

Chapter 1

Tax revenue trends, 1990-2015

1.1. Tax ratios

In light of the United Nation's 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 declining development assistance and the volatility of non-tax revenues with respect to commodity prices.

This report presents detailed internationally comparable data on tax revenues of seven Asian countries: Indonesia, Japan, Kazakhstan, Korea, Malaysia, the Philippines and Singapore. This chapter discusses the key tax indicators for this group of countries: the tax-to-GDP ratio, the tax structure and the share of tax revenue by level of government. The discussion supplements the detailed country information found in Chapter 4.

Tax-to-GDP ratios in 2015

The tax-to-GDP ratio is the total tax revenue of a country (including social security contributions) measured as a proportion of the gross domestic product (GDP). In 2015, tax-to-GDP ratios in the seven countries included in this publication ranged from 11.8% in Indonesia to 25.3% in Korea. In Japan, the tax-to-GDP ratio in 2014 was 32.0%, the highest of the countries included in this publication.¹ Korea and Japan have relatively high tax-to-GDP ratio (above 25%) compared to Indonesia, Kazakhstan, Malaysia, the Philippines and Singapore (below 18%), as shown in Figure 1.1. The higher tax-to-GDP ratios in Korea and Japan are partially due to their more diversified economies, which make them more able to collect tax revenue from various economic sectors (Papageorgiou et al, 2015).

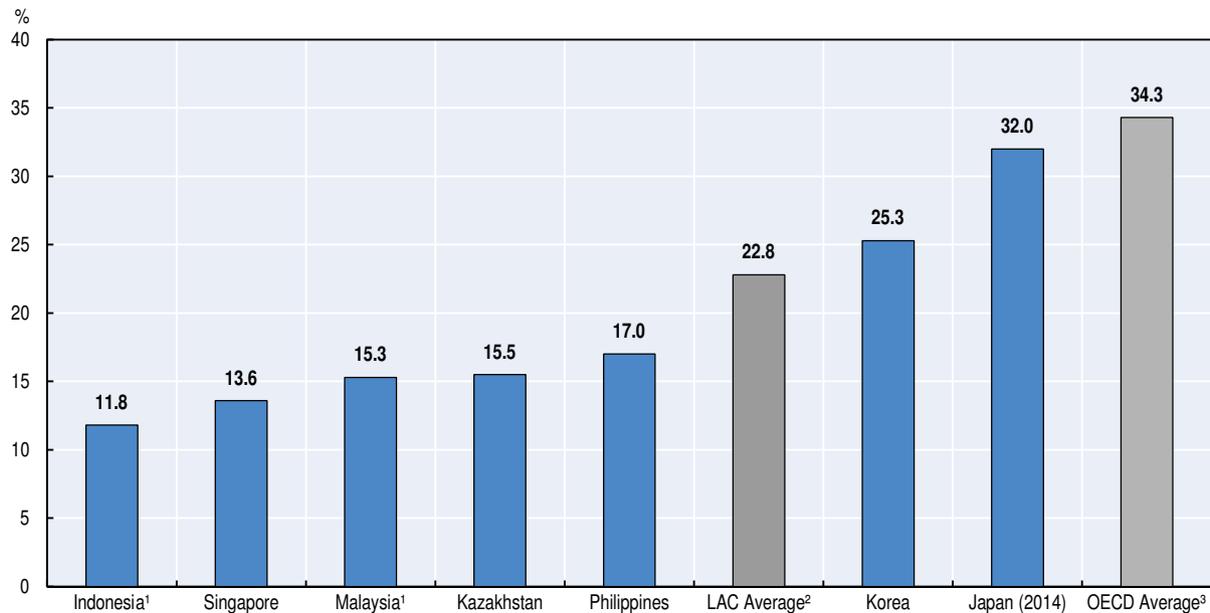
The tax-to-GDP ratios in Indonesia, Kazakhstan, Malaysia, the Philippines and Singapore in 2015 were 11.8%, 15.5%, 15.3%, 17.0% and 13.6% of GDP respectively. In the Philippines and Indonesia, the governments are endeavouring to strengthen their tax revenues and have established tax-to-GDP targets. The Philippines aims to increase their tax-to-GDP ratio to 17% (excluding social security contributions) by 2016 (The Philippine Star, 2016) and Indonesia aims to reach the same level by 2019 (OECD, 2015a). These targets will contribute to increasing financial capacity toward the minimum tax-to-GDP ratio of 25% deemed essential to become a developed country (UNESCAP, 2014).

Tax-to-GDP ratios tend to be higher in high-income countries: in general, OECD countries collect a higher amount of tax revenues than non-OECD countries, measured as a percentage of GDP. Asian and Latin American and Caribbean countries have broadly similar income and development levels and similar tax-to-GDP ratios. This is illustrated in Figure 1.2, which shows the tax-to-GDP ratios and GDP per capita of the seven countries of this publication compared with Latin American and Caribbean, African and OECD countries.

Singapore has the highest GDP per-capita of the seven countries 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 a highly attractive business climate and a

stable political environment (UNCTAD, 2012). The low tax-to-GDP ratio is explained by lower income tax rates (particularly on corporate income) and VAT rates, compared to other Asian countries (UNESCAP, 2014).

Figure 1.1. **Tax-to-GDP ratios (total tax revenue as % of GDP), 2015**



Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015, except for Japan, where some 2015 data are not available.

1. The figures exclude state government revenues for Malaysia and social security contributions for Indonesia.

2. Represents the unweighted average for 24 LAC (Latin American and Caribbean) countries.

3. Represents the unweighted average for OECD member countries. Japan and Korea are also part of the OECD (35) group.

Source: Table 3.1.

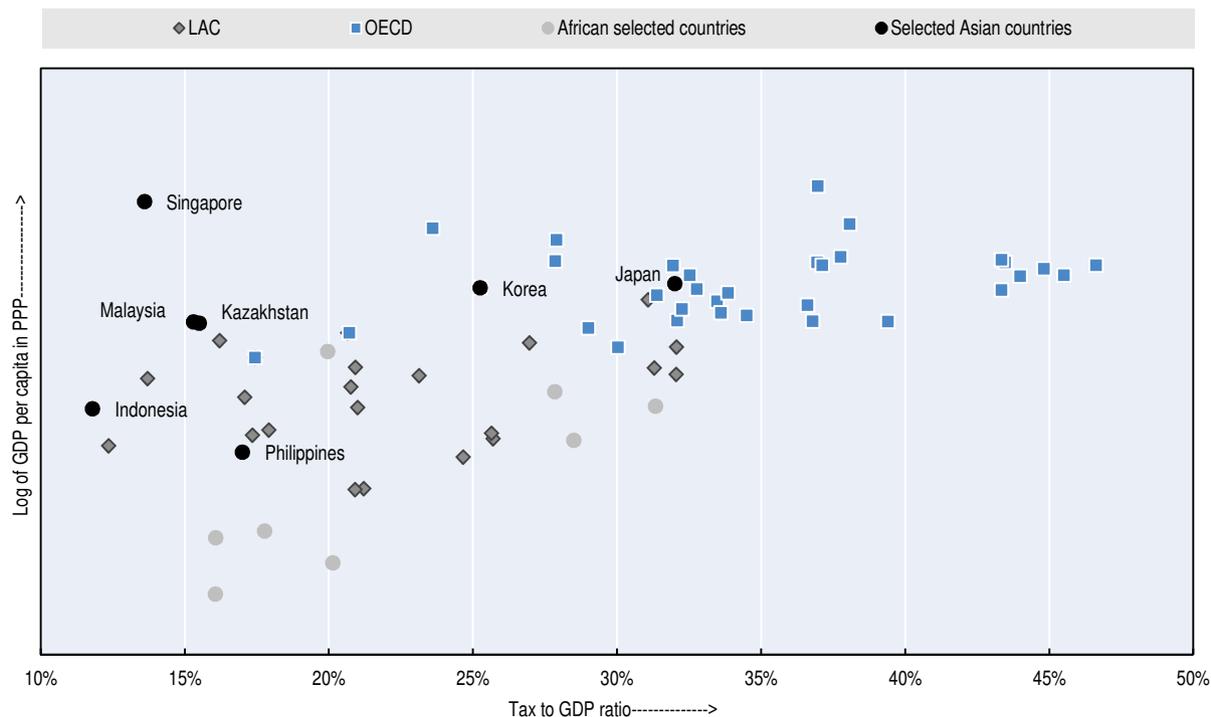
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In the Southeast Asia region, tax-to-GDP ratios tend to be lower compared to Japan and Korea. This is explained by two main factors: low tax compliance in many countries (UNESCAP, 2016) with the notable exception of Singapore, where tax compliance is high; and narrow tax bases due to numerous tax exemptions and incentives to attract foreign investment (UNESCAP, 2014). In Indonesia, for example, an estimated 44 million people should be paying tax whereas only 27 million are registered and less than 40% of them pay the full amount of income tax (UNESCAP, 2016).

Evolution of tax-to-GDP ratios

The evolution of tax-to-GDP ratios has been different in each country between 2014 and 2015 (Figure 1.3). Kazakhstan and the Southeast Asian countries with the exception of the Philippines saw decreases in their tax-to-GDP ratios. Kazakhstan experienced the largest decrease of 5.6 percentage points (p.p.) from 2014 to 2015, largely explained by the drop in oil tax revenues which decreased by 4.5 p.p. following the collapse of global oil prices. Changes in the Southeast Asian countries are relatively small from an increase of 0.3 p.p. in the Philippines to a decrease of 0.6 p.p. in Malaysia. Among the six countries included in this publication (except Japan which has no tax-to-GDP data in 2015), Korea has seen the largest increase, at 0.7 p.p.

