Development Policy Review 2014

Indonesia: Avoiding The Trap

THE WORLD BANK | BANK DUNIA
Sharing Development Solutions
for an Emerging Indonesia

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Poverty Reduction and Economic Management Department
East Asia and Pacific Region

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Preface

The World Bank undertakes, on a regular basis and in many emerging economies, an evidence-based review of development challenges and optional policy solutions to address these. One of such analytical pieces is called Development Policy Review.

The World Bank has completed a Development Policy Review for Indonesia in 2009. That report identified the reforms of institutions and processes that govern the state as critical for unleashing the country's development potential. That report provided an analytical underpinning for the Bank's Country Partnership Strategy 2009-2014 and shaped the Bank's support to the Government's RPJMN 2010-2014.

While the institutional reform agenda remains unfinished, the present report argues that Indonesia has the potential to rise and become more prosperous and equitable in the next two decades. Its central thesis is that with a few critical reforms in the six priority areas identified, Indonesia can climb the income ladder and join the rank of high-income economies within two decades, in an inclusive manner. At the same time, in the absence of critical reforms, Indonesia would float in the middle, as was the case of Brazil, Mexico, South Africa and other middle-income countries from the early 1980s to the mid-2000s. Which way Indonesia's economy will go depends is, to a critical extent, on the hands of Indonesia's authorities. The main difficulties lie in getting the reforms implemented in a complex institutional and decentralized framework. But Indonesia cannot afford to not try hard. The costs of complacency – and the rewards for action – are too high.

The report was elaborated upon large consultations/ discussions with key stakeholders in Indonesia, including government officials, private sector leaders, non-governmental organizations, academics and labor unions. It is hoped that these stakeholders, as well as others readers will find it useful.

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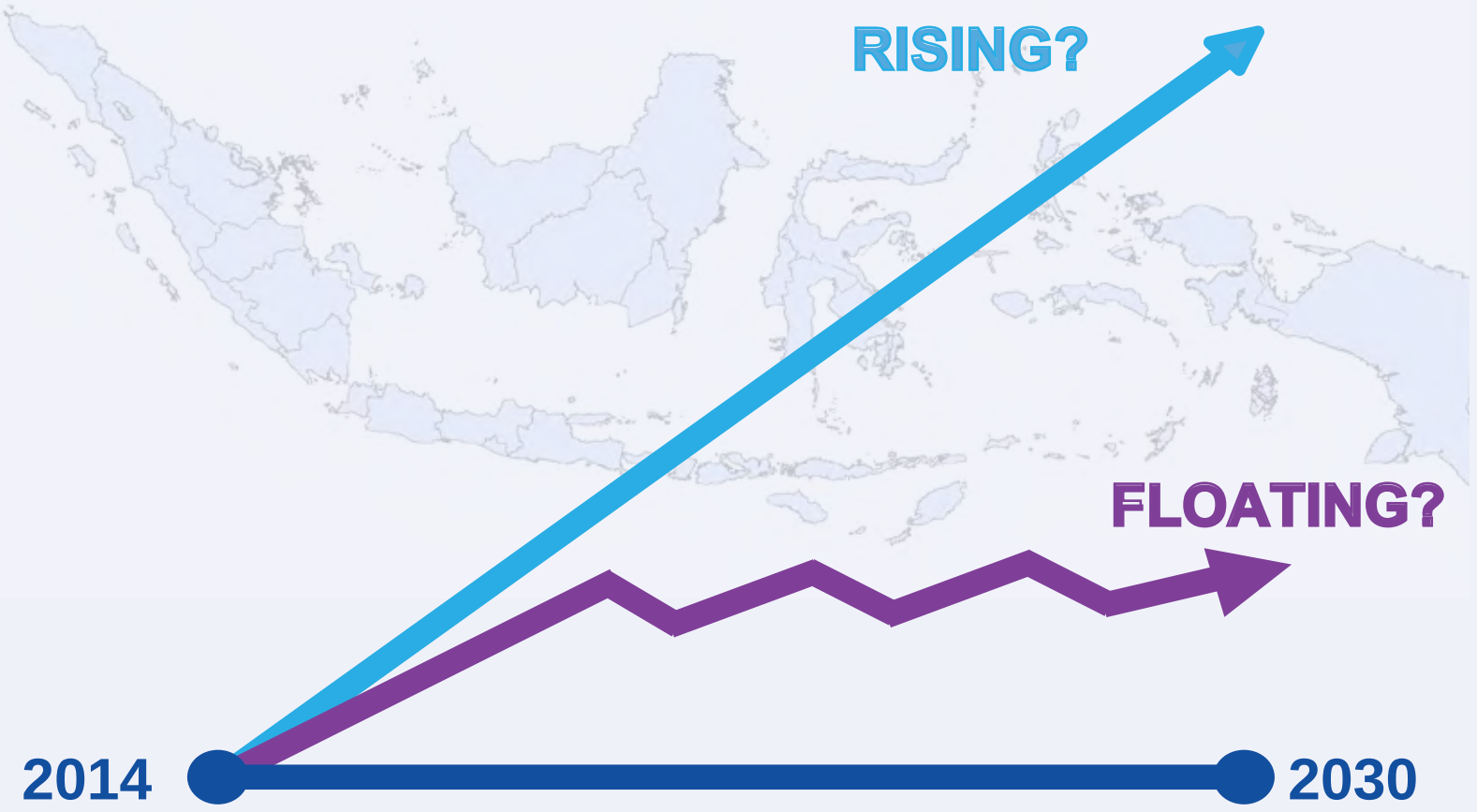
Executive Summary

INDONESIA: Avoiding The Trap



Executive Summary

Within the next two decades Indonesia aspires to generate prosperity, avoid a middle-income trap and leave no one behind as it tries to catch up with high-income economies. These are ambitious goals. Realizing them requires sustained high growth and job creation, as well as reduced inequality. Can Indonesia achieve them? This report argues that the country has the potential to rise and become more prosperous and equitable. But the risk of "floating in the middle" is real. Which pathway the economy will take depends on: (i) the adoption of a growth strategy that unleashes the productivity potential of the economy; and (ii) consistent implementation of a few, long-standing, high-priority structural reforms to boost growth and share prosperity more widely. Indonesia is fortunate to have options in financing these reforms without threatening its long-term fiscal outlook. The difficulties lie in getting the reforms implemented in a complex institutional and decentralized framework. But Indonesia cannot afford hard to not try harder. The costs of complacency – and the rewards for action -- are too high.

The next decade brings opportunities and risks for Indonesia

- **Over the next decade, four domestic and external factors**—which good policies can turn into powerful drivers of growth, or "pull factors" —will shape economic prospects. These factors are Indonesia's demographics, the urbanization trend, commodity prices, and developments in China.
- **Demographics.** Indonesia is fortunate to have abundant labor. Between 2013 and 2020, the working-age population will increase by 14.8 million, reaching 189 million from the current 174 million. Today, 50 percent of the population is under the age of 30. This increasingly educated and IT-savvy youth is an asset that can be used to boost overall productivity and economic growth. With the right policies in place to utilize this labor, Indonesia is poised to benefit from a demographic "dividend", before the population starts to age in 2025-30.
- **Urbanization.** Indonesia's urban population is increasing at an annual pace of about 4 percent, making Indonesia one of the most rapidly urbanizing countries in the world. By 2025, 68 percent of the population is projected to live in urban areas, compared to 52 percent in 2012. As income rises and existing large metropolitan areas such as Jakarta and Surabaya become saturated, the demand for consumer durables, shopping space and housing will increase significantly in smaller cities. Connecting these cities and their inhabitants to rural areas, metropolitan areas and the global economy will be essential to attracting firms and achieving shared prosperity. Empirical evidence shows that urbanization supports growth and poverty in Indonesia only in the presence of adequate infrastructure (Lewis, 2014).
- **Global commodity prices.** The softening of commodity prices since 2011 poses challenges for Indonesia in the short term, as seen in their impact on Indonesia's trade balance, but it offers an opportunity to enhance the quality and diversity of investments in Indonesia. Over the past decade, high commodity prices tilted investment incentives in favor of the resource sector and non-tradable sectors (e.g., the real estate sector) against manufacturing and other

tradable sectors. Since 2005, commodities have overtaken manufacturing as Indonesia's largest exports (65 percent of total exports). Going forward, lower commodity prices should increase the relative profitability and attractiveness of manufacturing and can help Indonesia develop its industrial base. Commodity price falls over the past two years are now translating into depreciation in the real effective exchange rate, stimulating manufacturing investments, exports and competitiveness. With reforms to reduce the constraints faced by manufacturing firms (see below), weaker commodity prices may be a blessing in disguise.

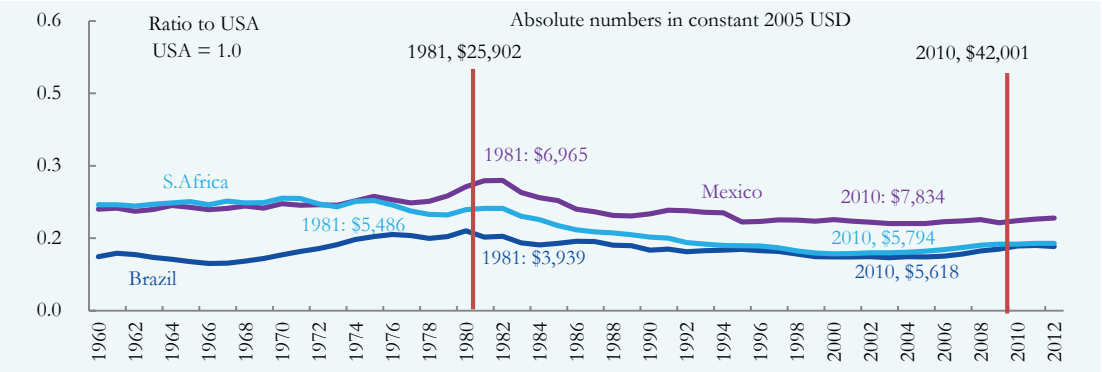
- **Developments in China.** China's rapidly rising wages present Indonesia with a potential in regaining a comparative advantage in labor-intensive export sectors. China's nominal wages have grown by an annual average of almost 15 percent since 2001 which, together with slowing productivity growth in low-skilled sectors in recent years, has seen Chinese unit labor costs grow by almost 70 percent since 2005 (Economist Intelligence Unit, 2012). Meanwhile, ongoing Yuan appreciation, with the real effective exchange rate up 30 percent since 2005, is further eroding China's competitiveness in manufactured goods. These pressures, combined with slower overall economic growth as China rebalances, are likely to prompt investors to look beyond China's coastal areas. These dynamics offer ASEAN countries, including Indonesia, an opportunity to attract more investments in the manufacturing industries.

However, while none of these potentially favorable factors will be captured without reforms, two risks remain: a risk of a slowdown in long-term growth and a risk of growth not being inclusive.

- **Risk of a growth slowdown.** International experience shows that growth slowdowns can occur at all levels of income (Bulman et al, 2012). Recent evidence suggests that their frequency is higher for middle-income countries (IMF, 2013). As an example, Brazil grew fast in the 1960s and 1970s. But from 1981, when its GDP per capita stood at US$3,939 (slightly above Indonesia's GDP per capita today), it suffered a prolonged relative growth slowdown, until 2004.[1] Similarly, also starting from 1981, when its GDP per capita was US$6,965, Mexico saw more than 20 years of slowing growth. South Africa experienced similar trends. These examples suggest that Indonesia cannot take its solid growth performance for granted. All the more so that growth was partially driven by a very favorable external environment: the commodity boom of 2003-11 combined with low global interest rates since 2009 supported corporate revenues, household incomes and government revenues, and led to a significant jump in domestic demand.[2] But, since 2011, commodity prices have softened significantly. With the normalization of US growth, the Fed's quantitative easing policy—which led to low global interest rates—is being gradually unwound, increasing financing costs. Without structural reforms, the risk of a growth slowdown for Indonesia is very real.

1 A commodity-rich country similar to Indonesia, Brazil benefitted significantly from a commodity boom in 2004-11. This favorable external factor explains parts of the strong growth recovery in that country in that period.
2 More specifically, the direct rise in the value of resource assets (palm oil, rubber, coal, gas, etc.), as well as the value of other assets purchased on the back of commodity incomes or wealth (real estate properties, land and securities), significantly encouraged consumption and investment against these assets and generated multiplier effects in the economy.

