INDONESIA

SELECTED ISSUES

This Selected Issues paper on Indonesia was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on December 22, 2018.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org   Web: http://www.imf.org
Price: $18.00 per printed copy

International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

INDONESIA

SELECTED ISSUES

December 21, 2017

Approved By	Prepared By Tidiane Kinda, Jongsoon Shin, Agnes
Asia and Pacific	Isnawangsih (all APD), Hui Jin (FAD), Heedon Kang (MCM),
Department	Yinqiu Lu (SPR)

CONTENTS

FIGURES

TABLES

FIGURES

TABLES

TABLES

APPENDIX

HARNESSING INDONESIA'S DEMOGRAPHIC DIVIDEND: OPPORTUNITIES AND CHALLENGES[1]

With a young and growing labor force, Indonesia is set to enjoy favorable demographic trends for many years to come. This provides a window of opportunity to raise growth and support the country in addressing its development challenges. However, reaping the demographic dividend before aging starts to kick in, in less than 15 years, requires policies to raise productivity and create sufficient quality jobs to absorb the growing working-age population.

A.   Demographic Trends in Indonesia

1.   The fourth most populous country in the world, Indonesia's population continues to grow strongly. The country's population grew at 1.3 percent per year on average during 2000−16, reaching around 260 million in 2016. About 57 percent of the population lives in Java island, which has the lowest population growth (1.1 percent). Currently at 2.4 children per woman, fertility rate, while declining, is projected to remain above the replacement rate of 2.1 children per woman until 2030. As a consequence, despite a declining trend in population growth rate, total population is projected to rise to 296 million by 2030, also helped by a marked improvement in life expectancy (Figure 1).[2] Alongside population growth, urbanization has been rapid in recent decades. Urban population grew at 3 percent per year during 2000−16, while rural population declined by 0.2 percent.[3]

Figure 1. Fertility, Population Growth and Life Expectancy
(In percent, left scale)

- Fertility rate
- Population growth rate
- Life expectancy (in years, right scale)
- Share of working age population

Source: IMF staff estimates based on United Nations 2015 (medium-fertility scenario).
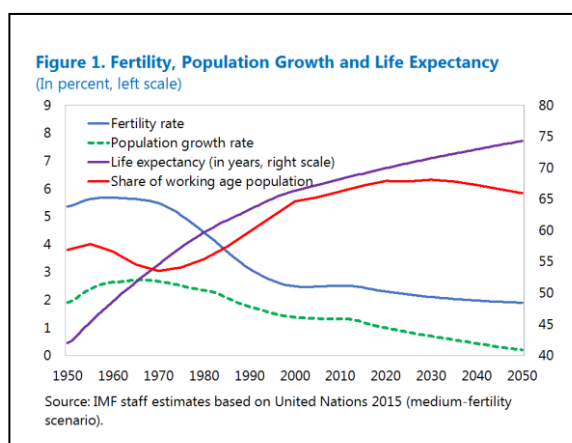
2.   The labor force is projected to rise substantially in the coming decades. Indonesia is undergoing a demographic transition with a sizeable decline in infant mortality and a reduction in fertility rates. For instance, infant mortality declined by about half during the recent years, from 41.1 infant per 1,000 live births in 2000 to 22.8 in 2016 (Table 1). This has led to an increase in the share of working age population, defined as persons 15 to 64 years old, which grew by 1.6 percent or 2.5 million people per year during 2000−16. From 67 percent of total population in 2016, the share of working age population is projected to peak at about 70 percent in 2031.

---

[1] Prepared by Agnes Isnawangsih and Tidiane Kinda.

[2] Population growth has been declining in recent years, from 1.4 in 2000 to 1.1 in 2016.

[3] About 55 percent of the population lives in urban areas.

3. **These favorable demographic trends provide a unique window of opportunity to raise growth**. With the number of workers growing faster than the number of dependents in Indonesia, the economy is set to benefit from a sizeable demographic dividend. Similar dynamics have provided strong tailwinds to growth and productivity in many other countries (IMF, 2015).

Table 1. Indonesia: Demographic Indicators

	2000	2005	2010	2016 1/
Population growth (percent)	1.4	1.4	1.3	1.1
Working age (15-64 years old)	2.1	1.6	1.4	1.2
Rural	-0.7	-0.1	-0.3	-0.4
Urban	4.3	3.1	2.9	2.5
In percent of total				
Working age (15-64 years old)	64.6	65.3	66.2	67.2
Rural	58.0	54.1	50.1	45.5
Urban	42.0	45.9	49.9	54.5
Population <30 years old	58.0	55.7	53.7	51.9
Total population (million)	211.5	226.7	242.5	261.1
Life expectancy at birth, total (years)	66.2	67.2	68.1	69.1
Fertility rate, total (births per woman)	2.5	2.5	2.5	2.4

Source: World Bank, Health Nutrition and Population Statistics; and BPS.

1/ or latest available data.

B. Tailwinds from Demographic Dynamics

4. **Demographic trends can impact growth through various channels**. These include the size of the labor force, productivity, and capital formation. The rising share of the working age population provides the most direct channel for higher incomes in a growth accounting framework. We rely on estimates from IMF (2017), which assesses long-term output using a production function approach with capital and labor as inputs.[4] Under this approach, population growth affects output through aggregate labor and capital. The impact of demographic changes on growth is obtained by the difference of estimated output between a hypothetical status quo scenario, which assumes constant population size and age structure, and the UN's medium-term fertility scenario.

---

[4] This estimation rests on a number of assumptions: (i) unchanged total factor productivity growth (based on the historical average); (ii) unchanged age- and gender-specific labor force participation rates (and employment rates); and (iii) constant capital-to-effective-labor ratio. See IMF (2017) for more details. The methodology follows the approach of Aiyar, Ebeke, and Shao (2017), building on the work by Feyrer (2007). The baseline model fits the growth in real output per worker on the share of workers aged 55+ years and the combined youth and old dependency ratios, with decade (10 years) and country fixed effects.

5. **Indonesia's growth is set to have a sizeable tailwind from demographic trends**.
Demographic trends in Indonesia, characterized by the rising working age population, are expected
to increase annual real GDP growth by close to 1 percentage point of GDP during the
period 2020−2050.[5] This is substantial and ranks the country relatively well compared to peers in the
Asia region, many of which are set to endure a reduction of real GDP growth due to adverse
demographic trends (Figure 2). In per capita terms, Indonesia is among a handful of comparable
Asian countries set to benefit from a boost in per capita GDP growth thanks to favorable
demographics. During the period 2020−2050, demographic trends are excepted to increase
Indonesia's annual per capita GDP growth by close to an additional 0.2 percentage points of GDP.

Figure 2. Growth Impact of Demographic Trends

(In percentage point impact; average over 2020–50)
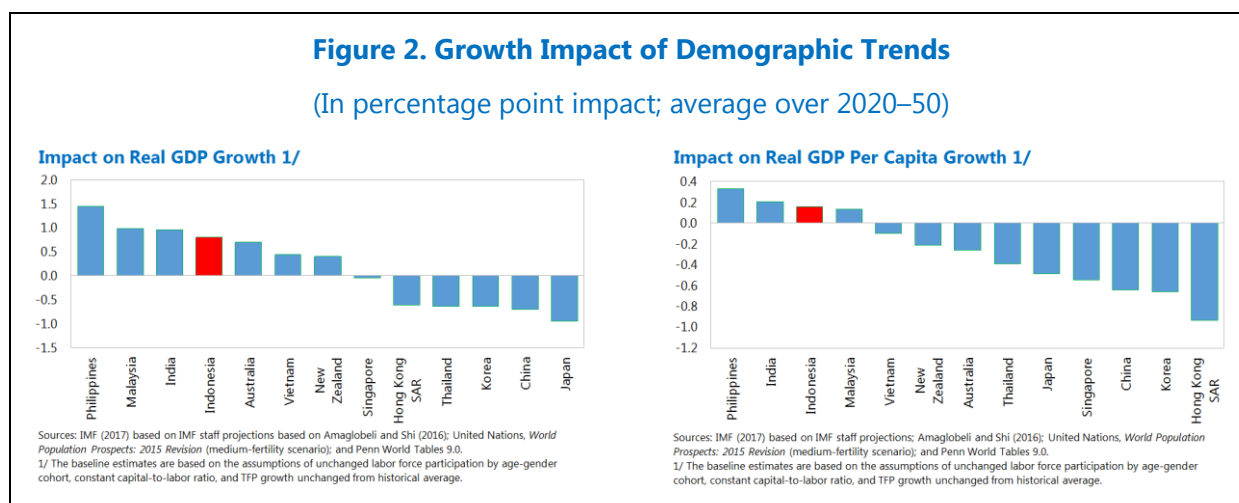
6. **The rising working population provides unique economic opportunities but also
comes with numerous challenges**. These include the need to create sufficient quality jobs to
absorb the rising labor force and preparing for aging in the long term.

C. Challenges Ahead

7. **Youth unemployment remains
stubbornly high**. Compared to the average
unemployment rate of 5.6 percent, youth
(15−24 years old) unemployment is significantly
higher at 19.4 percent and varies across age groups
(Figure 3).[6] Fresh graduates have difficulties finding
a job, particularly those with

---
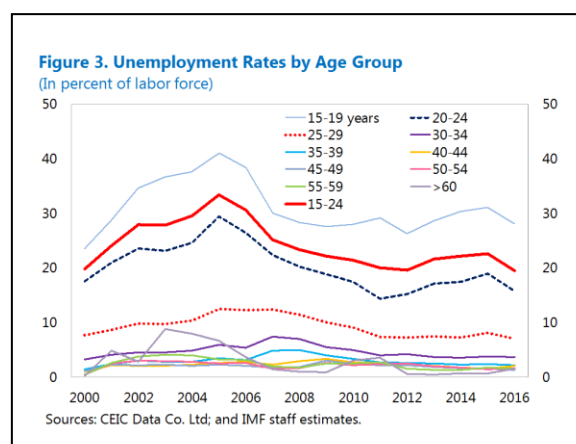
[5] This estimate could be viewed as a lower bound given the relatively high youth unemployment and existing room
to improve labor force participation rate, particularly for women.

[6] Informal employment remains still high at 58 percent.

tertiary education. Geographically, overall unemployment is highest in Java island, ranging from 8.9 percent in West Java to 2.7 percent in Yogyakarta, and lowest in Bali (1.9 percent).

8.   Gender disparity in labor participation has decreased but continues to persist. Female labor force participation rate improved from 48 percent in 2005 to 51 percent in 2017. However, it remains much lower than the 83 percent labor force participation rate of male. About a third of women have part-time jobs compared to less than 20 percent of men. Most female workers operate in the service sector (52 percent) and in agriculture (32 percent).

9.   Despite recent improvements, the quality of education remains low. Skill shortages are prevalent with under-qualified workers filling many positions (Allen, 2016). Indonesia's performance in various international education assessment programs has uncovered issues related to the quality of mathematics, science and literacy education. There are also significant disparities in education quality across regions, with the eastern parts of Indonesia lagging even further behind.

10.   Indonesia should seize the window of opportunity to reap the demographic dividend, as aging is projected to start kicking in less than 15 years. Asia overall and Indonesia are aging much faster compared to the past experiences of advanced economies. While in the United States, it took more than 50 years for the old-age dependency ratio to increase from 15 percent to 20 percent, this transition took 28 years in Australia and 26 years in Europe. However, for most Asian countries, a similar transition happened or is expected to in less than 15 years (IMF, 2017). Indonesia's old-age dependency ratio is projected to increase from 15 to 20 within 11 years. Such a rapid speed of aging means that the current favorable demographic trends should not lead to complacency.

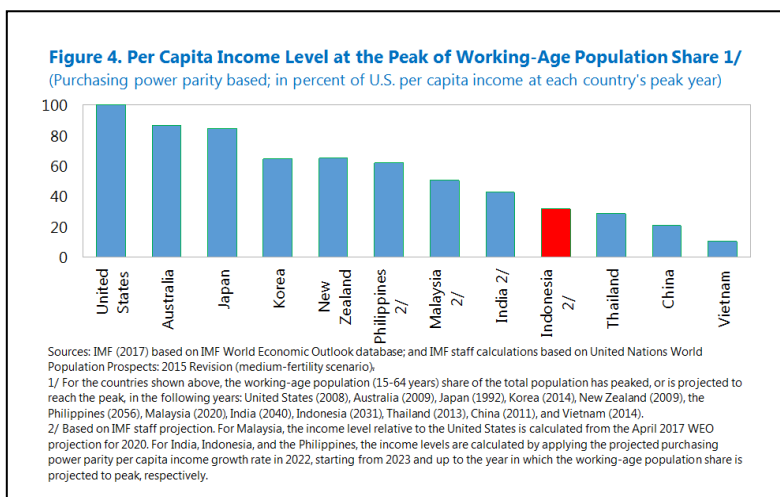**11.   In the long-term, Indonesia can grow old before becoming rich**. The rapid speed of aging implies that Indonesia, similarly to many Asian economies, may face the prospect of becoming old before becoming rich. Figure 4 illustrates this by comparing each country's per capita income relative to the United States when the share of working age population reached its peak or is projected to peak.

Figure 4. Per Capita Income Level at the Peak of Working-Age Population Share 1/
(Purchasing power parity based; in percent of U.S. per capita income at each country's peak year)

Sources: IMF (2017) based on IMF World Economic Outlook database; and IMF staff calculations based on United Nations World Population Prospects: 2015 Revision (medium-fertility scenario)
1/ For the countries shown above, the working-age population (15-64 years) share of the total population has peaked, or is projected to reach the peak, in the following years: United States (2008), Australia (2009), Japan (1992), Korea (2014), New Zealand (2009), the Philippines (2056), Malaysia (2020), India (2040), Indonesia (2031), Thailand (2013), China (2011), and Vietnam (2014).
2/ Based on IMF staff projection. For Malaysia, the income level relative to the United States is calculated from the April 2017 WEO projection for 2020. For India, Indonesia, and the Philippines, the income levels are calculated by applying the projected purchasing power parity per capita income growth rate in 2022, starting from 2023 and up to the year in which the working-age population share is projected to peak, respectively.

For example, Thailand, China, and Vietnam have already reached their peaks. At the year of the peak, each country's per capita income was still significantly below the U.S. level, from 10 percent of U.S per capita income in Vietnam to 29 percent in Thailand. In Indonesia, the share of working age population is projected to peak in 2031. At that time, Indonesia is projected to have only 32 percent of the U.S. per capita income (Figure 4). This contrasts with the case of some advanced Asian economies such as Australia and Japan, which were much wealthier at the same aging stage.

12. **Aging can also have a drag on productivity growth and put pressure on public finances**. Aging can reduce productivity growth through a depreciation of knowledge or age-related declines in physical and mental capabilities. IMF (2017) estimates that the projected workforce aging in Indonesia will reduce real GDP growth by 0.1 percent per year during the period 2020–50, through a decline in total factor productivity growth. At less than 1 percent of GDP from 2015 to 2050, the projected increase of age-relating spending (pension and health spending) remains relatively modest in Indonesia, thanks to a still favorable demographics. However, coverage remains limited and future expansions are likely to increase spending pressure.

D. Implications for Policies

13. **Given Indonesia's favorable demographic trends, policies should focus first on maximizing the demographic dividend**. Reaping the demographic dividend requires appropriate policies to raise productivity and create enough quality jobs for the growing working-age population. Investing in human capital early on, including education and health care, is essential to improve the productivity of the workforce and increase the size of the demographic dividend. Aiyar and others (2016) show that policies such as broadening access to health services, improving workforce training, and promoting innovation via higher R&D to adapt to a changing global environment may increase productivity growth and lower the negative productivity impact of an aging workforce. Facilitating the development of globally competitive labor intensive sectors, including by streamlining regulations, nontariff measures and FDI restrictions, could help absorb the large and rising labor force (IMF, 2015). If done in the early phases of the demographic transition, these investments can speed up the transition and help Indonesia reaps larger benefits.

14. **It is important for macroeconomic policies to account early on for the potential effects of aging**. The current fiscal framework, with a deficit ceiling of 3 percent of GDP, provides a strong policy anchor. Enhancing revenue mobilization would provide additional fiscal space to accommodate the cost of higher spending in education and health needed to increase the productivity of the rising labor force. Additional fiscal space could also support important structural reforms to maximize the demographic dividend. Essential structural reforms include labor market reforms, such as promoting labor force participation of women. Expanding the availability of childcare facilities and promoting flexible employment can be particularly important in that regard.

References

Aiyar, S., C. Ebeke, and X. Shao, 2016, "The Impact of Workforce Aging on European Productivity," IMF Working Paper No. 16/238 (Washington: International Monetary Fund).

Allen, Emma R., 2016, "Analysis of Trends and Challenges in The Indonesian Labor Markets," ADB Papers on Indonesia No. 16 (Manila: Asian Development Bank).

Amaglobeli, D., and W. Shi, 2016, "How to Assess Fiscal Implications of Demographic Shifts: A Granular Approach," *IMF Fiscal Policy Paper*, How-to-Note No. 16/02 (Washington: International Monetary Fund).

Feyrer, J., 2007, "Demographics and Productivity," *Review of Economics and Statistics*, Vol. 89 Issue 1, pp. 100–09.

International Monetary Fund, 2017, *Regional Economic Outlook, April 2017: Asia and Pacific— Preparing for Choppy Seas*, World Economic and Financial Surveys (Washington).

————, 2015, *Regional Economic Outlook, April 2015: Sub-Saharan Africa—Navigating Headwinds*, World Economic and Financial Surveys (Washington).

PRIORITIZING FISCAL REFORMS TO ENHANCE PRODUCTIVITY AND EQUITY IN INDONESIA[1]

A well-sequenced growth-enhancing fiscal strategy is critical for Indonesia. This paper outlines the priorities of a fiscal strategy, which includes new excise taxes and structural tax reforms to finance infrastructure and well-targeted social programs. These fiscal reforms will enhance productivity and equity and pave the way for future reforms.

A.   Introduction to Fiscal Reforms and Sequencing

1.   Implementing a growth-enhancing fiscal strategy is critical to promote growth and equity in Indonesia. A Medium-Term Revenue Strategy (MTRS) is necessary to address the low general government revenue (around 12 percent of GDP). The MTRS should increase revenue by at least 3 percent of GDP over the medium term to finance priority expenditure within Indonesia's fiscal rules. Most of the revenue gains should be generated by tax policy reforms, especially for income and value-added tax (VAT), complemented by improvements to tax administration and introducing excise taxes on vehicles and fuel products. The additional revenue should be used to expand growth and equity enhancing priority expenditure, such as on infrastructure, health, education, and social safety nets, while improving spending efficiency (Jin 2017).

2.   As implementing a comprehensive fiscal strategy will take time, near-term policy actions should be taken to arrest the fall in revenue and develop infrastructure. Indonesia's tax-to-GDP ratio has declined in recent years, therefore the introduction of excises taxes on vehicles and fuel should be frontloaded to raise additional revenue of about 1 percent of GDP. The additional revenue can be used to partly finance the authorities' infrastructure plan, including the 247 priority projects.

3.   A subset of the fiscal strategy could also be prioritized to support inclusive growth. This subset comprises revenue and expenditure measures. On the revenue side, the priorities include removing exemptions in income taxes and VAT, lowering the VAT and corporate income tax (CIT) thresholds, simplifying VAT policy and administration, and enhancing tax administration overall, which could deliver additional revenue of 0.5–1 percent of GDP in the near term. On expenditure, the additional revenue could be used to expand the most effective and targeted social programs to reduce inequality (see Section C below). These reforms would support inclusive growth and pave the way for future reforms.

---

[1] Prepared by Hui Jin.

B. Improving Productivity and the Business Climate Through Tax Reforms

Tax Policy Reforms: Reducing Resource Misallocation to Boost Productivity

4.   **The April 2017 Fiscal Monitor suggests that resource misallocation induced by distortionary tax treatments is an important source of low productivity** (IMF 2017). Such distortionary tax treatments are not uncommon worldwide, including different effective marginal tax rates on capital asset types (machines versus buildings), source of financing (equity versus debt), size of firms (small versus large), and formality of business (former sector versus informal sector):

- Distortions across capital asset types are due to differences between tax depreciation and economic depreciation, especially in equipment associated with information technology.

- Distortions across source of financing occur when firms can deduct interest expenses, but not returns to equity, in calculating CIT liability.

- Distortions across size of firms arise from lower CIT rates for firms below a certain size as measured by the level of profits, turnover, or number of employees.

- Distortions across business formality are due to higher taxes and social security contributions on formal businesses, while tax administration enforcement is weak on informal businesses.

5.   **Reducing such distortions through tax reforms could boost potential growth**. Although it is difficult to eliminate all distortions, reducing them to the level of the top performing countries in the same income group could deliver substantial benefits. For emerging market economies like Indonesia, such reforms could lead to an increase in real GDP growth of 1.3 percentage points in the long run.

6.   **Indonesia has several distortionary incentives and exemptions in its tax system**. They include not only internationally common practices such as deductibility of interest expenses, but also many Indonesia-specific distortions:

- **CIT exemptions**. Although the statutory CIT rate (25 percent) is in line with the OECD average and major emerging market economies, there are several lower-rate CIT regimes: a 1 percent presumptive tax on gross revenue for small and medium enterprises below an annual turnover of IDR 4.8 billion (USD 355,100); a rate reduction of 50 percent for taxable income corresponding to gross turnover up to IDR 4.8 billion of medium-sized enterprises with an annual turnover below IDR 50 billion; and a reduced rate of 20 percent for publicly listed companies.

- **VAT exemptions**. Despite a modest VAT statutory rate (10 percent), a long list of exemptions have been granted to final and intermediate goods and services by the VAT law and government regulations: mining (unprocessed products), staple goods (agriculture), tourism (hotels and restaurants), transportation, employment services, banking and insurance, art and entertainment services, education, and medical and social services; capital goods; agricultural, plantation, and

forestry products; electricity (excluding that supplied to households with consumption above 6,600 Watts); distributed piped water; cattle, poultry, and seeds, weapons for the army, educational books, ships, trains, aircrafts and their spare parts, and low-cost housing.