Figure 1.2. **Tax-to-GDP ratios and GDP per capita (in PPP) in Asian countries, Latin America and the Caribbean, OECD and African countries, 2015**



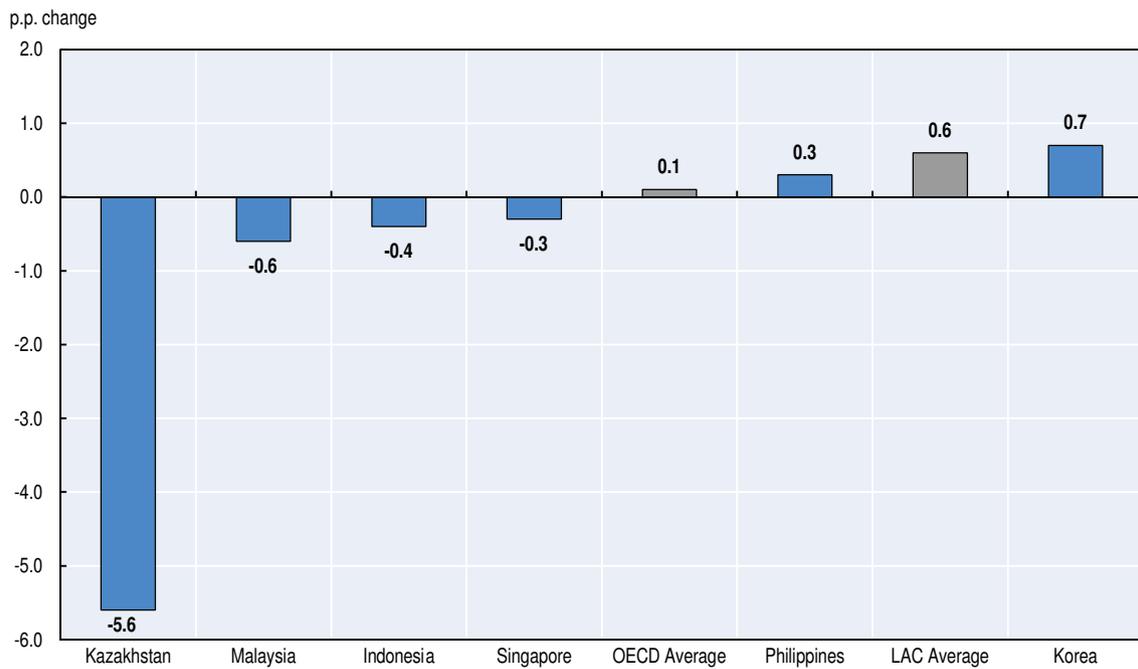
Note: The y-axis is on a logarithmic scale. Tax-to-GDP ratios for Japan and the selected African countries refer to 2014 as data in 2015 are not available. The purchasing-power-parity (PPP) between two countries is the rate at which the currency of one country needs to be converted into that of a second 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 and WHO, 2015).

Source: IMF (2016), *World Economic Outlook*, October 2016, International Monetary Fund for figures of GDP per capita. Tax-to-GDP ratios are sourced from the regional Revenue Statistics publications (www.oecd.org/tax/taxpolicy/revenue-statistics-comparable-tax-revenue-data.htm).

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By further distinguishing the changes in tax-to-GDP ratio by main type of taxes, the biggest contributors to the changes are revenues from taxes on income, profits and capital gains as well as taxes on specific goods and services. These revenues decreased in Kazakhstan by 1.8 p.p. and 3.1 p.p. respectively. In Malaysia, the 1.8 p.p. increase in revenues from general taxes on goods and services was offset by declines in revenues from taxes on income, profits and capital gains. Indonesia and Singapore have similar changes with increases in revenues from taxes on specific goods and services but decreases in those from general taxes on goods and services as well as other tax types. The Philippines' increase in tax revenue was mainly due to taxes on income, profits and capital gains and social security contributions. For Korea, large increases in revenues from taxes on income, profits and capital gains as well as other taxes cancelled out decreases in revenues from general taxes on goods and services, resulting in a net increase of 0.7 p.p.

Figure 1.3. Annual changes in tax-to-GDP ratios (p.p.), 2015

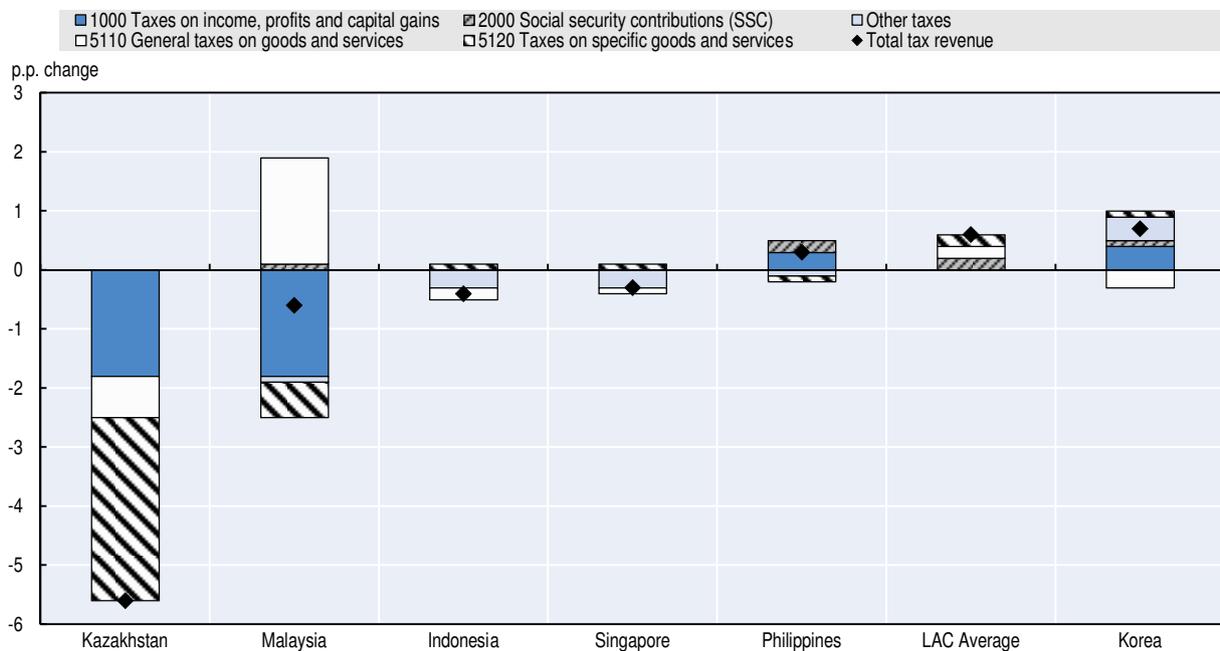


Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015, except for Japan, where some 2015 data are not available.

Source: Authors' calculations based on Table 3.1.

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Figure 1.4. Net changes in tax-to-GDP ratios between 2014 and 2015 by main type of taxes (p.p.)



Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 is used for the OECD average and for Japan as data for 2015 are not available.

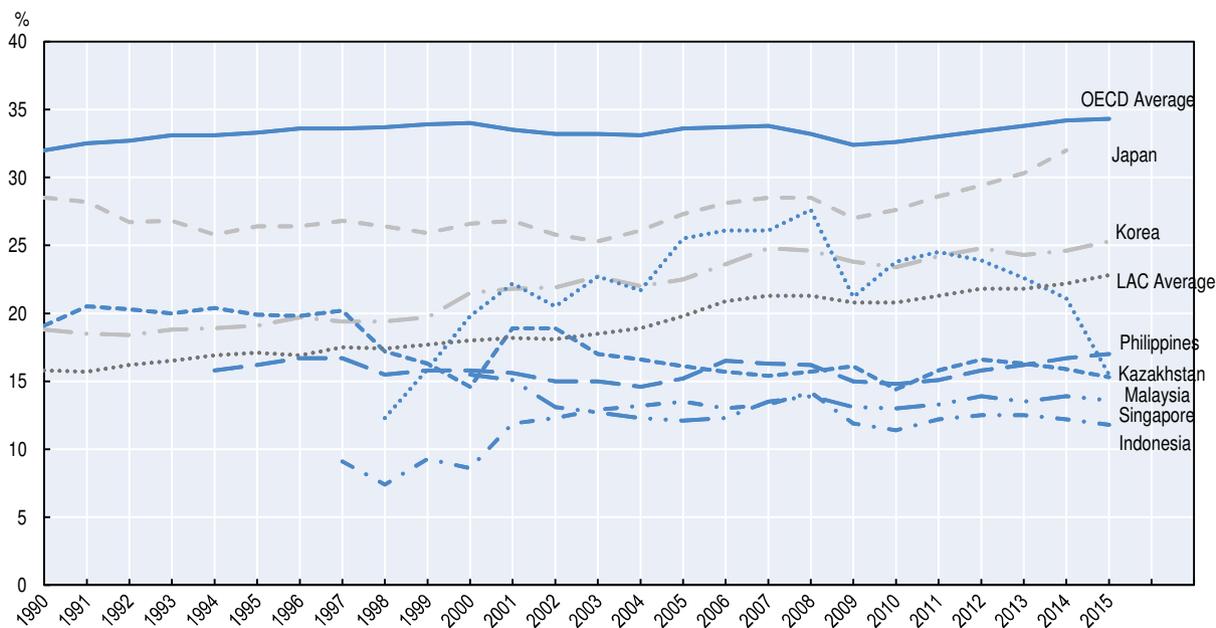
Source: Authors' calculations based on tables in Chapter 3.

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The tax-to-GDP ratio is affected by broader macroeconomic conditions. Asia as a whole continues to suffer from the slow recovery of developed countries from the financial crisis, the fall of commodity prices and a number of trade protectionist measures that hinder the rise in exports (UNESCAP, 2014). OECD (2016b) explains that “recent external shocks that are affecting economic activity in the region include (...) China’s further economic slowdown”. For example, lower international demand for goods and services, reduced commodity prices, and lower investment have slowed GDP growth in Indonesia (OECD, 2015a).

The Asian countries featured in this publication increased their tax-to-GDP ratios between 2000 and 2015, with the exception of Kazakhstan and Singapore, which decreased by 4.3 p.p. and 1.9 p.p. respectively over this period. This is illustrated in Figure 1.5, which shows the tax-to-GDP ratios for the seven countries between 1990 and 2015. Since 2003, the rate of growth for the Southeast Asian countries has been slower than the Latin American and Caribbean countries (LAC) average. Over that period, the LAC average increased by 4.8 p.p. whereas the increase was less than 1.3 p.p. in the Southeast Asian countries except for Indonesia whose tax-to-GDP ratio increased by 3.2 p.p.. In contrast, the OECD average has increased by 0.3 p.p. since 2000.

Figure 1.5. Tax-to-GDP ratios (%), 1990-2015



Source: Table 3.1.

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Between 2000 and 2015, increases in tax-to-GDP ratios of over 3.0 p.p. occurred in Korea and Indonesia. In that period Indonesia improved its revenue collection and the efficiency of its tax administration (Arnold, 2012) through the introduction of tax administration reforms in the 2000s, particularly with respect to personal income taxes (OECD, 2015a). One key reform was the creation of offices targeted at specific taxpayer groups such as the high-wealth individual, medium and small taxpayer offices (OECD, 2015b).

Malaysia and the Philippines had increases of 0.7 p.p. and 1.2 p.p., respectively, between 2000 and 2015. The Philippines have modernised their tax administration to increase taxpayer compliance and to improve collection efficiency (for example, the introduction of electronic tax services (e.g. eFPS) and mandatory use of such system). In addition major efforts were made to increase the number of taxpayers, resulting in an increase of 71% between 2007 and 2013. However, this has not resulted in a significant increase in tax revenues because of limited tax bases and high evasion (OECD, 2015b).

The financial crisis affected the tax-to-GDP ratios for the Asian countries featured in this publication. All seven countries experienced decreases between 2008 and 2010, ranging from -0.9 p.p. in Singapore to -3.8 p.p. in Kazakhstan. Following the crisis, the tax-to-GDP ratios in all countries have increased back toward pre-crisis levels except in Indonesia and Kazakhstan.