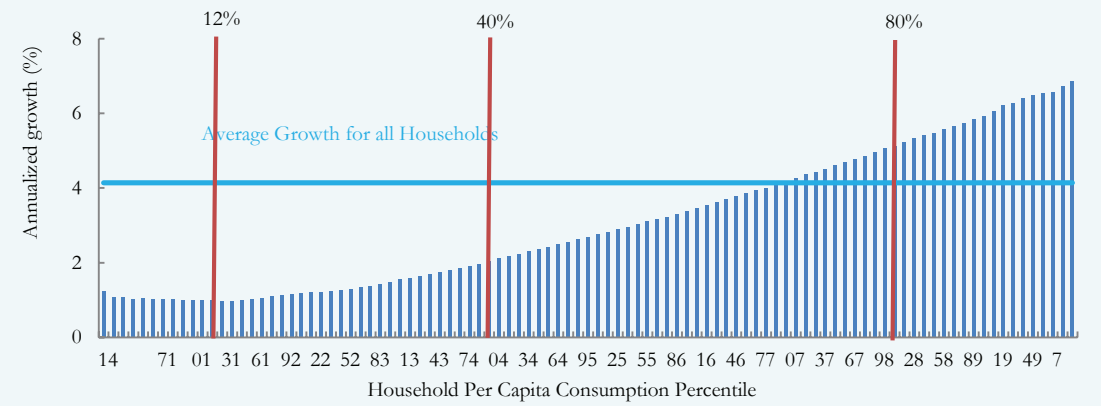
Figure ES1: Brazil, Mexico and South Africa experienced prolonged relative slowdown



Source: World Bank and World Development Indicators.

- **Risk of growth not being inclusive enough.** Even if Indonesia manages to avoid a prolonged growth slowdown, growth may not be inclusive, i.e. the benefits and opportunities associated with growth are not shared widely across the population. From 1999 to 2012, poverty was cut by half: from 24 percent to 12 percent. However, in 2012, about 65 million people hovered between the national poverty line and 50 percent above the latter. They and the poor are highly vulnerable to food price increases, health shocks and natural disasters. Vulnerability persists partly because the poorest families enjoy only a very small increase in real income, compared to those more fortunate. In 2003-10, real growth of per capita consumption was 1.3 percent per annum for the poorest 40 percent of households, compared with 3.5 percent for the next 40 percent, and 5.9 percent for the top 20 percent (Figure ES.2). Moreover, consumption inequality in Indonesia is increasingly determined by access to opportunities. In 2002, 27 percent of child consumption inequality was due to differences in their gender, the gender and employment status of the head of their household, their parents' education, and their region and location of birth. By 2012, this reached 37 percent. Going forward, equitable growth needs to be fostered and not taken as granted.

Figure ES.2: Poorer households experienced lower than average growth in their real consumption over 2003-10



Note. A Growth Incidence Curve (GIC) shows the annual growth rate in consumption between two periods for each percentile of the distribution. Thus, the GIC indicates how the average consumption growth for all households is distributed across the distribution. See World Bank (forthcoming) Inequality of Income and Consumption in Indonesia.
Source: Susenas and World Bank calculations

What strategy for a strong and inclusive growth in Indonesia?

Given the opportunities and risks discussed above, and Indonesia's aspiration of shared prosperity, what would be the country's best growth strategy going forward? Quite simply, a country can increase its income per capita (a proxy of prosperity) by a combination of improving labor productivity or increasing the share of the population employed.[3] Because the latter increases very slowly over time, cross-country evidence shows that 92 percent of the differences in GDP per capita across nations are explained by differences in aggregate labor productivity (IMF, 2013). Thus, for Indonesia's GDP per capita to converge rapidly to high-income economies, boosting economic growth through increasing labor productivity will be crucial. Beyond moving the economy to higher value-addition, a productivity-driven growth strategy is also important for Indonesia to reduce vulnerability and enhance competitiveness in the private sector. Indeed, the political pressure for increasing wages is unlikely to weaken in Indonesia. In this context, the only way to accommodate wage increases without jeopardizing competitiveness is to increase labor productivity.

The question is then how can Indonesia boost labor productivity growth? Aggregate labor productivity growth has two sources. First, a movement of labor (and capital or other inputs to production) from low to higher productivity growth sectors increases aggregate productivity of an economy (this is called "structural change effect", see McMillan and Rodrik, 2011). For instance, when workers leave agriculture and work in higher productivity sectors (e.g., as a result of investment in agriculture that increases yields), the aggregate productivity of the economy increases. The second source of aggregate productivity growth is productivity growth within economic sectors, e.g., higher productivity in agriculture, thanks to the use of higher-yielding seeds or higher productivity in manufacturing thanks to the entry of new innovative firms.

The good news is that productivity gaps across Indonesia's economic sectors are, providing scope for boosting productivity through structural change. Table E.1 shows the gap in labor productivity levels between agriculture and other sectors of the economy, measured as the ratio of sectoral productivity to agriculture. Moving a worker from agriculture to the low-end services subsectors (wholesale and retail trade and personal, social services and construction) leads to a doubling of productivity on average. This movement has largely occurred over the past decade and has been the key driver of poverty reduction. Seventeen of the 20 million jobs created in 2001-11 occurred in services, mostly in the low-end segment. Today, more than 50 percent of workers are employed in agriculture and low-end services. In the years to come, Indonesia should seek to expand the movement of labor and job creation in the manufacturing sector and high-end services.[4] Despite the sharp decline in manufacturing productivity growth in the past decade, the average productivity of workers in manufacturing industries remains fully five times higher than that in agriculture.[5] Indonesia will see rising productivity growth if most of the 15 million additional individuals that will join the labor force by 2020 are employed in manufacturing and high-end services (versus low-end services).

3 This proceeds the decomposition of GDP per capita as follows: $\frac{GDP}{Population} = \frac{GDP}{Workers} * \frac{Workers}{Population}$. $\frac{GDP}{Workers}$ is the aggregate labor productivity and $\frac{Workers}{Population}$ the proportion of the total population employed.

4 The skills requirement for entering the high-end services sector is however higher, implying that the scope for job creation in manufacturing is much larger given the average levels of skills in the labor force.

5 In the past decade, labor productivity in agriculture increased (driven by rubber, palm oil, coffee and tea) and dropped to almost zero in manufacturing. The sharpest decline in labor productivity growth occurred however in mining and quarrying. See Chapter 2.

The scope for increasing "within sector" productivity growth is also large in Indonesia. This type of productivity growth typically requires greater use of capital by workers (more modern machines and equipment), improvements in the quality of labor (better trained workers), adoption of new technology (including through FDI and joint-venture with foreign firms) and competition within sectors that lead to a larger number of efficient firms. The Government of Indonesia has, in its development plans, stated its objective of upgrading the country's industries to enhance value-addition. International experience shows that countries that are successful in achieving this have (i) adopted a clear and consistent industrial strategy; (ii) removed regulatory and administrative bottlenecks to investment and business conduct and; (iii) partnered and coordinated with the private sector to supply the right skills, infrastructure and specific institutional support in the sectors where the country has latent or overt comparative advantage. As shown below, important multi-faceted reforms will need to be implemented if Indonesia is to realize this.

Table ES.1: Labor productivity differences across sectors remain significant
(Sector labor productivity (real terms) compared with labor productivity in agriculture)

Sector	2000-03	2005-08	2009-12
Agriculture	1.0	1.0	1.0
Low-end services	2.4	2.5	2.2
Manufacturing industries	5.7	5.8	5.0
Transport and communication	2.8	3.5	5.5
Financial services	21.5	20.5	14.6
Mining and quarrying	46.8	26.7	18.0

Source: BPS and World Bank staff calculations.

Moving to a productivity-driven growth model will be a significant break from the past. Over past decades, growth has in large part been supported by capital accumulation and employment growth with limited contribution of total factor productivity (TFP). Van Der Eng (2008) finds that TFP explained only 33 percent of growth in 2000-07 and played no role in growth prior to 2000.[6] This is to be contrasted with China and South Korea, where TFP explained more than 50 percent of growth during that period. The aggregate productivity level of Indonesia—measured by average value-added per worker- is also low by regional standards. For instance, Malaysia's average productivity per worker is more than 5 times Indonesia's. Average labor productivity in Indonesia is also lower than in Thailand, the Philippines and China (Chapter 3). The decisive policy reforms discussed below will be necessary if Indonesia is to catch up with these countries.

What policy priorities to support productivity-driven growth?

This report identifies three priority areas to foster productivity-driven growth: (i) closing the infrastructure gap (roads, ports, electricity, water and sanitation and irrigation networks); (ii) closing the skills gap; and (iii) improving the functioning of product, labor, land and capital markets. Addressing these priorities is needed to boost productivity in key sectors, including agriculture (which will release labor), manufacturing and high-end services (which would

6 Van der Eng, Pierre (2008) 'Capital Formation and Capital Stock in Indonesia, 1950-2007.' Working Papers in Trade and Development No.24. Canberra: School of Economics, ANU College of Business and Economics, Australian National University.

absorb labor) and accelerate structural transformation. So far, progress in addressing these long-standing, well-known priorities has been uneven. Decentralization since the early 2000s has complicated and slowed implementation. Yet, there are a few key specific policies that can make a big difference in boosting growth under each of these priority areas (see Table ES1 for a summary). These reforms will also help share prosperity more widely although specific additional reforms are needed to achieve that objective.

Closing Indonesia's infrastructure gap

Infrastructure development in Indonesia rests on, first and foremost, improving central government and sub-national governments' quality of public spending to allocate more funds to infrastructure. Total infrastructure investment—that is, investment by the central government, sub-national governments, state-owned enterprises and the private sector—has remained at only 3 percent to 4 percent of GDP over the past decade. This is far below the rates of above 7 percent of GDP before the 1997 Asian financial crisis and the 10 percent and 7.5 percent spent by China and India, respectively.

At the central government level, a key option to finance greater infrastructure spending is phasing out the large fuel subsidy spending. At 2.6 percent of GDP and 21 percent of the central government budget after transfers to the regions and interest payments, fuel subsidy spending is more than double the spending on infrastructure which stands at 1 percent of GDP only. A more-than-doubling of government-wide infrastructure spending (from 2.5 percent of GDP) can come from *reducing energy subsidies* (see below). Any such spending reallocation would however need to be accompanied by further improvements in the areas of budget planning and execution so as to improve absorptive capacity and ensure the quality of infrastructure investment management and implementation.

At the sub-national governments, spending more on infrastructure also requires in most cases spending re-allocation and greater spending efficiency. Sub-national governments do spend more than the central government on infrastructure (1.5 percent of GDP versus 1 percent of GDP). But they could spend much more to improve roads, water and sanitation and health infrastructure (both in terms of new investments and maintenance) if their budgets were not tied up by excessive spending on personnel and if they could raise more revenues themselves. Over 40 percent of sub-national government spending is on personnel and about 90 percent of their budgets come from the central government (fiscal transfers). A key reform to incentive greater reallocation of spending to infrastructure is to *improve the fiscal transfer system* toward performance-based transfers by increasing the share of the transfers tied to spending on sectors/areas of national priorities.[7] For the few municipalities that meet fiscal prudence and fiduciary risk criteria, *alternative means of financing*, such as PPPs, municipal bonds, and intermediary financing can further help finance local infrastructure.

7 Fiscal transfers to sub-national governments are dominated by a "block grant" component (DAU) relative to transfers tied to special purposes. Block grant transfers are untied, facilitating excessive subnational personnel expenditure, leaving little space for transfers that could be tied to front-line service provider levels. In 2012, the DAU made up almost 60% of central government transfers to subnational governments. The specific purpose grant (DAK), allocated to certain regions with the aim of funding special activities of the region in accordance with national priorities, only cover 6% of these transfers and is highly fragmented (covers too many sectors).

Closing Indonesia's infrastructure gap requires additional reforms, however. In particular, the following complementary reforms will be needed: (i) *Strengthening project prioritization/selection and preparation.* Today, different government agencies/Ministries have different project lists. The authorities might want to consider empowering one dedicated agency/ Ministry to undertake project selection. This can help ensure that selected projects respond to value-for-money and viability/ feasibility rather than just political imperatives; (ii) *Strengthening the partnership between the public sector and private domestic and foreign investors.* Private partners are needed to bridge the funding gap (doubling of public investment in infrastructure will only help close about half of the funding gap). Private investors should also be considered as key partners to improve operational efficiency and accountability for service delivery and; (iii) *an effective implementation of the new land law, which, once enacted, will require good implementing regulations*.[8] Without faster and less conflict-ridden acquisition of land, implementation of infrastructure projects will remain uncertain and costly, discouraging private sector participation.[9]

The growth payoff of greater investment in infrastructure cannot be overstated. Under-investment in infrastructure has been a substantial drag on Indonesia's growth over the past decade.[10] The consequent slow growth in the infrastructure capital stock relative to the pace of economic and urbanization growth has contributed to congestion problems and poor logistics performance, undermining productivity growth. Firm surveys show that problems with transportation are among the worst business constraints for urban manufacturing firms. In urban areas, rural producers find themselves unable to compete with imports. Thus, clearly, connective infrastructure development can help leverage agglomeration economies in urban areas and unleash the growth and productivity potential of agriculture, rural non-farm industries and urban manufacturing sectors. Furthermore, because one-quarter of urban populations and more than half of rural dwellers have poor access to transport services, improving infrastructure is key in enhancing well-being in Indonesia.