- **VAT threshold**. The threshold of turnover for mandatory VAT registration is IDR 4.8 billion, the same as the CIT threshold for the 1 percent turnover tax in lieu of regular CIT, which is very high compared to other countries (Figure 1). This VAT threshold covers only 50,000 firms, compared to over 400,000 firms previously registered under a much lower threshold of IDR 600 million.

Figure 1. VAT Registration Thresholds

Threshold (in thousands of U.S. dollar, left scale)
Threshold as a multiple of per capita PPP GDP (right scale)

SGP IDN MYS BGD THA ARG PHL POL NGA PAK EGY

Sources: International Bureau of Fiscal Documentation; and IMF staff estimates.
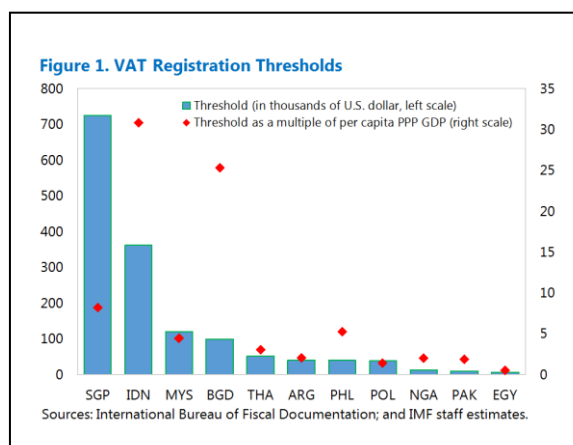
7.   These distortions could encourage arbitrage and lead to inefficient resource allocation. The 1 percent presumptive turnover tax for small and medium firms incentivizes them to stay below the threshold of IDR 4.8 billion, instead of growing into larger and more competitive firms. It also disregards the actual profit margins and may impose high tax burdens on firms experiencing short-term losses. The VAT threshold and numerous exemptions breaks the VAT chain, compromising the VAT's efficiency and neutrality. In addition, these exemptions and thresholds have made tax administration more complex. The Directorate-General of Taxation (DGT) allocates much of its human resources to deal with these complexities, instead of focusing on more productive areas such as risk-based audits.

8.   Tax policy reforms should reduce distortions and improve resource allocation to boost growth. On VAT, reducing the threshold of IDR 4.8 billion (e.g., to the previous threshold of IDR 600 million) would broaden the tax base and raise revenue, without overburdening truly small firms with little capacity to keep proper books and records. Removing unnecessary VAT exemptions on both final and intermediary consumptions would also strengthen the integrity of the VAT chain. On CIT, limiting the application of the 1 percent presumptive tax only to truly small and new firms (e.g., below IDR 600 million) with a phase-out period of a few years for the special treatment would incentivize the establishment of new and innovative firms. Unifying the remaining CIT rates at 25 percent or slightly lower would level the playing field for firms of different sizes and encourage firms to grow.

Tax Administration Reforms: Improving Business Climate to Enhance Growth

9.   Indonesia has made significant progress in improving its business climate. According to the 2018 World Bank *Doing Business Report* (World Bank 2018), Indonesia's overall ranking has been upgraded to 72 from 106 two year ago, thanks to the 16 economic policy packages adopted by the government since 2015. These packages aim to enhance the business climate by streamlining

regulations, cutting bureaucracy, adding one-stop shops, and rationalizing permit and license procedures. Indonesia's improvement in rankings during 2016–2018 is particularly impressive on resolving insolvency (36), enforcing contracts (26), protecting minority investors (26), starting a business (23), and getting electricity (23) (Table 1).
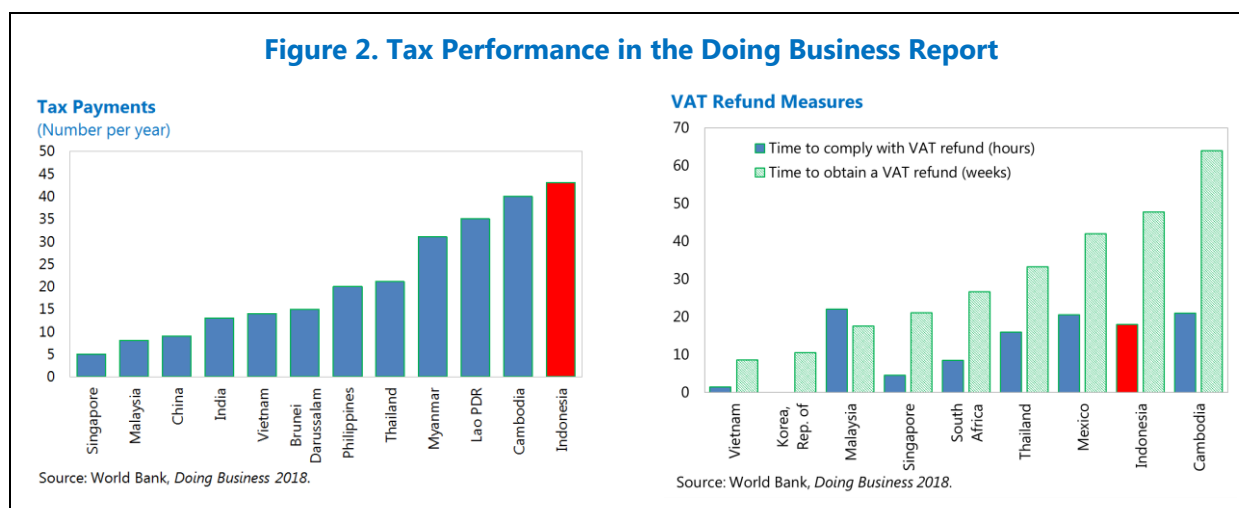
10.   However, Indonesia's ranking in paying taxes has barely moved, limiting the scope for further improvements of the business climate. The ranking of paying taxes has only improved from the 115th to 114th position in the past two years due to weaknesses on several fronts. For a typical medium-sized company assumed by the World Bank report, the number of tax payments needed per year has been reduced from 54 to 43, but is still above those in peer countries (average 19). Such a firm also needs to spend 18 hours to comply with VAT refunds and wait 47.7 weeks to receive refunds (Figure 2), which is longer than most peers (average 12 hours and 27.9 weeks, respectively). This is partly because Indonesia's VAT taxpayers must itemize each transaction in their tax returns, in contrast with other countries where only the aggregated amount is needed. Also, the DGT audits almost every taxpayer who requests a VAT refund, instead of using a modern risk-based approach.

Table 1. Indonesia's Doing Business Ranking

	Doing Business			Improvement
	2018	2017	2016	2016–2018
Overall ease of Doing Business rank	72	91	106	34
Component rank				
Resolving insolvency	38	76	74	36
Enforcing contracts	145	166	171	26
Protecting minority investors	43	70	69	26
Starting a business	144	151	167	23
Getting electricity	38	49	61	23
Registering property	106	118	123	17
Getting credit	55	62	70	15
Dealing with construction permits	108	116	113	5
Paying taxes	114	104	115	1
Trading across borders	112	108	113	1

Source: World Bank, Doing Business database.

Figure 2. Tax Performance in the Doing Business Report

Tax Payments (Number per year)

Source: World Bank, *Doing Business 2018*.

VAT Refund Measures
- Time to comply with VAT refund (hours)
- Time to obtain a VAT refund (weeks)

Source: World Bank, *Doing Business 2018*.

11.   Simplifying and strengthening tax administration is needed to address these issues, particularly on VAT. Removing VAT exemptions would significantly simplify VAT administration. Moreover, subjecting VAT refunds to risk-based audits, instead of audits of almost every refund request, would allow the DGT to focus on more productive areas and improve their collection efficiency.

12.   In summary, prioritizing the above reforms in tax policy and administration would not only raise revenue but also unlock growth potential. These reforms would contribute to more

efficient resource allocation and higher potential growth. Although the revenue potential from these structural tax reforms is modest, estimated at 0.5 percent to 1 percent of GDP in the next couple of years, it could be used to expand the most equity-enhancing priority expenditure discussed below.

C. Enhancing the Distributive Role of Fiscal Policy

13.   Inequality in Indonesia remains elevated, despite some improvement in recent years (Figure 3). According to the World Bank, Indonesia's income Gini coefficient was 39.5 in 2013, comparable to neighboring countries and the BRICS, and inequality has declined modestly in recent years. Mobility across income quintiles appears low (Table 2). During 1993–2007, 37 percent of the poorest 20 percent families remained in the poorest quintile, while 56 percent of the richest 20 percent families remained in the richest quintile, despite rapid growth (World Bank 2016).

Table 2. Indonesia: Household Income Mobility 1/

		2007 Income Quintile				
		Q1	Q2	Q3	Q4	Q5
1993 Income Quintile	Q1	37%	36%	19%	6%	2%
	Q2	31%	28%	19%	14%	8%
	Q3	23%	27%	28%	13%	10%
	Q4	12%	18%	22%	26%	21%
	Q5	8%	8%	11%	18%	56%

Source: World Bank.

1/ Q1 is the poorest, and Q5 is the richest. Percentage in each cell represents the proportion of the income quintile in 1993 that moved to the income quintile in 2007.

Figure 3. Inequality in Indonesia
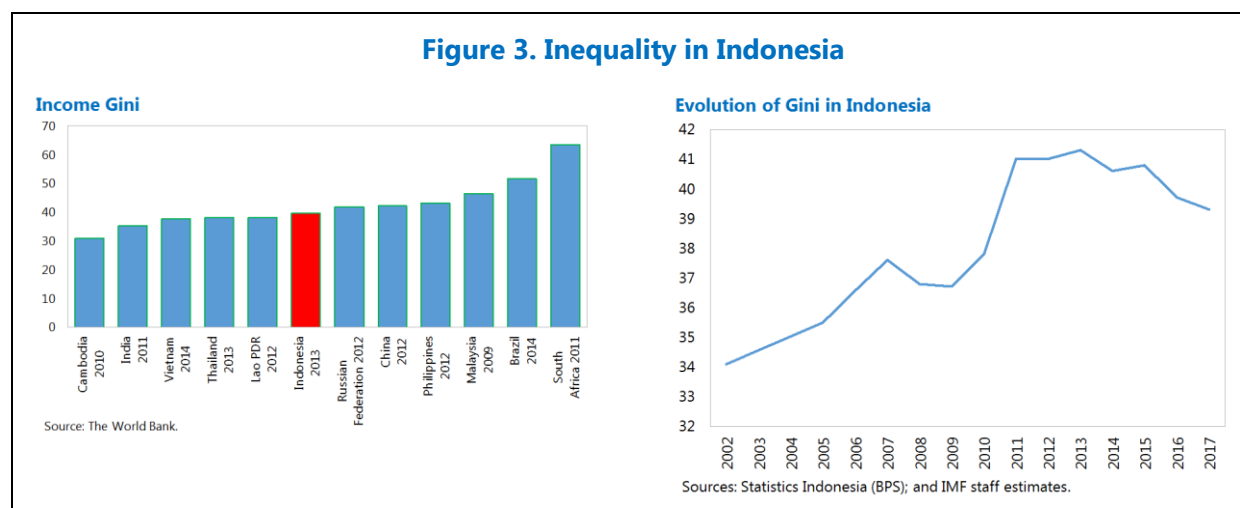
14.   Much of the inequality is associated with unequal access to social services and infrastructure (Figure 4). There is a significant gap in access to pension benefits, with the poorest households having no access. Access to health is better, as health insurance coverage is similar across income groups at around 50 percent, thanks to the government's effort to subsidize poor households' health insurance. However, inequality in access to health services across regions is notable, with only 28 percent of the villages in the poor regions of Maluku and Papua having health centers, compared to the national average of 38 percent. For the villages without health centers, the closest health center is 24 kilometers away, compared to the national average of 6 kilometers (World Bank 2016). In education, enrollment in free primary and lower secondary education is close to

universal across all income groups, but enrollment from rich households in upper secondary and tertiary education is much higher than those from poor households.

Figure 4. Inequality in Access to Social Services and Infrastructure
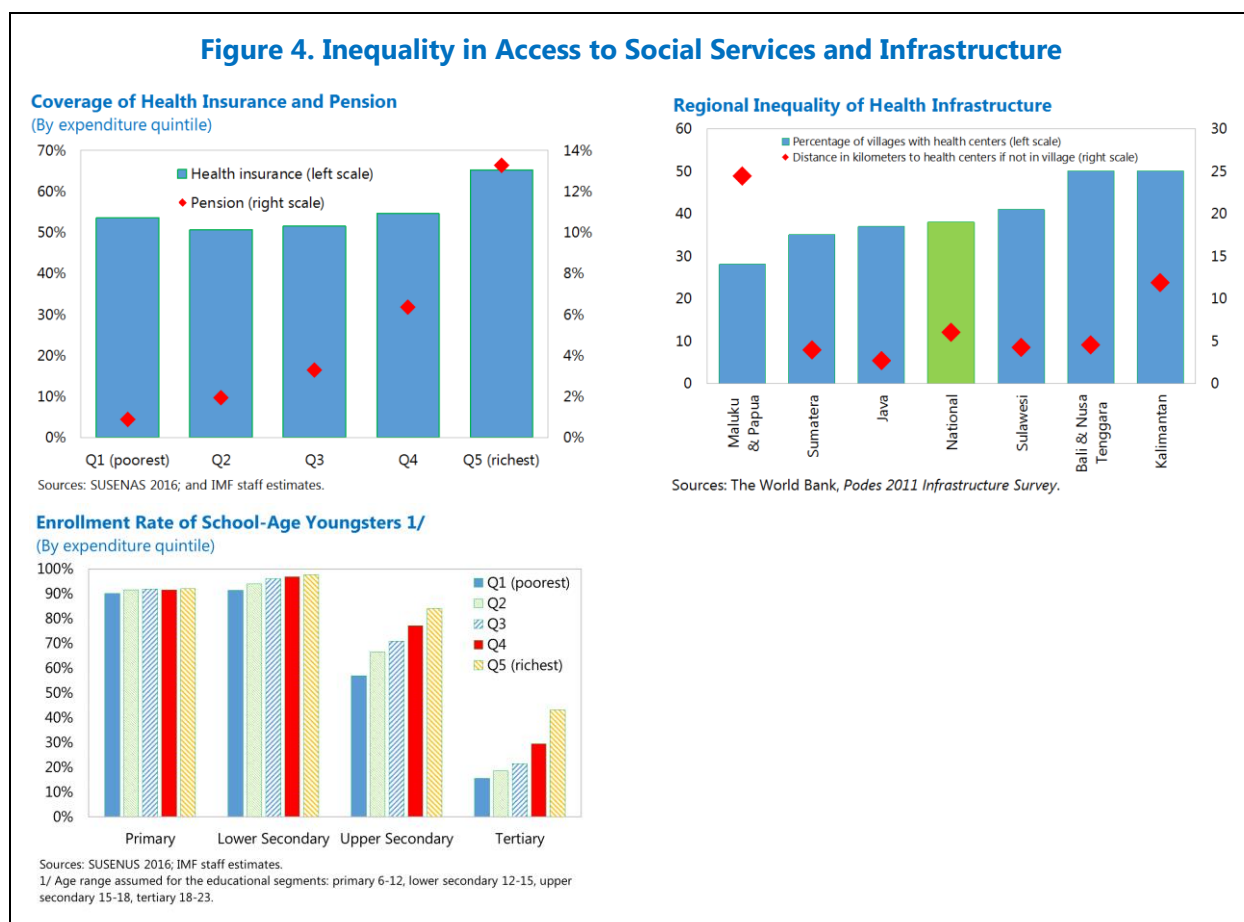
**15.	There is much room to improve the distributive role of the fiscal policy** (Figure 5). The impact of Indonesia's fiscal policy on inequality has been limited compared to other emerging market economies, particularly those in Latin America. Latin American countries spent much of their windfall revenue from the commodity boom in the 2000s on equity-enhancing areas, such as social assistance, health, education, and infrastructure. In Indonesia, there are also mandatory spending floors for health and education, which are 5 percent and 20 percent of budgetary expenditure, respectively. However, Indonesia still has much room to spend more on its most equity-enhancing programs, particularly on conditional cash transfers (PKH), targeted rice transfers (RASKIN), and scholarship programs for poor students (BSM).

**16.	Equity-enhancing expenditure can be financed by the generally equity-neutral tax system**. Indonesia's overall tax system has a limited impact on equity (Figure 5). Its VAT is only slightly regressive, because staple foods are exempt to support the poor. Excise taxes are notably progressive, and so is personal income tax. Therefore, increasing taxes to finance equity-enhancing priority expenditure would reduce inequality in Indonesia. Given the small size of the most

equity-enhancing programs (0.3 percent of GDP spent on PKH, RASKIN and BSM), expanding them with the additional revenue of 0.5–1 percent of GDP from the above structural tax reforms would provide a strong boost to equity in Indonesia.

Figure 5. Impact of Fiscal Policy on Inequality Reduction 1/

Source: The World Bank.

Sources: The World Bank; and IMF staff estimates.
1/ As of 2012. PKH-Conditional cash transfer, RASKIN -Rice subsidy, BSM-Scholarship for poor students (BSM), general education - primary and secondary education.

1/ On the right chart, the effectiveness index (left scale) of inequality reducing measures the cost-effectiveness of each tax or expenditure item. A larger bar means that the Gini was reduced by more for the given percent of GDP collected or spent than the item with a lower bar.

D. Paving the Way for Future Fiscal Reforms

17.   The above priority fiscal reforms will help lay a solid foundation for implementing the growth-enhancing fiscal strategy. Lowering the VAT threshold and removing distortionary VAT exemptions is a prerequisite for raising the VAT rate from 10 percent to a higher rate (e.g., 12 percent). Without these reforms, increases in the VAT statutory rate would amplify existing distortions. In addition, these fiscal reforms could help set the stage and gradually build public support for further reforms as infrastructure is developed and inequality reduced. Once consensus is reached, the remaining part of the growth-enhancing fiscal strategy (Jin 2017) could be rolled out, such as raising the VAT rate to finance health, education, and further infrastructure development. With a full implementation of the fiscal strategy, Indonesia will gain much-needed resources for moving beyond its middle-income status.

References

International Monetary Fund, 2017, *Fiscal Monitor: Tackling Inequality, October 2017*, World Economic and Financial Surveys (Washington).

Jin, Hui, 2017, "Deepening the Growth-Enhancing Fiscal Strategy," in *Indonesia: Selected Issues*, IMF Country Report No. 17/48 (Washington: International Monetary Fund).

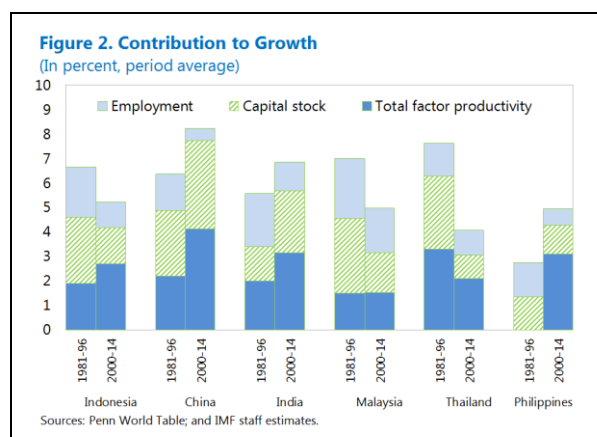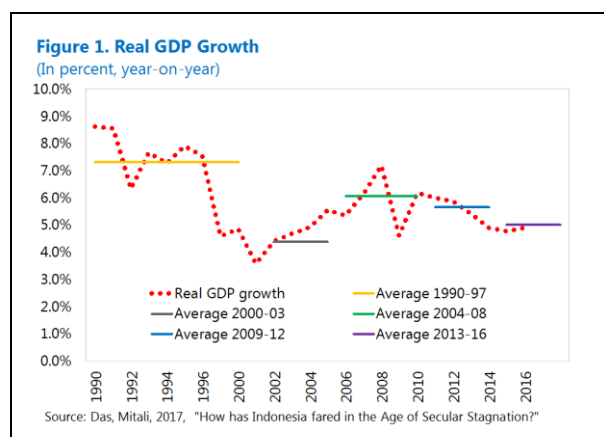World Bank, 2016, *Indonesia's Rising Divide* (Washington).

—————, 2018, *Doing Business 2018: Reforming to Create Jobs* (Washington).

INDONESIA'S GROWTH STRATEGY: BOOSTING POTENTIAL GROWTH WITH STRUCTURAL REFORMS[1]

The Indonesian authorities are seeking to accelerate economic growth. Indonesia can achieve stronger inclusive potential growth with structural reforms on infrastructure, regulations, and human capital. An illustrative scenario that includes these reforms shows that potential growth could rise from 5.6 percent to 6.5 percent in the medium term. Structural reforms, together with clear communication and coordination among the authorities, would also help boost confidence in the economy.

A.   Introduction

1.   Higher growth is needed to address Indonesia's developmental needs and reap the benefits of the demographic dividend. Indonesia's economic growth has slowed in the last decade, with the contributions from capital and labor falling and that of total factor productivity (TFP) remaining below peers (Figure 1 and Figure 2). Growth has stabilized at near 5 percent, and exports and imports have declined relative to GDP. Slower growth has made it more difficult to create quality jobs for the near 2 million new labor force entrants each year. Employment varies widely across provinces, and inequality remains somewhat elevated.

Figure 1. Real GDP Growth (In percent, year-on-year)

Source: Das, Mitali, 2017, "How has Indonesia fared in the Age of Secular Stagnation?"

Figure 2. Contribution to Growth (In percent, period average)

Sources: Penn World Table; and IMF staff estimates.

2.   To boost growth, the authorities have accelerated infrastructure development and improved the business environment. Public investment on infrastructure has increased with several projects currently under construction. The authorities have also implemented 16 economic policy packages since 2015 to streamline regulations and strengthen productivity. The FDI regime was partially liberalized, barriers to entry have been reduced, including on logistics, and the setting of the minimum wage has been made clearer. A single submission system, covering the licenses of both central and 534 regional governments, is being introduced to improve coordination with line ministries and local governments. Reflecting these efforts, Indonesia's World Bank's *Doing Business* ranking improved markedly to the 72nd position in 2018 from the 106th position in 2016.