Revenues from each tax category as percentage of GDP decreased in Indonesia, with corporate income tax and VAT revenues most affected over this period. This was due to the impacts of declining GDP growth on tax revenue and the reduction of income tax rates in 2009 as part of a stimulus package that also included the removal of some tax and import duties. Under this package the top personal income tax rate was reduced from 35% to 30% and the corporate income tax rate from 30% to 28% (Basri and Rahardja, 2011).

Factors influencing tax-to-GDP ratios

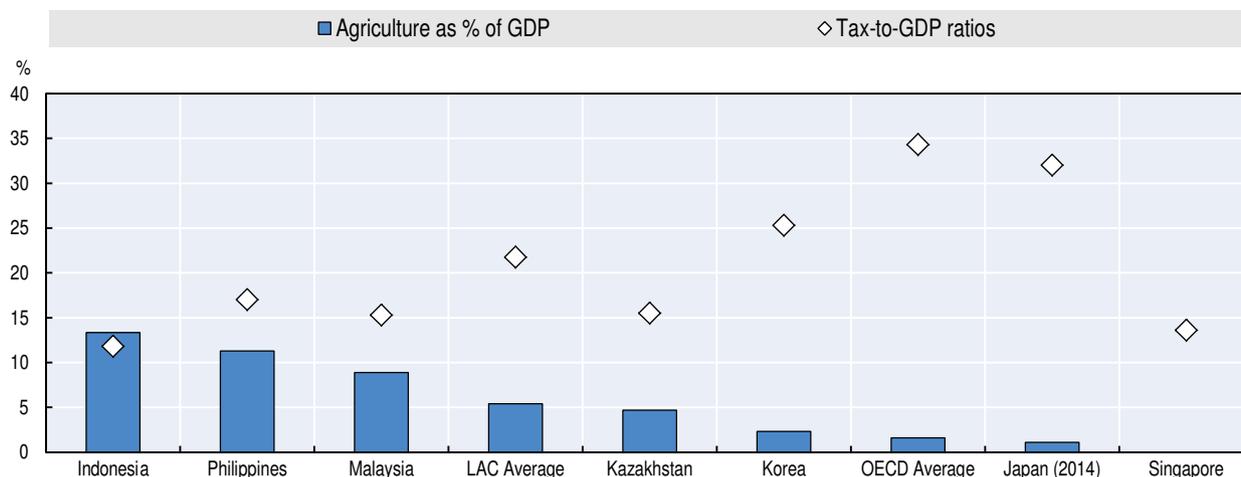
Tax-to-GDP ratios are influenced by a variety of domestic and international factors. Domestically, macroeconomic characteristics such as the importance of agriculture in the economy, resource endowments, openness to trade and the size of the informal economy can influence tax-to-GDP ratios. The power of tax administrations, the levels of corruption and tax morale (or willingness of people to pay taxes) are also strongly linked to the level of tax revenues (OECD, 2014). Aizenman et al (2015) found that in Asia, government effectiveness and institution quality are positively correlated with the level of tax-to-GDP ratio. Geographic location is also relevant: landlocked countries are less able to impose taxes on goods and services entering the country than island countries (UNESCAP, 2014). In addition, international factors, including the tax policies of other countries, can impact tax-to-GDP ratios.

Higher shares of agriculture in GDP are associated with lower tax-to-GDP ratios (Gupta, 2015; Addison and Levin, 2012; Profeta and Scabrosetti, 2010). This finding is mirrored in the revenue data for most of the Asian countries featured in the publication, where countries with higher shares of agriculture display lower tax-to-GDP ratios. Agriculture amounts to more than 8% of GDP in Indonesia, Malaysia and the Philippines and their tax-to-GDP ratios are all below 18%. In contrast, agriculture is less than 3% of GDP in Japan and Korea and their tax ratios are above 25% (Japan's tax-to-GDP ratio refers to 2014 as 2015 data are not available). However, in Singapore, the agricultural sector is very small as a share of GDP, but the tax-to-GDP ratio is relatively low.

The inverse relationship between agriculture and tax revenues as a percentage of GDP is explained by several factors. Firstly, agriculture is a challenging sector to tax: most people in this sector in developing economies are on low incomes and many are not registered for tax purposes (EPS PEAKS, 2013). Secondly, 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) and goods and services related to the agriculture sector are exempt from import duty, sales tax and excise duty (Ministry of International Trade and Industry, 2016).

Figure 1.6. **Agriculture as % of GDP and tax-to-GDP ratios, 2015**



Note: The indicator agriculture as % of GDP includes forestry, hunting and fishing, as well as cultivation of crops and livestock production. The LAC average includes developing Latin American and Caribbean countries only. The latest data for the agriculture as % of GDP are for 2014. Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for Japan as data for 2015 are not available.

Source: World Bank for the figures on agriculture as % of GDP. Table 3.1 for the tax-to-GDP ratios.

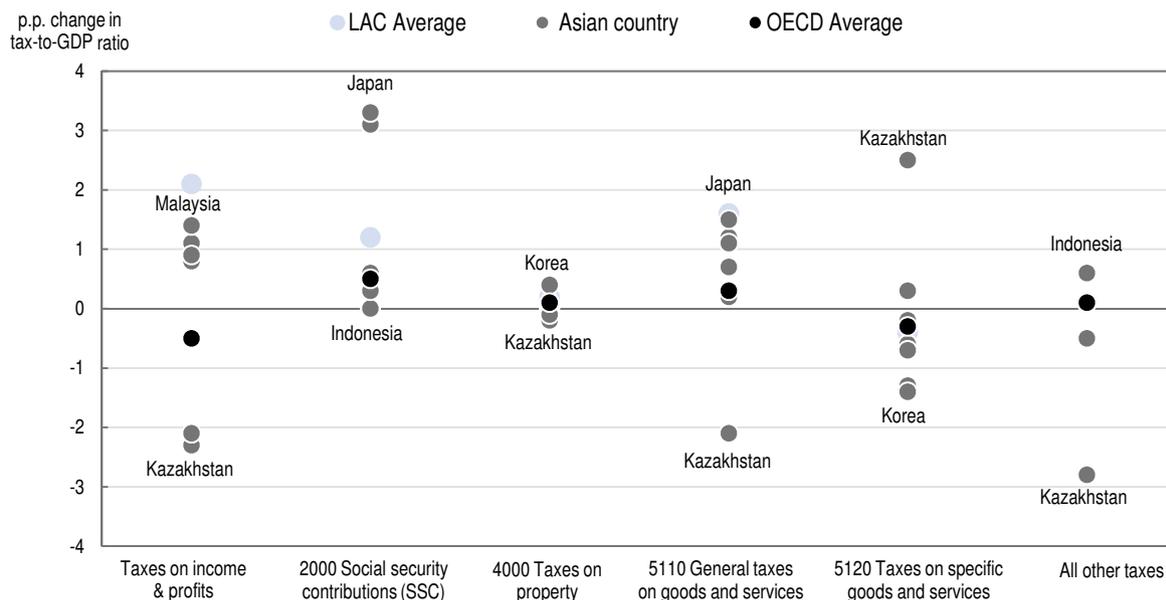
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Tax exemptions and incentives can reduce the levels of tax ratios. As Southeast Asian countries have increasingly integrated into the global market they have reduced corporate income tax rates and import tariffs, in line with the international trends. The countries have also developed broad tax-incentive schemes to encourage foreign investment. Tax incentive schemes have put pressure on corporate income tax revenues, particularly following ASEAN² integration. In 2007, as part of the ASEAN integration, the ASEAN economies endorsed the Economic Community blueprint “to establish ASEAN as a single market and production base making ASEAN more dynamic and competitive with new mechanisms and measures to strengthen the implementation of its existing economic initiatives” (ASEAN, 2008). UNESCAP (2016) explains that “since the adoption of the ASEAN Economic Community blueprint in 2007, several countries have further reduced their CIT rate and expanded tax incentives and exemptions for investors”.

Changes in tax-to-GDP ratios from 2000-15 by tax category

Changes in the overall tax-to-GDP ratios between 2000 and 2015 in the seven countries were caused by a variety of changes in the categories of tax revenues. The biggest changes to a category of tax revenue over this period occurred in taxes on incomes and profits as percentage of GDP (where Malaysia showed an increase of 1.4 p.p.) and in social security contributions (where Japan and Korea saw an increase of over 3 p.p.). Changes in each of the subcategories are shown in Figure 1.7.

Figure 1.7. Changes in tax-to-GDP ratios by type of taxes between 2000 and 2015 (p.p.)



Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015. Data for the OECD average and for Japan refer to 2000-14 as some data for 2015 are not available.

Source: Authors' calculations based on tables in Chapter 3.

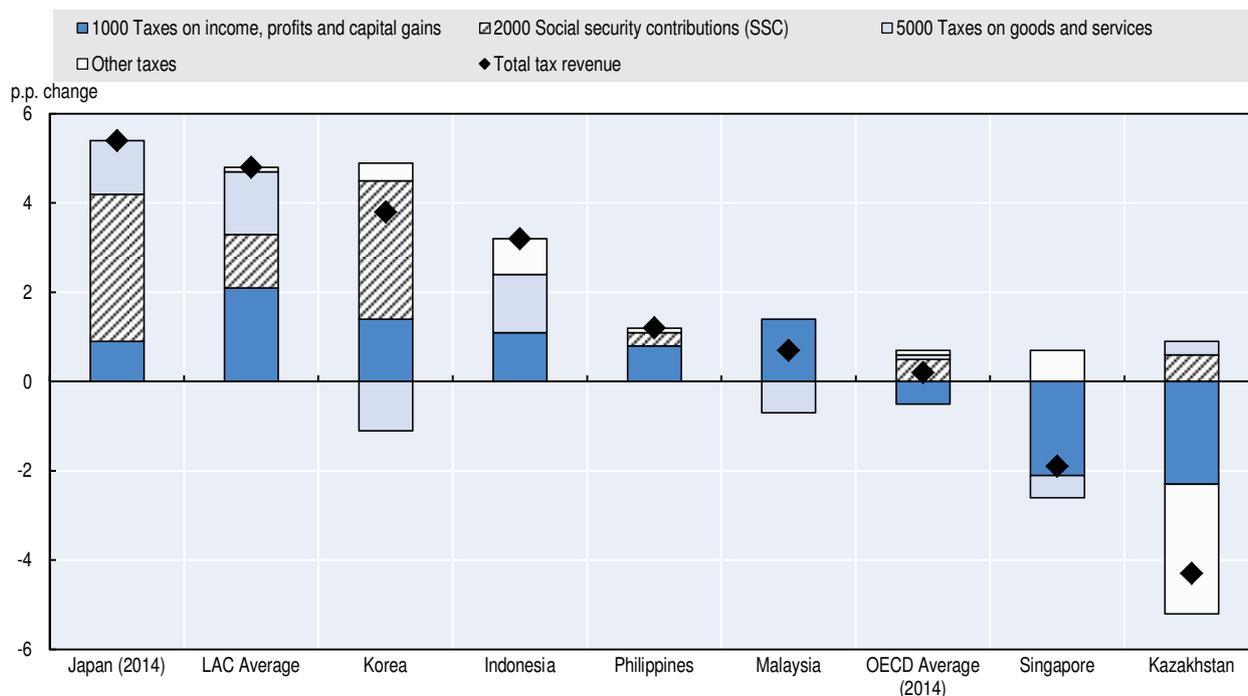
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In Malaysia and the Philippines, the growth of the tax-to-GDP ratio from 2000 to 2015 is primarily due to increases in taxes on incomes and profits. In Japan and Korea, the predominant driver of growth (as a percentage of GDP) is the increase in social security contributions whereas in Indonesia, increases were seen across different categories, with the biggest increase in revenues from taxes on general goods and services. In Kazakhstan, negative growth of the tax-to-GDP ratio is due to decreases in revenues from taxes on income and profits and other taxes which have decreased respectively by 2.3 p.p. and 2.9 p.p. (the decrease in other taxes is explained entirely by a decrease in payroll tax revenues). The tax-to-GDP ratio in Singapore is lower in 2015 relative to 2000, driven by the decrease of individual income tax rates and corporate income tax rates. The change in tax revenues in each category (as a percentage of GDP) between 2000 and 2015 is depicted in Figure 1.8 for each country.