Closing Indonesia's skills gap

Closing Indonesia's skills gap requires enhancing the quality of education at all levels and the functioning of training centers. Today, two-thirds of firms complain that finding suitable employees for professional and managerial positions is either "difficult" or "very difficult"; and almost 70 percent of employers in manufacturing report finding it "very difficult" to fill skilled professional-level positions (engineers). There are two types of mismatch. Some sectors report insufficient graduates as the reason (for example, in textiles), whereas other sectors complain about the skills of existing graduates (for example, in rubber and plastics). Meanwhile, firms in Indonesia are much less likely to offer training to their employees than in other countries in the region. Most existing training-providers are concentrated in low-value-added areas (such as beauty salon and spa skills and basic computer skills). Finally, Indonesia compares unfavorably with other middle-income economies and East Asian neighbors in learning assessments such as

8 Subject to the adoption of the Land Bill by the Parliament and its enactment.
9 As discussed in Chapter 4 and 6, a land bill, currently being discussed at the Parliament, is expected to facilitate access to land for public purposes.
10 If Indonesia's real infrastructure capital stock had growth by 5 percent annually over 2001-11 versus the actual growth rate of 3 percent it is estimated that annual real GDP growth would have been 0.5 percentage points higher. See the October 2013 Indonesia Economic Quarterly for further details.

PISA. For instance, 15-year-old students in Indonesia have learning levels far below their peers in Vietnam, even though per-capita income is higher. To expand workers' entry into manufacturing and high-end services (e.g. finance, business services, communications, etc.)—again crucial for productivity growth—these issues need to be addressed.

Public policy has so far focused on access/enrollment. Thanks to strong government commitment, Indonesia will probably boast one of the largest numbers of college-goers in the world in years to come.[11] Over the past five years, the labor force with tertiary and secondary levels of education has increased by more than 1 million and more than 2 million annually, respectively. If recent trends in enrollment continue, the number of Indonesians with tertiary education can more than double in the next decade.[12]

Thus, going forward the focus should be on equipping graduates and workers with the right technical and employer-valued behavioral skills (discipline, reliability, teamwork and leadership) to support/enable large investments in key sectors. This requires a three-pronged reform strategy. First, improve the quality of basic education to build a stronger base of cognitive skills necessary to acquire the higher-level skills that will be needed by the workforce. How? A single key measure that could significantly support this is to *strengthen the quality assurance system* by ensuring that quality assessments are followed-up on and education institutions implement identified corrective actions.

However, even if the educational system could be perfected instantly, the first graduates would only join the workforce in about 10-20 years' time. It is therefore essential to find short and medium-term solutions for the current skills constraints: the second and third prongs of the strategy are **thus improving the relevance of feeders into the labor market** (technical and vocational education, and tertiary education) and **upgrading the skills of the existing workforce** (reform of the training system). Improving the relevance of vocational and tertiary education calls for (i) supplying students and graduates with *more information on labor market opportunities* (most graduates chose the public sector whereas return to tertiary education in many parts of the private sector is higher than in the public sector), and (ii) making the *tertiary and vocational education more responsive to the market's needs*. Improving the relevance of the training system, on the other hand, requires *creating more training institutions to deliver relevant training and specific skills in higher value-added, strategic sectors* (textiles, food products, other key manufacturing branches and higher-end services).

The growth payoff of skills development is large, if difficult to quantify. Because more than 60 percent of Indonesian firms report that skills are a constraint, relaxing this constraint will help them expand and become more competitive.[13] Today the majority of tertiary graduates work in the public sector. Going forward, skills development is likely to increase the flow of graduates employable in the private sector where the focus is arguably more on specific skills than diplomas (contrary to the public sector). This could thus increase aggregate productivity

11 The Constitution mandates that 20% of the budget should be allocated to education.
12 The Government's objective is to provide universal access to senior secondary education through a compulsory 12 years of education and to double enrollment in higher education by 2020. The share of individuals with tertiary education in the labor force stood at 8% in 2012.
13 The importance of human capital in and of itself to economic growth has been much stressed in the endogenous growth theory literature, starting with Romer (1986) and Lucas (1988).

and growth through "within sector" productivity growth (e.g. workers in manufacturing and high-end services equipped with more skills) and/or labor movement from low-end services to manufacturing (e.g. worker from low-end services moving to manufacturing thanks to adequate training). Developing skills should also help Indonesia leverage the opportunities to increase middle-class demand and withstand competition from ASEAN partners. Without the right skill sets among those entering the workforce, imports may remain more competitive than domestic production in satisfying the demand for higher quality products and services from Indonesia's growing middle-class.

Improving the functioning of markets

Enhancing productivity growth through structural change or within sectors in Indonesia requires improving the functioning of product, labor, capital and land markets. [14] As regards **product markets (or sectors)**, even as Indonesia implements reforms to reduce administrative and regulatory barriers and facilitate investment and licensing in some sectors, ad-hoc policy-making protectionist measures are increasing uncertainty for businesses and sending mixed signals to investors. For instance, a number of sector-specific laws and measures announced recently are either inconsistent with previous laws or create confusion about the direction of reforms (e.g. conflicts between the horticulture law versus the investment law). The new industry and trade laws provide ministerial authorities with new, sweeping authority to intervene in the market, increasing uncertainty and exposing the economy to rent-seeking activities. In the mining sector, irrespective of how the new regulation banning exports of mineral ores is ultimately applied, the repeated shifts have increased uncertainty.[15] The Government's recent approach in trying to move up the value chain is to legislate and regulate first, then negotiate with private actors whose investments are needed to realize the government's objective. This approach contrasts with the one adopted in most successful countries, where sound analysis and a strong partnership with the private sector in identifying and coordinating the needed investments and other industry-specific needs were used as a first step.

Going forward, to successfully upgrade the country's industries, a consistent industrial strategy elaborated in partnership with the private sector is needed. Such industrial policy could usefully reflect lessons from industrial policy around the world. In particular, a coordinated approach to identifying and removing binding constraints such as sector-specific infrastructure, skills and institutional support is needed. To ensure adequate implementation, a key option is to strengthen the quality of the policy formation process for economic policies and regulations. Some countries have done this by empowering one ministry or government agencies to play the function of "policy integrator" (i.e. *create a so-called "Center of Government"*).[16]. A strengthened policy formation process should help address genuine concerns of Indonesians that the public interest be protected, and should enable the Government to push back against more narrow rent-seeking activities and self-centered business interests. This is all the more important

14 The land market is also very important for public and private investment. A comprehensive land law, currently being discussed by the Parliament, is expected to address some of the key issues that have constrained investments in recent years. See Chapter 4.
15 Under the new Mining Law of 2009 and its implementing regulation issued in 2012, the export of unprocessed minerals was to be banned completely. The Government issued conflicting statements about the application of this ban, adding to the sense of regulatory uncertainty across all sectors.
16 See specific recommendations in the "implementation" section below

given that Transparency International (TI) rates Indonesian law courts, local governments and politicians poorly in terms of the corruption perception index (in 2012, TI ranked Indonesia 100 out of 183 countries reviewed). In addition to strengthening policy formation, the pursuit of ongoing reforms spearheaded by BKPM to *facilitate investments and business licensing* would help Indonesia attract more investment in higher value-added sectors.

The labor market. For Indonesia's labor market to support workers' mobility and structural transformation, a revision of the severance pay provision of the labor law will be needed. The labor Law enacted in 2003 significantly improved workers' rights and made hiring more flexible. However, the provision of the law mandating that severance pay should be at least 100 weeks of wages is an example of a well-intentioned provision that has led to a "lose-lose" outcome. The majority of companies adjust to the high severance pay provision by either not formally signing a contract for workers or resorting to short-term contracts (80 percent of workers do not have a formal contract). The fewer formal companies that abide by the Law have to deposit cash accrual for severance pay in an escrow account to be able to pay for the severance if they decide to fire their workers. At the same time, when a worker decides to voluntarily quit a company, only a part of the severance accrued is paid. In 2011, only 7 percent of dismissed workers received full severance pay. Thus, the severance pay neither protects workers nor encourages formal employment. As a result, for instance, workers leaving farm or rural non-farm activities are stuck into slightly higher but still low-productivity informal sectors. *Revising the severance pay provision of the labor Law* could significantly improve the functioning of the labor market.

The minimum wage setting process is another critical labor market issue to tackle in improving the functioning of the labor market. Since 2011, there is a significant departure from the moderate pace in minimum wage increases observed over most of the past decade. In 2012, 25 Provinces increased their minimum wage by an average 30 percent and Jakarta increased it by 44 percent. While workers in Jakarta see these increases as "normal" given the cost of living in this metropolitan area, in the absence of commensurate labor productivity increases, Indonesia's competitiveness and firms' capacity and incentive to create jobs in the formal sectors are reduced. Perhaps even more problematic is the uncertainty of the minimum wage setting process, which can encourage firms to replace labor by capital when they make their investment/ expansion decisions.[17] To support formal job creation and structural transformation, consultations between employers, workers and the Government in view of *adopting new minimum wage setting formula based on cost of living, inflation and productivity* (as mandated by a recent Presidential guidance) is crucial.[18]

Capital markets. There is ample evidence that enterprises in Indonesia are credit constrained (IMF 2012). Firms, to a large extent, tend to rely more on retained earnings than on bank credit for the expansion of their activities, which in turn means that current cash flow

17 The minimum wage-setting process is complex. Negotiations and final agreements take place at the province and sectoral level (and often at the district and sub-sector level), making communication and compliance with new formula-based adjustments more difficult. More generally, ensuring the compliance of firms and employers to minimum wage regulations is not easy, and requires monitoring and coordination at the central level, between the Ministry of Manpower and relevant ministries for effective implementation, as well as between central and local governments and relevant actors (District Governors and Wage Councils).
18 Because the minimum wage in some Provinces is far below the minimum cost of living, an adjustment mechanism can be introduced in the formula to gradually bring the minimum wage to the cost of living.

becomes the major factor in investment decisions. This has significant implications for the types of investments taking place in the economy, particularly in young and innovative firms that usually have negative cash flows in the early stages of operation, and need bank or non-bank financing to grow and create high quality jobs.

The credit constraint faced by firms reflects the lack of depth of Indonesia's financial market. The financial sector is dominated by banks (78 percent of assets) and its claims to the private sector stand at only 35 percent compared to close to 100 percent on average for Malaysia, Thailand and the Philippines. Capital markets are thin with corporate domestic debt securities (outstanding) accounting for less than 5 percent of GDP, similar to Thailand and the Philippines but much lower than the 45 percent for Malaysia. Pension fund assets are also relatively low compared to the size of the economy (5 percent compared to 10-15 percent in the Philippines and Thailand and 40 percent in Malaysia).

A part of the shallowness of Indonesia's financial market will be difficult to overcome because it reflects deep risk aversion behavior. For instance, following the 1997-98 financial crisis, both savers and investors moved into the shorter end of the maturity spectrum. Insurance, investment funds, and corporate bonds issuance, for example, have grown in recent years but still do not contribute significantly to the pool of domestic long-term savings and investments.[19] Public policy can nudge the system toward greater financial depth. For instance, the *development of the corporate bond market* appears particularly constrained by strict investment requirements, high underwriting costs and weaknesses in the execution regime. International experience emphasizes the role of *building a credible legal system* that allows for the effective enforcement of contracts and property rights and provides investor protection. Financial contracts are defined and made more or less effective by legal rights and enforcement mechanisms. From this perspective, improving Indonesia's legal system would facilitate the operations of markets and intermediaries. This relates to *improving the quality of the business environment more broadly*, as financial sector actors, just as investors themselves, need a minimum level of certainty when making long-term financing decisions.

Land market. Land is at the center of a large number of socio-economic issues in Indonesia, including infrastructure development, urban development, mining and forestry resource management, environment degradation, conflicts, etc. Looking at how land markets intermediate all these issues is beyond the scope of this report.[20] From a growth perspective, it is notable that **a lack of clarity in regulations governing land acquisition for public purposes** has caused major delays to infrastructure projects, particularly toll roads. This is in part due to the imprecision of the rules and procedures of a 2005 Presidential Regulation on Land Acquisition for Infrastructure Development in the face of a complex problem (although land tenure is characterized by a state control over land, but parallel, traditional systems subsist and enforcement is weak). Legitimate or illegitimate landowners frequently hold onto their land to benefit from an appreciation in value or enhance their negotiating power. Investors in infrastructure, public or private, have to overcome this hurdle before shovels hit the ground, leading to higher costs and significant delays.