---

[1] Prepared by Jongsoon Shin (APD)

3.   Indonesia can accelerate potential inclusive growth by continuing structural reforms on infrastructure, regulations, and human capital. Previous studies have found that the most binding constraints to growth in Indonesia include infrastructure, regulations, and human capital (OECD, 2016; World Bank, 2015; and ADB, 2013). Previous studies have also found positive effects on growth from reforms on infrastructure, regulations, trade and FDI, labor markets, and education:

- IMF (2014) finds that the multiplier on output of increasing infrastructure investment by 1 percentage point of GDP ranges between 1 percent and 1.3 percent in the first year, rising gradually to over 2 percent in 10 years.

- Barnes (2014) finds that a benchmark reduction in the product market regulation (PMR) index could increase TFP by around 2 percent of GDP over 5 years, with larger gains for emerging market economies (EMEs). For example, a 10 percent reduction in the PMR index could lead to gains in TFP of 1.7 percent for BRICS and 1.3 percent for OECD countries. Gal and Hijzen (2016) finds that product market reforms have positive effects on capital, output and employment, with their effects increasing over time. After two years, product market reforms raise capital by 4 percent, output by 3 percent, and employment by 1 percent. Bouis and others (2016) finds that major reductions in entry barriers yield large increases in output and labor productivity over a five-year horizon, and output gains from reforms primarily reflect higher TFP; and that effects become statistically significant two to three years after the reform, as prices start dropping, and productivity and output increase significantly.

- Dabla-Norris and others (2016) finds that trade and foreign direct investment (FDI) liberalization, as well as labor market reforms to remove excessive rigidities, can significantly boost TFP in EMEs. Moreover, the short-term costs of these reforms are small, while the medium-term benefits are sizable and long lasting. Coady and Dizioli (2017) finds that expanding education would help reduce income inequality, especially in EMEs.

B.   Infrastructure Development

4.   The government has prioritized several infrastructure projects.

- *The government has selected 247 priority infrastructure projects, with a total cost of US$323 billion (32 percent of GDP),* to be implemented in 2015–22 (Figures 3 and 4). The plan centers on improving logistics, power generation, water and sanitation, and oil refineries. These include constructing 3,650 km of roads, 3,258 km of railways, 24 new seaports, and 15 new airports. The plan also includes developing power plants with total capacity of 35 GW, 33 new dams, and new oil refineries of 600,000 barrels per day. Most of the cost is expected to be borne by the private sector (18 percent of GDP) and state-owned enterprises (SOEs) (10 percent of GDP). Out of 247 projects, four have been completed; 131 are being constructed; and 112 are being prepared.

- *Fiscal spending on infrastructure has risen*. The authorities have increased infrastructure spending after the fuel subsidy reforms in 2015, which freed fiscal space for development. The central government's capital spending and transfers to local governments for infrastructure have risen

by 1 percentage point of GDP between 2014 and 2017. The funds allocated for infrastructure investment in the 2018 budget is about 6 percent higher than in the 2017 revised budget.

- *The authorities are also seeking to raise infrastructure investment through SOEs and public-private partnerships (PPPs).* To support infrastructure investment, the government injected capital to SOEs amounting to 0.6 percent of GDP in 2015–16. The authorities are trying to mobilize foreign investment by having SOEs finance from capital markets, including by domestic and external bond issuances as well as initial public offerings of subsidies. The authorities have improved the schemes for guarantees and PPPs. Government guarantees for infrastructure investment (credit, business viability, and PPP guarantees) stood at 2.8 percent of GDP in March 2017, while the maximum guarantee limit is 6 percent of GDP during 2017–20.

Figure 3. Real Public Capital Stock
(In percent of 2011 constant GDP, 2015)

Sources: IMF, Investment and Capital Stock data (2017).
1/ General Government.
2/ Public-private partnership.

Figure 4. Funding Allocation Plan for 247 Projects
(In percent of GDP)

Sources: The Committee for Acceleration of Priority Infrastructure Delivery (KPPIP); and IMF staff estimates.
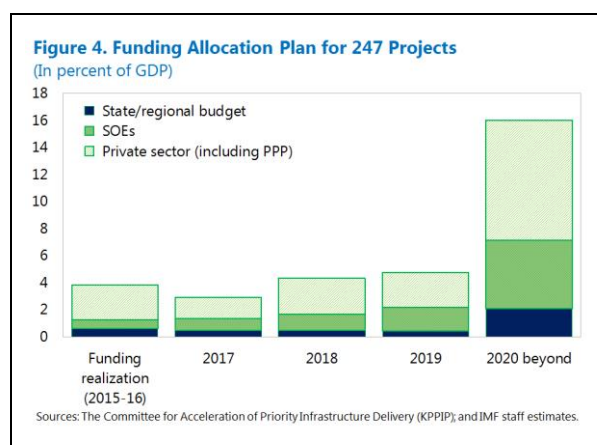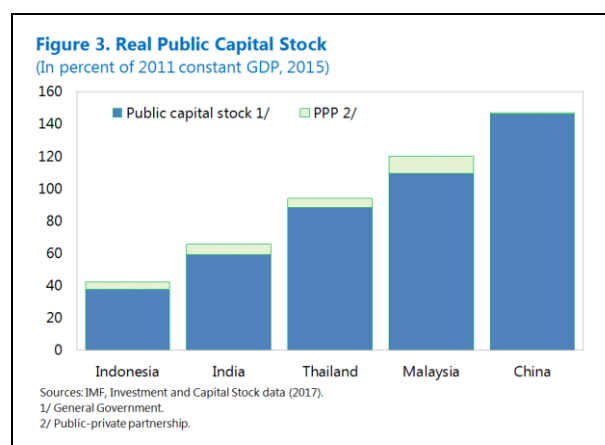
5.   The authorities have also improved the institutional and regulatory framework.

- *Coordination has been strengthened.* The authorities established the Committee for Acceleration of Priority Infrastructure Delivery (KPPIP) to coordinate priority projects, including by commissioning or amending feasibility studies. KPPIP coordinates 37 of these projects, including 12 oil refineries, one electricity program, 74 roads, and 23 rail roads. The Investment Coordinating Board (BKPM)'s one-stop service has also helped expedite investment approvals.

- *The land acquisition process has been streamlined and made more flexible.* The maximum time needed for land acquisition has been shortened to around 400 days from 518 days. The revised regulations allow for revocation of land rights in public interest and enable businesses to acquire land on behalf of the authorities and be reimbursed later. The State Asset Management Agency (LMAN) was established to facilitate the financing of land acquisitions. LMAN integrates land acquisitions for national strategic projects and carries over unused budget into the following year. The land acquisition process was completed for a toll road project (the Trans-Sumatra) and a rail project (the Java North Line Double track), both of which had been delayed for decades.

- *To attract foreign investment in infrastructure, the Negative Investment List (DNI) has been eased.* The foreign ownership limit for toll road operators, telecommunications, and testing companies has risen to 100 percent from 95 percent. The foreign ownership limit of distribution and

warehousing has increased to 87 percent from 33 percent.

- *The framework for PPPs has improved, and several important PPPs were launched* (Figure 6). The government established a PPP unit and improved financial support schemes, particularly guarantee programs to ensure acceptable market returns for private investors, including the Viability Gap Fund (covering up to 49 percent of the construction cost) and the Availability Payment scheme (annuity payment during the concession period). Several PPPs have been launched, including the Palapa Ring Broadband project (US$0.6 million, supported by Availability-Payment scheme); the Umbulan Water project (US$0.3 million, supported by the Viability Gap Fund); the Central Java Power Plant (US$3 billion); and three toll roads (US$2.2 billion).

Figure 5. Private Participation in Infrastructure
(In percent of GDP)

Sources: World Bank, *Private Participation In Infrastructure*; and IMF staff estimates.
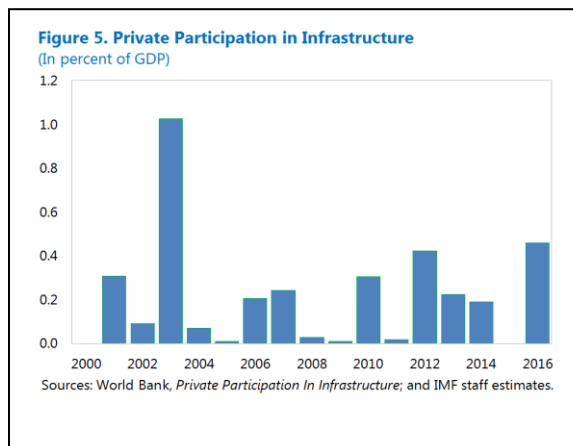
6.   Notwithstanding these actions, the government is relying on SOEs while investors are concerned with uncertain policy and regulations. Limited fiscal space and low private sector participation have made the government rely on SOEs to jumpstart infrastructure investment. This may crowd out private investment and prevent a sound, sustainable development framework. Investors appear to be concerned with the lack of transparency in the procurement of projects, believing that SOEs receive more commercially attractive projects through direct assignments. Investors are also concerned with the uncertain legal/regulatory framework, particularly regarding policy continuity and land acquisition, given the long-term capital intensive nature of the projects.

7.   In developing infrastructure, vulnerabilities and risks should be carefully managed to protect macrofinancial stability:

- *Priority should be given to financing infrastructure development with revenue from a medium-term revenue strategy (MTRS).* Despite a recent increase, there is still large room for public investment to expand, aided by tax revenue reforms (Figure 6). This would allow for steady funding for infrastructure investment, while limiting the buildup of external debt.

Figure 6. Real Public Investment 1/
(In percent of GDP, 2011 constant dollars)

Sources: IMF (2017); and IMF staff estimates.
1/ Investment of general government as the average of 2012-15.

- *Meanwhile, infrastructure development should be paced in line with available financing and the economy's absorptive capacity*. Given low fiscal space, limited institutional capacity, and shallow domestic financial markets, a too rapid raise in infrastructure investment could increase
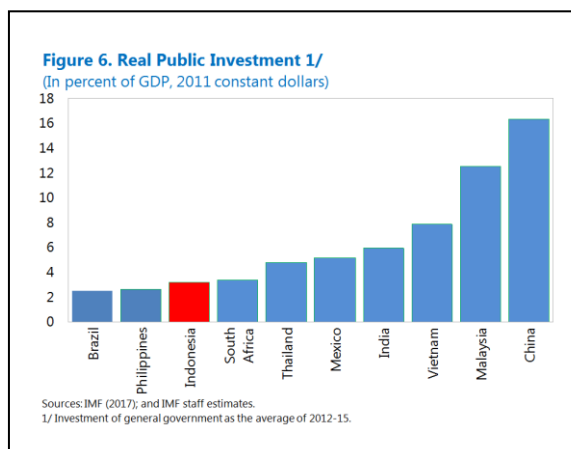
external debt. A more measure pace of infrastructure development, particularly in the absence of a MTRS, would help preserve macrofinancial stability. Projects with larger impact on production capacity should be prioritized.

- *Infrastructure development should be accompanied by sound risk management for SOEs and PPPs.* Financial performance of SOEs, including domestic and external debt, should be closely monitored, as SOEs in the infrastructure sector have continued to leverage. While proper balance between SOEs and the private sector is needed to ensure that SOEs do not crowd out private investment, the burden of financing infrastructure investments could be further shifted to the private sector through PPPs and FDI. Proper design of PPP contract—including on respective rights and responsibilities, risk allocation, and mechanisms for dealing with changes— is important. Overemphasis on the equity aspect of infrastructure projects may undermine feasibility studies. Government guarantees for infrastructure development need to be carefully designed and monitored to avoid a potential increase in contingent liabilities.

8.   Attracting private sector financing requires improving the regulatory framework for new financing instruments (debt and equity) and institutional investors.

- *Regulations on structured products* should be enhanced, including by clarifying the risk allocation between special purpose vehicles (SPVs) and issuers. Building on the recent successful issuance of asset-backed securities (ABS) for the Jagorawi toll roads (IDR2 trillion), ABS should be further explored, especially on toll roads and power plants, which have more predictable cash flows. Infrastructure investment schemes (e.g., project finance, infrastructure bonds, or IDR-linked global bonds) need to be developed, together with a thorough assessment of potential fiscal risks.

- *Limited concession schemes (LCS)* should be explored, which offers concession to the private sector for infrastructure assets that are already operational and generating cash flows. This would help free financial resources for other infrastructure investment, increase management efficiency, and adopt know-how from the private sector.

- *The expansion of the institutional investor base* (e.g., insurance firms, social security funds, private pension funds) can be supported by a stronger regulatory and supervisory framework to allow better asset and liability management (see the Selected Issues on "Financial Deepening and Inclusion" for more details).

C.   Regulatory Reforms

9.   In addition to the 16 economic policy packages, the authorities have implemented other reforms to improve the business environment. The FDI regime was partially liberalized, including on logistics, tourism, and agriculture, and the setting of the minimum wage was made more transparent and predictable. A national single window system to automate export and import permits has been introduced in more than 21 ports. The authorities are also planning to streamline nontariff measures (NTMs), gradually shifting control from border to post border, and open to trade

through bilateral and regional trade agreements. Compared with BKPM's one-stop service that deals with 9 types of licenses, the forthcoming single submission system covers about 100 licenses of both central and local governments, thus helping simplify regulations.

10.   Restrictive product market regulations should be reformed to foster competition and productivity growth. The OECD's Product Market Regulations (PMR) Index suggests that the biggest gains can be realized by reducing state control, easing trade and FDI regulations, and lowering business entry barriers, including antitrust exemptions:

- *The dominant role of SOEs needs to be reduced.* With a rise in assets to around 50 percent of GDP and stable revenue, SOE efficiency has declined (Figure 7). This suggest an increase of non-commercial activities and implicit subsidies, including price controls (e.g., gas, electricity, air fares, retail prices of various products) and import or export restrictions. These practices could undermine the financial strength of SOEs, increase fiscal risks from contingent liabilities, and crowd out private investment. SOEs are prevalent in manufacturing, trade and transportation, and financial services (Figure 8). SOEs need to be confined to strategic areas with commercial viability, while those in low strategic areas should be privatized or closed (IMF, 2016; Figure 9). For example, the heavy SOE involvement in the network industries such as electricity and railroads, needs to be rationalized, which would promote private sector participation and help reduce fixed costs, particularly for smaller firms (Gal and Hijzen, 2016). The energy sector, which requires significant investment, merits a review, including on the transmission and distribution of electricity and exploration of hydrocarbons. SOEs should be subject to the competition law and proper bidding procedures, and refrain from exercising dominant power. The governance of SOEs also needs to be improved for proper risk management, including through public listing on the Indonesia Stock Exchange (IDX), which would enhance public scrutiny and transparency of financial information (Figure 10).

Figure 7. SOEs Assets and Turnover Ratio
(In percent)

Sources: Obis; and IMF staff estimates.
1/ Estimated using previous year growth for companies which assets data have not been available.
2/ Asset turnover ratio = Operating revenue/total assets.

Figure 8. Industry of State-Owned Enterprises
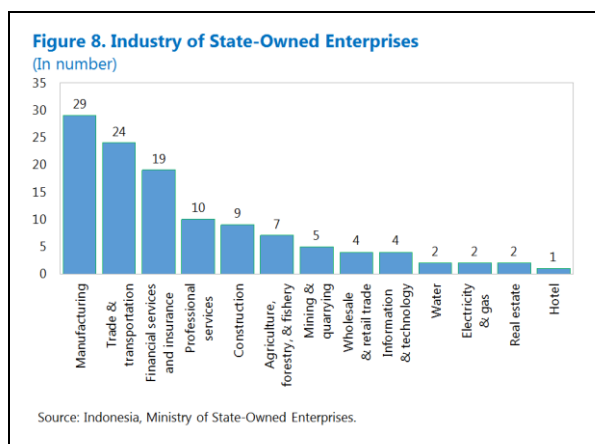(In number)

Source: Indonesia, Ministry of State-Owned Enterprises.
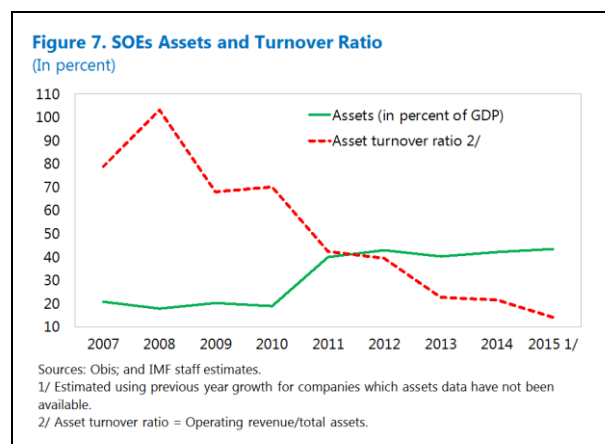
Figure 9. Framework for Reviewing the Status of Public Enterprises

		Policy or Strategic Relevance	
		Low	High
Commercial Viability	Low	Close down	Convert into a noncommercial government entity
	High	Privatize	Retain as a public corporation, monitor closely operations and finances

Source: IMF, Fiscal Affairs Department, 2016, *How to Improve the Financial Oversight of Public Corporations*, Fiscal Policy Paper.

Figure 10. Ownership of State-Owned Enterprises
(Number; as of January 2017)

Source: Indonesia, Ministry of State-Owned Enterprises.
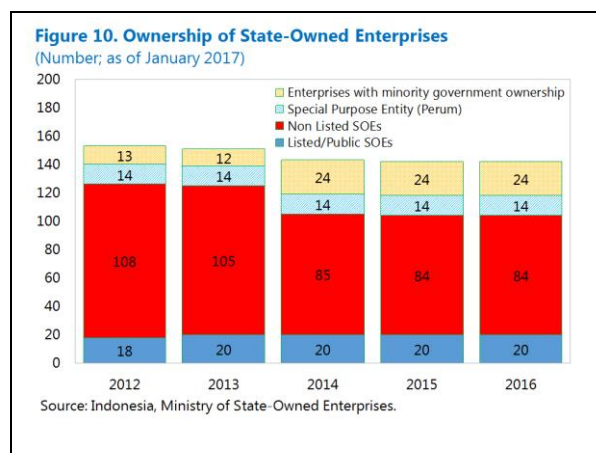
- *Lowering trade and FDI restrictions* would boost competitiveness and export diversification. Barriers to FDI and trade, particularly NTMs, have led to low integration with global value chains and limited competitiveness, compared to Asian peers (Das, 2017; the Selected Issues on "The Evolution of Merchandise Exports in the New Millennium"; and Figure 11). Imports still require overlapping licensing. Against this backdrop, Indonesian manufacturers, including FDI-affiliated corporates, became less export-oriented in contrast with those in other emerging Asian economies, which increasingly took part in regional production networks (Basri, 2016). Indonesia's ranking on trading across borders in the World Bank's 2018 *Doing Business Report* is still low at the 112th place out 190 countries. The priority is to adopt internationally harmonized standards and certification procedures in major sectors (energy, transport, construction, banking, and business services). Stronger coordination across ministries would ensure coherent regulations. Free trade agreements would help lower trade and FDI restrictions.

Figure 11. Regulations by Category, 2016
(Number of regulations)

Source: Indonesia, Ministry of National Development Planning.
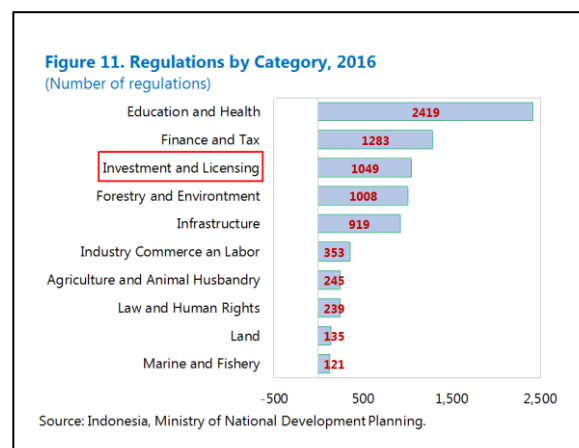
- *Easing administrative burdens and entry barriers* would help create businesses and jobs. There is still a significant regulatory burden on existing and new corporates due to required licenses and permits under different ministries and local governments, and their procedures.

11.   The overall legal and regulatory framework should be also enhanced.

- *The regulation and* policy *making process* should be improved by adopting a systemic, holistic approach. Laws often lack implementing regulations, where regulations are subject to substantial interpretation and prone to rent-seeking, while often conflicting with other regulations. In many cases, implementing regulations are not issued for several years, while law provide only brief guidelines (Devi and others, 2013). For example, when a new Construction Law came into effect in early 2017, implementing regulations were not issued and could take up to
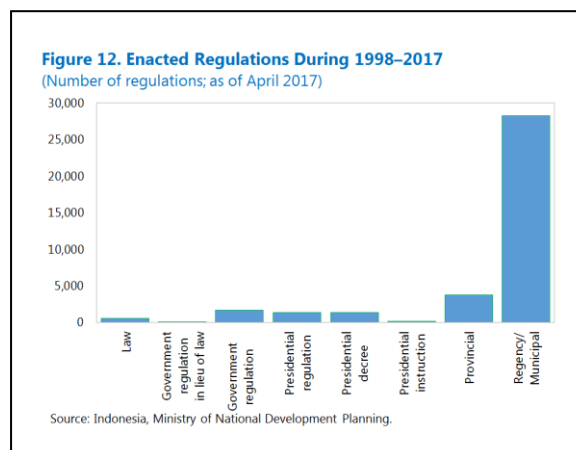
two years to issue them, while the regulations under the old Construction Law were still applicable. Environmental regulations and industrial regulations are often at odds, causing confusion to investors. Therefore, greater ministerial coordination and public consultation are needed to avoid conflicting regulations and policies, particularly among line ministries and local governments (OECD, 2012). The regulatory impact assessment should also be strengthened (Intal and Gill, 2016; Table 1). A formal centralized mechanism to simplify and evaluate existing regulations would ensure a holistic approach. The recent presidential decree to strengthen the coordination of policies through coordinating ministries is a welcome first step.

Table 1. Use of Regulatory Management System Instruments 1/

	Internal Coordination of Rulemaking Activity	Regulatory Impact Assessment	Public Consultation Mechanism
Australia	Strong	Strong	Strong
Korea	Moderate	Moderate	Weak
Indonesia	Moderate	Weak	Weak
Thailand	Moderate	Weak	Weak
Malaysia	Weak	Weak	None
Philippines	Weak	None	Weak

Sources: APEC; and NZIER via Economic Research Institute for ASEAN and East Asia.