The growth of revenue from taxes on incomes and profits as a percentage of GDP in Malaysia and Philippines is consistent with the broader trend for developing countries. As countries increase their level of development they tend to collect more of their tax revenue from taxes on incomes and profits relative to taxes on goods and services (UNESCAP, 2014).

Another contributor to the higher revenues in Malaysia was changes to the tax administration. The most important were providing more autonomy by making the tax administration into a statutory authority in 1996; a change in the tax collection from formal to self-assessment (2000-04); and deployment of more of the workforce to compliance programmes and enforcement tasks. As with many countries both outside and inside the OECD, income tax revenues in Malaysia decreased following the financial crisis, by over 1 p.p. in 2010. However the subsequent increase in 2011 returned the tax-to-GDP ratio to above the pre-crisis levels. This was partially a reflection of further changes to working practices and the organisation of the tax administration that improved the efficiency of the tax collection process (OECD, 2015b).

Figure 1.8. Net changes in tax-to-GDP ratios between 2000 and 2015 by main type of taxes (p.p.)



Note: Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

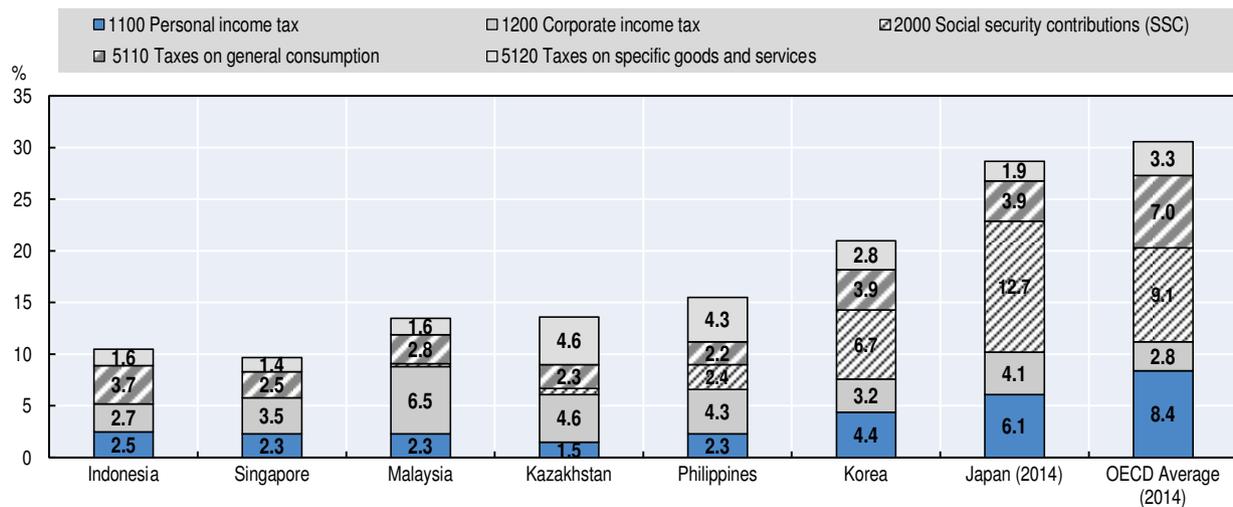
Source: Authors' calculations based on tables in Chapter 3.

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In Japan and Korea, social security contributions were the main contributors to the increase in tax revenue as percentage of GDP since 2000. The increase in social security contributions in Japan and Korea accounted for more than 3 p.p. of GDP in each country, as shown in Figure 1.8. In Japan, the change resulted from reforms in 2000, 2004 and 2009 to secure the sustainability of social security systems in light of an ageing population. These reforms included increases to premiums and the pensionable age (SSA, 2000; IPSS, 2014).

Japan and Korea have the highest revenues from social security contributions among the seven countries as a percentage of GDP.³ Social security contributions in Japan and Korea stood respectively at 12.7% and 6.7% of GDP whereas they represented less than 2.5% of GDP in Indonesia, Kazakhstan, Malaysia and the Philippines (Figure 1.9). The range of social security contributions as a percentage of GDP reflects the wide divergence of social security systems and the instruments used to deliver social protection in Asia. For example, in Indonesia, social protection takes the form of social assistance (non-contributory) rather than a social security system (contributory). Social security contributions are therefore negligible and relate only to the “Asuransi Kesehatan” – a health insurance programme for employees in for-profit state-owned enterprises. In Malaysia, civil servants are not required to contribute to their pensions, which are partially financed from the government budget (Bauer and Thant, 2010).

Figure 1.9. Tax revenue by main type of taxes as % of GDP, 2015



Note: Less than 5% of revenue from taxes on income and profits cannot be allocated to corporate income tax revenue or personal income tax revenue in Malaysia, the Philippines and Singapore. Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: Tables in Chapter 3.

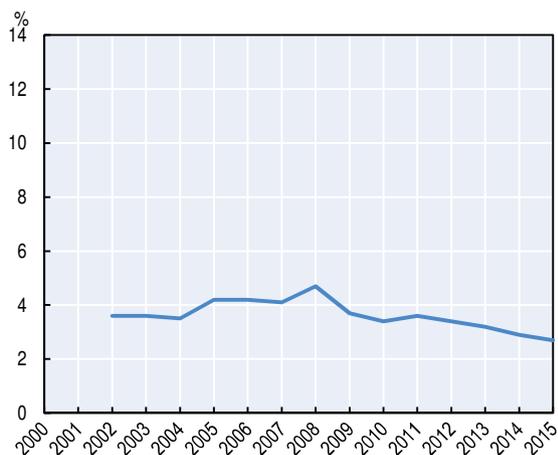
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Corporate income taxes are a significant source of tax revenue in each of the countries in this publication. The share of corporate income tax revenues-to-GDP is higher than the OECD average in all countries except Indonesia, ranging from 2.7% of GDP in Indonesia to 6.5% in Malaysia in 2015, compared to the OECD average of 2.8% in 2014 (data in 2015 are not available). Corporate income tax revenue as a percentage of GDP in Malaysia is significantly more than that of the other countries, which is partly explained by revenue derived from petroleum companies which are taxed at a higher rate (38%) than the standard corporate tax rate (25%) (Oxford Business Group, 2014). Revenues from petroleum companies represented about 1.0% of GDP in 2015.

Between 2000 and 2015, corporate income tax rates were reduced in each of the seven countries, although corporate income tax revenues as a percentage of GDP in 2015 remained at the same level or increased compared to 2000, with the exception of Indonesia, Kazakhstan and Singapore. Corporate income tax revenues in Indonesia began decreasing as a percentage of GDP in 2008, following the first of two decreases in the corporate income tax rate (Figures 1.10 and 1.11). In Kazakhstan, corporate income tax revenue as a percentage of GDP increased up to 2008 to reach its peak at 13.4% and decreased steadily to reach its lowest level in 2015 at 4.6%. The decreases were partly driven by the sharp decrease in the rate from 30% to 20% in 2009 (Figure 1.12 and 1.13). In Singapore, the fall in corporate income tax revenues as a percentage of GDP coincided with the gradual decrease in corporate tax rates from 26% in 2000 to 17% in 2015 (Figure 1.14 and 1.15).

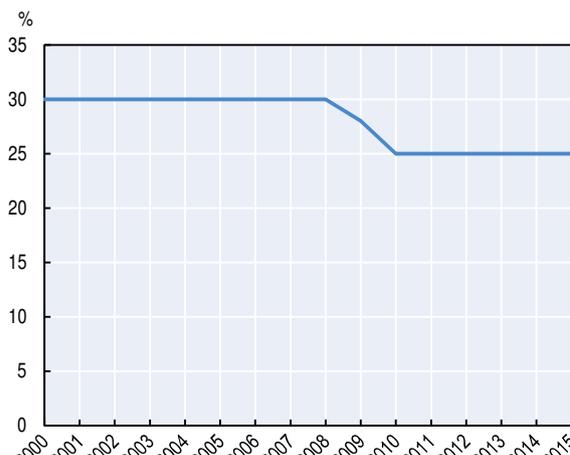
Personal income tax revenues in the seven countries are lower as a percentage of GDP than the OECD average. Two factors contribute to these lower levels. Firstly, a larger population of taxpayers are on low incomes and are exempt from paying taxes. Secondly, personal income tax revenue may be reduced by non-compliance and tax evasion of some high-income individuals. As a result, in many Asian countries, a small proportion of the population bears the tax burden (UNESCAP, 2014).