19 A significant share of high-wealth savers have actually chosen to intermediate their resources offshore.
20 For a comprehensive review of the land sector in Indonesia, see World Bank (2014 –forthcoming): Towards Indonesian Land Reforms: Challenges and Opportunities.

A new land Law is expected to improve the clarity and transparency of land acquisition for public purpose. Drawing on the lessons from the 2005 regulation, the new draft land Law is more specific and can significantly improve the procedures for acquiring land for public infrastructure.[21] Areas of significant improvement include the setting of clearer guidelines for land valuation, the mechanisms for grievances, the compensation for affected or displaced individuals and of clear timeframe for each step in the process.[22] For instance, the new regulation provides specifics about the inventory of affected people and assets, the consultation process, the compensation, and the dispute settlement. It also sets a specific timeframe for each of the acquisition stages and sub-stages, including the maximum time that a court may take to resolve disputes related to land acquisition. *If well enacted and well implemented (i.e., with good implementing regulations and enforcement), the new land Law should help.*

The pay-off for reforming product and factor markets is large. Well-functioning product, labor, financial and land markets are critical drivers of productivity growth and are central to the overall efficiency and competitiveness of the economy. These markets act as a lubricant allowing the expansion of individual sectors and the movement of resources across sectors. In Indonesia, along with infrastructure and skills development, they determine whether resources (workers, talent and capital) can move to higher productivity sectors or remain bottled up in low-productivity uses. Although reforms of product and factor markets (in particular the labor market) are difficult and politically sensitive, they yield high payoffs for ordinary citizens. Realizing Indonesia's growth potential hinges in part on making the product and factor markets function better.

What policy priorities to ensure that prosperity is shared more widely?

Indonesia's public policy challenge is not only to support policies that generate prosperity. Another challenge facing policymakers is that of sharing prosperity more widely. Indeed, a large number of households classified as non-poor in terms of income/consumption are poor in many other dimensions, including access to decent housing, transportation, water, sanitation, health and education. At the same time, despite Indonesia's success in reducing poverty, the slowing pace of progress in recent years and high vulnerability remain a concern. Finally, Indonesia's hard-fought poverty reduction outcomes are constantly under threat, due to the country's vulnerability to natural disasters such as earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires. The report discusses three key priority areas to address these challenges.

Improving local access to services for all

For the poor, the vulnerable and some in the middle-class, higher income and prosperity will not translate fully into enhanced living standards if access to key services is not improved. The hopes placed on decentralization reforms to improve public services delivery

21 A Presidential Regulation No. 71/2012 sets the institutional arrangements for implementing the law.

22 In 2012, the GoI issued several pieces of legislation relating to land acquisition to be carried out for projects of public purpose (Law No. 2/2012 in January 2012; Presidential Regulation No. 71/2012 in August 2012; and technical guidelines issued by the relevant ministries). These replaced previous presidential regulations that had been unable to support accelerated infrastructure development in Indonesia while ensuring that people affected by the negative impacts of associated land acquisition were adequately protected. Pursuant to Law No. 2/2012, Presidential Regulation No. 36/05 as amended is valid until 31 December 2014. The new legislations procedure applies to the acquisition of land under the authority and control of the National Land Agency. If land needed is under the authority of other ministries such as Ministry of Forestry, then before such land can be dealt with under the new legislations procedure, it must be released from forest zoning pursuant to applicable forestry legislation or other relevant legislation like mining, natural gas, etc.

have yet to materialize. Regional autonomy has indeed failed to deliver the improvements in local public services that were expected when launched in 2001, despite substantial resource transfers to subnational governments. Transfers to sub-national governments now make up approximately one-half of the state budget, net of subsidies and interest payments (about 6 percent of GDP), and over 80 percent of this amount accrues to subnational governments at the lowest level—kabupaten/kota. Nevertheless, the quality of services remains problematic (as detailed in chapter 7, Indonesia's indicators in the areas of sanitation, water, health, electricity are below the level expected from a G-20 member, below East Asia Pacific's middle-income average and below the ambitions of the authorities).

Improving service delivery requires strengthening accountability through both demand-side and supply-side measures. International experience reveals that weak accountability and poor local public services go hand in hand. Accountability in this context comprises two separate dimensions: (i) a demand by citizens for improvements to service quality, and (ii) a response by local governments to meet constituents' demands. Addressing the poor performance of local service providers will require measures focused on each dimension. A variety of approaches can be helpful for improving citizen engagement. These include sharing information about public service quality with local citizens (open data), including comparative studies of one locality with other similar ones. In the context of Indonesia, *strengthening of community-driven programs*, which have a strong demand-side accountability component, can help. From the perspective of service providers (supply-side) there are a number of constraints imposed by the current funding mechanisms that inhibit performance. First, there is a one-size fits all approach in the intergovernmental finance system, despite the diversity of issues faced by regions in Indonesia. The uniform treatment of heterogeneous subnational units in policy design and implementation is a problem for the proper resourcing of provinces and districts. Large municipalities, small- and medium-sized cities, and rural districts are all treated more or less equivalently from a fiscal point of view. Furthermore, perverse incentives in the grant allocation system have encouraged spending on salaries and administration at the expense of a more balanced use of resources that promotes service delivery outcomes. Thus, two reform options might be considered: (i) *amending the central government transfer system* to increase the proportion of local governments' budgets tied to specific sectors and front line-services and (ii) *clarifying the roles and responsibilities of different levels of government while refocusing the bureaucracy to be accountable for results* (see below the "implementation" section).

Strengthening social protection

Indonesia's social security system is set to undergo significant transformations. Indeed, universal social insurance is legally mandated for health (by 2014) and employment (by 2015) under the 2004 National Social Security Law and the 2011 Social Security Administrators Law. These ambitions have fiscal implications as they require *increases in public health and social assistance spending*. Given its income level, expenditure on health and social assistance is very low in Indonesia compared with other countries. In 2013, total (central and subnational) public health expenditure was estimated to be only 0.9 percent of GDP and central government social assistance 0.7 percent of GDP. While Indonesia has financing options to accommodate the additional spending (see "financing option" section below), whether the desired results will be obtained will crucially depend on the *quality of implementation*. To be effective and sustainable, the

system will require appropriate benefit levels, sound fiscal risk management, sound institutional development and management, and non-contributory coverage of the poor and vulnerable, while at the same time collecting contributions from those who can afford to pay. But this transformative reform requires above all strong leadership for effective implementation due to the large number of stakeholders with diverging interests and the significant potential impact on the state budget, the labor market and the macro economy.

Alongside social insurance, strengthening existing social assistance programs is the other essential component of a comprehensive social protection framework. Indonesia needs to reform current programs, fill in existing gaps, and integrate the programs into a system—all of which will increase the quality of spending and the impact of social assistance programs. Again, leadership and coordination will be crucial. Central government social spending is currently distributed among roughly 12 ministries, 22 programs, and 87 activities. In order to ensure services are delivered appropriately, the Government might want to *continue its efforts to eliminate fragmentation and duplication across programs*. The oversight and coordination under National Team for the Acceleration of Poverty Reduction (TNP2K) has played a crucial role in devising the poverty assistance strategy, integrating poverty programs and coordinating implementation with various ministries. Going forward, *a unified oversight and coordination model will continue to be crucial for effective implementation irrespective of the form of institutional arrangement setup*.

Managing natural disaster risks, building resilience

Safeguarding hard-fought poverty reduction and social protection progress in Indonesia calls for continuously enhancing the management of disaster risks and further building resilience. Indonesia is situated in one of the world's most active disaster zones, prone to earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires. The increase in population and assets exposed to natural disasters in recent years, combined with the rise in the number and intensity of hydro-meteorological events resulting from climate change, may further increase the economic and human impact of natural disasters. According to a global risk analysis by the World Bank[23], Indonesia is among the top 35 countries that have high mortality risks from multiple hazards. About 40 percent of the population is at risk, that is, more than 90 million lives.

At the same time, Indonesia's cities' resilience to natural disasters has weakened due to the rapid construction of physical assets in urban areas and weak enforcement of building codes and zoning regulations. Indonesia's capital, Jakarta, is particularly exposed, with urbanization-induced land subsidence posing a bigger threat to the metropolitan area than climate change associated with rising sea levels. The non-compliance with building codes and zoning regulations, and the occupation of dedicated drainage "open" spaces, have not only made Jakarta and many other Indonesian cities more vulnerable to natural disasters but also created new hazards such as seawater inundation in low-lying coastal areas and flooding.

23 See World Bank, Natural Disaster Hotspots, A Global Risk Analysis (Washington, DC: Disaster Risk Management Series, 2005), table 1.2. For a comprehensive review of disaster risks in the EAP region and policy options, see Abhas K. Jha and Zuzana Stanton-Geddes, Editors (2012): Strong, Safe, and Resilient A Strategic Policy Guide for Disaster Risk Management in East Asia and the Pacific. World Bank

The rapid expansion in the physical assets of cities requires both a credible regulatory framework and a healthy market to accompany the economic dynamism with preventive and risk-management investments. Priority reform options include: (i) a *national program on hazardous micro-zoning* providing detailed instruments for incorporating resilience into site design and construction standards; (ii) financing framework for both urban, housing and property development that incentivizes investment with built-in resilience linked to disaster insurance; and (iii) a *national program on urban upgrading and ecosystem rehabilitation* to increase the resilience of existing settlement and urban infrastructure.

Financing options for the reform agenda

What are the options available to finance the significant expansion in infrastructure, health and social assistance spending advocated by this report? Indonesia faces considerable and inter-related challenges in improving the quality of its spending mix to meet its development goals. Solid growth of revenues and spending in recent years, and achievement of small fiscal deficits and the debt-ratio reduction, mask two key challenges for Indonesia's fiscal sector. First, relative to total output, both revenues and expenditures have in fact fallen since 2001, to about 15.7 percent and 18.1 percent of GDP in 2013, respectively—both at the low end for middle-income countries. This suggests that there is scope for Indonesia to increase the public sector's share of total expenditures (absorption), making it feasible for Indonesia to increase the spending on key developmental priorities such as infrastructure, health and social assistance. Second, the quality of the spending mix has been reduced by high spending on energy subsidies, which have limited the Government's ability to increase budget allocations towards more beneficial forms of spending, especially in infrastructure and social sectors.

"Business as usual" fiscal projections: limited fiscal space for spending priorities
Macro and fiscal projections have been developed for the next national medium-term plan (RPJMN) period: 2015-19 (see Table ES2, section 1 at the end of the ES). Assuming a base-case GDP growth scenario of 5.5 percent-5.8 percent per annum and a "business as usual" situation with no significant fiscal reforms or shocks, total revenues and expenditures are projected to remain fairly constant during this period at 16.5 percent-16.7 percent of GDP and 18.4 percent-18.6 percent of GDP, respectively. This results in a fiscal deficit of 2.1 percent of GDP in 2015, which gradually declines to 1.7 percent of GDP by 2019. Keeping the deficit within the fiscal rule of maximum 2.5 percent of GDP, the amount of fiscal space for spending priorities will be very limited, especially if additional baseline expenditure pressures emerge. Potential sources of pressures include external shocks (e.g., oil price increase and rupiah depreciation on subsidy spending), as well as domestic policy developments such as the implementation of SJSN (risk of actual costs being higher than those currently estimated), implementation of the new village law and the rollout of bureaucracy reform at the subnational level. In addition, lower-than-expected growth could reduce revenues.

Reforms required to increase fiscal space: taxes, personnel spending and fuel subsidies
There are at least three major options that could significantly increase the available fiscal space. On the revenue side, Indonesia could embark on a "big push" to increase tax revenues as a share of GDP by improving tax administration and compliance, as well as increasing excise tax on tobacco (which will have additional public health benefits). Second, growth in average central

and subnational personnel spending could be tempered to grow in line with inflation rather than at 5 percent to 8 percent above inflation in recent years. Lastly, fuel subsidies could be phased out by 2019. Section 2 of Table 1 provides an indication of the potential annual gains from all of these measures, relative to the baseline through 2019. Fully phasing out fuel subsidies by 2019 would free up 2 percent of GDP per year by 2019. Tax measures to increase compliance such as implementing fully third-party reporting and improving data matching could increase revenues by nearly 1.5 percent of GDP per year by 2019, while increasing excise tax on tobacco to 70 percent would increase revenues by 0.5 percent of GDP per year by 2019. Maintaining central and subnational personnel spending flat in real terms would free up 1.4 percent of GDP per year by 2019. All together, these measures have the potential to expand the available fiscal space by 1.1 percent of GDP in 2015, rising to 5.3 percent of GDP by 2019 (see Section 2 of Table ES2).[24]

Spending priorities: increasing infrastructure, health and social assistance spending
Phasing out fuel subsidies combined with either tax reform or efforts to control personnel spending could allow Indonesia to double its spending on infrastructure, health and social assistance (Section 3 of Table 1). Indonesia can double its total infrastructure spending in real terms and increase it to 4.4 percent of GDP by 2019, with additional financing of just 0.3 percent of GDP in 2015, rising to 1.9 percent of GDP by 2019.