1/ "None" refers to the non-use of any informal instrument.

- *Local regulations*. Local policies and regulations are often inconsistent with national policies (OECD, 2016). Decentralization without adequate coordination since the early 2000s has resulted in a proliferation of local regulations (Figure 12). Coordination among 405 regional governments has been challenging, with a limited role of provinces. Therefore, a regional government coordination forum, anchored by a clear national strategy, would help nationwide policy coordination. Adopting merits and competition factors into fiscal transfers to local governments would enhance accountability and coordination. Continuing efforts are required to synchronize local with central regulations through standardization. Capacity building for local governments is also critical.

Figure 12. Enacted Regulations During 1998–2017
(Number of regulations; as of April 2017)

Source: Indonesia, Ministry of National Development Planning.

- *Law and contract enforcement*. Weak enforcement of laws and contracts has hampered business certainty. Indonesia still ranks low in contract enforcement (145th place) in the World Bank's 2018 *Doing Business Report*.[2] Addressing these constraints requires upgrading governance in the legal environment, and the transparency and consistency of the judiciary system. The recent decision of the Supreme Court to recruit 1,500 judges and train them for two years would help mitigate the shortage of judges and foster public trust in the judiciary system.

---

[2] It takes 498 days to enforce contracts in Indonesia with sizeable costs during the process. Weak property rights are also reflected in low rankings of starting a business (144th place), and registering property (106th place).
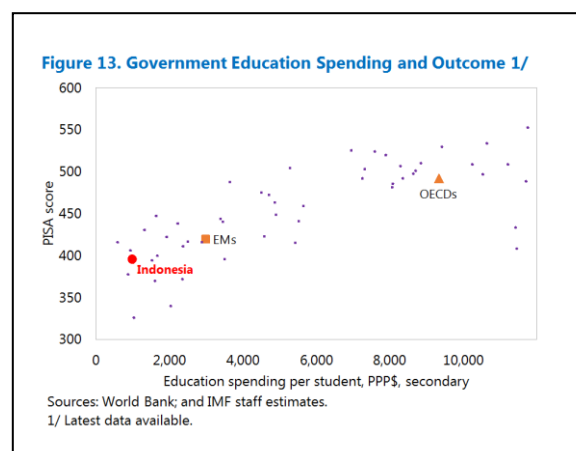
D. Human Capital

12.   The authorities are trying to improve the performance of education and labor markets. The government has allocated 20 percent of the annual budget to education, and is focusing on improving the efficiency of education spending. Efficiency savings will be channeled to a sovereign wealth fund to finance future education needs. The authorities are also considering labor market reforms to enhance flexibility and align wage growth with productivity growth. Improving education and labor market outcomes would support inclusive growth and job creation.

13.   Further efforts are needed to improve the quality of education and reduce labor market segmentation:

- *Education.* Enrollment rates in primary schools vary widely across districts, while those in higher education are low, with fewer than one-third of Indonesians completing secondary education. Educational quality is also low, with many of graduates not meeting international standards due to unqualified teachers and unaccredited higher education institutions (Figure 13). Corporates face persistent skill shortages.

Figure 13. Government Education Spending and Outcome 1/

Sources: World Bank; and IMF staff estimates.
1/ Latest data available.

- *Labor market.* The transition from employment in agriculture to services has continued, although wage earning employment has slowed and non-agricultural self-employment has risen. The labor market continues to be segmented, with a large fraction of workers employed on short-term contracts. Rigid labor regulations have led to high informal employment (58 percent of total employment) and low on-the-job training. Youth unemployment is high at around 20 percent, hindered by inadequate education. Female labor participation has stagnated at around 50 percent, much lower than that of males (83 percent).

14.   The priority is to improve the quality of and access to education.

- *Enhancing the quality of education spending* (OECD, 2016; ADB, 2015; and World Bank, 2017). Expenditure on teacher salaries and allowances has risen substantially in recent years. The priority now is to improve the efficiency and quality of spending by strengthening the link between compensation and performance in education sector in terms of competency, classroom performance, and professional development. The teachers' skills should be improved through training and periodic recertification. The monitoring of the local government's budget spending and schools' performance should be also improved.

- *Improving access to education.* Efficiency savings and additional resources should be directed to ensure equitable access to quality education, especially in rural areas. A strong role of the central government on resource allocation across regions would help alleviate the imbalance on teacher distribution across regions. Opening the education market to foreign investment would help

strengthen education quality, particularly in higher education institutions, while greater availability of student loans would help increase enrollment in higher education. Early childhood education should also be developed (Jung and Hasan, 2014).

- *Tailoring education to labor market needs*. Vocational training can be improved by strengthening the coordination with employers, with the education process closely linked to the needs of the corporates, including by improving soft skills (computer, language, and thinking skills).

15.   Strengthening active labor market policies and streamlining labor market regulations would support job creation.

- *Active labor market policies*, including job placement services and vocational training, would help labor mobility (Allen, 2016). Youth employment can be boosted by targeted training in regions. Female labor participation can be enhanced by providing affordable childcare and flexible work arrangements, as well as better education opportunities. However, these initiatives should be subject to a cost-benefit test and ex-post evaluation given potential fiscal costs (Mckenzie, 2017).

- *Easing stringent job protection*, such as dismissal procedures and severance payments, while improving vocational training and job placement services, would promote youth employment and reduce the use of short-term contracts. In particular, streamlining administrative procedures, including on mediation by the administration and judicial settlement, would be important, as administrative procedures are more distortive and disruptive than severance payments (Mckenzie, 2017). Adopting a more open immigration policy for skilled labor, and improving the quality of domestic education, can lower skill mismatches, including in professional services. The minimum wage formula introduced in 2015 should continue to be implemented, which would help foster business certainty.

E.   Structural Reform Scenario

16.   A comprehensive and properly sequenced package of fiscal and structural reforms would be self-reinforcing. Given limited fiscal space, the priority should be on reforming product markets to promote entry and reduce state control, streamlining complex regulations, and fostering financial deepening and inclusion. An increase in revenue from tax reforms would create fiscal space for development spending on infrastructure, education and health, where policy gaps remain large.

17.   Complementarities between reforms should also be exploited. Product market reforms, including relaxing FDI and network industry regulations, can promote private participation in infrastructure. Stronger property rights through regulatory reforms can improve access to credit, while financial inclusion, such as student loans, can expand education opportunities. Financial deepening can help mobilize financing for infrastructure, while infrastructure development can improve education access in remote areas.

18.   The IMF's Global Integrated Monetary and Fiscal (GIMF) model is used to estimate the macroeconomic effects of fiscal reforms in Indonesia. GIMF is a multicountry general equilibrium model that includes a detailed specification of fiscal policy, including different taxes (consumption, labor, and corporate) and expenditure items (government consumption, public investment, general and targeted transfers, and interest payments) (Kumhof and others, 2010).

19.   The main properties of the GIMF model calibrated for Indonesia are as follows (Anderson and others, 2013; and Curristine and others, 2016):

- *Tax increases.* The multipliers on output in the first year from a 1 percent of GDP permanent rise in revenue due to higher taxes are –0.2 percent for consumption taxes, –0.3 percent for labor taxes, and –0.5 percent for corporate taxes. The negative impact on output from higher consumption taxes declines over time to nearly zero after 10 years, while that from higher labor taxes rises increases to 0.5 percent in the second year, remaining at that level for the following eight years. The negative impact on output from higher corporate taxes increases gradually over time to 1.5 percent after 10 years.

- *Infrastructure investment.* The multiplier on output from a 1 percent of GDP permanent increase in infrastructure investment is 1 percent in the first year, rising gradually to over 2 percent in 10 years. The rise in the multiplier in the medium term is driven by the increase in private investment, as the higher stock of public capital raises the productivity of private capital.

- *Social transfers.* The multipliers on output from a 1 percent of GDP permanent rise in social transfers are modest in the first year, ranging between 0.15 percent for targeted transfers to the poor and 0.05 percent for untargeted general transfers. The medium-term impact is slightly negative as taxes are raised or spending is cut to keep the fiscal deficit unchanged.

- *Other structural reforms.* As the GIMF model cannot estimate the impact of other structural reforms directly, these are estimated indirectly in the GIMF model through an estimated impact of these reforms on TFP based on previous studies (Barnes, 2014; Dabla-Norris and others, 2016; Gal and Hijzen, 2016; and Bouis and others, 2016).

20.   The reform scenario includes higher spending in infrastructure and targeted transfers financed mainly by higher consumption taxes, reduced barriers to trade and FDI, and structural reforms to the product and labor markets (Table 2).

- *Revenue.* About 2 percentage points of GDP of the extra revenue from a medium-term revenue strategy (MTRS) would come from consumption taxes such as VAT and excises on fuel, vehicles, and plastic bags, which have low negative multipliers. The other 1 percentage point of GDP would come from taxes with larger negative multipliers.

- *Expenditure.* This extra revenue would be used to increase spending in infrastructure (1.3 percentage points of GDP) and targeted transfers in education, health and social programs (1.5 percentage points of GDP), which have larger multipliers.

- *Other structural reforms* would center on reducing restrictions to trade and FDI, and streamlining product and labor market regulations to promote entry, rationalize the role of SOEs, and foster employment. The reform scenario assumes a 10 percent reduction in the OECD's product market regulations (PMI) over 5 years, to the level comparable to the average of the BRICS economies. This includes rationalizing the role of SOEs through enhancing the governance of SOEs and reducing price controls; removing FDI and trade restrictions; and easing entry barriers and administrative burdens to businesses. These would be accompanied by reforms on the legal and regulatory framework. The effects of reforms on education and the labor market would take longer to realize, but would be conducive of inclusive growth.

### Table 2. Indonesia: Illustrative Effects of Fiscal and Structural Reforms 1/

| | 2015 | 2016 | 2017 | Baseline | | | | | Reform Scenario | | | | |
				2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
General government revenue	14.9	14.3	13.8	14.0	13.9	13.9	13.9	13.9	14.3	14.7	15.1	15.6	16.9
Central government revenues and grants	13.1	12.5	12.0	12.2	12.1	12.1	12.1	12.1	12.5	12.9	13.2	13.6	14.9
Of which: tax revenues	10.8	10.4	9.8	10.0	10.0	10.0	10.0	10.0	10.3	10.7	11.1	11.6	12.8
Oil and gas revenues	1.1	0.7	0.9	0.9	0.8	0.7	0.7	0.6	0.9	0.8	0.7	0.7	0.6
Non-oil and gas revenues	11.9	11.8	11.2	11.3	11.3	11.4	11.4	11.4	11.6	12.1	12.5	13.0	14.2
Tax revenues	10.3	10.1	9.5	9.6	9.7	9.7	9.7	9.8	9.9	10.4	10.9	11.3	12.6
Income tax	4.8	5.1	4.4	4.4	4.4	4.5	4.5	4.6	4.4	4.4	4.5	4.5	5.4
VAT	3.7	3.3	3.4	3.6	3.5	3.5	3.5	3.5	3.7	3.9	4.1	4.3	4.5
Excise	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.5	1.7	1.9	2.1	2.3
Other	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nontax revenues	1.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Local government revenue net of transfer	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0
General government expenditure	17.5	16.8	16.5	16.5	16.4	16.4	16.4	16.4	16.9	17.2	17.5	17.8	19.1
Infrastructure	2.2	2.2	2.7	2.8	2.6	2.5	2.5	2.5	2.9	3.2	3.4	3.6	3.8
Education	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.5	3.6	3.8	3.9	4.1
Health	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.7	1.9	2.0	2.1
Social assistance	1.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8
General government deficit	-2.6	-2.5	-2.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.4	-2.3	-2.2	-2.2
General government debt	26.8	28.3	29.1	29.6	30.2	30.2	30.4	30.5	29.6	30.1	30.0	29.9	29.7
Real GDP growth	4.8	5.0	5.1	5.3	5.5	5.6	5.6	5.6	5.4	5.7	5.9	6.2	6.5
Inflation	3.4	3.0	3.7	3.6	3.8	3.7	3.5	3.6	3.8	4.1	4.0	3.7	3.8
Current account deficit/GDP	-2.0	-1.8	4.7	-1.9	-1.8	-1.9	-2.0	-2.0	-2.0	-2.0	-2.2	-2.3	-2.3

Source: World Bank; Indonesian authorities; and IMF staff estimates.

1/ The estimate impact of the reforms included in staff's active scenario are based on Nozaki and Shin, 2015, "Infrastructure Development in Indonesia," IMF Country Report No. 16/82; Dabla-Norris and others, 2015, "Structural Reforms and Productivity Growth in Emerging Market and Developoing Economies," IMF Working Paper No. 16/15); Bouis, Duval and Eugster, 2016, "Producer Market Deregulation and Growth: New Country-Industry-Level Evidence," IMF WP/16/114; Gal and Hijzen, 2016, "The short-term impact of produt market reforms: A cross-country firm-level analysis."; Chapter 3, Time for a supply-side boost? Macroeconomic effects of labor and product market reforms in advanced economies, IMF WEO April 2016.

21.   Potential real GDP growth would increase gradually to 6.5 percent by 2022, 0.9 percentage point higher than the baseline scenario (Figure 14). Most of the gains in potential growth in the initial years would come from public and private investment on the back of fiscal reforms and improved efficiency, while gains in TFP from other structural reforms would play a bigger role in the outer years. Higher infrastructure investment and lower trade and FDI regulations, which would also catalyze private investment and employment, would be the main growth drivers in the first two

Figure 14. Growth Under Reform Scenario
(In percent)
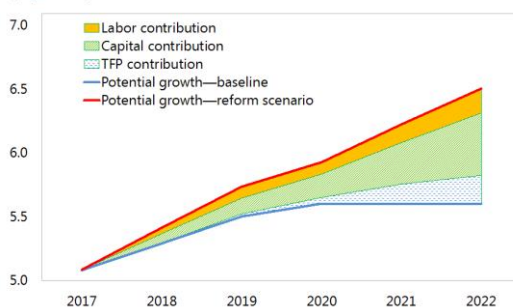
Sources: Penn World Trade; and IMF staff estimates.

years, raising potential growth by 0.2–0.3 percentage point. Implementing the medium-term revenue strategy will help contain the fiscal deficit and government debt, while allowing greater social and infrastructure spending. While infrastructure spending would stabilize in the medium term, higher private investment partly due to improved efficiency, and employment growth would play an increasing role over time, raising potential growth by additional 0.5 and 0.2 percentage point relative to the baseline by 2022, respectively. Gains in TFP from regulatory reforms including on product market regulations would raise potential growth by 0.1 percentage point in 2020–21 and 0.2 percentage point in 2022. Gains in TFP would become larger in a long term, benefiting from enhanced competition, improved labor skills, and greater integration with global value chains.

22.   The reform scenario also assumes continued macroeconomic stability:

- *Inflation* would rise to around 4 percent (y/y) in the initial years due to the demand stimulus and higher consumption taxes, but it would moderate afterwards due to a tighter monetary stance, stronger domestic competition and expanded production capacity.

- *The current account deficit* would widen to around 2.3 percent of GDP due to higher public and private investment-related imports (or a lower saving-investment gap in the private sector), which would be partly offset by higher exports due to enhanced competitiveness.

- With a medium-term revenue strategy in place, *the fiscal deficit* would be contained at around 2.2 percent and *government debt* below 30 percent of GDP in the medium term.

F. Conclusion

23.   Indonesia can achieve stronger inclusive potential growth with structural reforms on infrastructure, regulations, and human capital. Growth remains constrained by a large infrastructure gap, low institutional quality, and inadequate human capital. Indonesia can achieve stronger inclusive potential growth by developing infrastructure, streamlining regulations, and strengthening human capital. An illustrative scenario that includes fiscal and structural reforms shows that potential growth could rise to 6.5 percent in the medium term due to permanent supply shifts, around 1 percentage point higher than the baseline scenario. Together with a clear communication strategy, these structural reforms will help boost confidence in the economy.

References

Allen R., Emma, 2016, "Analysis of Trends and Challenges in the Indonesian Labor Market", *ADB Papers on Indonesia*, No. 16 (March).

Anderson, Derek, Benjamin Hunt, Mika Kortelainen, Michael Kumhof, Douglas Laxton, Dirk Muir, Susanna Mursula, and Stephen Snudden, 2013, "Getting to Know GIMF: The Simulation Properties of the Global Integrated Monetary and Fiscal Model," IMF Working Paper No. 13/55 (Washington: International Monetary Fund).

Asian Development Bank, 2013, *Diagnosing the Indonesian Economy: Toward Inclusive and Green Growth*.

——————, 2017, *Public-Private Partnership Monitor* (Manila)

Barnes, Sebastian, 2014, "Reforms and Growth: A Quantification Exercise," presentation at the Nero Meeting (Paris: Organisation for Economic Co-operation and Development).

Basri, Muhammad Chatib, Sjamsu Rahardja, Syarifah Namira Fitrania, 2016 "Not a Trap, But Slow Transition? Indonesia's Pursuit to High Income Status" *Asian Economic Papers*, Vol. 15. No. 2, pp.1–22.

Bouis, Romain, Romain Duval and Johannes Eugster, 2016, "Producer Market Deregulation and Growth: New Country-Industry-Level Evidence," IMF Working Paper No. 16/114 (Washington: International Monetary Fund).

Coady, David and Allan Dizioli, 2017, "Income Inequality and Education Revisited: Persistence, Endogeneity, and Heterogeneity," IMF Working Paper No. 17/126 (Washington: International Monetary Fund).

Curristine, Teresa, Masahiro Nozaki, and Jongsoon Shin, 2016, "*Infrastructure Development in Indonesia*," Indonesia Selected Issues, IMF Country Report No. 16/21 (Washington: International Monetary Fund).

Committee for Acceleration of Priority Infrastructure Delivery (KPPIP), 2017, *Infrastructure Delivery in Indonesia*, November (Jakarta).

Dabla-Norris, Era, Giang Ho, and Annette Kyobe, 2016, "Structural Reforms and Productivity Growth in Emerging Market and Developing Economies," IMF Working Paper No. 16/15 (Washington: International Monetary Fund).

Das, Mitali, 2017, "How has Indonesia fared in the Age of Secular Stagnation?," paper presented at the IMF-Peterson Institute Conference, *Prospects and Challenges for Sustained Growth in Asia,* September 7–8, 2017, Seoul, Korea.

Devi, Bernadetta, Dody Prayogo, 2013, "Mining and Development in Indonesia: An Overview of the Regulatory Framework and Policies," (Queensland: International Mining for Development Center).

Gal, Peter N. and Alexander Hijzen, 2016, "The Short-Term Impact of Product Market Reforms: A Cross-Country Firm-Level Analysis," IMF Working Paper No. 16/116 (Washington: International Monetary Fund).

Jung, Haeil, and Amer Hasan, 2014, "The Impact of Early Childhood Education on Early Achievement Gaps: Evidence from the Indonesia Early Childhood Education and Development Project" World Bank Policy Research Working Paper No. 6794 (Washington: The World Bank).

Intal, Ponciano, Jr., and Deriek Gill, 2016, "The Development of Regulatory Management Systems in East Asia: Deconstruction, Insights, and Fostering ASEAN's Quiet Revolution," Economic Research Institute for ASEAN and East Asia (ERIA).

International Monetary Fund, 2017, *Investment and Capital Stock Database 2017*.

——————, 2016, *How to Improve the Financial Oversight of Public Corporations*, Fiscal Policy Paper, (Washington).

——————, 2014, "Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment," Chapter 3 in *World Economic Outlook, October 2014: Legacies, Clouds, Uncertainties*, World Economic and Financial Surveys (Washington).

Kumhof, Michael, Douglas Laxton, Dirk Muir, and Susanna Mursula, 2010, "The Global Integrated Monetary and Fiscal Model (GIMF)–Theoretical Structure," IMF Working Paper No. 10/34 (Washington: International Monetary Fund).

Mckenzie, David, J., 2017, "How Effective Are Active Labor Market Policies in Developing Countries? A Critical Review of Recent Evidence", Center for Economic Policy Research.

Organisation for Economic Co-operation and Development, 2012, "Indonesia: Strengthening Coordination and Connecting Markets," in *OECD Reviews of Regulatory Reform* (Paris).

——————, 2016, "OECD Economic Surveys: Indonesia 2016."

PricewaterhouseCoopers, 2016, *Indonesian Infrastructure: Stable Foundations for Growth*.

World Bank, 2015, "*Indonesia Systemic Country Diagnostic*."

——————, 2017, "Sustaining Reform Momentum," *Indonesia Economic Quarterly* (January).

——————, 2017, "Closing the Gap," *Indonesia Economic Quarterly* (October).

FINANCIAL DEEPENING AND INCLUSION[1]

Promoting financial deepening and inclusion is crucial to increase resilience to external shocks and is a priority of the government. The authorities issued a national strategy for financial inclusion in 2016 and are preparing a national strategy for financial market development. Indonesia's financial markets are still underdeveloped and financial access is low compared to those of its peers, but they have potential to support inclusive growth with the proper reforms. This chapter assesses the status of financial market development and financial access, summarizes the national strategies, and discusses priorities to enhance the role of financial system for inclusive growth.