Figure 1.10. Corporate income tax revenue as % of GDP in Indonesia, 2000-15



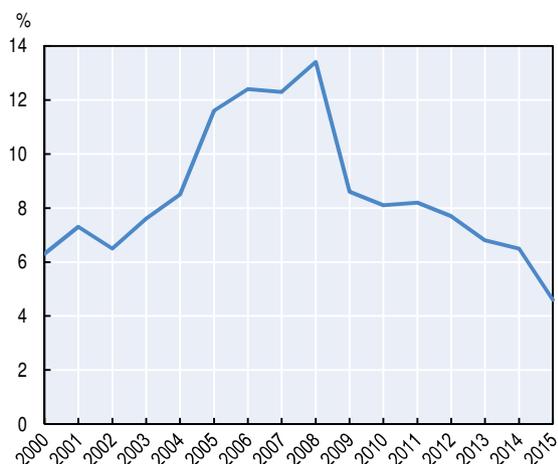
Source: Authors' calculations based on Tables 4.1 and 3.16.
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Figure 1.11. Corporate income tax rates in Indonesia, 2000-15



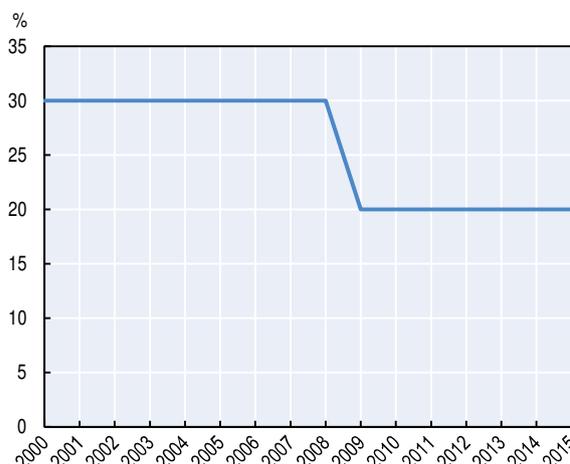
Source: Berlianto (2009) for corporate income tax rates up to 2005, KPMG (2016) for corporate income tax rates for 2006-15.
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Figure 1.12. Corporate income tax revenue as % of GDP in Kazakhstan, 2000-15



Source: Authors' calculations based on Tables 4.3 and 3.16.
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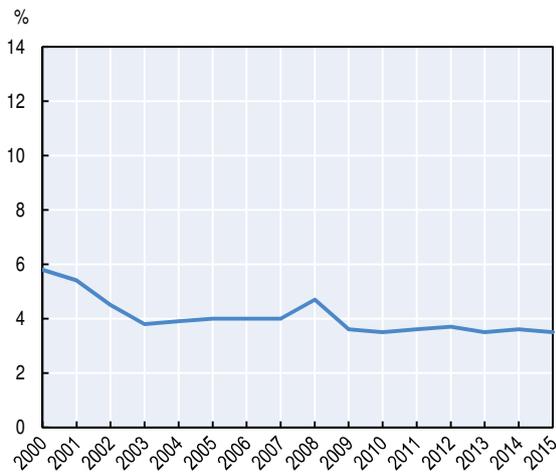
Figure 1.13. Corporate income tax rates in Kazakhstan, 2000-15



Source: Ministry of Finance of Kazakhstan.
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For example, in Indonesia, 3% of households paid more than 80% of personal tax revenues in 2010 (Nugraha and Lewis, 2011). Higher- and middle-income households in Indonesia may underreport their taxable personal income (Arnold, 2012) and the self-employed are not covered by a withholding system, so it is difficult to assess their taxable income. Indonesia has since taken measures to improve the registration of taxpayers and the number of individual taxpayers increased from 3.25 million in 2006 to almost 17 million in 2010 (Arnold, 2012).

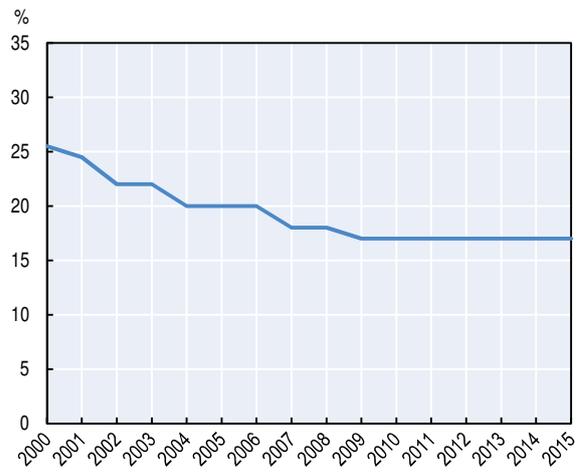
Figure 1.14. Corporate income tax revenue as % of GDP in Singapore, 2000-15



Source: Authors' calculations based on Tables 4.7 and 3.16.

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Figure 1.15. Corporate income tax rates in Singapore, 2000-15



Source: Ministry of Finance (MOF) of Singapore.

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1.2. Tax structures

The tax structure, measured as the composition of tax revenues of different types, is a second important indicator, since different taxes have different economic and social effects. Across the seven countries in this publication, the composition of taxes varies widely, reflecting their different policy choices, economic structures and conditions, tax administration capabilities and historical factors.

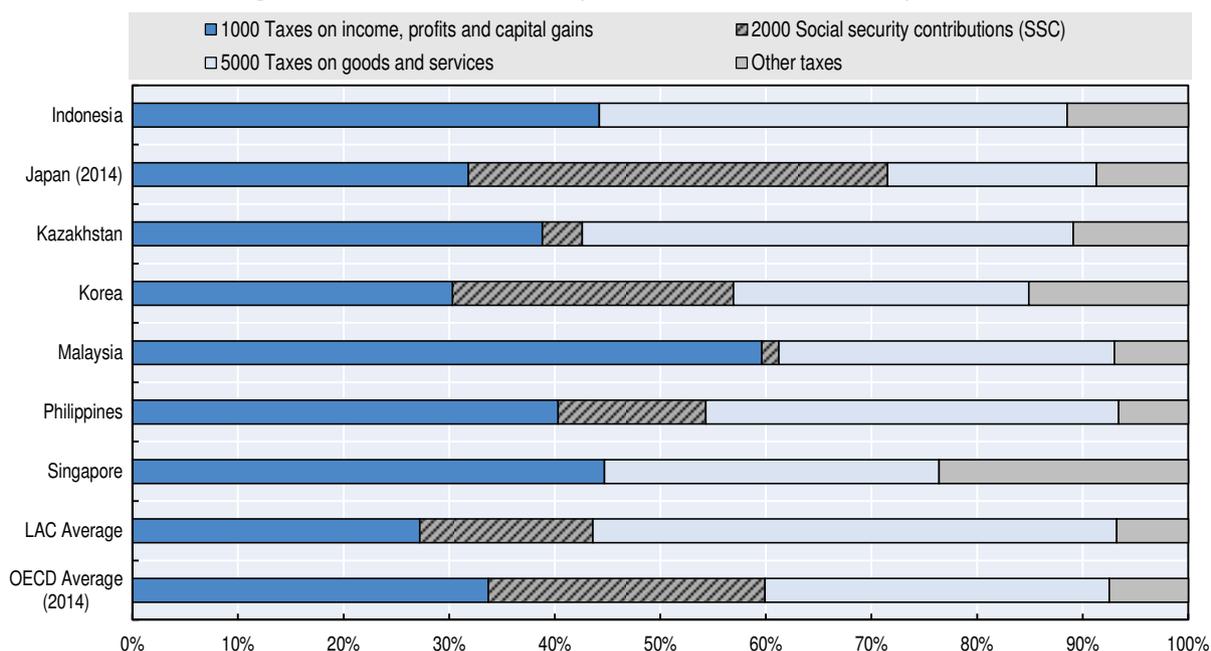
Tax structures in 2015 and evolution since 2000

There is a wide divergence of tax structures across the seven countries in this publication. The countries can be divided into two main groups:

- The four Southeast Asian countries and Kazakhstan rely principally on taxes on goods and services and taxes on incomes and profits, which together make up more than 75% of total tax revenue in these countries. Within this group, the share of taxes on income and profits and on taxes on goods and services is roughly the same (around 35-45%) in Indonesia, Kazakhstan, the Philippines and Singapore whereas revenue from taxes on income and profits in Malaysia generates nearly 60% of total tax revenue.
- In contrast, the tax structures of Japan and Korea are more evenly split between the main categories of tax revenues: in Korea, tax revenue is divided roughly equally into three parts: 30.3% from taxes on income and profits, 26.6% from social security contributions, and 28% from taxes on goods and services. This tax structure is similar to the OECD average. In Japan, social security contributions amount to nearly 40% of total tax revenue and the share of taxes on goods and services was slightly below 20% in 2014.

Between 2000 and 2015, Indonesia, Japan, Malaysia and the Philippines decreased their reliance on revenues from taxes on specific goods and services (mainly excises and import and customs duties) and increased revenues from taxes on general consumption, most notably VAT (Figures 1.17 and 1.18). In contrast, Korea, Kazakhstan and Singapore decreased their reliance on taxes on general consumption and increased their reliance on taxes on specific goods and services.

Figure 1.16. Tax structures (as % of total tax revenue), 2015

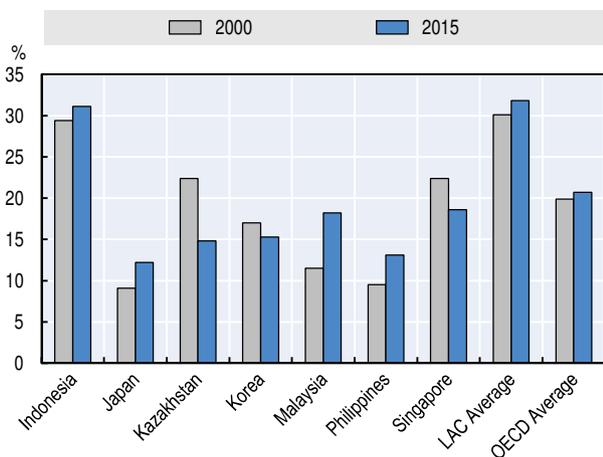


Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: Authors' calculations based on tables in Chapter 4.

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Figure 1.17. Revenue from taxes on general consumption as % of total tax revenue, 2000 and 2015

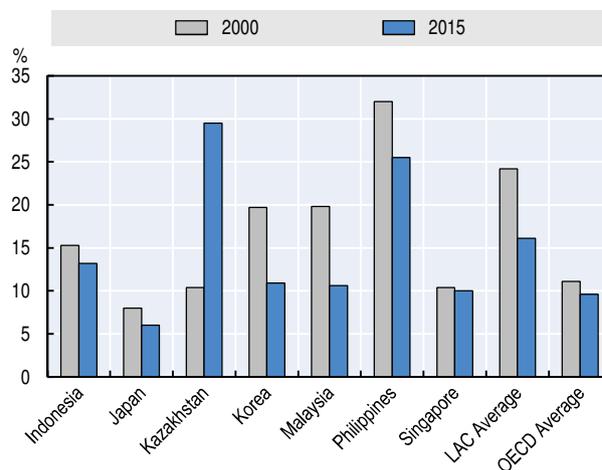


Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: Table 3.13.

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Figure 1.18. Revenue from taxes on specific goods and services as % of total tax revenue, 2000 and 2015



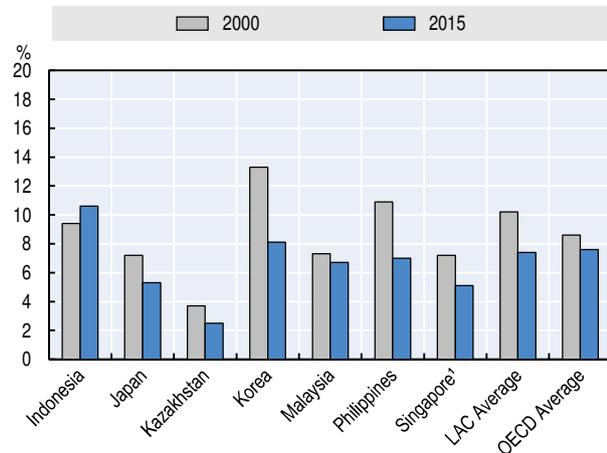
Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: Table 3.15.