To close half of the gap to the international norm of public health spending per capita[25] by the end of the RPJMN period, Indonesia needs to increase health spending to 2.4 percent of GDP by 2019 (from 0.9 percent of GDP in 2013). Social assistance spending should increase to 1 percent of GDP from 2015 onwards to accommodate the costs of SJSN health, as well as enable expansion of poverty programs. Increasing spending on health and social assistance would require additional financing of 0.4 percent of GDP in 2015, rising to 1.6 percent of GDP by 2019.

The total additional financing requirement for these three spending priorities is 0.6 percent of GDP in 2015, rising to 3.6 percent of GDP by 2019. This could be met through a combination of the fiscal space options outlined in Section 2—for example through the phasing-out of fuel subsidies plus tax reforms or a concerted effort to control personnel spending.[26] Indonesia is fortunate in having real options to meet the challenge of financing an ambitious expansion of pro-development spending.

The Challenge of Implementation: What Can Be Done?

The public administration plays an important role in delivering both the regulatory legal environment and services vital for a prosperous and equitable state. As the economy grows, the administration has to be responsive in providing sound regulations to support investment and to deliver core infrastructure and services for the needs of individuals and

24 This discussion focuses on the opportunities that could be created by redirecting spending and boosting revenue collection, but these are not the only options. For example, subject to debt sustainability considerations, Indonesia could also evaluate increasing deficit spending.
25 Predicted average of all countries at the same income level (GDP per capita) as Indonesia
26 These figures are conservative in the sense that they exclude potential positive feedback loops from higher development spending to GDP growth and revenues, as well as gains from increasing efficiency.

companies – including roads, health care, education, physical security, environmental safety, etc. However, some of the systems and practices within the public administration that have been part of Indonesia's development process over the past decades will not serve its future needs and could undermine future growth. Attention needs to be given to realign and refocus the core institutions of government to support a modern and rapidly developing economy.

In spite of the substantial changes in the roles and responsibilities of the public institutions since 1998, many of the core elements of the pre-1998 era remain. For instance, MENPAN&RB continues to control the administrative apparatus and while there are now multiple stakeholders formulating and implementing policy at both the national and sub-national level there are no effective coordination mechanisms across government. The outcome has been poor delivery of services by government institutions, inconsistent policy settings across sectors, and a lack of responsiveness of the administration to the priorities of the government and citizens. The failure to adapt old institutional arrangements and policies to reflect the new environment is an impediment to the effectiveness of the public administration, and poses a threat to Indonesia's future ambitions.

To support a rapidly developing economy attention needs to be given to refocusing the public administration to establish:

- A stronger Center of Government to manage the policy process and resolve policy conflicts.
- Streamlined bureaucracy for enhanced accountability.
- More strategic management of human resources across the public administration
- Better planning and budgeting procedures to deliver improved results with public spending
- Stronger accountability for service delivery at the local level

These reforms are notoriously difficult to implement. However, given their costs to the economy and to citizens and the country's ambitions, Indonesia cannot afford not to consider decisively implementing some of these in the short-term (low-hanging fruits). Perhaps the most urgent one is the need of a stronger Center of Government. In 2004 OECD/Sigma provided an outline of some of the core functions one would expect in an effective CoG.[27] Those functions include: (i) policy document review: quality assurance; inter-ministry mediation; (ii) monitoring government performance; (iii) coordination of horizontal policies/priorities; (iv) legal conformity of draft laws; (v) communication with media and public and (vi) coordinating with other branches of the state.

In Indonesia several different institutions, starting with the Presidential Administration, play some role in the coordination of policies including the three Coordinating Ministries, the Ministry of Finance, Bappenas, ManPAN, the Vice President's office, the delivery units (UKP4 and TPN2k) and others. However, this fragmentation of CoG roles and functions is not serving Indonesia well. On the contrary, ministries have been able to implement new policies and regulations that conflict with other regulations. Policy management is also more difficult because of the challenges to coordinate separate planning and budgeting processes for different parts of the budget. In the future, Indonesian authorities may want to

27 SIGMA Paper 35: Coordination at the Centre of Government: The Functions and Organization of the Government Office (OECD; Paris, 2004).

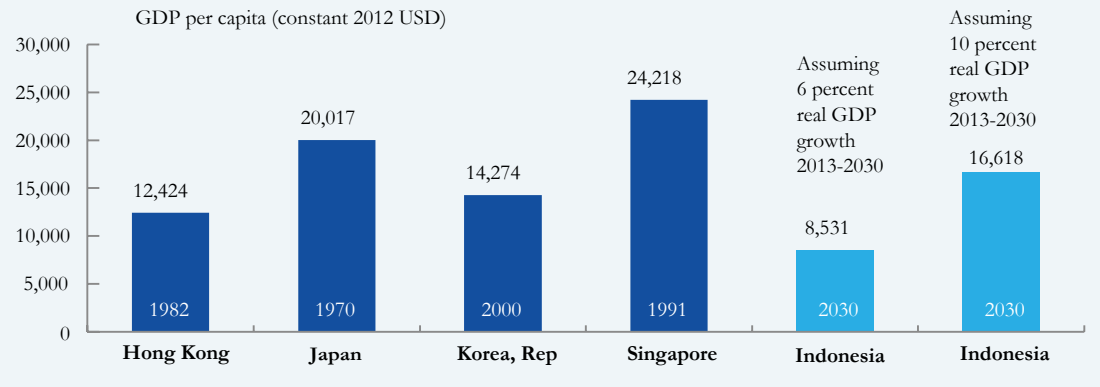
consider how to refine the mandates and functions of the various institutions that support the CoG, and to empower the President's Office (or its designate) or another institution to play a stronger role in managing the policy process.

The Stakes: Reform Payoff and the Cost of No Reform

Indonesia needs to grow above 5 percent to avoid serious unemployment problems. First, the population of working age is projected to increase significantly in the next 10 years before peaking as a share of the total population around 2025. Most of the additional 14.8 million individuals that will join the population of working age by 2020 will seek jobs and absorbing them will require fast economic growth. Based on the sensitivity of employment to growth for the period 1990-2012, if Indonesia grows by 6.5 percent annually the country would create 12.4 million new jobs by 2020. This compares favorably with the employment creation if the country grows by only 5 percent per annum: 10.2 more million jobs by 2020. Thus, the difference between growing by 5.0 percent and 6.5 percent is a significant 2.2 million jobs over the eight years, which is significant.

Looking longer term, faster economic growth (than 5 percent) is also required if Indonesia is to climb the income ladder and position itself well to become a high-income economy before starting to get old. For Indonesia to reach high-income status by 2030—i.e. a per-capita income of US$12,000—it will need to grow by some 9 percent annually over the next 16 years.[28] Short of this exceptionally high rate of growth, growing at least above the current 5 percent-6 percent "trend" growth would be required to position the country well to escape a middle-income trap. The income per capita of Singapore, South Korea, Japan and Hong Kong all were above $12,000 when the population of these countries started to age. For Indonesia, it will take a really fast growth to realize that. Fortunately, the country can do it, with the implementation of the serious reforms outlined above.

Figure ES 3: Income per capita reached by several countries when their demographic dividend ended, versus Indonesia (2030)



28 Using constant 2013 US dollars.

Structure of the report

The report is structured around 3 parts and 9 chapters. In Part 1, the report looks back and analyzes the key drivers of Indonesia's economic transformation in the past decade (chapter 1) and its social consequences (chapter 2). The second part of the report, composed of 4 chapters, starts by laying out a framework for analyzing Indonesia's journey to high-income status, taking into account (chapter 3). This chapter highlights the opportunities and risks that will shape economic prospects but also the growth strategy, policy priorities and institutional reforms that could help Indonesia realize Indonesia's aspirations. Then chapters 4, 5 and 6 elaborate on the policy reform areas and priorities to boost prosperity, namely closing Indonesia's infrastructure and skills gaps (chapter 4 and 5 respectively) and improving the functioning of product and factor markets (chapter 6). The last part of the report discusses in some details the policy priorities to share prosperity more widely: quality service delivery for all (chapter 7), enhanced social protection (chapter 8) and improved resilience and management of natural disaster risks.

Annex Table ES 1: Summary of key suggested policy reform options

Development aim	Suggested policy options	Evidence, salient facts
Enhancing productivity growth		
Closing infrastructure gap	*Increase total public sector infrastructure spending from 2.5 percent of GDP in 2013 to 4.5 percent by 2019*	Phasing out fuel subsidy alone could fully finance this increase (would free up 2% of GDP)
	Improve the fiscal transfer to sub-national government to encourage investment in infrastructure	The DAK share in total transfers is small (only 7 percent) and is highly fragmented
	Alternative means of financing for the municipalities that are ready	Large municipalities miss this opportunity; but safeguard measures needed to reduce fiscal risks
	Strengthening project prioritization/ selection and preparation	Multiple agencies and Ministries draft project lists; value-for-money/feasibility often absent
	Strengthening the partnership between the public and private sector	Private sector is often just expected to take up pre-selected projects and finance it.
	Effective implementation of the new land law	Once enacted, the Law will require good implementing regulations
Close skills gap	*Strengthen the education quality assurance system by acting on quality assessments*	Quality assessments are not followed-up on and corrective actions not effectively implemented
	Provide more information to students on labor market opportunities	Occupational choice of graduates depends on the information on job opportunities
	Make tertiary and vocational education more responsive to the market's needs	Skills shortages and mismatches persist in part because the system is not responsive to markets
	Create more training institutions to deliver relevant training and specific skills in higher value-added, strategic sectors	Most training centers are in low productivity sectors (spas, beauty salons, etc.).

Improve market functioning		
• *Product markets*	*Create a strong "Center of Government"*	Policy and regulatory inconsistency reflect weak policy integration/ brokerage
	Continue simplification of investment procedures, incl. licensing	Time to obtain licenses varies by districts and sectors; investment facilitation helps investors
• *Labor market*	*Revise the severance pay provision of the labor Law following consultation with relevant stakeholders*	Severance pay neither protection workers nor encourage formal employment
	Adopt a new minimum wage setting formula based on cost of living, inflation and encourage use of productivity for wage raises	Uncertainty around minimum wage setting undermines formal employment
• *Capital market*	*Identify specific measures to develop of the corporate bond market*	More analysis needed to pinpoint specific measures to support this
	Build a more credible legal system to secure financial contracts	More analysis needed to pinpoint specific measures to support this
• *Land market*	*Effective implementation of the new land Law*	The new land law addresses some of the key issues related to land acquisition
Sharing prosperity more widely		
Quality local service for all	*Support demand-side accountability (user empowerment)*	There is evidence that open data initiatives and partnership with change agents works
	Improve the fiscal transfer to sub-national government to encourage front line service delivery	The large block grant component encourages personal and admin spending
	Refocus the bureaucracy to be accountable for results	The focus is almost exclusively on compliance
	Clarifying roles and responsibilities of different levels of government	There are overlaps and coordination failures
Strengthen social protection	*Increase public health spending from 0.9 percent of GDP in 2013 to 2.4 percent of GDP by 2019*	Tax measures and tempered growth in personal spending free up enough revenues to finance it
	Leadership and high quality implementation of SJSN	International experience supports this
	Increase social assistance spending from 0.7 percent of GDP in 2013 to 1 percent of GDP from 2015 onwards	Tax measures and tempered growth in personal spending free up enough revenues to finance it
	Expand proven poverty programs (e.g. PKH), reform the ineffective ones (e.g. RASKIN) and fill in coverage gaps through pilots (e.g., elderly, disabled, early childhood, workfare)	See related evidence in chapters 2 and 8
	Keep a unified oversight and coordination model for effective implementation of poverty program	Given large number of Ministries and agency implementing, a unique umbrella "broker" is needed to ensure consistency and effectiveness

