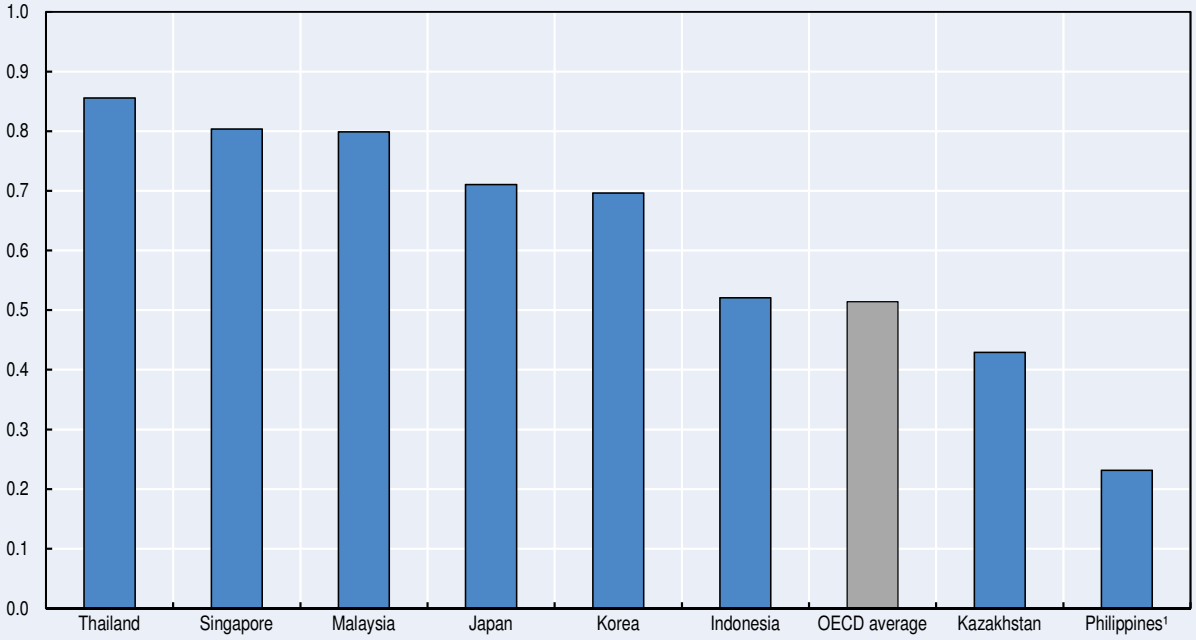
Box 1.2. **VAT revenue ratios in Asian countries**

The VAT revenue ratio (VRR) measures the difference between the VAT revenue collected and what would theoretically be raised if VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime and all revenue was collected. A VRR of 1 suggests no loss of VAT revenue as a consequence of exemptions, reduced rates, fraud, evasion or tax planning. This section describes the VRR levels in the Asian countries in this publication.

There was a wide disparity of VRRs in Asian countries in 2016. The Philippines had the lowest VRR ratio at 0.23 and Thailand had the highest at 0.86. Of the countries in this publication, Japan, Korea and Singapore have relatively high VRR (exceeding 0.6), above the OECD average of 0.51. This is partially because of the relatively broad-based VAT in each country: Japan does not have any reduced rates while in Singapore, only international services are zero-rated, with the only exemptions applying to the sales and leases of residential properties and to most financial services (MOF, 2017[39]). Korea has a reduced rate on a number of goods and services. In comparison, many OECD countries have one or more reduced rates (OECD, 2016[26]), which partly explains the lower average VRR in the OECD region.

The VRR needs to be interpreted with caution and can be affected by several factors that inflate it. One reason can be where exemptions on products and services relating to intermediate consumption can lead to a cascading effect that increases VAT revenue (IMF, 2017[38]). For example, in Thailand, excessive exemptions may cause "cascading", which artificially increases the VRR. Another reason the VRR may be inflated is refund processes do not work correctly, which may discourage taxpayers from claiming their VAT refunds, resulting in artificially higher VAT revenue and VRR.

Figure 1.13. **VAT revenue ratio (VRR) in Asian countries, 2016**



Note: OECD average (36 countries) is unweighted. Data for Singapore and Malaysia are for 2015, data for Thailand are for 2014.
1. The VRR is currently underestimated as the VAT revenue collected at customs is not accounted for in total VAT revenue in this publication [this revenue could not be distinguished from revenue from other import duties and is currently classified under heading 5120 (taxes on specific goods and services)].

Source: VAT rates are sourced from national governments, the Trading Economics and KPMG websites and OECD (2018[30]). The final expenditure consumption figures come from the United Nations Statistics Division website (UN, 2018[31]) and the OECD Annual National Account (OECD, 2018[32]). VAT revenues are sourced from the country tables in Chapter 4.