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Over the past decades, tax revenues from import duties have decreased in many countries, partly due to trade liberalisation that took the form of reductions of tariffs and new trade agreements (UNESCAP, 2014). Since 2000, dozens of bilateral and regional trade agreements have been signed by East Asian countries (Pomfret and Sourdin, 2011). In January 2007, the ASEAN countries agreed that tariffs on all intra-ASEAN goods would be eliminated by 2015 (Safuan, 2012).

Figure 1.19. Revenue from excises as % of total tax revenue, 2000 and 2015



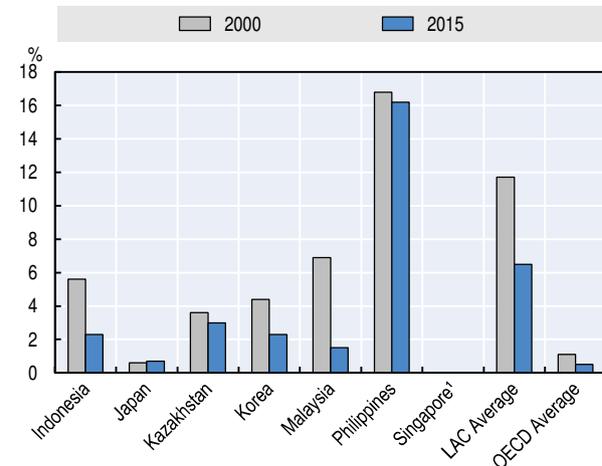
Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

1. Customs and import duties cannot be separated from excises in Singapore and have been classified in category 5121 excises.

Source: Authors' calculations based on tables in Chapter 4.

StatLink  <http://dx.doi.org/10.1787/888933543638>

Figure 1.20. Revenue from customs and import duties as % of total tax revenue, 2000 and 2015



Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

1. Customs and import duties cannot be separated from excises in Singapore and have been classified in category 5121 excises.

Source: Authors' calculations based on tables in Chapter 4.

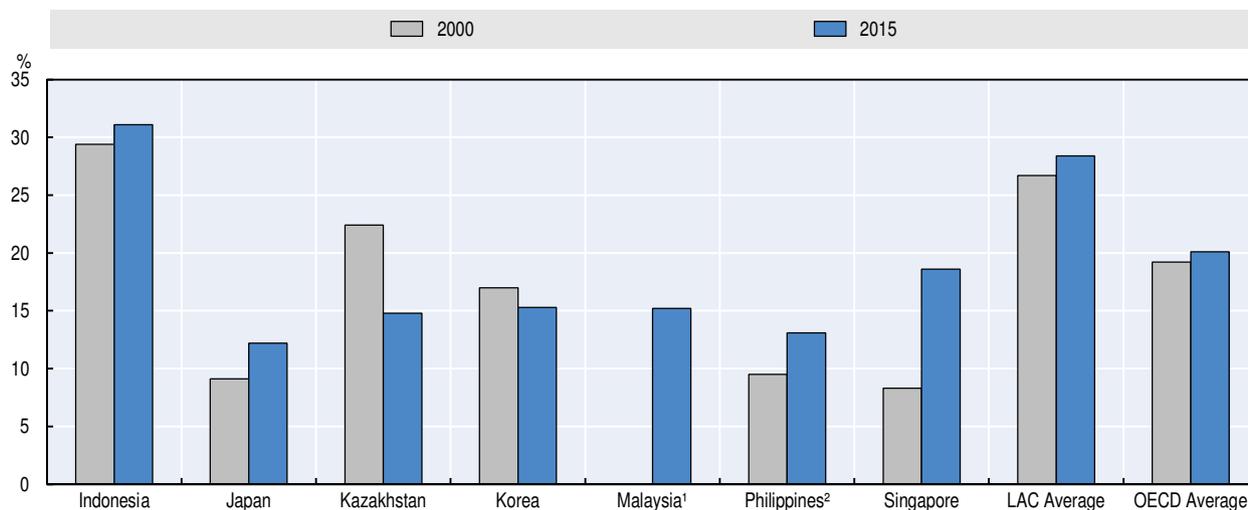
StatLink  <http://dx.doi.org/10.1787/888933543657>

In Indonesia, Kazakhstan, Korea, Malaysia and the Philippines, the share of import duties⁴ decreased between 2000 and 2015, consistent with these broader trends. As in OECD countries on average, the share of excises decreased in all seven countries except in Indonesia where it increased slightly over that period.

Between 2000 and 2015, the contribution of VAT to total tax revenues increased significantly in most Asian countries, including five of the seven countries in this publication. In Kazakhstan and Korea, revenues from VAT as percentage of total tax revenues have decreased. In Kazakhstan, this is partly due to the steady decrease in the VAT standard rate from 20% in 2000 to 12% in 2015. All seven countries source an important part of their revenue from VAT, except for Malaysia, which introduced VAT in 2015, having relied previously on a goods and services tax. Across the seven countries, VAT revenue as a percentage of total tax revenue ranges from 13% in the Philippines to 31% in Indonesia in 2015 (Figure 1.21). The figure for the Philippines needs to be interpreted with caution as the data exclude revenue from VAT on imports that could not be distinguished from revenue from other import duties.

The share of the VAT to total tax revenues in each country remains smaller than the OECD average of 20%, except in Indonesia. This is partially due to the lower VAT rates in many Asian countries compared to OECD countries. VAT rates in the seven countries ranged from 7% in Singapore to 12% in Kazakhstan and the Philippines in 2015 (Tradegeconomics, 2016), whereas the average standard VAT rate is 19% in OECD countries (Ernst and Young, 2015).

Figure 1.21. Revenue from VAT as % of total tax revenue, 2000 and 2015



Note: Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

1. Malaysia introduced a VAT in 2015 and previously relied on a goods and services tax until 2014.

2. The figure needs to be interpreted with caution as the data exclude revenue from VAT on imports that could not be distinguished from revenue from other import duties.

Source: Authors' calculations based on tables in Chapter 4.

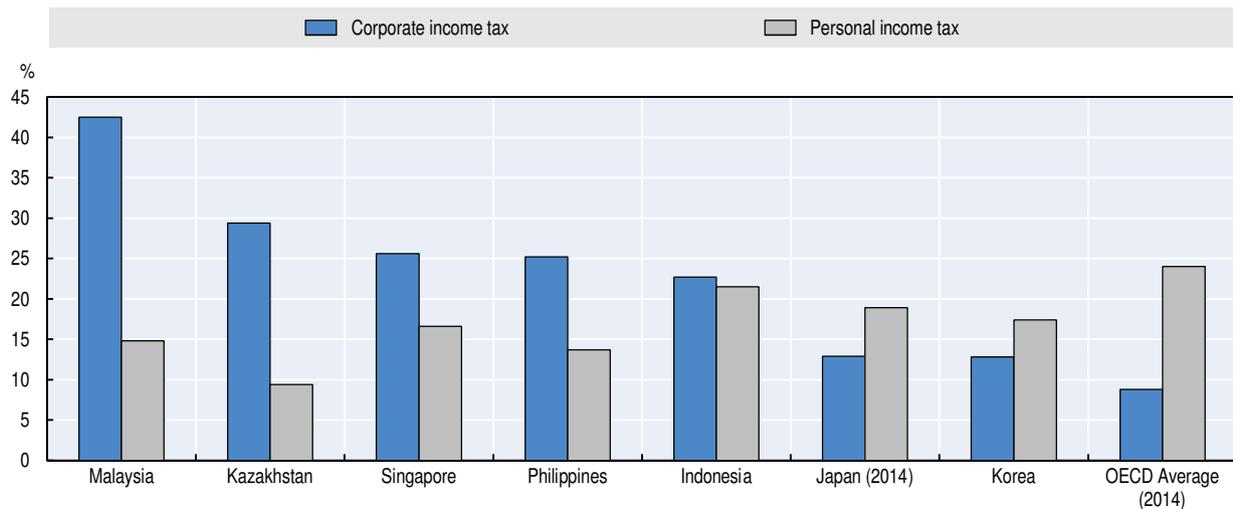
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The share of corporate income tax revenues to total tax revenue in the seven countries included in this publication is higher than the OECD average of 8.8% (2014 figure). The share of corporate income tax revenues to total tax revenue is around 13% in Japan and Korea and is higher in other countries, where corporate income tax revenues ranged from 23% of total tax revenue in Indonesia to 42.5% in Malaysia. Southeast Asian countries and Kazakhstan obtain a higher proportion of their revenue from corporate income taxes than from personal income taxes. In contrast, Japan and Korea have a higher share of personal income tax revenues compared to corporate tax revenues.

The share of personal income taxes to total revenue ranges from approximately 9.4% in Kazakhstan to 21.5% in Indonesia. When social security contributions are also considered, the two categories account for 60% of total tax revenues in Japan (2014); 44% in Korea; 28% in the Philippines; and less than 20% in the other countries.

As in OECD countries on average, property taxes and payroll taxes play a limited role in the tax revenues of Asian countries. The percentage of property tax revenue to total tax revenues varies from 8.5% to 13% in Japan, Korea and Singapore, and less than 4% in Indonesia, Kazakhstan, Malaysia and the Philippines. There are no payroll taxes in Indonesia, Japan, Malaysia, the Philippines and Singapore.

Figure 1.22. **Revenue from corporate income tax and personal income tax as % of total tax revenue, 2015**



Note: A small amount of income tax revenues (less than 5%) cannot be allocated to either personal or corporate income tax in Malaysia, the Philippines and Singapore, and is not included in this figure. Data for Korea, Japan and the OECD average are taken from Revenue Statistics (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: Authors' calculations based on tables in Chapter 4.