Disaster risk management, building resilience	*Establish a national program on hazardous micro-zoning*	Needed for greater resilience of site design and construction standards
	Put in place a financing framework for housing and property development	Needed to incentivize disaster insurance
	Establish a national program on urban upgrading and ecosystem rehabilitation	To increase resilience of existing settlements and urban infrastructure (green growth)
Financing option initiatives		
Infrastructure development	• Remove fuel subsidy for premium & diesel over 5 years • Control central and subnational personnel spending • Increase tax revenues by improving tax administration (measures to increase compliance such as implementing fully third-party reporting and improving data matching) and increasing tobacco excise tax	Phasing out fuel subsidies would free up 2 percent of GDP by 2019
Greater protection against health risks		1.4 percent of GDP can be secured if central and subnational personnel spending could be tempered to grow in line with inflation rather than at 5 percent to 8 percent above inflation in recent years
Social assistance to the poor		Tax administration measures could increase revenues by nearly 1.5 percent of GDP per year by 2019, while increasing excise tax on tobacco to 70 percent would increase revenues by 0.5 percent of GDP per year by 2019
Strengthening implementation		
Effective implementation of the development agenda	• A stronger Center of Government to manage the policy process and resolve policy conflicts • Streamlined bureaucracy for enhanced accountability • More strategic management of human resources across the public administration • Better planning and budgeting procedures to deliver improved results with public spending • Stronger accountability for service delivery at the local level	

Table ES 2: Baseline fiscal projections, options for increasing fiscal space, and expanded infrastructure, social assistance and health spending scenarios
(all figures are percent of GDP)

	2013	2014	2015	2016	2017	2018	2019
1.Baseline fiscal projections- business as usual							
Revenues	15.7	16.6	16.5	16.5	16.7	16.7	16.7
o/w tax	11.8	11.7	11.7	11.7	11.7	11.7	11.7
o/w non-tax	3.9	4.8	4.8	4.8	5.0	4.9	5.0
Expenditures	18.1	18.6	18.6	18.5	18.5	18.4	18.5
o/w central personnel spending	2.4	2.4	2.4	2.4	2.4	2.4	2.4
o/w subnational personnel spending	3.3	3.4	3.5	3.6	3.8	3.9	4.1
o/w fuel subsidies	2.3	2.4	2.4	2.5	2.5	2.6	2.7
o/w infrastructure	2.5	2.5	2.5	2.5	2.5	2.5	2.5
o/w social assistance (inc. SJSN)	0.7	0.9	0.8	0.8	0.8	0.8	0.7
o/w health	0.9	0.9	1.0	1.0	1.0	1.0	1.1
Fiscal balance	-2.4	-2.1	-2.1	-2.0	-1.8	-1.8	-1.7
2. Options for increasing fiscal space							
(a) Increase tax revenues by improving tax administration and increasing tobacco excise tax	0.4	0.8	1.1	1.5	1.9		
(b) Control central and subnational personnel spending	0.3	0.5	0.8	1.1	1.4		
(c) Remove fuel subsidy for premium & diesel over 5 yrs.	0.4	1.0	1.5	1.9	2.0		
Total increase in fiscal space			1.1	2.3	3.5	4.4	5.3
3. Total spending priorities additional financing requirement			0.6	1.2	2.1	2.8	3.5
3a. Spending Priority 1: Increasing total infrastructure capital spending to 4.4% by 2019							
o/w infrastructure	2.5	2.5	2.8	3.0	3.6	4.0	4.4
Additional financing requirement			0.3	0.5	1.1	1.5	1.9
3b. Spending Priority 2: Increasing social assistance spending to 1% of GDP from 2015 onwards							
o/w social assistance (inc. SJSN)	0.7	0.9	1.0	1.0	1.0	1.0	1.0
Additional financing requirement			0.2	0.2	0.2	0.2	0.3
3c. Spending Priority 3: Increasing public health spending to 2.4% of GDP by 2019							
o/w health	0.9	0.9	1.2	1.5	1.8	2.1	2.4
Additional financing requirement			0.2	0.5	0.8	1.0	1.3

Source: Baseline fiscal projections from the World Bank's RMSM model for Indonesia, updated in February 2014. Estimations of fiscal space options and spending options from World Bank staff analyses.
Notes:

- 2013: Estimated outturn for government revenues, expenditures and the fiscal deficit.
- For 2014-19, the revenues and expenditures are projected assuming a base case GDP growth scenario of 5.3-5.8% per annum and a "business as usual" situation assuming no significant fiscal reforms and no significant shocks or sustained pressures to revenues or expenditures.
- Aggregate revenue is total central government revenues and grants excluding subnational own source revenues. Aggregate expenditure is central government expenditure plus transfers to regions and fiscal balance is central government deficit.
- Infrastructure spending is total estimated capital and current spending on infrastructure by central and subnational government. Capital spending is approximately 85 percent of total infrastructure spending.
- Social assistance spending figure is central government only and includes estimated SJSN health costs from 2014 onwards.
- Health spending figure is total estimated spending on health by central and subnational government

Part 1
Indonesia in the Past Decade

Chapter I. Indonesia's Economic Transformation Post-1997/98

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Indonesia's Economic Transformation Post-1997/98

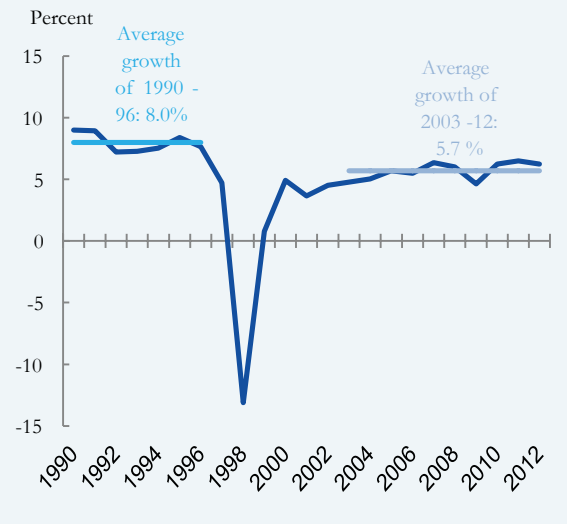
Indonesia's economic turnaround since the Asian financial crisis in 1997/98 has been impressive. In little more than a decade, Indonesia has gone from a low middle-income country (MIC) in political, financial and economic crisis to a democratic, stable and confident member of the G-20. Between 2001 and 2012, total GDP almost doubled from US$580 billion to US$1.1 trillion (15th largest economy in the world). During the same period, GDP per capita jumped from US$2,737 to US$4,272 (all in constant 2005 US$, PPP). These shifts reflect a gradual recovery in economic growth post-1998: following a 13 percent contraction in 1998, real GDP growth rebounded to an average annual rate of 4.7 percent in 2000-05, then picked up to 5.7 percent in 2006-10 and 6.0 percent in 2011-12, demonstrating Indonesia's strong resilience to the global economic downturn in 2008. Remarkably, growth has gone hand-in-hand with low fiscal deficits, a sharp decline in the debt-to-GDP ratio and healthy external balances until mid-2013, when Indonesia opened an annual current account deficit for the first time since 1997.

The recent moderation in economic growth and sharp external balance pressure invite a deep examination of Indonesia's growth pattern and model. This first chapter focuses on this examination. Its key findings are as follows:

- Improved macro policy management in the decade or so following the 1997/98 financial crisis played a very important, and particularly welcome, role in supporting the stability of Indonesia's growth performance over the past decade;
- However, the considerable structural shifts seen in the economy were driven by deeper dynamics, in particular the commodities boom Indonesia experienced in the period 2003-12, which made the economy dependent on commodities for exports;
- The massive income and wealth effects of the commodities boom fed into nominal GDP growth, boosting private consumption and supporting a recovery in investments;
- In response, the service sector expanded rapidly to become the largest sector in the economy both in terms of production and employment relative to agriculture; but Indonesia's structural transformation pattern displays important differences from China, South Korea and India:
    - The relative decline of agriculture (as a share of total production and employment) has been slower in Indonesia than in these economies over the past three decades, reflecting the fact that some branches of agriculture in Indonesia benefited from the commodities boom of the past decade (palm oil, rubber and to a lesser extent coffee and tea);
    - The relative rise in services in Indonesia is also smaller than in China, South Korea and India, reflecting the fact that lower value-added services increased much more in size than modern services in Indonesia;

- While manufacturing also declined as a share of GDP over the past decade, the availability of a large pool of labor in Java (population of 139 million), where most manufacturing firms are located, helped Indonesia avoid an absolute contraction of manufacturing and a Dutch Disease; and
- The commodities boom has tipped exports toward commodities (65 percent of total exports in 2012) exposing Indonesia to large terms-of-trade shocks that could rapidly translate into mounting external imbalances, as seen over the past year.

Figure 1.1. Real GDP growth, 1990-2012



Source: World Development Indicators 2013 (WDI), World Bank and World Bank staff.

The next chapter looks at the social transformation associated with the above shifts in the economy. The economic and social transformations of the past decade call for a gradual shift towards productivity-driven growth to deepen the structural transformation (Chapter 3). The rest of the present chapter examines the quality of macroeconomic policymaking post 1997/98 (Section 1), describes how the massive income and wealth effects of the commodities boom filtered into domestic demand via the corporate sector, households and public finance (Section 2), discusses the subsequent shift in the structure of production, employment and exports, and looks at the environmental cost of growth in the decade (Section 5).

1. The Turnaround in Macro Policymaking Post-1997/98

Indonesia has made remarkable progress over the past decade in terms of macroeconomic stability. As highlighted above, buoyed by strong global commodity demand, output growth was strong and consistent, grounded on increasing private sector investment, robust domestic consumption and generally sustainable external surpluses. There were fears during late 2008 that the economy would be dragged into another major crisis, just over ten years after the 1997/98 crisis but, in the end, Indonesia's economic resilience to global financial market and economic instability was notable.

The resilient economic performance over the 2008/09 global financial crisis reflected both strong initial conditions—fiscal and financial sector balance sheets and macro policies—along with a proactive and precautionary approach to crisis preparedness and mitigation. Indeed, both of these factors are linked to the legacy of the 1997/98 crisis. The strength in macro policies and fiscal, corporate and financial sector balance sheets was the result of ten years of deleveraging and measures to address vulnerabilities exposed by, or resulting from, the 1997/98 crisis. The Government's policy response in late 2008 and early 2009, in particular the arrangement of contingent fiscal financing facilities, also reflected a strong desire not to see a repeat of the social, economic and financial impact of the 1997/98 crisis and a focus on maintaining key development expenditures, such as on infrastructure, which had been hit in the previous crisis.

The legacy of the 1997/98 crisis

The origins and evolution of the 1997/98 financial crisis are described in detail elsewhere.[29] **In sum, the build-up of currency and maturity mismatches, high leverage and exposure to risky investments, weak supervisory and regulatory structures and corporate governance, along with macro external imbalances, were exposed** as the Rupiah came under pressure following the devaluation of the Thai baht in mid-1997. Exchange rate depreciation, credit contraction, increased interest rates, sharp falls in asset quality and political turmoil precipitated a fall of real investment by one-third in 1998, contributing to a GDP contraction of 13 percent (Mansoor et al, 2003). Poverty rates rose markedly.[30]

The level of government debt increased dramatically, moving from 40 percent of GDP in 1997 to over 100 percent in 2000. The fiscal balance moved into deficit but, constrained by the adjustment program, only reached 2.8 percent by FY 1999/2000, putting pressure on development expenditures. Domestic government debt rose from zero before the crisis to 50 percent of GDP in 2000 due to the issuance of bank recapitalization and liquidity support bonds. The depreciation of the rupiah also increased the local currency value of the pre-existing government debt, which was owed predominantly to external official creditors.

The fiscal legacy of the crisis was a debt position with significant interest rate, exchange rate and maturity risks: the floating rate "recapitalization" bonds accounted for around one third of the domestic debt at end-2000; around 46 percent of public debt was external debt at end-2000 and; domestic debt amortizations rose sharply from 2004. Debt service costs increased markedly (from 4 percent of GDP in 1996 to 8 percent in 2002) and there were concerns that high government financing needs would crowd out private borrowing.

Addressing the fallout of the crisis

To address the debt service burden and potential crowding out effects there was a considerable focus on reducing the overall level of government debt. Official external debt was also rescheduled in the early 2000s through Paris Club negotiations. Limits on the fiscal deficit (3 percent of GDP) and debt level (60 percent of GDP) were put in place from 2003 (Blöndal et al, 2009). Fiscal deficits remained below this level (averaging 1.2 percent of GDP from 2000 to 2010). Currency appreciation plus strong nominal GDP growth also contributed to the impressive reduction in government debt to less than 25 percent of GDP in 2012.

There was also a focus on addressing the above-mentioned interest rate, exchange rate and maturity risks in the debt stock, as well as cleaning up corporate and financial sector balance sheets. As a result, rollover and interest rate risk for government debt and corporate leverage ratios have declined notably. Inflation targeting and central bank independence were introduced and the commitment to the flexibility of the exchange rate maintained, helping to limit the build-up of external imbalances. Financial supervisory and regulatory reforms have also continued.