A.   Financial Market Depth and Financial Access

1.   Banks dominate the financial system, while the domestic institutional investor base is narrow. Aggregate assets of financial institutions amounted to 72 percent of GDP, and banks account for about 80 percent of the aggregate assets. Banks tend to be quite conservatively run and rely on retail deposits for funding; wholesale funding is very small. Given the short-term nature of the retail deposits, banks provide only limited financing for long-term investments and focus instead on commercial lending. Asset holdings by domestic institutional investors, such as pension funds and insurance companies, remain small, with outstanding assets under management of pension funds equal to about 2 percent of GDP and those of insurance companies at below 8 percent of GDP at end-2015. Each type of investor trails peers by a wide margin.[2]
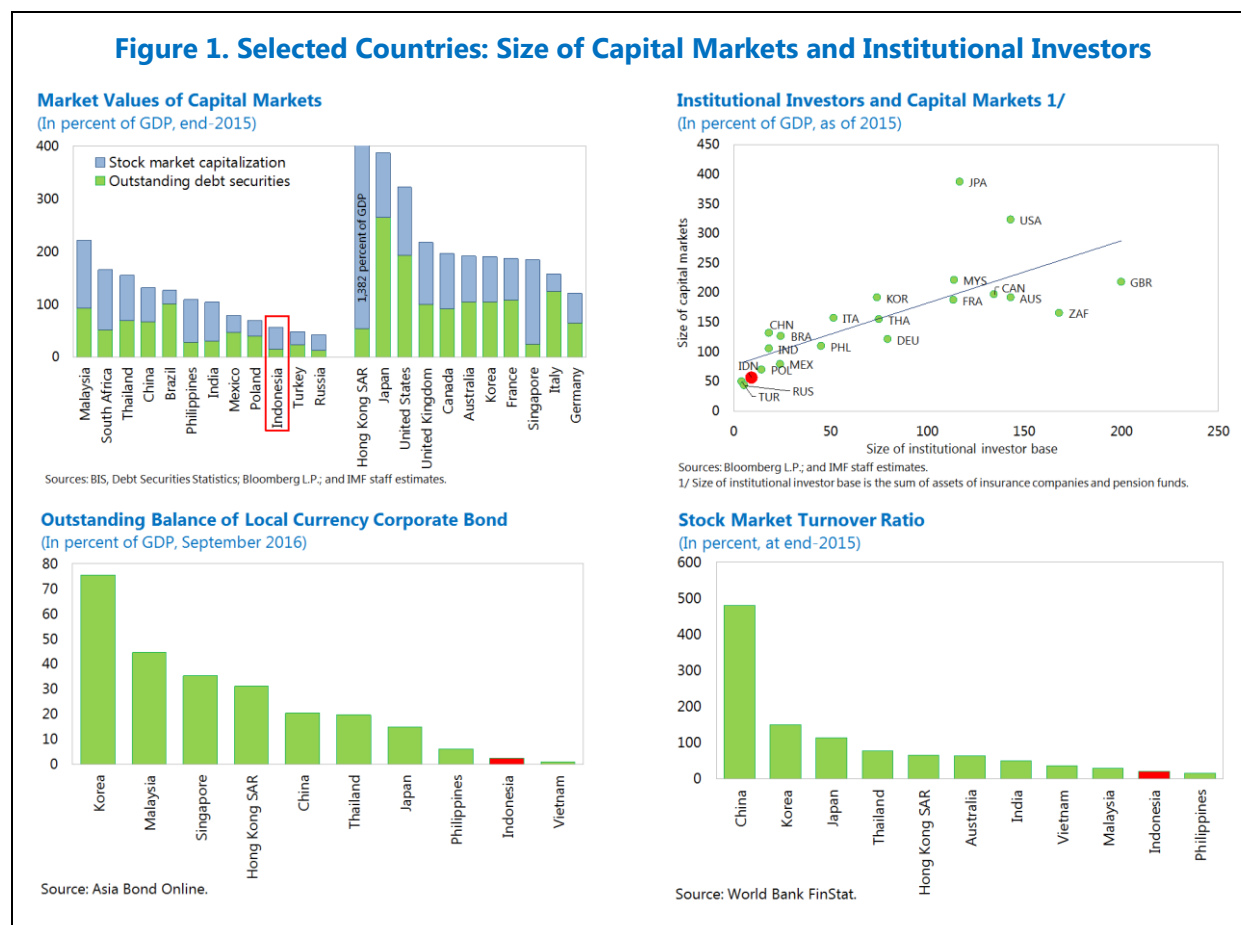
2.   The short-term funding markets are shallow and segmented. Money market liquidity remains low and is dominated by short-dated unsecured interbank transactions. The daily average volume of the unsecured interbank market was IDR11.8 trillion in 2016 (less than 0.1 percent of GDP, compared to 0.3 percent of GDP in Malaysia and Thailand). Turnover is skewed to the overnight, which accounted for about 60 percent of the interbank market activity in 2016. The main liquidity providers in the interbank rupiah market are state-owned banks. Foreign banks mainly trade with large domestic banks in the FX swap market, while small banks usually transact FX swaps among themselves. Segmentation, coupled with chronic excess liquidity, limits the effectiveness of monetary policy, complicates BI liquidity management, and constrains the development of money markets (IMF, 2017).

3.   Domestic capital markets are also relatively underdeveloped and foreign presence is strong. At end-2015, outstanding domestic debt securities and stock market capitalization amounted to 16 percent and 41 percent of GDP, well below the peer median of 60 percent and

---

[1] Prepared by Heedon Kang (MCM).

[2] The shadow banking activities accounted for less than 1 percent of GDP in Indonesia according to FSB (2017).

49 percent, respectively (Figure 1).[3,4] The paucity of domestic institutional investors is associated with the underdevelopment of capital markets. Figure 4 shows a high correlation between the size of the institutional investor base and the size of capital markets. Foreign investors hold about 39 percent of government securities denominated in local currency, one of the highest penetration rates among EMs (26 percent in Asia on average). This combination of shallow markets, the narrow base of domestic institutional investors, and high foreign participation have left Indonesia susceptible to capital flow reversals.

Figure 1. Selected Countries: Size of Capital Markets and Institutional Investors

Market Values of Capital Markets
(In percent of GDP, end-2015)

Sources: BIS, Debt Securities Statistics; Bloomberg L.P.; and IMF staff estimates.

Institutional Investors and Capital Markets 1/
(In percent of GDP, as of 2015)

Sources: Bloomberg L.P.; and IMF staff estimates.
1/ Size of institutional investor base is the sum of assets of insurance companies and pension funds.

Outstanding Balance of Local Currency Corporate Bond
(In percent of GDP, September 2016)

Source: Asia Bond Online.

Stock Market Turnover Ratio
(In percent, at end-2015)

Source: World Bank FinStat.

4.   Corporate financing through capital markets is also limited, compared to government financing. The government bond market—outstanding government bonds amount to about 22 percent of GDP in 2016, with nearly three-quarters denominated in rupiah—is relatively developed. The size of the corporate bond market, however, remains at less than 3 percent of GDP, two-thirds of which is accounted for by financial institutions and the rest mainly issued by SOEs. While corporate bond issuances almost doubled to IDR116 billion in 2016 from IDR58 billion

---

[3] Peers include Brazil, China, India, Malaysia, Mexico, the Philippines, Poland, Russia, South Africa, Thailand, and Turkey.

[4] The size of domestic bond market and stock market has continued to increase, standing at 18 percent and 48 percent of GDP in July 2017.

in 2013, the development gap remains evident in the low outstanding amounts, the small share of issuances by nonfinancial corporations, and the short maturities, compared to its peer countries (Figure 1). The low demand for corporate bonds is partly driven by concerns about weak creditor rights and lengthy default resolution. Corporate financing through the stock market also remains low, as reflected in the number of companies issuing IPOs (16 firms a year on average during 2014–16) and thin market turnover (Figure 1). While the total number of listed firms has increased to 555, it is still small compared to the Asian peers (4,073 in India and 806 in Malaysia).

5.   Access to the formal financial system is low given the Indonesia's unique geographical challenges, although it has improved recently. About 36 percent of adults had a transaction account with a formal financial institution in 2014, up from 20 percent in 2011, per the Global Findex database (Figure 2). However, it is still low compared to the average among other EMs in the East Asia and Pacific region (53 percent).

6.   Inefficient bank intermediation has held back financial inclusion. Net interest margins (NIMs), a commonly used measure for bank intermediation efficiency, is structurally higher in Indonesia than in many other EMs (Figure 3). The small size of the banking system, weaknesses in the legal and institutional environment, high market power, and operational inefficiencies have contributed to weak intermediation efficiency (World Bank, 2017). Given Indonesia's bank centric system, these inefficiencies have adverse implications for savings mobilization, credit intermediation, and financial inclusion.

7.   Current policy measures to address high NIMs are unlikely to be effective. They include caps on deposit rates, allegedly to discourage aggressive pricing behavior by some banks; moral suasion to induce banks to lower lending rates to single digit levels, particularly for the corporate and mortgage segments; requirements for all banks

Figure 2. Financial Access in Asia
(Share of adult population with bank account, 2014)
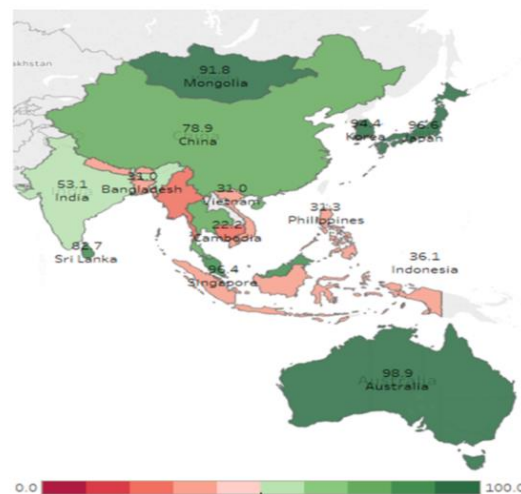
Source: World Bank, *Global Findex Database*.

Figure 3. Bank Net Interest Margin[1/]
(In percent)
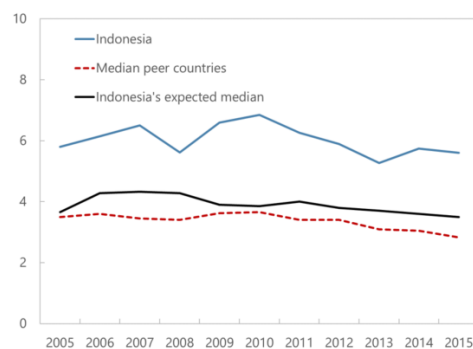
Source: World Bank, the 2017 Financial Sector Assessment and *FinStats Database*.
1/ Peer countries are Brazil, Chile, China, India, Mexico, Malaysia, Philippines, Russia, Thailand, Turkey, Vietnam, and South Africa. The expected median is a statistical benchmark based on a quantile regression applied to a global country database for the period 1980-2015 using a country's structural characteristics such as its income, population size and density, age distribution, and whether it is an oil exporter or offshore financial market.

to meet minimum lending exposures quotas to micro, small and medium-sized enterprises. NIMs remain high despite these measures, which also hinder the effectiveness of monetary policy operations.

B.   National Strategies and Recent Progress on Financial Deepening and Inclusion

8.   Promoting financial deepening and inclusion has been a priority of the government in recent years. Indonesia faces a long-term finance and investment gap, particularly in infrastructure. The development of capital markets to mobilize private long-term finance is needed to supplement and alleviate traditional bank and fiscal channels. The government has created a national council for financial inclusion and a high-level joint forum for financial deepening to promote interagency coordination. The national council, chaired by the President, adopted the National Strategy for Financial Inclusion (SNKI) in 2016.

9.   The high-level joint forum is currently preparing an ambitious national strategy for financial market development. Figure 4 summarizes the draft national strategy, which covers three pillars and seven elements of financial market ecosystem to develop six financial markets in

Figure 4. Fundamental Framework for Financial Market Development
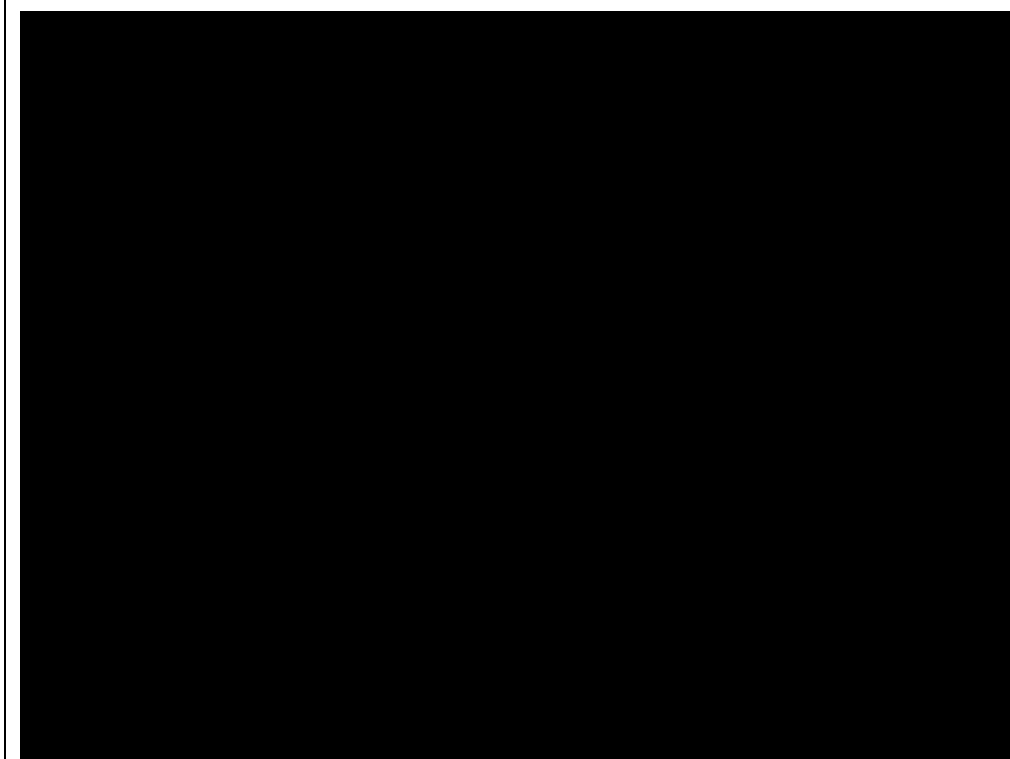
Source: Draft National Strategy for Financial Market Development, mimeo.

parallel—money, foreign exchange, bond, equity, sharia financial, and structured product market. The strategy aims to allocate resources and manage risks efficiently through deep and liquid financial markets by developing market infrastructures and harmonizing regulations under close policy coordination. For successful implementation, the authorities will design a detailed multiyear strategic action plan with quantitative targets (size of each market in percent of GDP) along with key performance indicators through three separate phases (2017–19, 2020–22, and 2023–24).

10.   The authorities have taken steps to advance money and foreign exchange market development. In August 2016, BI introduced a regular 7-day reverse repo operation with a fixed rate, full allotment, and the attached rate as the main policy rate. The interest rate corridor was narrowed to 150 basis points from 250 basis points. In July 2017, it also launched a partial reserve requirement (RR) averaging of 1.5 percent, out the 6.5 percent current primary RR ratio, over a two-week period, allowing the floor of the RR ratio to be at 5 percent on a given day. This reform has benefited small banks with shortage of liquidity. BI has already stopped issuing the 3-month tenor securities with the regular 3-month T-bills issuances planned by the Ministry of Finance (MOF). Issuance of T-bills has risen, providing more instruments at the short end of the yield curve. The Financial Services Authority (OJK) launched the Global Master Repurchase Agreement to develop the repo market, and BI offers seminars and workshops on the trading of repo operations.[5] To spur FX market development, BI has overhauled FX regulatory framework to spur FX market development. In addition, the Indonesian version of the International Swap and Derivatives Association contract has been introduced, and call spread options are allowed as hedging instruments.
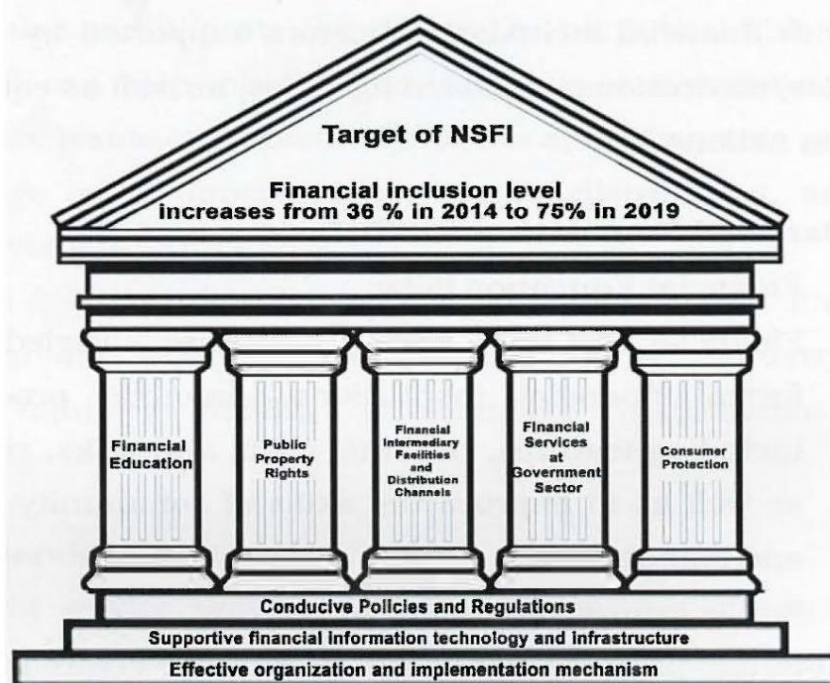
11.   The authorities have made progress in enhancing inter-agency coordination to develop capital markets. Substantial cross-agency coordination and private sector consultation occurs through the Capital Market Infrastructure Development Program Team and the Bond Market Development Program Team. These initiatives have resulted in various positive reforms, including the development of a capital market data warehouse and the implementation of Single Investor Identification for government bonds. Initiatives under implementation include the development of infrastructure for third party repo and the establishment of a bond electronic trading platform.

The 2016 National Strategy for Financial Inclusion has raised the profile of the financial inclusion agenda (Figure 5). The SNKI has five pillars—financial education, public property rights, expansion of financial products, distribution of government transfers, and consumer protection—supported by three foundations, including conducive policies and regulations, supportive IT infrastructure, and effective coordination and implementation. It targets an ambitious goal to reach 75 percent of adults with a transaction account by end-2019. Prior to the launch of the SNKI, the government established the "People's Business Loan" (KUR) program in 2007 to enhance the access of medium, small, and micro enterprises (MSMEs) to bank loans through the provision of subsidized, partial credit guarantees covering 70 percent of the loss. Under this program, the government

---

[5] Currently, 74 out of 103 conventional banks have signed the Global Master Repurchase Agreement, and 55 banks engage in repo transactions.

provides interest subsidies to participating banks allowing them to lend to MSMEs at capped interest rates. The total loans supported by KUR reached IDR53 trillion in August 2017.

Figure 5. Pillars and Foundation of the National Strategy for Financial Inclusion

Target of NSFI

Financial inclusion level
increases from 36 % in 2014 to 75% in 2019

Financial Education

Public Property Rights

Financial Intermediary Facilities and Distribution Channels

Financial Services at Government Sector

Consumer Protection

Conducive Policies and Regulations

Supportive financial information technology and infrastructure

Effective organization and implementation mechanism

Source: Coordinating Ministry of Economic Affairs, 2016, *National Strategy for Financial Inclusion.*

12.   The increasing use of digital financial services (DFS) offers a promising channel to overcome geographical barriers to financial inclusion.[6] Recent regulatory changes have allowed e-money issuers (banks and nonbanks) to engage *Layanan Keuangan Digital* (LKD, digital financial services) agents and allowed banks to provide basic bank accounts and other financial services via *Laku Pandai* (LP, branchless banking) agents to expand service delivery outreach. These agents are now present in all provinces and in 99 percent of the districts in the country. LKD agents provide access to cash-in, cash-out, bill payments and transfers services, while LP agents can offer these

---

[6] DFS is defined in Indonesia as tailored financial services and products delivered through channels other than traditional bank branches.

same services and facilitate opening basic bank accounts and conduct transactions. At end-2016, 23 banks were offering LP services to around 3.7 million customers.

13.   BI and OJK are supportive of the rapid developments of FinTech.[7] The Fintech sector has expanded rapidly in recent years and attracted around US$15 billion in investments in 2016. BI has established a FinTech office and OJK has established an internal cross-departmental group to promote sustainable growth of FinTech and mitigate risks to the financial system. OJK recently issued a regulation on Peer-to-Peer lending and proposals to establish a FinTech incubator. BI issued regulation in December 2016 on FinTech players in the payments system.

C.   Key Priorities for Successful Implementation of National Strategies

14.   Effective prioritization and sequencing of the strategic actions will be essential. The authorities' progress in developing a national strategy for capital market development is commendable, and reflects high-level political support and enhanced inter-agency coordination. Priority should be given to improve fundamentals for financial deepening and inclusion in a manner that does not give rise to undue stability risks, as recommended in the latest FSAP (IMF, 2017). They include: (i) strengthening credit culture; (ii) upgrading supervisory and regulatory framework along with financial market development; (iii) establishing a liquid benchmark yield curve; (iv) promoting long-term financing with new financial instruments; and (v) expanding the domestic investor base.

15.   A stronger credit culture and improved financial infrastructure are important for sustainable financial development. The authorities have improved the use of movable collateral by transitioning to an online collateral registry in 2013. The transformation from manual to online registry resulted in a huge increase in the number of total registrations (World Bank, 2017).[8] The introduction of a credit registry and the recent licensing of private credit bureaus were positive steps towards improving credit culture, and efforts can be stepped up to operationalize the credit bureaus. Current Indonesian insolvency and creditor rights (ICR) legislation represents a significant improvement over pre-2004 laws, but out-of-court restructuring is still the preferred method because of the costs of using formal procedures, which still require some improvement (World Bank, 2017). Adequate ICR regimes would further improve recovery rates and increase access to credit, particularly for MSMEs.

16.   The supervisory and regulatory framework needs to evolve along with financial market development. To reduce the silo structure in financial oversight, which will require changes to the OJK law, OJK has established a new department for integrated supervision (the Integrated Supervisory and Regulatory Department) which brings internal coordination directly under the authority of the Chairman. OJK should tackle its silo structure formally through the amendment of

---

[7] FinTech is defined as innovative use of technology to introduce new approaches to the provision of financial services and products.

[8] Since its launch, the registry has facilitated over US$30 billion in financing for more than 200,000 small-scale businesses. In total, there were 19.3 million registrations of corporates, MSMEs, and consumers in the three years since the launch, compared to only three million registrations in total during the ten years of operation of the manual registration system that preceded it.

its law and also strengthen the financial oversight and the enforcement of prudential regulations, including with respect to financial conglomerates, as recommended in IMF (2017). Other priorities include eliminating interest rate caps, which will help improve monetary transmission. Portfolio exposure targets, including minimum MSME exposure targets and the minimum investment requirement on government bonds and infrastructure-related SOE bonds on nonbank financial institutions, should be reviewed.