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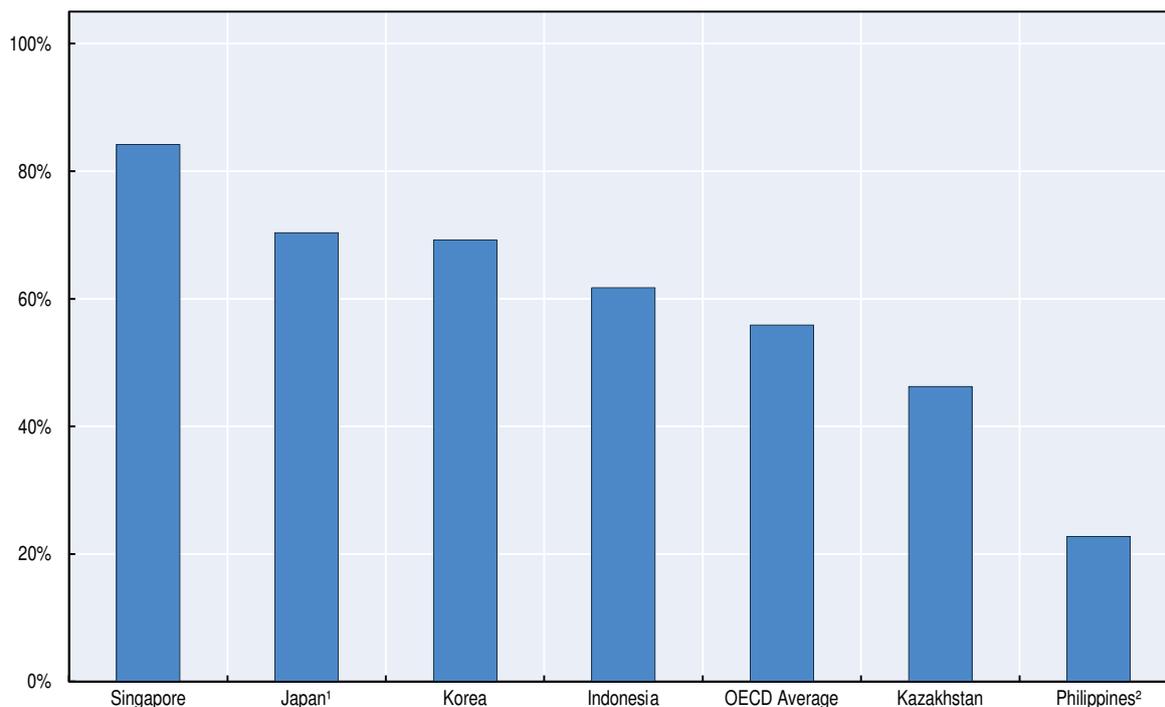
VAT revenue ratio

The VAT revenue ratio (VRR) measure for Asian countries has been calculated for the first time and included in this publication. OECD (2016c) explains that “the VRR measures the difference between the VAT revenue actually 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 100% 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 and analyses Indonesia and the Philippines in more depth.

There was a wide disparity of VRRs in Asian countries in 2014 (Figure 1.23). The Philippines had the lowest VRR ratio at 23% and Singapore had the highest at 84%. Of the countries in this publication, Japan, Korea and Singapore have relatively high VRR (exceeding 65%), above the OECD average of 56%. This is partially because of the relatively broad VAT based in each country: Japan does not have any reduced rates and 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). Korea has a reduced rate on a number of goods and services. In comparison many OECD countries have one or more reduced rates (OECD, 2016c), which partly explains the lower average VRR in the OECD region.

Of the countries included in this publication, Indonesia had the fourth highest VRR in 2014 at 62%. This figure needs to be interpreted with caution as the VAT revenue includes revenue from the luxury tax⁵ whose rates range between 10% and 125% on luxury goods (Indonesia investments, 2017). Brondolo et al. (2008) estimated that in 2001 luxury tax revenue may have represented over 10% of the VAT revenue. A decrease of 10% in VAT revenue results in the VRR decreasing by 8 p.p. from 62% to 54% in 2014.

Figure 1.23. VAT revenue ratio (VRR) in Asian countries (%), 2014



Note: 2015 figures are not available due to missing final expenditure consumption figures for Kazakhstan, Singapore and Malaysia. Malaysia is not included as VAT was introduced in 2015.

1. Given the increase in the VAT rate from 5% to 8% on 1 April 2014, an average VAT rate was used to calculate the VRR for 2014 i.e. $(5 \times 3 + 8 \times 9) / 12 = 7.25\%$.

2. The VRR measure 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)).

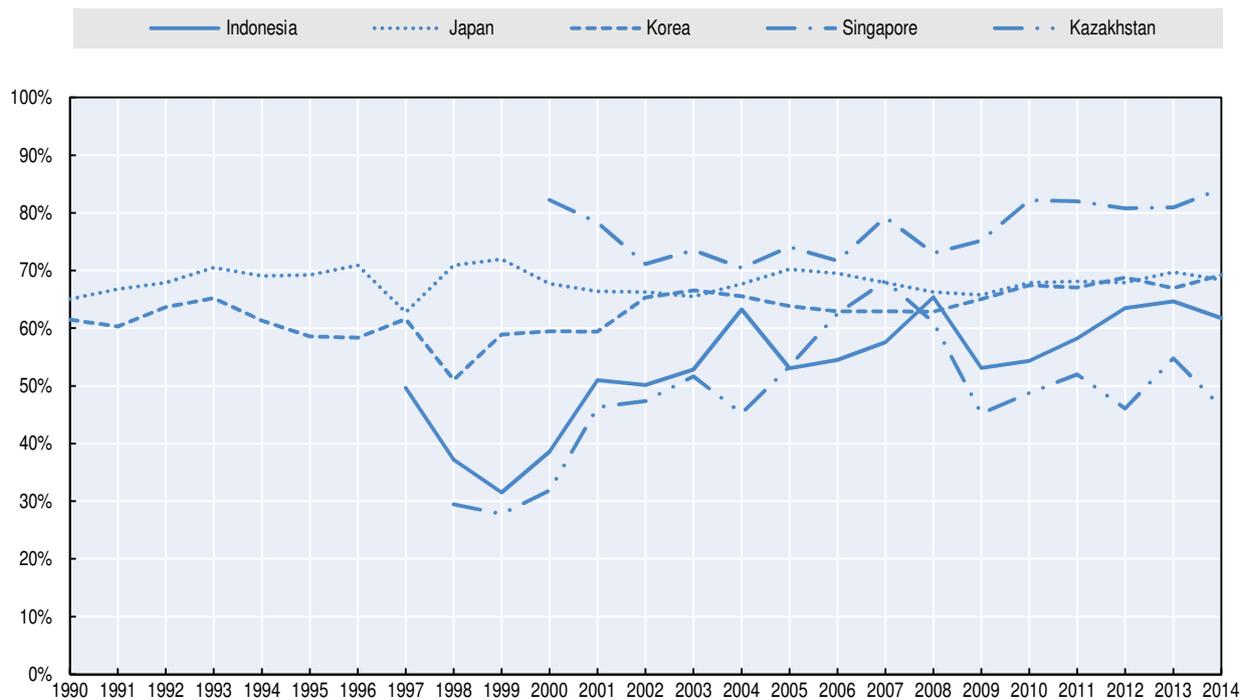
Source: The VAT rates are sourced from countries, Trading Economics and Deloitte websites and OECD (2016c). The final expenditure consumption figures are from the United Nations Statistics Division website and the OECD Annual National Accounts. The VAT revenues are sourced from the country tables in Chapter 4.

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Moreover, the relatively high VRR rate in Indonesia also hides a number of complexities within the VAT system. On one hand, there are many exemptions on products and services in Indonesia. These include mining and drilling products, food and beverages served in hotels and restaurants, various services including healthcare, social welfare, postal delivery, financial services, religion, education, culture and entertainment (IBFD, 2017). IMF (2017) estimated that the VAT revenue loss due to exemptions on final consumption of goods and services in Indonesia amounted to 0.8% of GDP. On the other hand, a few aspects of the design of the VAT system artificially inflate revenue and therefore the VRR. Many exemptions in Indonesia relate to intermediate consumption leading to a cascading effect that increases VAT revenue (IMF, 2017).⁶ IMF (2017) estimated that this amounted to around 0.9 % of GDP. Another factor influencing the VRR in Indonesia is the VAT refunds process. IMF (2017) explains that “the refund procedure is excessively long. Regular taxpayers (...) are audited prior to receiving a refund payment”. This aspect of the VAT administration may discourage taxpayers to claim their due VAT refunds resulting in higher VAT revenue and VRR.

In the Philippines, the VRR was 23% in 2014. However, this figure also needs to be interpreted with caution. The VRR measure is currently underestimated as the VAT revenue collected at customs is not included with the Philippines' total VAT revenue in this publication.⁷ Using publicly available estimates of this VAT revenue (BOC, 2015), the VRR increases from 23% to 47%. However, even this adjusted VRR remains one of the lowest of the countries in this publication. The Department of Finance (DOF) has noted that VAT revenue collection is particularly low in comparison to Thailand, which collects a similar VAT share as a percentage of GDP with a lower standard rate (DOF, 2016). The DOF saw this as being due to the Philippines' tax code, "which contains 59 lines of exemptions from the Value-Added Tax and 84 special VAT-related laws, [which] have led to massive revenue leakages costing the government an estimated P90.7 billion each year (...)". The government is considering a tax reform which will rationalise the VAT system and remove some exemptions, while maintaining exemptions of senior citizens and persons with disabilities, raw food purchases and health and education expenses (DOF, 2017). This may increase VAT revenue and the VRR in the future.

Figure 1.24. VAT revenue ratio (VRR) in Asian countries (%), 1990-2014



Note: 2015 figures are not available due to missing final expenditure consumption figures for Kazakhstan, Singapore and Malaysia. Malaysia is not included as VAT was introduced in 2015. The Philippines are excluded as the VRR's trend may not be representative because of the exclusion of the VAT revenue at customs in the total VAT revenue.

Source: The VAT rates are sourced from countries, Trading Economics and Deloitte websites and OECD (2016c). The final expenditure consumption figures are from the United Nations Statistics Division website and the OECD Annual National Accounts. The VAT revenues are sourced from the country tables in Chapter 4.

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The VRR has not evolved greatly for Japan, Korea and Singapore since 2000 (Figure 1.24) whereas it has experienced major changes in Indonesia and Kazakhstan over that period. Looking more closely at Indonesia, its VRR has increased significantly since the late 1990s experiencing sharp declines in 2005, 2009 and 2010. Between 2000 and 2004, the VRR for Indonesia nearly doubled and increased from 38% to 63% and VAT revenue increased from 2.5% of GDP to 4.5% over that period, which coincided with the recovery from the Asian financial crisis of 1997/98 in many Asian countries. Since 2001, Indonesia has undertaken extensive tax administration reforms to improve the effectiveness and efficiency of the Department General of Taxes (DGT). These reforms aimed to make taxpayer services and enforcement programmes more effective, improve tax administration structure and update information systems (Brondolo et al., 2008). The combination of structural economic changes and the tax administration improvements accounts for the increase in VAT revenue. Following this, VAT revenues as a percentage of GDP decreased in 2005, with a further decrease between 2008 and 2010 following the global financial crisis.

1.3. Taxes by level of government

The proportion of total revenues collected by local government in Malaysia and the Philippines is relatively small at 3.3% and 5.3% respectively in 2015. Singapore, a city-state, has no local government divisions. In Indonesia, the proportion attributed to local governments is rising and was over 9% in 2015, following the shift of property taxation to the local level in 2014. Local government revenues in Japan, Kazakhstan and Korea are substantially higher at 23.4% (2014), 23.9% and 18.2% respectively. The corresponding average for OECD unitary countries was 11.7%. The share of local government revenue is high in Japan since local governments finance a wide range of goods and services including public welfare. They are also responsible for financing some education and debt services (Bessho, 2016).