29 See Ghosh, S.R. (2013) East-Asian Crisis of 1997. In: Gerard Caprio (ed.). The Evidence and Impact of Financial Globalization, Vol. 3, pp. 669-688. Oxford: Elsevier Inc.; Ghosh, S.R. (2001) Managing Financial Integration – Lessons from East Asia: Indonesia Case Study; Mansoor, A. M. Takagi, S. Barnes, K. and Cohen, B. H. (2003): The IMF and Recent Capital Account Crises: Indonesia, Korea and Brazil. IMF Independent Evaluation Office Report and; Feridhanusetyawan, T. and Pangestu, M. (2003)"Managing Indonesia's Debt," Asian Economic Papers, MIT Press, vol. 2(3), pages 128-154.

30 Chapter 2 discusses Indonesia's performance in reducing poverty during the past decade or so.

Good policies in bad times: policy response to the global financial crisis

In late 2008, domestic bond yields and the exchange rate came under pressure, and there were concerns Indonesia could be entering another crisis period, similar to 1997/98, despite the strong macro positions.[31] But the authorities responded proactively to these pressures, and allowed the exchange rate to adjust. The Government moved to introduce a responsive fiscal stimulus package, focusing primarily on tax adjustment given the ongoing public expenditure disbursement challenges. In addition, a key innovation was the Government's decision to put in place a contingent financing facility with development partners, including the World Bank, in early 2009. This facility aimed both to reduce the risk that there would be increases in financing costs or reduced market access, and to limit the risk that, conditional on a financing crisis occurring, key expenditures would be adversely affected, as had been the experience in 1998.

The Government has also put in place a range of other measures to improve crisis monitoring, preparedness and response. These include a set of Crisis Management Protocols, policies to improve budget execution and improve targeting of social spending. The 2012 revised Budget and 2013 Budget also included provisions to allow for an adjustment in spending or financing in response to a crisis, requiring parliamentary approval within 24 hours. Notwithstanding the progress, given the continued uncertainty in the global environment, there remains a need for continued efforts in these areas of crisis preparedness. Furthermore, the quality of fiscal spending, particularly the burden of fuel subsidies, can be improved, notwithstanding the overall balance sheet strength.

The overall improvement in macro policy management paved the way for Indonesian policymakers to focus more on structural reforms and growth. Structural reforms had momentum for most of the past decade but stalled in recent years and, as will be seen in the next section, the considerable structural shifts in the economy were mostly driven by the commodities boom Indonesia experienced in the period 2003-12.

2. The Transformational Impact of the Commodities Boom

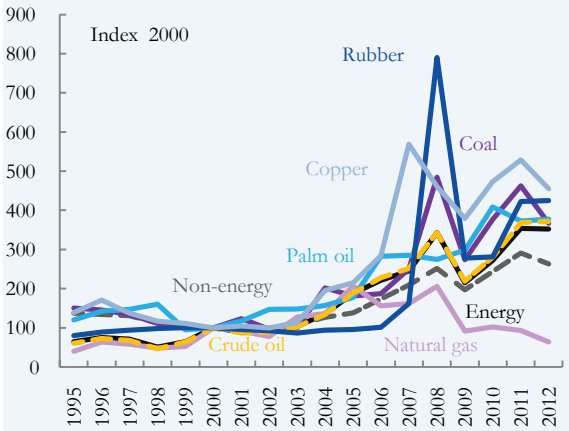
The significant rise in commodity prices in 2003-11 led to massive income and wealth effects in Indonesia. These effects filtered into corporate revenues, household incomes and government revenues, and led to a significant jump in domestic demand for goods and services. The direct rise in the value of resource assets, as well as that of other assets purchased on the back of commodity incomes or commodity wealth, significantly encouraged consumption against these assets. Furthermore, much of the significant rise in government resource and non-resource revenues was transformed into consumption through fuel subsidies, while infrastructure investment, for example, remained relatively stable. This stability of infrastructure investment at relatively low levels contrasts with the rapid increase in the investment-to-GDP ratio in the past 5 years and highlights the dominance of construction in investment, with building investment accounting for 85 percent of total fixed investment.

31 Ref: IMF (2012), Indonesia: Sustaining Growth during Global Volatility.

The commodities boom: a significant and unforeseen positive shock

From 2003 to 2011, the world went through one of the greatest commodities booms of all time. Rapid growth in China, India and other emerging economies translated into rapid increases in demand for many commodities and a sharp rise in prices. Indonesia, one of the most commodity-abundant countries in the world, benefited substantially from this boom (Table 1.1).[32] Benchmark international prices for coal, crude palm oil, rubber and crude oil—all important export commodities for Indonesia—each rose threefold, in real US dollar terms, between 2000 and 2010 (Figure 1.2).

Figure 1.2: Global commodity prices increased dramatically
(USD price index, 2000 = 100)



Source: World Bank and World Bank staff calculations.

Table 1.1: Indonesia benefited substantially, given its exports, 2012
(%)

Commodities	Share in Indonesia's total exports (%)	Share of Indonesia in total world imports (%)
Coal	13.8	17.0
Natural gas	10.8	5.0
Crude Palm Oil	9.3	52.4
Crude oil	6.5	0.7
Rubber	4.2	14.6
Copper	1.4	5.0
Nickel	1.3	17.6
Coffee	0.7	4.2
Cocoa	0.5	6.0

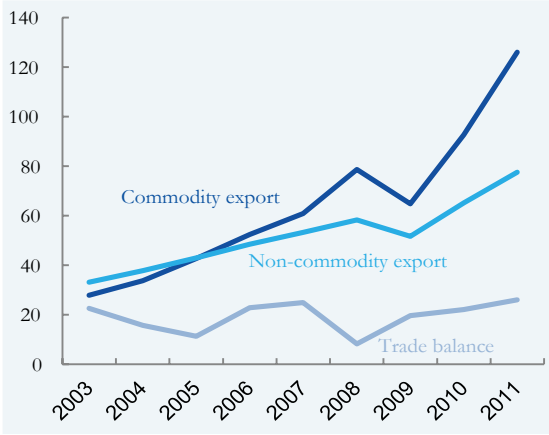
Source:UN-COMTRADE via WITS and World Bank staff calculations.

Impact on Indonesia's terms-of-trade and corporate wealth

The dramatic rise in commodity prices, coupled with a positive supply response in some cases (coal, palm oil, natural gas but not crude oil), led to a sharp improvement in the terms-of-trade, export earnings and in Indonesia's external trade balance. Indonesia's terms-of-trade doubled between 2003 and 2011. During this period, total annual export earnings tripled to US$203.5 billion, thanks to a sharp increase in commodity exports. Indonesia's trade surplus reached record levels during this period (averaging US$19.3 billion per year) and the commodities boom significantly contributed to the balance of payments (BOP) surplus in 2003-11 (Figure 1.3).

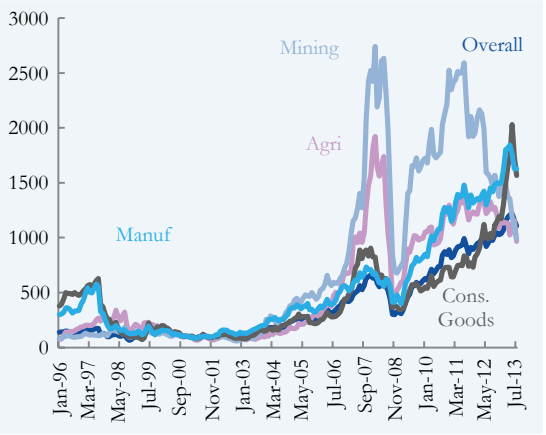
32 Indonesia is the world's biggest exporter of thermal coal used in power plants, shipping about US$2 billion of the fuel every month, mainly to China and India. It is the world largest exporter of crude palm oil, supplying more than half of the world's total exports.

Figure 1.3: Commodity export earnings drove the trade surplus and the sharp rise in foreign exchange reserves
(US$ billion, nominal terms)



Source: BPS, BI and World Bank staff calculations.

Figure 1.4: Equity indices rose significantly, in part driven by mining assets
(eom index, Dec 2000=100)

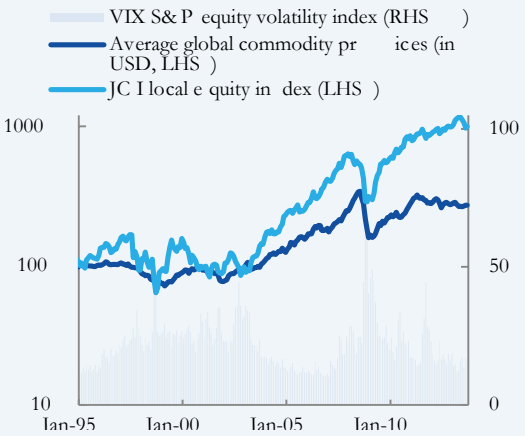


Source: WDI, BPS, CEIC, and World Bank staff calculations.

The prosperity generated by the resources sector is also illustrated in the significant increase in corporate wealth and the Indonesian stock market. Much of the rise in the stock market since the mid-2000s was related to the commodities boom with mining, coal and crude palm oil assets witnessing particularly large price increases in value until March 2011 (Figure 1.4). These price increases led to 20-fold rise in the mining equity price index from end-2002 to end-2012 and a 14-fold increase for agriculture and contributed to a 10-fold increase in the overall equity index.[33] Sixteen out of the 21 billionaires in the Forbes 2010 list of Indonesia's 40 richest people are from the coal and palm oil sectors. Due to these sizeable equity price increases, and new equity issuance, the local equity market valuation rose from an average of 16 percent of GDP over 2000-02 to 49 percent over 2010-12 (above the pre-1997/98 crisis average of 37 percent in 1995-96). The mining and agriculture sectors contributed around one-fifth of this increase in capitalization-to-GDP, just below the contribution from finance and the combined contribution from consumer goods, and trade and services. Indonesia's overall equity index is highly correlated with global commodity prices (although this relationship may reflect the relationship of the latter with global and domestic demand conditions more broadly). As shown in Figure 1.6, the correlation with international risk appetite is also high, particularly during periods of financial market turbulence.

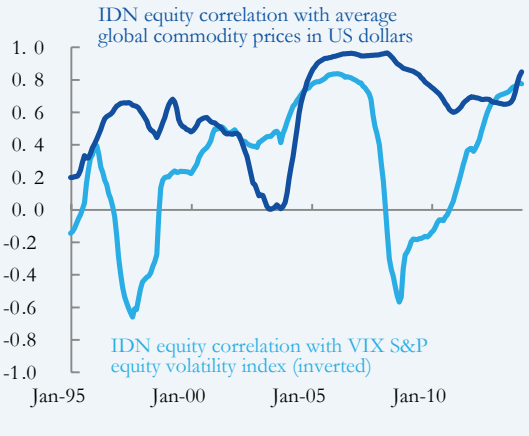
33 The finance sub-index also increased 10-fold while manufacturing saw a 13-fold rise.

Figure 1.5: Indonesian equity price are highly correlated with global commodity prices…
(eom index, Dec 2000=100)



Source: CEIC and World Bank staff calculations.

Figure 1.6: … but also the risk appetite of international investors
(eom index, Dec 2000=100)



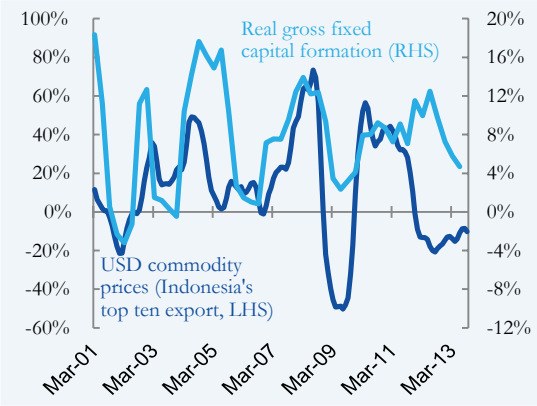
Source: World Bank, CBOE,CEIC and World Bank staff calculations.
Note: End of period equity prices and VIX. Global commodity prices are average of energy and non-energy prices. Correlation is rolling 60 week level correlation.

Contribution to Indonesia's investment recovery

The commodities boom has also supported the marked rise in the nominal investment-to-GDP ratio in Indonesia over the past decade. After falling dramatically after the 1997/98 crisis, Indonesia's investment-to-GDP ratio has recovered strongly over the past five years, moving up to 32 percent in 2012 (compared with ratios of 27 percent in South Korea, 30 percent in India and the extremely high 46 percent in China, for example). While much of this increase has been due to rising investment prices, real investment growth has averaged an annual 8.4 percent over 2008-12 (up from 7.6 percent over 2003-07), and has tracked commodity prices (Figure 1.7). Indeed, recent work on short-term investment dynamics in Indonesia found that terms-of-trade gains contributed around one-third to investment growth over 2005-11 (with lower volatility of interest rates and the real exchange rate also supportive).