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1.3. Taxes by level of government

This section discusses the relative share of tax revenues attributed to the various subsectors of general government in 2016. The different sub-sectors discussed here are central government, sub-national government (including state government, where relevant) and local government) and social security funds.

In many economies included in this publication, the share of sub-national taxes was comparatively small as a share of total tax revenues in 2016. Shares of sub-national government tax revenue in the Asian countries ranged from 5.2% in the Philippines and 8.0% in Thailand to 17.5% in Korea, 23.9% in Japan and 24.5% in Kazakhstan. In Indonesia, revenues attributed to sub-national governments are rising and were over 10% in 2016, following the shift of property taxation to the local level in 2014. In New Zealand, sub-national government revenues were 6.7%; and in Australia subnational revenues (including both state and local revenues) amounted to 20.5% of total revenues.

The types of taxes levied at local government level vary between countries. Local governments in the Philippines have a narrow range of taxes under their jurisdiction, relying on property taxes and taxes on income and profits. By contrast, Sub-national governments in Japan and Korea raised revenue from taxes on income and profits, property taxes, taxes on goods and services, payroll (Korea only) and other taxes. The share of sub-national government revenue also depends on the range of services which local governments are expected to provide: for example, local revenues are higher in Japan since local governments finance a wide range of goods and services including public welfare and are responsible for financing some education and debt services (Beshho, 2016[33]).

Between 2000 and 2016, the share of revenues collected by sub-national governments in Asian and OECD countries was stable, with the exception of Indonesia and Kazakhstan. In Indonesia, the share of revenues attributed to sub-national governments increased by 7.7 p.p., whereas in Kazakhstan in which the share decreased by 25.4 p.p.

As social security contributions play a smaller role in total revenues in Asia and the Pacific than in other regions, the share of revenues attributed to social security funds was also low. The proportion of total tax revenues collected by social security funds in Australia, Indonesia and New Zealand was zero in 2016, and was under 6% of total revenues in Kazakhstan, Malaysia and Thailand. By contrast, countries that source a greater share of their revenues from social security contributions also had higher shares of revenues attributed to social security funds in 2016: 40.4% of revenues in Japan and 26.2% in Korea. The share of revenues attributed to social security funds has increased in both Japan (by 6.8 p.p.) and Korea (14.1 p.p.) since 2000.

Table 1.1. **Attribution of tax revenues to sub-sectors of general government as a percentage of total tax revenue, 2016**

	Federal or central government				Sub-national government				Social security funds			
	1995	2000	2010	2016	1995	2000	2010	2016	1995	2000	2010	2016
Australia[1]	77.5	81.8	80.2	79.5	22.5	18.2	19.8	20.5	..	..	..	..
Indonesia	..	96.8	92.8	89.1	..	3.2	7.2	10.9	..	..	..	..
Japan	41.2	38.7	33.0	35.7	25.2	26.1	25.9	23.9	33.6	35.2	41.1	40.4
Kazakhstan	..	50.1	81.3	71.8	..	49.9	16.2	24.5	..	..	2.5	3.7
Korea	69.2	68.2	60.0	56.3	18.7	15.1	16.6	17.5	12.1	16.7	23.3	26.2
Malaysia	100.0	98.0	98.2	98.2	..	..	..	..	..	2.0	1.8	1.8
New Zealand	94.7	94.3	92.8	93.3	5.3	5.7	7.2	6.7	..	..	..	..
Philippines	90.8	81.5	82.2	80.9	..	5.3	5.2	5.2	9.2	13.1	12.7	14.0
Thailand	..	88.9	86.3	86.4	..	7.5	6.6	8.0	..	3.7	7.1	5.6

Note: The figures exclude the Cook Islands, Fiji, Papua New Guinea, Samoa, the Solomon Islands as sub-national data are not available. Tokelau and Singapore are also excluded, as they do not have local governments.
Australia, Japan, Korea and New Zealand are part of the OECD (36) group. Data for Australia, Japan, Korea, New Zealand and the OECD average are taken from OECD (2018[1]), *Revenue Statistics 2018*, *https://doi.org/10.1787/2522770x*.
1. Sub-national figures in Australia include data from state and local governments.

Source: OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

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1.4. Non-tax revenues in selected Pacific economies

This publication also includes information on non-tax revenues for selected Pacific economies for which data are available. Non-tax revenues are defined as all revenues received by general government that do not meet the OECD definition of taxes, as set out in the Interpretative Guide (Annex A). They are further divided into five categories according to the definitions set out in Annex B: grants; property income; sales of goods and services; fines, penalties and forfeits; and miscellaneous and unidentified revenues.