Table 1.1. **Attribution of tax revenues to sub-sectors of general government as % of total tax revenue, 2015**

	Federal or Central government				State/Regional				Local government				Social Security Funds			
	1995	2000	2010	2015	1995	2000	2010	2015	1995	2000	2010	2015	1995	2000	2010	2015
Federal countries																
Malaysia	97.5	94.5	94.4	94.8	..	..	..	..	2.5	3.4	4.2	3.3	..	2.1	1.4	2.0
OECD ¹	52.5	55.9	53.0	53.4	16.0	15.4	16.4	16.7	7.7	6.9	8.0	7.6	23.6	21.5	22.4	22.2
Unitary countries																
Indonesia	..	96.5	92.1	91.5	..	..	..	..	..	3.5	7.0	9.3	..	..	..	..
Kazakhstan	..	50.0	81.1	72.3	..	..	..	..	..	50.0	16.4	23.9	..	..	2.5	3.9
Philippines	90.7	81.0	81.8	80.6	..	..	..	..	..	5.1	5.4	5.3	9.3	13.3	12.8	14.1
Singapore	..	100.0	100.0	100.0	..	..	..	..	..	0.0	0.0	0.0	..	0.0	0.0	0.0
Japan	41.3	38.7	33.0	36.9	..	..	..	..	25.4	26.3	25.7	23.4	33.3	35.3	40.9	39.7
Korea	69.1	67.9	59.8	55.3	..	..	..	..	18.8	14.9	16.7	18.2	12.0	16.7	23.5	26.5
OECD ²	65.5	66.4	63.4	63.5	..	..	..	..	10.7	10.8	11.8	11.7	23.5	22.6	24.5	24.5

Note: Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

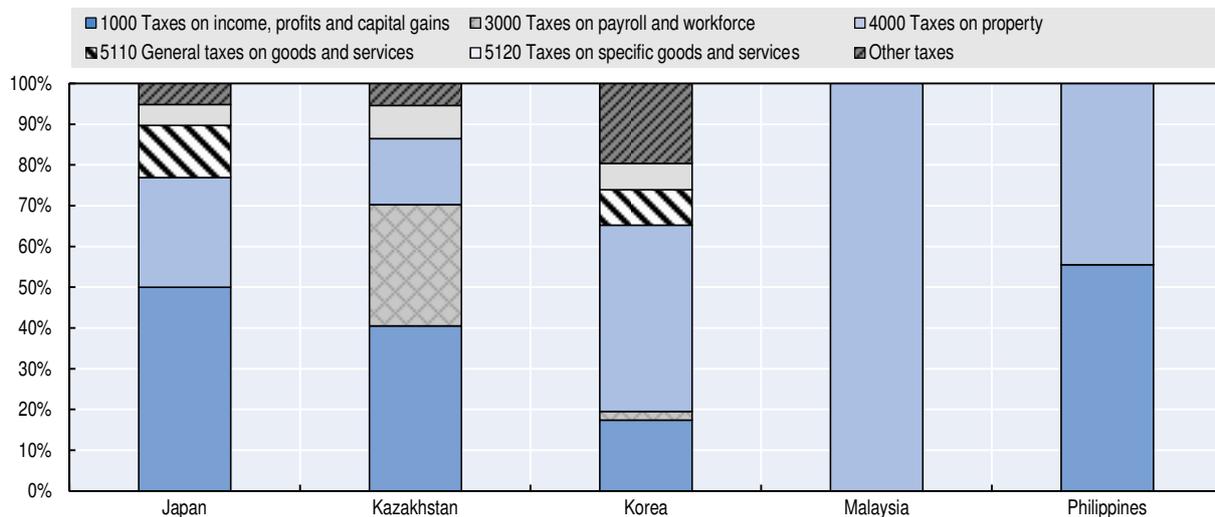
1. Represents the unweighted average for OECD federal member countries.

2. Represents the unweighted average for OECD unitary countries.

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The types of taxes levied at local government level vary between countries. Local governments in Malaysia and the Philippines have a narrow range of taxes under their jurisdiction, relying on property taxes (both countries) and taxes on income and profits (the Philippines only). Local 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.

Figure 1.25. **Composition of local government tax revenue by main type of taxes, 2015**



Note: Indonesia and Singapore are not included. In Indonesia, the composition of local tax revenue is unknown and is currently allocated to 6000 "Other taxes". Singapore, a city-state, has no local government divisions. Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

Source: OECD (2017), "Revenue Statistics - Asian Countries: Comparative tables", OECD Tax statistics (database).

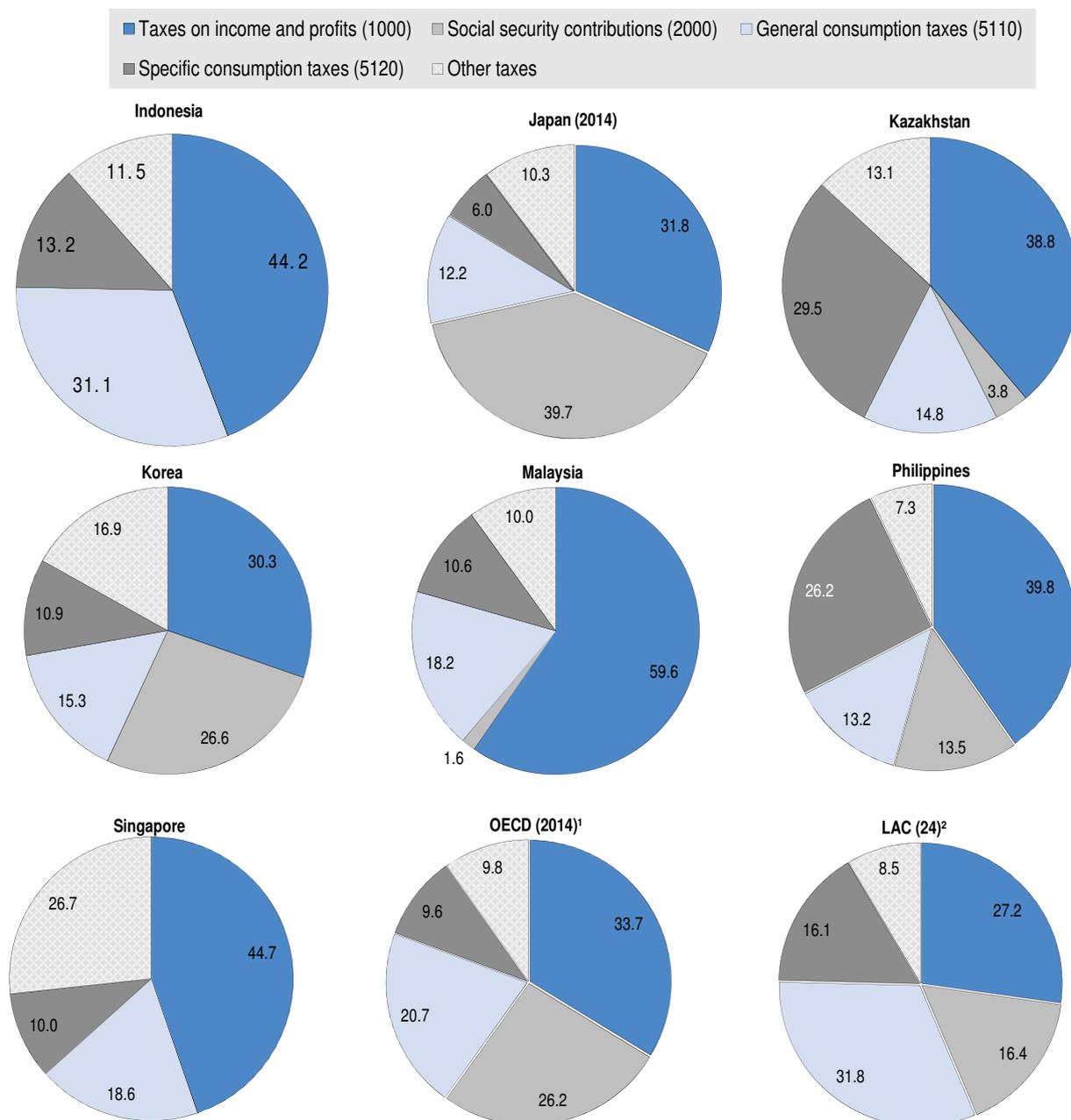
StatLink  <http://dx.doi.org/10.1787/888933543752>

Between 2000 and 2015 the share of revenues collected by local governments in Asian and OECD countries was fairly stable, with the exception of Indonesia and Kazakhstan in which the share of revenues attributed to local governments increased by 5.8 p.p. and Kazakhstan in which the share decreased by 26 p.p.

The proportion of total tax revenues collected by social security funds in Indonesia and Singapore was almost zero in 2015, whereas in the Philippines it was 14%. Tax revenues collected by social security funds in Kazakhstan and Malaysia were relatively low and amounted to 3.9% and 2.0% of total tax revenues. This compares with 39.7% in Japan (2014), 26.5% in Korea and 24.5% on average in the OECD unitary countries (2014). The share of revenues from social security funds has increased in both Japan (by 4.3 p.p.) and in Korea (9.7 p.p.) since 2000.

1.4. Comparative figures

Figure 1.26. **Tax structures, 2015**



Note: Data for Korea, Japan and the OECD average are taken from *Revenue Statistics* (OECD, 2016a) and are preliminary for 2015 in Korea. Data for 2014 are used for the OECD average and for Japan as data for 2015 are not available.

1. Represents the unweighted average for OECD member countries. Japan and Korea are also part of the OECD (35) group.

2. Represents the unweighted average for 24 LAC (Latin American and Caribbean) countries.

Source: Authors' calculations based on tables in Chapter 4.

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Notes

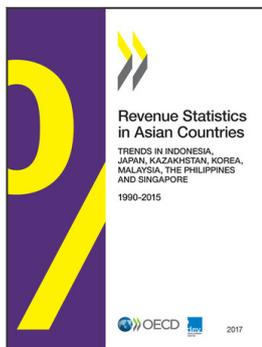
1. Data for Korea, Japan and the OECD average are taken from OECD (2016a), *Revenue Statistics* and are preliminary for 2015. At the time that publication was prepared, preliminary data on SSCs in 2015 for Japan were not available and consequently the tax-to-GDP ratio is not available for Japan in 2015.
2. ASEAN, the Association of Southeast Asian Nations.
3. Singapore does not levy social security contributions.
4. Customs and import duties cannot be separated from excises in Singapore and have been classified in 5111 Excises.
5. The breakdown between these two taxes is not readily available. In 2014 the luxury tax was applied to an extensive number of goods such as specified electronic appliances, housing, vehicles, alcoholic beverages, certain branded goods and household and office furnishings (PKF, 2015).
6. The cascading effect occurs when the VAT is levied on inputs used to produce VAT-exempt goods and services. In such cases, the VAT on inputs – that cannot be deducted – is transferred to the consumer through higher prices.
7. 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).

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