17. **Financial innovation needs to be accompanied by financial stability**. BI and OJK could step up their oversight activities of DFS and FinTech, and expand collaboration to fully monitor and ensure safety, efficiency and reliability of these services. Weakness in the communication infrastructure, particularly in remote and rural areas, may pose operational risks which could adversely affect agent and customer confidence in DFS (World Bank, 2017). Especially, the authorities should engage the telecom regulator and payment system operators to enhance operational reliability. In partnership with financial institutions, the authorities could consider launching a nationwide campaign to spread awareness on DFS. The authorities should also review the effectiveness of the KUR program, including its potential fiscal costs and whether it is achieving increased lending to new borrowers, as recommended in IMF (2017).

18. **Continued efforts are needed to build a liquid benchmark yield curve**. MOF observes good practices regarding its issuance program, including market communications and auctions. Benchmark securities of 5, 10, 15, and 20-year maturities are perceived to be reasonably liquid, but liquidity is thin in shorter segments of the yield curve. BI has already stopped issuing securities on the 3-month tenor with the regular 3-month T-bills issuances. Further improvements can be considered, including: (i) the gradual move to further reserve averaging already planned; (ii) the gradual consolidation of BI liquidity management instruments to support the move to the mid-corridor system; (iii) the maintenance of regular issuances of T-bills to avoid competition between BI instruments and T-bills on the same maturities.

19. **The authorities have been mobilizing private long-term financing with new financial instruments, but there is scope for further improvement**. The development of capital markets to mobilize private long-term finance for infrastructure is needed to supplement and alleviate traditional bank and fiscal channels. The government has sought to fund infrastructure projects by issuing SOE bonds and structured products (e.g., asset backed securities) in addition to traditional bank funding. It will be important to ensure that these products are introduced without compromising prudential standards or creating undue risk in the form of high and concentrated exposures to infrastructure-related instruments or SOE debt in the balance sheets of financial institutions. Also, the development of FX and derivatives markets is important to support the development of bond and stock markets, as the former helps market participants manage existing risk exposure to their holdings of debt and equity securities.

20. **The enlargement of the domestic investor base should go hand in hand with the expansion of capital markets**. The paucity of domestic institutional investors is not just a constraint on capital market development but also a source of vulnerabilities in the financial system. Institutional investors, in addition to serving as major asset holders, could help provide market

liquidity and act as market stabilizers, as capital market development would broaden their investment opportunities. They can also help intermediate large national savings domestically and thus mitigate the heavy reliance on foreign funding. Therefore, developing a critical mass of long-term institutional investors will be important to support economic development as well as financial market deepening. Improved financial literacy and IPO distribution could enhance participation of retail investors, helping diversify the investor base. Also, greater participation of domestic institutional and retail investors in capital markets require improvements in tax framework for financial products and hedging instruments (World Bank, 2017).[9]

---

[9] The withholding tax rate of foreign investors is 20 percent, while ranging from 0 to 15 percent in its peers.

References

Coordinating Ministry for Economic Affairs, 2016, "National Strategy for Financial Inclusion—Synergizing Efforts to Expand Financial Access for the People's Welfare," (Jakarta: Coordinating Ministry for Economic Affairs).

International Monetary Fund, 2017, "*Indonesia: Financial System Stability Assessment*," IMF Country Report No. 17/152 (Washington).

World Bank, 2017, "*Republic of Indonesia Financial Sector Assessment*," (Washington).

# THE EVOLUTION OF MERCHANDISE EXPORTS IN THE NEW MILLENNIUM[1]

Since the start of the new millennium, Indonesia has expanded its merchandise trade with the rest of the world. The composition of its main exports and trading partners has evolved, with palm oil and coal replacing oil and gas as Indonesia's top exports and China taking over Japan as Indonesia's number one export destination. Nonetheless, the shares of key non-commodity exports, such as electrical appliances and textiles, in total exports declined. Indonesia needs to further pursue structural reforms to improve its competitiveness in higher technology products, economic complexity, and participation in global value chains in order to graduate from the status of basic commodity exporter subject to global price swings, low value added, and limited employment growth.

A.   An Overall Picture of Goods Exports

1.   The value of goods that Indonesia exported to the rest of the world increased in the new millennium. Export growth averaged 6½ percent in 2000–16, with the value of export doubling between 2000 and 2016. By keeping pace with the expansion of global trade, Indonesia maintained its share in the global market roughly unchanged at one percent (Figure 1), which positioned it as the 29th largest goods exporter in 2016 (up by 5 positions since 2000).

Figure 1. ASEAN: Share of World Exports
(In percent)

Sources: IMF, *Direction of Trade Statistics*; and IMF staff estimates.
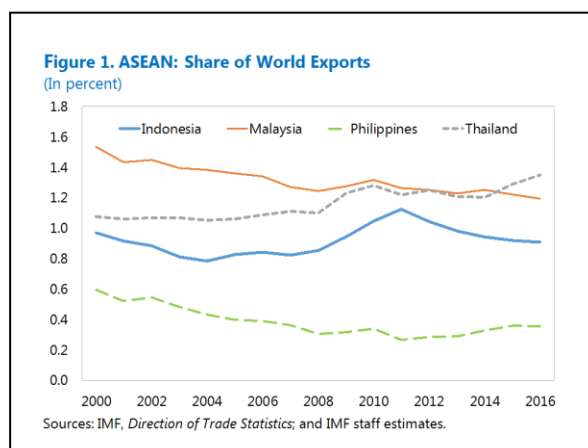
2.   Indonesia's export growth was broadly synchronized with key global developments. After a brief contraction in 2001 following the burst of the dot-com bubble, exports started to expand in 2002 riding on the wave of the global commodity price boom. The expansion was briefly interrupted in 2009 by the global financial crisis but rebounded sharply when the commodity price boom resumed. As the commodity price boom started to fizzle out in 2012, exports contracted.
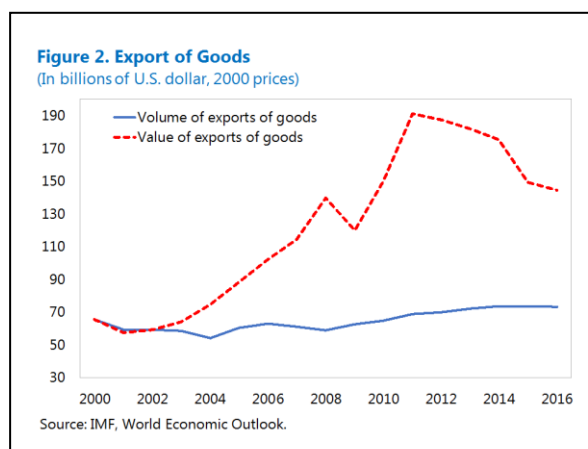
3.   The increase in exports during 2000–16 was mostly due to prices (Figure 2). The year-on-year change in exports volumes was smaller and less volatile than that of the exports values, reflecting the impact of global commodity
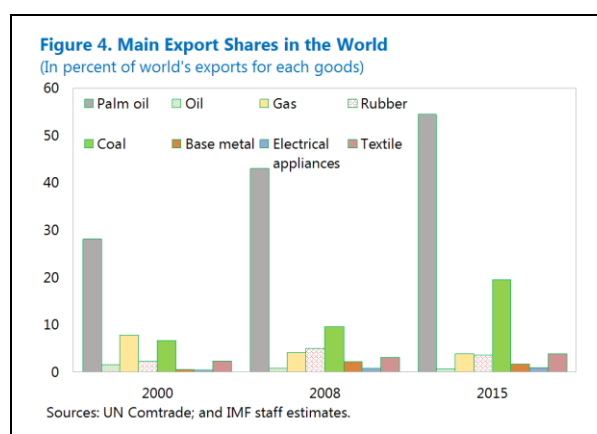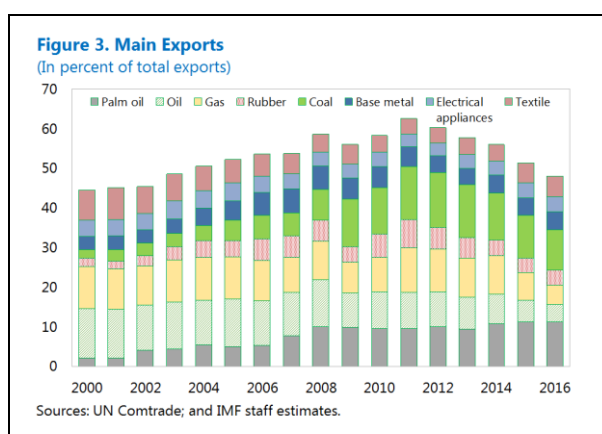

Figure 2. Export of Goods
(In billions of U.S. dollar, 2000 prices)

Source: IMF, World Economic Outlook.

---

[1] Prepared by Agnes Isnawangsih and Yinqiu Lu.

prices. Despite the increase in exports, the exports value to GDP declined to 15½ percent in 2016 from 34½ percent in 2000.

4.   Five key traditional commodity products (gas, oil, coal, palm oil, and rubber) have contributed much to the dynamics of Indonesia's exports. Their dynamics were synchronized and influenced by the global commodity price cycle. For instance, their total share in exports jumped from 30 percent in 2000 to a peak of 50 percent in 2011 before gradually declining to 34 percent in 2016 (Figure 3).

5.   The importance of these five commodities has shifted over time. Coal and palm oil have replaced oil and gas as the top two export products (oil and gas exports accounted for 80 percent of total exports in 1965–85, Pangestu, Rahardja, and Ing, 2015). The maturing of oil and gas fields, lack of infrastructure investment, and higher domestic demand have turned Indonesia into a net importer of oil and gas since 2011. These trends are also confirmed by their shares in global export markets (Figure 4). The global share of Indonesia's oil and gas exports halved from 9.4 percent in 2000 to 4.5 percent in 2016, contributing to a sharp decline in oil and gas fiscal revenue (from 5.6 percent of GDP in 2000 to 0.7 percent of GDP in 2016). The global share of palm oil exports almost doubled from 28.1 percent to 54.5 percent and that of coal almost tripled from 6.7 percent to 19.5 percent.

6.   The shares of key non-commodity exports, such as electrical appliances and textiles, in total exports declined in 2000–16. They have faced increased competition from neighboring countries. Competition from Bangladesh and Vietnam intensified as the WTO phased out quotas on textiles and clothing in 1995–2005, while competition from China rose following its accession to the WTO in 2001 (Pangestu, Rahardja, and Ing, 2015).

Figure 3. Main Exports
(In percent of total exports)
Sources: UN Comtrade; and IMF staff estimates.

Figure 4. Main Export Shares in the World
(In percent of world's exports for each goods)
Sources: UN Comtrade; and IMF staff estimates.

7.   China has replaced Japan as Indonesia's top export destination (Table 1). Export values to China quadrupled in 2000–16 on the back of China's demand for raw materials to support its rapid economic expansion. In 2016 China became the top destination for Indonesia's coal and base metal exports, and number two destination for oil and palm oil exports. China's share in Indonesia's total exports more than doubled from 4½ percent in 2000 to 11½ percent in 2016. During the same period, Japan's share halved from 23¼ percent to 11 percent (Figure 5). Nevertheless, Japan was still Indonesia's top export destination for natural gas in 2016, and number two destination for rubber,

textiles, and electrical appliances. The United States' share remained broadly stable over this period (11.2 percent in 2016 versus 13.7 percent in 2000), remaining as the number one market for Indonesia's rubber and textile exports (Table 2).

Table 1. Indonesia: Main Export Destinations
(In percent of total)

2000		2005		2016	
Japan	23.2	Japan	21.1	China	11.6
United States	13.7	United States	11.5	United States	11.2
Singapore	10.6	Singapore	9.1	Japan	11.1
Korea	7.0	Korea	8.3	Singapore	7.8
China	4.5	China	7.8	India	7.0
Taiwan POC	3.8	Malaysia	4.0	Malaysia	4.9
Malaysia	3.2	India	3.4	Korea	4.8
Netherlands	3.0	Taiwan POC	2.9	Thailand	3.7
Hong Kong	2.5	Thailand	2.6	Philippines	3.6
Australia	2.4	Netherlands	2.6	Taiwan POC	2.9
Rest of the World	26.3	Rest of the World	26.7	Rest of the world	31.5

Sources: IMF, *Direction of Trade Statistics*; and IMF staff estimates.

8.   Exports to China are concentrated in a few commodities (Figure 6). Five key commodity products accounted for about 60 percent of total exports to China in 2016. Among them, coal has replaced oil as the number one export product to China in line with the decline of oil production in Indonesia and the rising coal demand from China. In 2016, China sourced 26 percent of its coal imports and 62 percent of its palm oil imports from Indonesia. These two commodities accounted for 41 percent of Indonesia's total exports to China in 2016.

Figure 5. Major Export Destinations
(In percent of total)
Sources: IMF, *Direction of Trade Statistics*; and IMF staff estimates.

Figure 6. Main Commodities Exports to China
(In percent of total Indonesia export to China)
Sources: UN Comtrade; and IMF staff estimates.
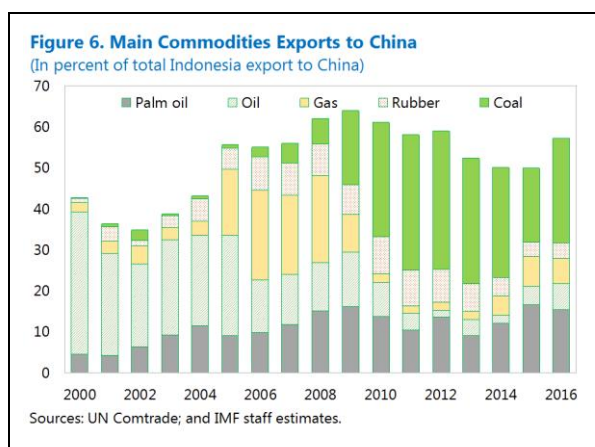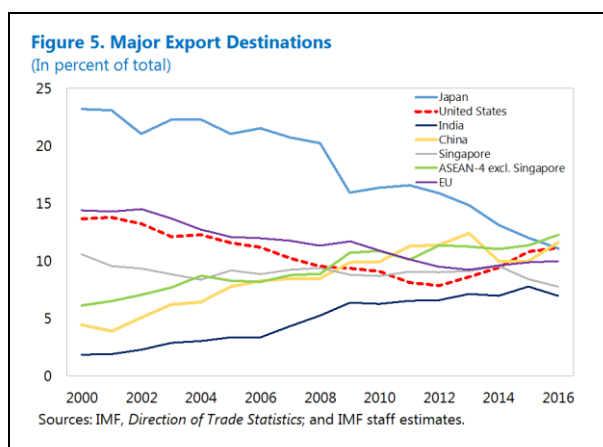
9.   Despite rising exports, Indonesia ran a bilateral trade deficit with China. The bilateral trade surplus that Indonesia used to enjoy with China turned into a small deficit in 2008, with the deficit further widening to 1.9 percent of GDP in 2016. While Indonesia maintained its trade surplus with China in resource-based sectors, the shift to deficit took place in the manufacturing sectors, such as machinery and transport equipment, and textiles (Marks, 2015).

10.   Indonesia's trade developments have benefited from regional and bilateral free trade agreements (FTAs), especially with ASEAN. As of September 2017, Indonesia was part of seven regional and two bilateral FTAs,[2] and the counterparts of these FTAs accounted for 60 percent of Indonesia's exports and 70 percent for its imports in 2016. In particular, ASEAN has continued its effort to build a region-wide policy framework to enhance trade, economic cooperation, and financial flows among its member states. The share of Indonesia's exports to the other ASEAN countries has increased from 17.5 percent in 2000 to 20.7 percent in 2016.

11.   Indonesia has low tariff rate but high WTO bound tariff rate (i.e., committed tariff rate under WTO) and services trade restrictiveness. Indonesia's average applied most-favored-nation (MFN) tariff rate was low at 6.9 percent in 2016, down from 9.5 percent in 2006 (WTO, 2013 and USTR, 2017). On top of this, Indonesia offers additional tariff reductions for the economies in the FTAs. Despite the low applied MFN tariff rate, its average bound tariff rate was 37 percent in 2016 (USTR, 2017). The difference between its bound and applied tariff rates, at 30 percentage points, was higher than the average of 20 percentage points among G20 developing countries. Most of Indonesia's OECD services trade restrictiveness was higher than the average G20 countries with large gaps in distribution services, maritime transport, and legal services.

12.   The increase in nontariff measures (NTMs) has been a prominent feature in Indonesia's trade policy since the global financial crisis. The share of tariff lines subject to NTMs on the import side grew from 42 percent in 2009 to 51 percent in 2015. On the export side, the share of tariff lines subject to NTMs grew from 4 percent in 2009 to 10 percent in 2015 (Marks, 2017). Data of the World Bank Temporary Trade Barriers indicate that Indonesia's import restriction decreased in 2004–05 but then increased sharply after the global financial crisis. Despite the recent improvement, import restrictions remain higher relative to the level before the global financial crisis. Based on the data from the Global Trade Alert, Indonesia has introduced more NTMs than other G20 countries since 2008.

B.   Composition of Trade and Comparative Advantage

13.   An analysis of Indonesia's trade composition can reveal its comparative advantage in trade. Our analysis of Indonesia's composition of trade follows the four dimensions presented by Ding and Hadzi-Vaskov (2017): diversification across product and destination, revealed comparative advantage, product sophistication, and economic complexity (see Annex I). In each dimension, Indonesia's position is analyzed and compared with its regional comparators (i.e., other ASEAN-4, China, India, and Vietnam) and other large emerging market economies (i.e., non-Asian G20 emerging economies— Argentina, Brazil, Mexico, Russia, South Africa, and Turkey).
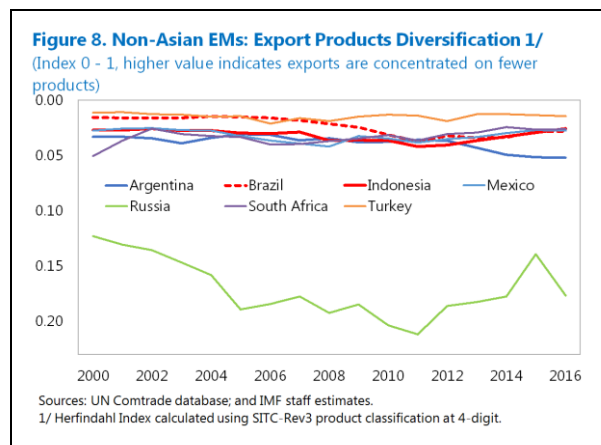
Product and Destination Diversification

14.   Product and destination diversification are analyzed for Indonesia and its comparators. The assessment of diversification is based on the Herfindahl concentration index, which is calculated

---

[2] The regional agreements are ASEAN, ASEAN-Australia FTA, ASEAN-New Zealand FTA, ASEAN-China Existing Comprehensive Economic Cooperation Arrangement (CECA); ASEAN-India CECA, ASEAN-Japan CECA, ASEAN-Korea CECA. The bilateral agreements are Japan-Indonesia Economic Partnership Agreement, and Indonesia-Pakistan FTA.

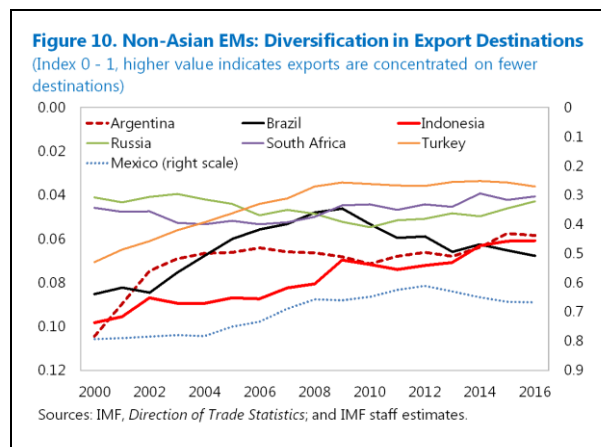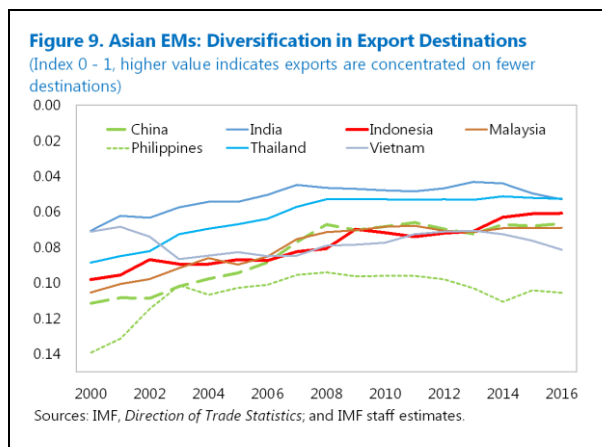based on the SITC-Rev3 product classification. A smaller index indicates more diversified or less concentrated markets. More diversified export products and destinations would allow a country to better absorb shocks in its export markets.

15.   Indonesia's export products have become more diversified since 2011, according to the Herfindahl concentration index. Its product diversification stood in the middle among its comparators. Within the region, it has similar level of product diversification as India and Vietnam, while it is more diversified than the Philippines and Malaysia and less diversified than China and Thailand (Figure 7). Compared with other large emerging economies, it has similar product diversification levels as Mexico and South Africa, while is less diversified than Turkey and more diversified than Argentina and Russia (Figure 8).

Figure 7. Asian EMs: Export Products Diversification 1/
(Index 0 - 1, higher value indicates exports are concentrated on fewer products)
Sources: UN Comtrade database; and IMF staff estimates.
1/ Herfindahl Index calculated using SITC-Rev3 product classification at 4-digit.

Figure 8. Non-Asian EMs: Export Products Diversification 1/
(Index 0 - 1, higher value indicates exports are concentrated on fewer products)
Sources: UN Comtrade database; and IMF staff estimates.
1/ Herfindahl Index calculated using SITC-Rev3 product classification at 4-digit.

16.   Its export destinations have also improved. A similar trend applies to most of its comparators (Figures 9 and 10). The index suggests that Indonesia has improved from the category of moderate concentration to unconcentrated category. It exported one-third of its products to its top three export destinations in 2016, while this proportion was one half in 2000.

Figure 9. Asian EMs: Diversification in Export Destinations
(Index 0 - 1, higher value indicates exports are concentrated on fewer destinations)
Sources: IMF, *Direction of Trade Statistics*; and IMF staff estimates.