Non-tax revenues as a percentage of GDP

Non-tax revenues were equivalent to a significant share of GDP in 2016 for two of the Pacific economies for which data are available: the Cook Islands (11.5% in 2016) and Tokelau (236.5% of GDP in 2016). The very high levels of non-tax revenues in Tokelau, measured as a share of GDP, are due to the fact that they derive primarily from payments from foreign vessels for access to Tokelau fishing waters. In the 2008 System of National Accounts these revenues are recorded as part of GNI, but they do not add to GDP. By contrast, non-tax revenues are comparatively low in Papua New Guinea and Samoa (2.9% and 4.8% of GDP in 2016, respectively).

Further, non-tax revenues have been on an upwards trend since 2007 for the Cook Islands and Tokelau, whereas they have been declining as a share of GDP for the other two economies. The upwards trend for Tokelau has been driven by the increase in revenues from property income, which is entirely sourced from fishery income. Tokelau receives support from New Zealand to strengthen the management of its Exclusive Economic Zone to maximise Tokelau's revenue collection from its international fisheries (New Zealand Foreign Affairs & Trade, 2018[34]). Fisheries income also increased after Tokelau became a partner to the Nauru Agreement, which administers the fishing vessel-day scheme (VDS). The VDS is the system to sustainably manage the world's largest tuna fishery in the Western and Central Pacific Ocean and has increased revenue to participating islands by over 500% in the past six years (Parties to the Nauru Agreement, 2016[35]).

The increase in non-tax revenue for the Cook Islands has been predominantly driven by an increase in grant revenues from New Zealand, Australia and the European Union. This support contributes to upgrading infrastructure, growing sustainable tourism, and supporting initiatives that strengthen the public sector and improve education, health and social services.

Table 1.2. **Non-tax revenue of main headings as a percentage of GDP in selected Pacific economies, 2016**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cook Islands	5.5	5.1	9.0	12.8	8.0	8.2	14.1	16.8	9.0	11.5
Papua New Guinea	4.0	4.1	3.5	4.7	3.3	3.1	2.4	3.1	3.1	2.9
Samoa	7.8	10.0	3.6	9.3	5.8	4.6	6.7	4.8	4.9	4.8
Tokelau[1]	149.3	157.6	165.2	154.6	196.4	192.6	246.6	173.4	252.5	236.5

1. Tokelau receives significant revenues from foreign vessels for access to Tokelau fishing waters. In the 2008 SNA, these revenues are recorded as part of GNI, but they do not add to GDP.
Source: OECD (2018[22]), "Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

StatLink https://doi.org/10.1787/888933853737

Structure of non-tax revenues

As mentioned, non-tax revenues are divided into different categories: grants; property income; sales of goods and services; fines, penalties and forfeits; and miscellaneous and unidentified revenues.

In 2016, the shares of each of these categories in total non-tax revenues varied across the four Pacific economies for which the data are included:

- Grants were an important source of revenues for all economies in 2016, exceeding 30% of total non-tax revenues. They ranged from 33.4% of non-tax revenues in Tokelau to 69.3% of total non-tax revenues in Papua New Guinea and were the main source of non-tax revenues for Papua New Guinea.
- Property income was the main source of non-tax revenues for the Cook Islands in 2016 (44.2% of non-tax revenues) and Tokelau (64.4%), whereas it was relatively small for Samoa (6.4%). Property income in the Cook Islands and Tokelau was derived predominantly from fisheries income (i.e. fishing rents), which represented more than 80% of the total property income in both economies. Fisheries revenues have been increasing in the Cook Islands and were boosted by reforms and new initiatives in the past decade (Bertram, 2016[36]; Roy, 2017[37]).
- Revenues from sales on goods and services and from grants were the main sources of non-tax revenues in Samoa, where both categories amounted to around 40% of non-tax revenues in 2016.

Table 1.3. **Non-tax revenue of main headings as a percentage of total non-tax revenues in selected Pacific economies, 2016**

	Grants	Property income	Sales of goods and services	Fines, penalties and forfeits	Miscellaneous and unidentified revenue
Cook Islands	39.7	44.2	5.0	1.1	10.0
Papua New Guinea	69.3	25.6	0.0	0.0	5.1
Samoa	40.9	6.4	41.4	11.4	0.0
Tokelau	33.4	64.4	2.1	0.0	0.0

Source: OECD (2018[22])"Revenue Statistics - Asian and Pacific economies: Comparative tables", OECD Tax statistics (database).

StatLink https://doi.org/10.1787/888933853756

Note

1. As of 1 September 2018, the new government replaced the GST with the old system of a sales and services tax (SST). For goods, the rate is set to be between 5-10%, while the tax on services is set at a 6% rate. The new measure came into force following a three-month tax break from June 2018.

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