Figure 10. Non-Asian EMs: Diversification in Export Destinations
(Index 0 - 1, higher value indicates exports are concentrated on fewer destinations)
Sources: IMF, *Direction of Trade Statistics*; and IMF staff estimates.

Revealed Comparative Advantage (RCA)

17.   The RCA indicates the country's relative advantage or disadvantage in exporting a certain product or group of products. It is based on the RCA index introduced by Balassa (1965) that compares the share of a group of products in a country's total exports with the share of that group of products in total world exports. A RCA larger than one indicates that the country has a revealed comparative advantage in exporting that group of products. Likewise, a RCA below one indicates that a country has a revealed comparative disadvantage.

18.   Indonesia has maintained comparative advantage on mineral fuels and low technology industries, in contrast with its Asian comparators (Figure 11). The results suggest that Indonesia's RCAs in mineral fuels and low technology industries have been consistently above one in 2000–16, with an increasing RCA for the former in 2013–16 and a stable RCA for the latter. The RCA's stability in low technology industries sets Indonesia apart from its Asian comparators. For those countries with RCA in low technology industries above one in 2000 (China, India, Thailand, and Vietnam), their RCAs declined gradually in 2000–16. In particular, China's RCA in low technology industries declined below one while its RCA in higher technology industries rose. Other large emerging markets' RCAs in low technology industries have been relatively stable except for Turkey which has observed a gradual decline in this RCA.

19.   Indonesia's has yet to improve its competitiveness in products with higher technology components. Its RCA in high technology industries declined gradually in 2000–16, while its RCAs in medium-low and medium-high technology industries remained below one and stable. In contrast, China and Vietnam have gained comparative advantage in high technology industries in this period.
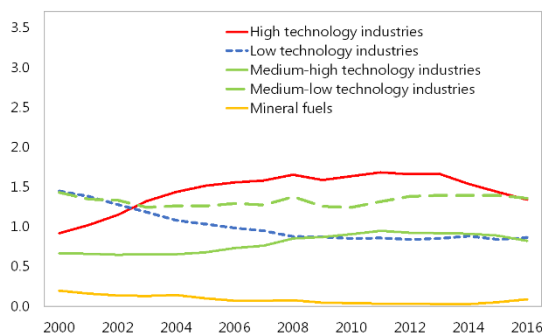
Figure 11. Revealed Comparative Advantage

Indonesia has maintained comparative advantage on mineral fuels and low technology industries. RCA on other group of products consistently below 1. Compared to peer countries, technology based products in Indonesia were not competitive.

Indonesia
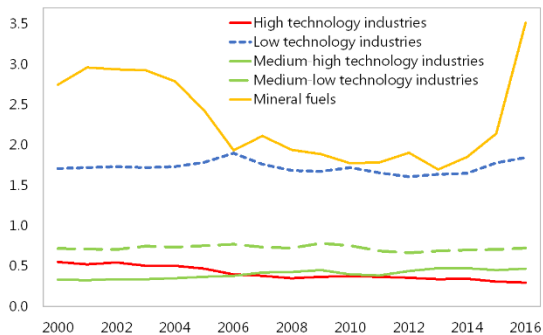
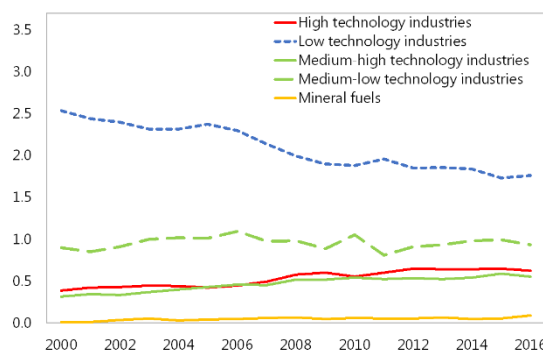Sources: UNComtrade database; and IMF staff estimates.
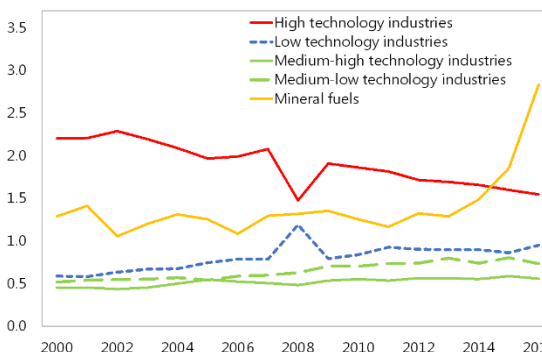
China

Sources: UNComtrade database; and IMF staff estimates.
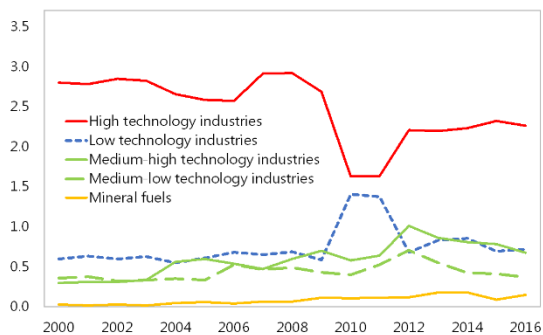
India

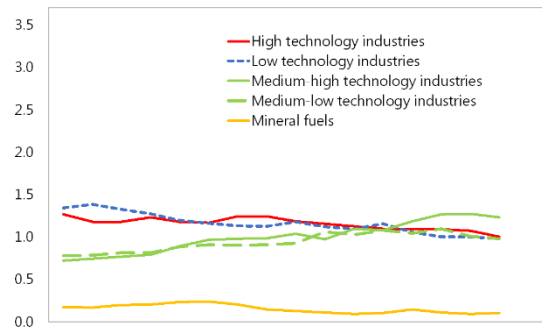Sources: UNComtrade database; and IMF staff estimates.

Malaysia

Sources: UNComtrade database; and IMF staff estimates.

Philippines

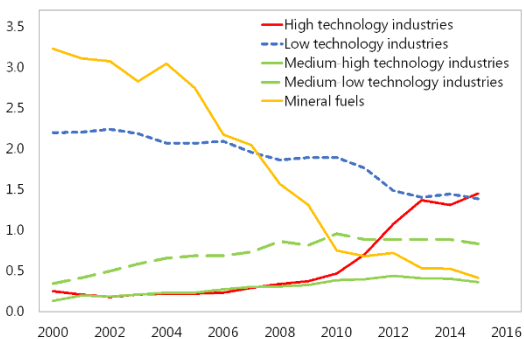
Sources: UNComtrade database; and IMF staff estimates.

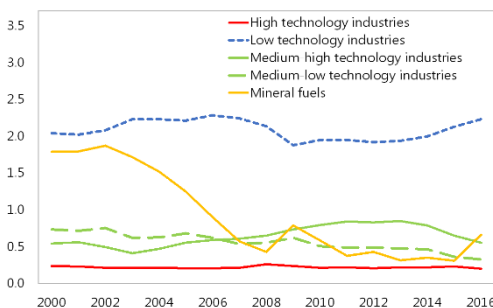**Thailand**

Sources: UNComtrade database; and IMF staff estimates.

Figure 11. Revealed Comparative Advantage (Concluded)

Vietnam

High technology industries
Low technology industries
Medium-high technology industries
Medium-low technology industries
Mineral fuels

Sources: UNComtrade database; and IMF staff estimates.

Argentina
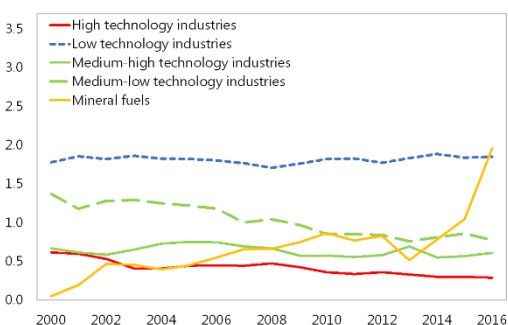
High technology industries
Low technology industries
Medium high technology industries
Medium-low technology industries
Mineral fuels

Sources: UNComtrade database; and IMF staff estimates.

Brazil

High technology industries
Low technology industries
Medium-high technology industries
Medium-low technology industries
Mineral fuels

Sources: UNComtrade database; and IMF staff estimates.

Mexico

High technology industries
Low technology industries
Medium-high technology industries
Medium-low technology industries
Mineral fuels

Sources: UNComtrade database; and IMF staff estimates.

Russia

High technology industries
Low technology industries
Medium-high technology industries
Medium-low technology industries
Mineral fuels (right scale)
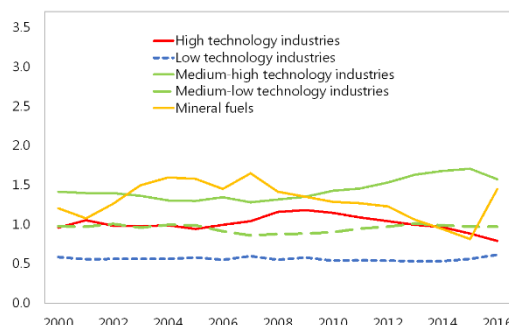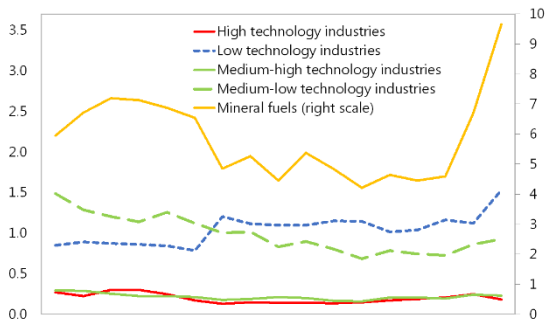
Sources: UNComtrade database; and IMF staff estimates.

South Africa
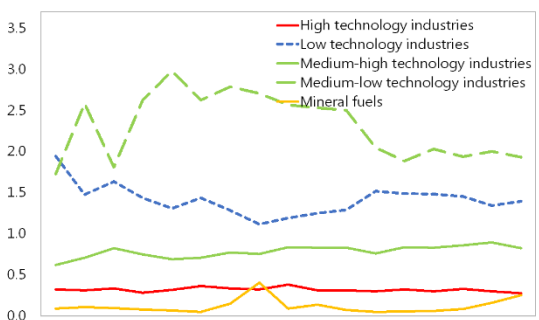
High technology industries
Low technology industries
Medium-high technology industries
Medium-low technology industries
Mineral fuels

Sources: UNComtrade database; and IMF staff estimates.

Turkey

High technology industries
Low technology industries
Medium-high technology industries
Medium low technology industries
Mineral fuels
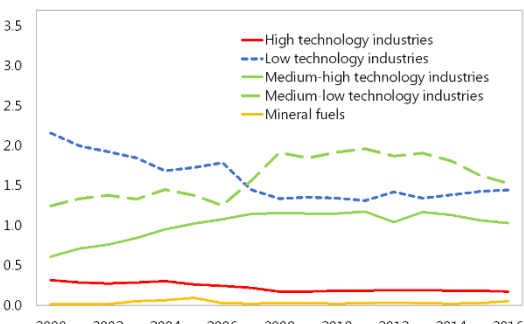
Sources: UNComtrade database; and IMF staff estimates.

Export Sophistication

20.   Export sophistication aims to capture the potential income level at which a product may dominate based on the income level of countries that export that product. For instance, if a country starts to export a new product that is exported by countries with high productivity, it may mean that over time this country can increase prices and its income. This measure is constructed using the framework in Hausmann, Hwang, and Rodrik (2007).

21.   Indonesia's export sophistication has improved, but remains low compared with peers in 2000–16 (Figures 12 and 13). In this period, Indonesia managed to surpass Philippines and be surpassed by China, while it lagged other comparators such as Malaysia, Thailand, and non-Asian large emerging economies.

Figure 12. Asian EMs: Export Sophistication Index 1/
(Index 1-10 with 10 being the most sophisticated)

Sources: UN Comtrade database; and IMF staff estimates.
1/ Based on 13 countries (Argentina, Brazil, China, India, Indonesia, Malaysia, Mexico, Philippines, Russia, South Africa, Thailand, Turkey, Vietnam).
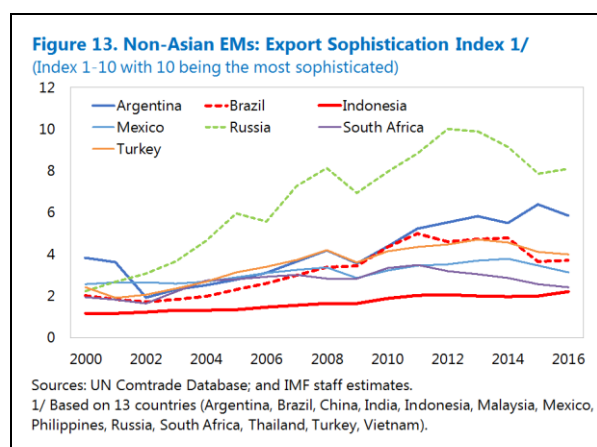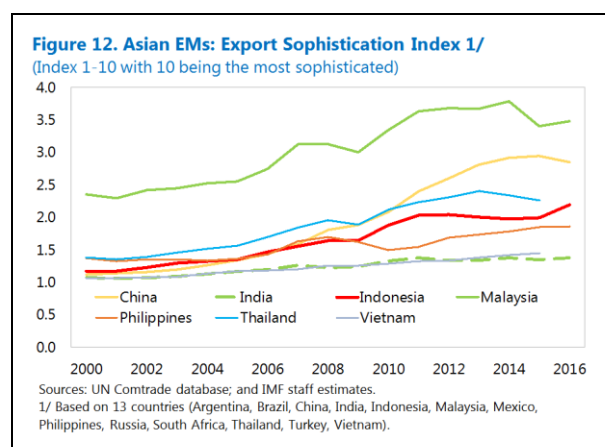

Figure 13. Non-Asian EMs: Export Sophistication Index 1/
(Index 1-10 with 10 being the most sophisticated)

Sources: UN Comtrade Database; and IMF staff estimates.
1/ Based on 13 countries (Argentina, Brazil, China, India, Indonesia, Malaysia, Mexico, Philippines, Russia, South Africa, Thailand, Turkey, Vietnam).

Economic Complexity

22.   Economic complexity is a concept developed by Hidalgo and Hausmann (2009) to capture the amount of productive knowledge that is embedded in a country's products. The economic complexity index (ECI) encompasses two aspects: diversity—the number of distinct products that a country makes; and ubiquity—the number of countries that also make the same product. Countries that produce and export a wide variety of products (high diversity) and those that are less ubiquitous are ranked higher on the ECI.

23.   The ECI suggests that Indonesia has low economic complexity. It is relatively less capable of producing a diverse range of products which are less commonly produced by other countries. In 2015, it ranked the 57th out of 108 countries by the Economic Complexity Observatory at The MIT Media Lab Macro Connections Group (Figure 14). While the ECI of most of its comparators increased in 2000–16,

Figure 14. Economic Complexity Rank, 2015 1/

Sources: The Economic Complexity Observatory; and IMF staff estimates.
1/ Ranked out of 108 countries. Higher number indicates higher ECI.

Indonesia's ECI has decreased (Figure 15). Indonesia also registered lower ECI than India, Philippines,
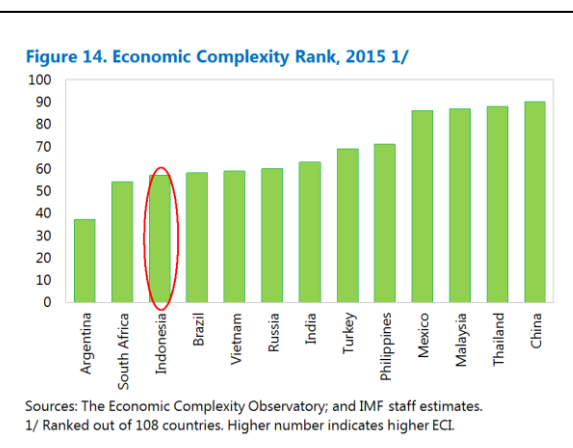
and Vietnam despite having higher per capita income (Figure 16, high ECI is usually associated with high per capita income).

Figure 15. Economic Complexity Index 1/

Source: The Economic Complexity Observatory.
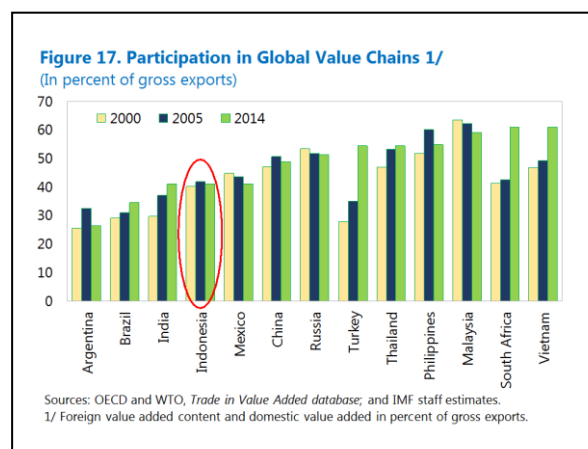1/ Index level measures the knowledge intensity of an economy by considering the knowledge intensity of the products it exports.
2/ 2015 data for Thailand and Vietnam.

Figure 16. Economic Complexity Index and Per Capita Income, 2016 1/

Sources: The Economic Complexity Observatory; IMF, *World Economic Outlook*; and IMF staff estimates.
1/ Or latest data available.

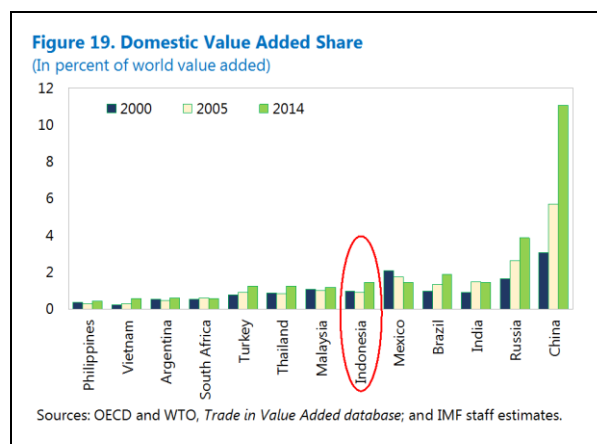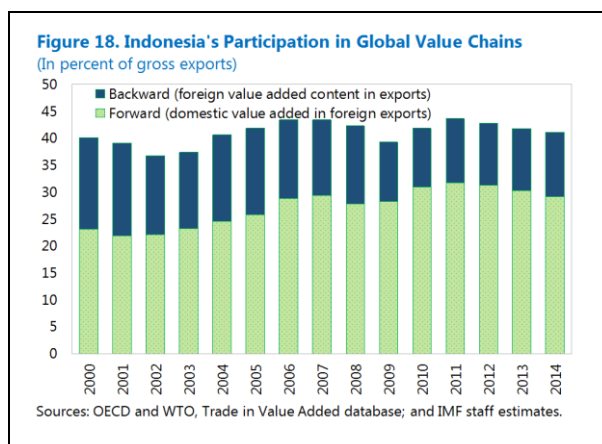## C. Participation in Global Value Chains

24.   Countries can benefit from participating in global value chains (GVC) by enhancing productivity in tradable sectors through knowledge spillovers, technology transfers, and cost-savings (Cheng and others, 2015). The expansion of GVCs has been particularly pronounced among emerging Asian economies.

25.   Indonesia's participation in GVCs remains below Asian comparators, despite a slight increase since 2000 (Figure 17). The increased participation in GVCs came mainly from forward participation—domestically produced intermediate goods to be used in third countries; while backward participation—foreign value added in domestic exports—has declined overtime, likely due to complex regulations including NTMs (Figure 18). Despite the rise in forward participation, Indonesia's share in global value added remains in the middle of its comparators (Figure 19).

Figure 17. Participation in Global Value Chains 1/
(In percent of gross exports)

Sources: OECD and WTO, *Trade in Value Added database*; and IMF staff estimates.
1/ Foreign value added content and domestic value added in percent of gross exports.

26.   The origin of value added in exports and final demand became more dominated by domestic sources (Tables 3–5). The origin of the value added in exports and final demand was dominated by domestic sources in 2011, accounting for 88 percent and 77.9 percent, respectively. China's shares in Indonesia's exports, final demand, and import value added has further increased, while the shares of the United States, Japan, Singapore, Germany, and Australia fell.

27.   Literature points to several factors determining the level of GVC participation. They include tariffs (WTO, 2014; and Blanchard, 2013), infrastructure, access to trade finance, regulatory

Figure 18. Indonesia's Participation in Global Value Chains (In percent of gross exports)

Figure 19. Domestic Value Added Share (In percent of world value added)

Sources: OECD and WTO, Trade in Value Added database; and IMF staff estimates.

environment, business environment, labor skills, transportation (WTO-OECD, 2013; and Hummels and Schaur, 2012), and economic complexity (Cheng and others, 2015).

28.   Indonesia has space for improvements to enhance its participation in GVCs with structural reforms to improve the investment climate. Indonesia' investment environment, including regulatory quality, labor skills, and quality of infrastructure, is relatively weak compared with most of its comparators (Figure 20). Despite Indonesia's relatively low tariffs and partial liberalization of the FDI regime, the prevalence of trade barriers and FDI restrictions have also contributed to low integration with GVCs compared to ASEAN peers; while for instance, FDI has brought gains to Vietnam in terms of improving export competitiveness and rising participation in GVCs. The authorities are planning to streamline NTMs, gradually shifting control from border to post border, and open to trade through bilateral and regional trade agreements. Enhancing the investment climate including on infrastructure, regulations, and labor skills would help strengthen links with GVCs and competitiveness (see chapter on "Indonesia's Growth Strategy: Boosting Potential Growth with Structural Reforms").

D. Conclusion

29.   Indonesia has room for strengthening export competitiveness by improving the investment climate. Indonesia has become more integrated with the rest of the world through regional and bilateral FTAs, and its export products and export destinations have become more diversified. Indonesia's relatively high and stable growth rate and low trade tariffs, have been able to attract GVCs in recent years. However, its comparative advantage still lays in mineral fuels and low technology industries with low economic complexity, and its participation in GVCs remains low compared with Asian comparators. Indonesia needs to strengthen competitiveness in higher technology products, economic complexity, and participation in GVCs, by enhancing its investment environment, including on infrastructure, regulations, and labor skills. By pursuing reforms in these areas, Indonesia would be well positioned to enhance its living standards and graduate from the status of basic commodity exporter subject to global price swings, low value added, and limited employment growth.

Figure 20. Factors Affecting GVC Participation

Strengths
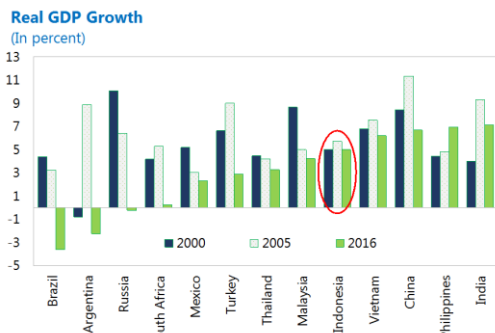
Real GDP Growth
(In percent)

Source: IMF, *World Economic Outlook.*

Trade Tariffs
(Rank)
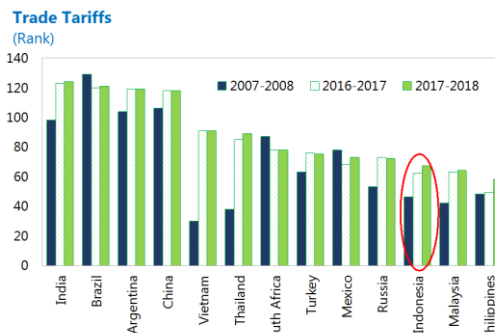
Source: World Economic Forum, *The Global Competitiveness Index.*

Challenges

Doing Business—Trading Across Borders
(Distance to frontier on a scale 0 to 100 with 0 represents the lowest performance)
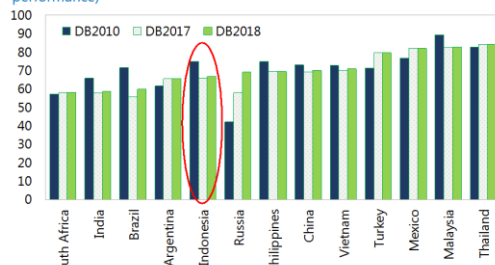
Source: World Bank, *Doing Business.*

Foreign Direct Investment
(Cummulative inflow from 2006-16, in percent of average GDP)
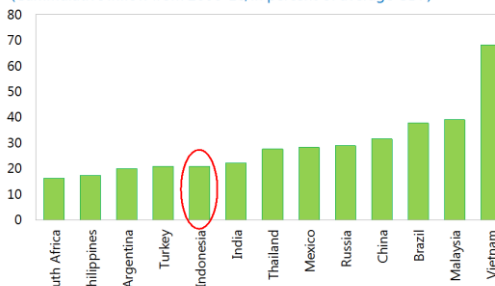
Sources: IMF, *World Economic Outlook*; and IMF staff estimates.

Prevalence of Trade Barriers
(Rank)
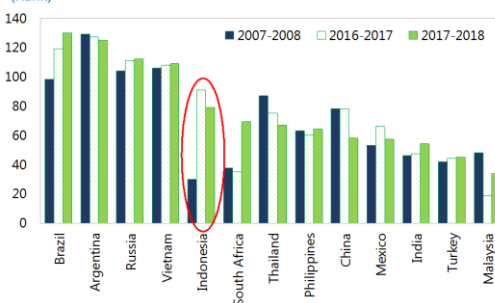
Source: World Economic Forum, *The Global Competitiveness Index.*

Regulatory Quality 1/
(Ranges from approximately -2.5 (weak) to 2.5 (strong) performance)
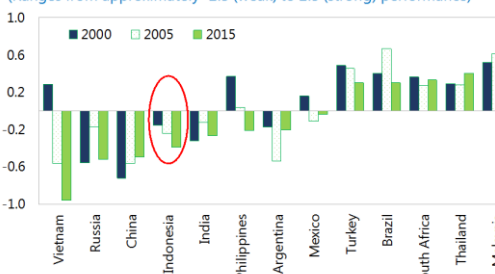
Source: World Bank, *Worldwide Governance Indicators.*
1/ Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Higher Education and Training
(Rank)
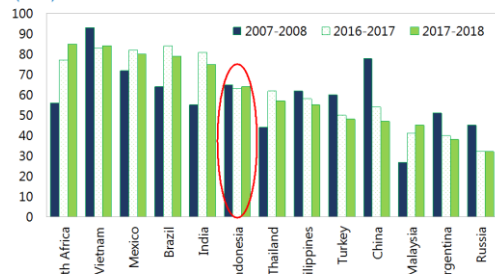
Source: World Economic Forum, *The Global Competitiveness Index.*

Quality of Port Infrastructure
(Rank)
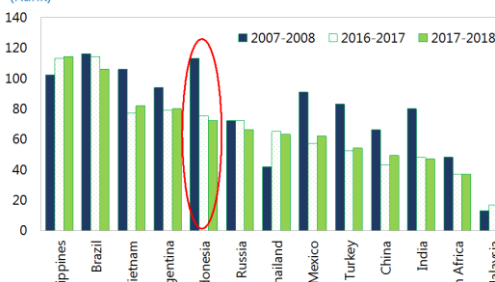
Source: World Economic Forum, *The Global Competitiveness Index.*

Table 2. Indonesia: Main Commodity Export by Major Export Destination

(In percent of the commodity exported from Indonesia)

2000		2005		2016	
Natural Gas: SITC-Rev3 34					
Japan	67.33	Japan	56.36	Japan	29.85
Korea	20.38	Rep. of Korea	25.62	Singapore	24.23
Other Asia, nes	10.01	China	11.75	Rep. of Korea	18.72
China	0.93	Other Asia, nes	5.62	China	12.31
USA	0.64	Philippines	0.27	Other Asia, nes	11.64
Philippines	0.39	Thailand	0.21	Malaysia	2.66
Australia	0.16	Malaysia	0.04	United Arab Emirates	0.31
Hong Kong SAR	0.11	Italy	0.04	Mexico	0.26
Malaysia	0.03	United Arab Emirates	0.03	Thailand	0.02
Vietnam	0.01	Australia	0.03	Timor-Leste	0.00
Rest of the World	0.01	Rest of the World	0.03	Rest of the World	0.00
Oil: SITC-Rev3 33					
Japan	32.93	Japan	32.76	Malaysia	14.46
Rep. of Korea	19.11	Rep. of Korea	21.56	China	14.32
China	12.38	China	15.93	Singapore	13.63
Singapore	9.90	Australia	10.77	Thailand	13.53
Australia	7.73	Singapore	7.99	Japan	12.63
USA	5.85	USA	3.55	Australia	8.51
Other Asia, nes	4.25	Thailand	3.03	USA	7.22
Malaysia	1.98	Other Asia, nes	1.71	Rep. of Korea	7.12
Thailand	1.65	Malaysia	1.22	Other Asia, nes	4.27
India	1.51	New Zealand	0.90	India	2.68
Rest of the World	2.71	Rest of the World	0.57	Rest of the World	1.62
Palm oil: SITC-Rev3 4222+4224					
India	34.55	India	22.36	India	21.38
Netherlands	19.33	China	13.87	China	13.46
China	9.37	Netherlands	13.59	Pakistan	8.00
Singapore	5.54	Pakistan	7.42	Netherlands	5.30
Germany	3.01	Malaysia	6.53	Spain	4.34
Spain	3.00	Singapore	3.87	USA	4.30
Malaysia	2.39	Bangladesh	3.58	Egypt	4.03
USA	2.34	Germany	3.05	Bangladesh	3.59
Turkey	2.32	Sri Lanka	2.70	Italy	3.48
Bangladesh	2.00	Turkey	2.37	Malaysia	3.10
Rest of the World	1.78	Rest of the World	20.68	Rest of the World	29.02
Rubber: SITC-Rev3 23+62					
USA	32.72	USA	27.58	USA	28.01
Japan	10.90	Japan	15.09	Japan	13.53
Singapore	6.07	China	9.93	China	9.66
Germany	4.81	Singapore	5.68	India	5.96
Rep. of Korea	4.53	Germany	3.40	Rep. of Korea	4.63
Canada	3.11	Rep. of Korea	3.11	Germany	3.03
Belgium	2.88	Canada	2.79	Brazil	2.56
China	2.41	Brazil	2.06	Canada	2.12
United Kingdom	2.06	United Kingdom	1.73	Turkey	1.91
Italy	2.04	Belgium	1.59	Belgium	1.90
Rest of the World	0.26	Rest of the World	27.04	Rest of the World	26.68

Table 2. Indonesia: Main Commodity Export by Major Export Destination (Concluded)

(In percent of the commodity exported from Indonesia)

2000		2005		2016	
Base metal : SITC-Rev3 67+68+69					
Singapore	21.98	Singapore	24.45	China	17.19
Japan	20.42	Japan	14.97	Singapore	13.11
USA	13.75	Malaysia	10.94	Australia	11.09
Malaysia	5.61	Thailand	9.73	Malaysia	8.33
Other Asia, nes	4.90	China	7.50	Thailand	7.11
Thailand	4.90	USA	4.56	USA	6.27
Netherlands	4.23	Other Asia, nes	3.93	India	5.84
Philippines	3.19	Philippines	3.00	Viet Nam	4.93
Germany	2.05	Rep. of Korea	2.25	Rep. of Korea	4.90
Rep. of Korea	1.96	China, Hong Kong SAR	2.03	Japan	4.87
Rest of the World	0.11	Rest of the World	16.65	Rest of the World	16.38
Coal : SITC-Rev3 32					
Japan	26.39	Japan	24.79	China	24.99
Rep. of Korea	8.01	Rep. of Korea	10.60	India	22.77
Philippines	5.85	India	10.49	Japan	13.65
Thailand	5.27	China, Hong Kong SAR	6.98	Rep. of Korea	8.57
India	5.26	Italy	5.12	Other Asia, nes	6.59
Spain	4.57	Malaysia	4.73	Malaysia	5.60
Netherlands	4.55	Thailand	4.34	Philippines	5.49
China, Hong Kong SAR	4.37	Philippines	3.44	Thailand	4.39
Malaysia	3.19	Spain	2.21	China, Hong Kong SAR	2.78
Italy	2.83	Netherlands	1.98	Spain	1.46
Rest of the World	0.03	Rest of the World	25.31	Rest of the World	3.69
Textile : SITC-Rev3 84					
USA	42.55	USA	55.17	USA	50.05
United Kingdom	8.41	Germany	8.03	Japan	9.40
Germany	7.87	United Kingdom	6.26	Germany	6.51
Netherlands	4.53	France	2.67	Rep. of Korea	3.84
Japan	3.92	United Arab Emirates	2.64	United Kingdom	2.72
United Arab Emirates	3.81	Japan	2.56	China	2.42
France	2.96	Belgium	2.30	Belgium	2.37
Saudi Arabia	2.75	Netherlands	2.08	Australia	2.37
Belgium	2.65	Italy	1.86	Canada	2.29
Singapore	2.25	Canada	1.85	United Arab Emirates	1.81
Rest of the World	0.01	Rest of the World	14.59	Rest of the World	16.22
Electrical Appliances : SITC-Rev3 77					
Singapore	29.81	Singapore	41.87	Singapore	25.00
Japan	22.08	Japan	17.05	Japan	17.74
USA	8.74	USA	6.52	USA	8.94
Malaysia	4.55	China, Hong Kong SAR	4.65	China, Hong Kong SAR	5.17
Thailand	4.31	Malaysia	4.34	Malaysia	4.50
China, Hong Kong SAR	3.39	Thailand	2.55	France	4.25
Philippines	2.92	China	2.41	China	4.04
Rep. of Korea	2.37	Rep. of Korea	1.87	Thailand	3.57
France	2.28	Australia	1.70	Philippines	2.39
Germany	2.08	Philippines	1.53	Rep. of Korea	2.33
Rest of the World	17.46	Rest of the World	15.50	Rest of the World	22.06

Sources: UNComtrade database; and IMF staff estimates.

Table 3. Origin of Value Added in Indonesia Gross Exports

Source Country	2000	2005	2011	2000	2005	2011	Sparkline
	(In millions of U.S. dollar)			Share (in percent)			
Domestic	54,534	80,259	195,877	83.0	83.9	88.0	
Saudi Arabia	806	1,877	3,099	1.2	2.0	1.4	
China	391	1,118	2,789	0.6	1.2	1.3	
Japan	1,663	1,432	2,205	2.5	1.5	1.0	
United States	1,312	1,191	1,576	2.0	1.2	0.7	
Malaysia	425	590	1,356	0.6	0.6	0.6	
Korea	582	570	1,246	0.9	0.6	0.6	
Singapore	638	865	1,103	1.0	0.9	0.5	
Australia	479	654	919	0.7	0.7	0.4	
India	192	436	895	0.3	0.5	0.4	
Thailand	239	457	839	0.4	0.5	0.4	
Rest of the world	4,427	6,263	10,630	6.7	6.5	4.8	

Sources: OECD and WTO, *Trade in Value Added database;* and IMF staff estimates.

Table 4. Origin of Value Added in Indonesia Final Demand

Source Country	2000	2005	2011	2000	2005	2011	sparkline
	(In millions of U.S. dollar)			Share (in percent)			
Domestic	108,858	202,800	640,214	74.6	74.9	77.9	
China	1,515	5,314	23,715	1.0	2.0	2.9	
Japan	5,575	7,941	18,664	3.8	2.9	2.3	
United States	4,963	6,322	13,231	3.4	2.3	1.6	
Saudi Arabia	1,475	3,929	9,803	1.0	1.5	1.2	
Korea	1,725	2,697	9,128	1.2	1.0	1.1	
Singapore	2,137	4,230	8,983	1.5	1.6	1.1	
Malaysia	1,279	2,664	8,358	0.9	1.0	1.0	
Australia	2,333	3,412	7,787	1.6	1.3	0.9	
Thailand	1,088	2,633	7,372	0.7	1.0	0.9	
India	611	2,023	6,738	0.4	0.7	0.8	
Rest of the world	14,279	26,786	67,725	9.8	9.9	8.2	

Sources: OECD and WTO, *Trade in Value Added database;* and IMF staff estimates.

Table 5. Origin of Value Added in Indonesia Gross Imports

Source Country	2000	2005	2011	2000	2005	2011	sparkline
	(In millions of U.S. dollar)			Share (in percent)			
China	1,905	6,432	26,504	3.9	7.7	12.6	
Japan	7,237	9,373	20,869	14.9	11.2	9.9	
United States	6,275	7,513	14,807	13.0	9.0	7.0	
Saudi Arabia	2,281	5,807	12,902	4.7	6.9	6.1	
Korea	2,307	3,267	10,375	4.8	3.9	4.9	
Singapore	2,776	5,096	10,086	5.7	6.1	4.8	
Malaysia	1,704	3,254	9,714	3.5	3.9	4.6	
Australia	2,812	4,066	8,706	5.8	4.8	4.1	
Thailand	1,328	3,090	8,211	2.7	3.7	3.9	
India	803	2,459	7,633	1.7	2.9	3.6	
Germany	1,818	2,828	5,301	3.8	3.4	2.5	
Domestic	278	525	2,709	0.6	0.6	1.3	
Rest of the world	16,888	30,221	73,055	34.9	36.0	34.6	

Sources: OECD and WTO, *Trade in Value Added database;* and IMF staff estimates.

Appendix I. Dimensions of Trade Composition and GVCs

Diversification is measured based on Herfindahl-Hirschman Index (HHI). The HHI is calculated as the sum of squared shares of each product in total export for export product diversification and the sum of squared shares of each export destination in total export for market diversification. If *N* denotes the number of export products or export destinations and *s* denotes the market share, *HHI* of a country is calculated as

$$HHI = \sum_{i=1}^{N} s_i^2$$

The HHI values range between 1/N to 1 with smaller index indicates more diversified or less concentrated market. Diversifications of export product and destination are analyzed for Indonesia and its comparators. Product diversifications are calculated based on SITC Rev. 3 at 4-digit product classification and for destination HHIs are calculated using Direction of Trade Statistics data.

Revealed comparative advantage (RCA) is measured according to the RCA index introduced by Balassa (1965) that compares the share of a group of products in a country's total exports with the share of that group of products in total world exports. RCA > 1 indicates that a country has revealed comparative advantage in exporting that group of products. Likewise, RCA < 1 indicates that a country has revealed comparative disadvantage.

The RCA index for country *c* in exports of product *p* is calculated using the following formula:

$$RCA_{cp} = (\frac{x_{cp}}{\Sigma_c x_{cp}})/ (\frac{\Sigma_p x_{cp}}{\Sigma_c \Sigma_p x_{cp}})$$

Where x_{cp} represents the exports of product *p* by country *c*. The numerator refers to the share of product *p* in the total exports of county *c* and the denominator refers to the share of product *p* in total world exports.

Hatzichronoglu (1997) and OECD (2003) developed export products classification based on level of skill and technology intensity. This classification has been modified to make it more relevant to Indonesia's export structure and data availability. Instead of ISIC Rev 3 product classification, we use SITC-Rev 3 at the 4 digit. Export products are classified into five categories: High, Medium-high, Medium-low, Low Technology and Mineral Fuels. Mineral Fuels group is added, as oil and gas are the main export products in Indonesia.

Export sophistication is constructed using Hausmann, Hwang and Rodrik (2007) framework. This measure aims to capture the productivity level associated with a country's exports. The evolution of sophistication displays trend in high-growth, rich countries versus slow-growing, poor economies. For each product, an associated income/productivity level (PRODY) is generated by taking a weighted average of the per capita GDP, where the weights reflect the RCA of a country in that product. Where *p* denotes export product or category, *t* time, *c* country, and *Y* per capita income

$$PRODY_{pt} = \Sigma_c(RCA_{cpt} * Y_{ct}).$$

Then the income/productivity level that corresponds to a country's export basket (EXPY) is constructed with the weights corresponding to the shares of these products in total exports.

$$EXPY_{ct} = \Sigma_p(x_{cpt} / \Sigma_p \, x_{cpt}) \, PRODY_{pt}$$

Economic complexity is a concept developed by Hidalgo and Hausmann (2009) to capture the amount of productive knowledge that is embedded in a country's products. The economic complexity index (ECI) encompasses two aspects: diversity—the number of distinct products that a country makes; and ubiquity—the number of countries that also make the same product. A country that is able to produce and export a wide variety of products (high diversity) and those that are less ubiquitous are ranked high on ECI. ECI ranks how diversified and complex a country's export basket is. We use ECI data calculated based on Simoes and Hidalgo (2011).

Global value chains (GVCs) are the position and participation of countries in global production. The GVC participation index indicates the extent to which a country is involved in a vertically fragmented production process (in relative and absolute terms). It distinguishes the use of foreign inputs in exports or backward participation and the use of domestic intermediates in third country exports or forward participation (De Backer and Miroudot, 2013). The OECD, in cooperation with the World Trade Organization (WTO), has developed estimates of trade flows in value-added terms. Inter-country input-output tables and a full matrix of bilateral trade flows are used to derive data on the value added by each country in the value chain.

References

Balassa, B., 1965, "Trade Liberalization and "Revealed" Comparative Advantage," *The Manchester School*, Vol. 33, pp. 99–123.

Blanchard, E., 2013, "What Global Fragmentation Means for the WTO: Article XXIV, Behind-the-Border Concessions, and A New Case for WTO Limits on Investment Incentives," WTO Working Paper ERSD-2013–03 (Geneva: World Trade Organization).

Cheng, K., S. Rehman, D. Seneviratne, and S. Zhang, 2015, "Reaping the Benefits from Global Value Chains," IMF Working Paper No. 15/204 (Washington: International Monetary Fund).

De Backer, K. and S. Miroudot (2013), "Mapping Global Value Chains," *OECD Trade Policy Papers*, No. 159 (Paris: Organisation for Economic Co-operation and Development).

Ding, X., and M. Hadzi-Vaskov, 2017, "Composition of Trade in Latin America and the Caribbean," IMF Working Paper No. 17/42 (Washington: International Monetary Fund).

Hatzichronoglou, T., 1997, "Revision of the High-Technology Sector and Product Classification," OECD Science, Technology and Industry Working Papers, No. 1997/02 (Paris: Organisation for Economic Co-operation and Development).

Hausmann, R., J. Hwang, and D. Rodrik, 2007, "What You Export Matters," *Journal of Economic Growth*, Vol. 12, pp. 1–25.

Hidalgo, C. A., and R. Hausmann, 2009, "The Building Blocks of Economic Complexity," *Proceedings of the National Academy of Sciences*, Vol. 106, pp. 10570–10575.

Hummels, D., and Schaur, G., 2012, "Time as a Trade Barrier," NBER Working Paper No. 17758 (Cambridge, Massachusetts: National Bureau for Economic Research).

Marks, S., 2015, "The ASEAN-China Free Trade Agreement: Political Economy in Indonesia," *Bulletin of Indonesian Economic Studies*, Vol. 51, No. 2.

Marks, S., 2017, "Non-tariff Trade Regulations in Indonesia: Nominal and Effective Rates of Protection," *Bulletin of Indonesian Economic Studies* (March).

Pangestu, M., S. Rahardja, and L. Ing, 2015, "Fifth Years of Trade Policy in Indonesia: New World Trade, Old Treatments," *Bulletin of Indonesian Economic Studies*, Vol. 51, No. 2.

OECD, 2003, *Science, Technology and Industry Scoreboard*.

Office of the United States Trade Representative (USTR), 2017, *2017 National Trade Estimate Report on Foreign Trade Barriers*. Available via the Internet: https://ustr.gov/sites/default/files/files/reports/2017/NTE/2017%20NTE.pdf.

Simoes, A. J. G, and C. A. Hidalgo, 2011, "The Economic Complexity Observatory: An Analytical Tool for Understanding the Dynamics of Economic Development," Workshops at the Twenty-Fifth AAAI Conference on Artificial Intelligence, 2011.

World Trade Organization, 2013, *Trade Policy Review—Indonesia*.

_____, 2014, "The Rise of Global Value Chains," *World Trade Report* (Geneva).

WTO-OECD, 2013, *Global Review of Aid for Trade*.