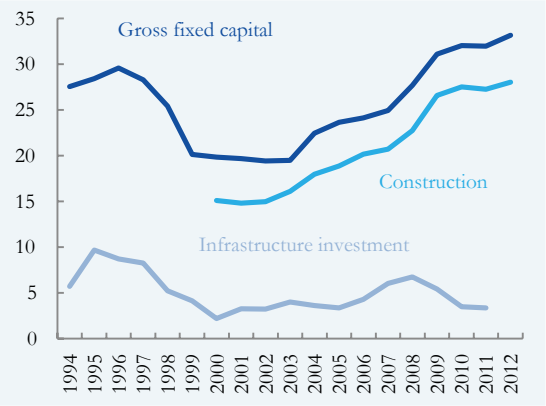
However, much of the rise in the investment rate has gone into construction, but with limited change in infrastructure investment rates. Indonesia's nominal investment is dominated by building investment (accounting for 85 percent of investment in 2012, and a similar share of its nominal growth over the past five years). However, the rise in aggregate construction investment, for example, through channeling of earnings from commodity businesses, has not followed through into a rise in the ratio of infrastructure investment-to-GDP (as discussed in more detail later in this report).

Figure 1.7: Indonesia's real investment growth has tracked commodity price movements...
(YoY growth, %)



Source: BPS and World Bank staff calculations.

Figure 1.8: …but the marked rise in nominal investment-to-GDP has not been reflected in the infrastructure investment rate
(%)

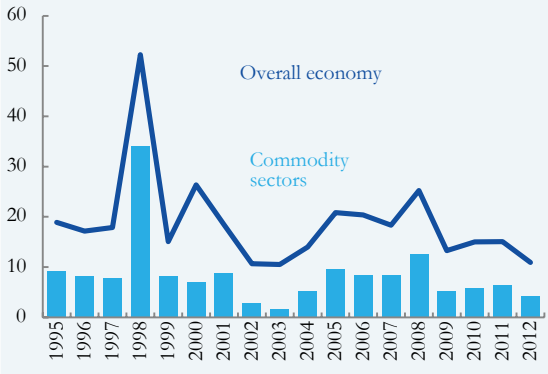


Source: BPS and World Bank staff calculations.

Contribution to Indonesia's nominal GDP growth and household incomes

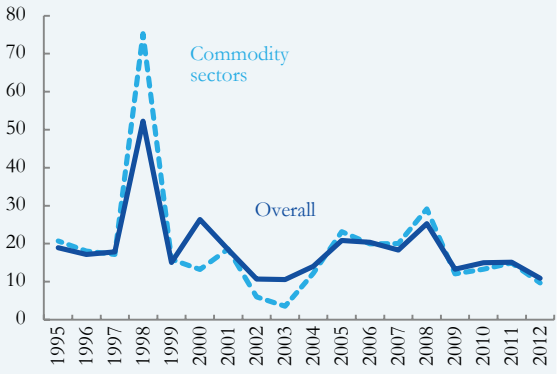
Finally, through indirect linkages, the rise in commodity prices has meant that the commodities sector has driven a sizeable share of nominal income growth over this period. Commodity-related sector accounted directly for around one-fifth of real GDP growth between 2002 and 2012 (around one-tenth each from primary and secondary commodities subsectors). Given the rise in commodity prices, these sectors' contributions to nominal GDP have been much greater (around two-fifths). Indeed, as Figure 1.9 shows, Indonesia's nominal GDP has become highly correlated with growth in the commodities sector. In part, this may reflect the second-round effects from commodity-related activity on GDP via demand for other goods and services.[34]

Figure 1.9: The commodities sector contributed substantially to growth in nominal GDP
(Contribution to YoY nominal growth, %)



Source: BPS and World Bank staff calculations.

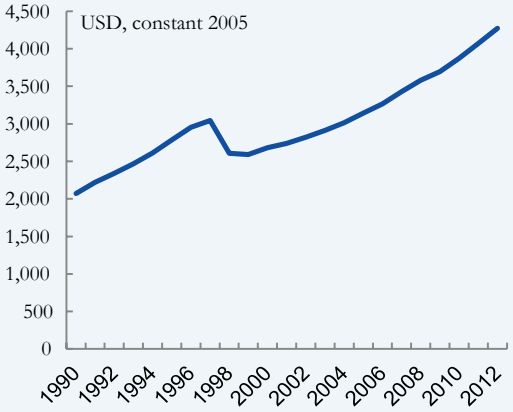
Figure 1.10: Nominal GDP is highly correlated with growth of the commodity sector
(%)



Source: BPS and World Bank staff calculations.

34 These effects are hard to quantify but using the 2008 Input Output table (the most recently publicly available data), a one unit rupiah rise in final demand for the commodity manufacturing sector increases total economic output by 2.14 units (with a direct effect on own commodity manufacturing sector output of 1.37 unit and indirect effect on the output of other sectors of 0.77). The mining sector multiplier is lower at 1.31 (primarily direct effects).

Figure 1.11. GDP per capita increased sharply



Source: World Development Indicators 2013 (WDI), World Bank and World Bank staff.

The average purchasing power of the population has increased dramatically over the past decade, supported by a steady rise in GDP per capita and rapid consumer credit growth. GDP per capita increased from US$2,737 to US$4,272 (in constant 2005 PPP terms) between 2001 and 2012. Consumer lending also increased dramatically, complementing household revenues. Consumer credit saw an average annual growth of 18 percent in real terms over the period 2004-12. Because this rapid rise in consumer lending occurred in a context of rising incomes and bank deposits, the level of household leverage remains relatively limited, however (at under 20 percent of GDP).

As a result, the percentage of individuals consuming between twice and eight times the poverty line increased from 32 percent in 2005 to 40 percent in 2012.[35] That is an addition of 20 million middle-class consumers in seven years. The rise in incomes led to a rapid growth in domestic demand. In particular, "non-tradable" services such as real estate, tourism, restaurants, transport, communications, and financial services have seen a rapid rise in demand.[36] But demand for manufactured and food items, both domestically produced and imported, also increased significantly. Real private consumption growth averaged 4.5 percent per year over the period 2003-12, with peaks of 5.3 percent in 2008 and 2012, and private consumption now accounts for 55 percent of nominal GDP (2012).

Supply-side response and the structural transformation

(i) The economy tipped towards services…

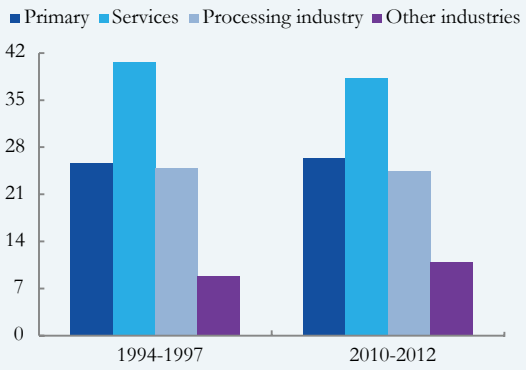
Driven by a sharp increase in demand, the services sector expanded significantly over the past decade to become Indonesia's engine of growth and employment. The services sector, broadly defined, contributed an average 3.3 percentage points (pp) to total GDP growth against 1.8 pp for industry and 0.6 pp for agriculture in 2003-12. The services sector consists of a large number of service branches—wholesale and retail trade; hotels and restaurants; community, social, personal and government services can be labeled "traditional non-tradable services" and transport, storage and communications; finance, insurance, real estate and business services can be considered as more "modern services". Transport and communications, financial services and retail trade, hotel and restaurants drove the rapid expansion of services in the past decade.

35 Individuals consuming twice the poverty line have a 5 percent chance of sliding into poverty in the next year.

36 These activities are mostly "non-tradable" in the sense of standard trade theory, i.e., consumers/ users can hardly arbitrage between sourcing them domestically or internationally, contrary to tradable manufacturing goods and services that can be imported. A consumer in Jakarta can only choose between different hotels or shopping malls in Jakarta. Engel's Law stipulates that services tend to have a higher income elasticity of demand than either agriculture or manufacturing.

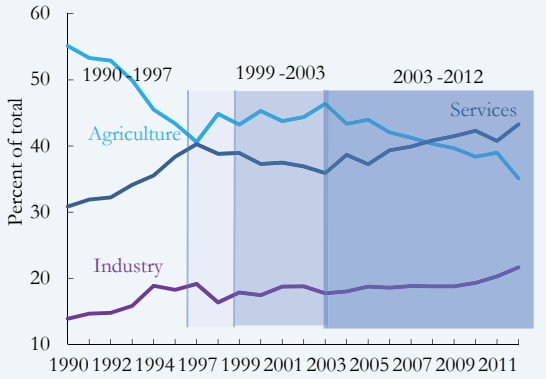
The expansion of the services sector was driven by a large addition of new workers. As discussed in detail in Chapter 2, 82 percent of the total 20 million new jobs created in 2001-11 were in the services sector.[37] Greater openness to investments also underpinned the expansion of the sector. Between 2001 and 2008-10, the share of transport and communications, financial services and retail trade, hotel and restaurants in total foreign investment flows almost doubled to an average of 63 percent in 2010, before slowing back to 34 percent in 2012 as FDI into manufacturing picked up significantly. The reduction of barriers to entry into these sectors by the private sector and foreign investors (greater competition) has been one of the major enabling factors in realizing these investments. There is strong evidence that the liberalization of the retail trade in 1998, telecoms from 1999 and air transport in 2004 have had a robust impact on investment and growth in these sectors.[38]

Figure 1.12: The services sector remains the largest in the economy…
(% of GDP)



Source: BPS and World Bank staff calculations.

Figure 1.13: …and the largest employer
(% of total employment)



Source: BPS and World Bank staff calculations.

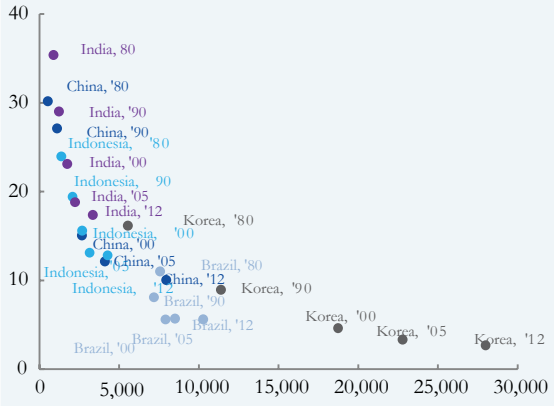
(ii) …but the structural transformation has been less dramatic than in other fast-growing economies

In fast-growing economies, a rapid rise in services is often the flip side of a rapid decline in the share of agriculture in employment. The rise in services and relative decline in agriculture, while both sectors faced high consumer demand, is consistent with "Engel's Law" effects in consumption. This "law" stipulates that demand for services tends to increase more with income thanks to higher income elasticity of demand of services relative to agricultural products (Chenery and Syrquin, 1975; Chenery, Robinson and Syrquin 1986).[39] In addition, supply of services to customers in urban areas is less constrained than supply of agriculture, explaining a more rapid response of domestic production to rising demand. Indeed, while production and consumption of services often occur simultaneously (investments are often made where the demand is), a key challenge for agriculture is to remain competitive in distant markets (e.g., urban centers), due to high transport and distribution costs (see Chapter 4 on infrastructure).

37 The implications of the expansion of the service sector on poverty and vulnerability are examined in Chapter 2.
38 See, for instance, Dharmawan, Gusti, Ngurah, Irwan (2012). The Effect of Air Transport to Economic Development in Indonesia, Erasmus University of Rotterdam, Erasmus School of Economics.
39 Engel's effects refer to the Engel's Law, introduced by Ernest Engel in 1857, which stipulates that as households' income increases, the percentage of income spent on food decreases while the proportion spent on other goods and services increases.

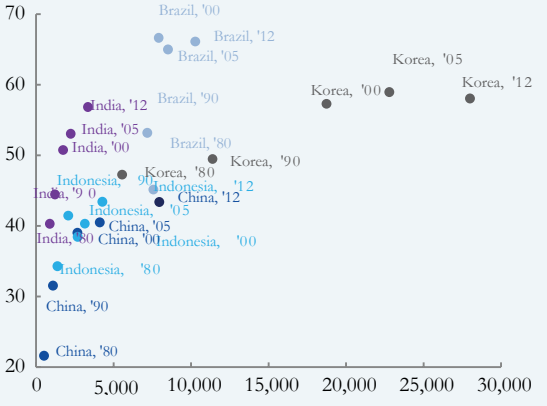
While Indonesia's structural transformation is broadly consistent with global patterns, there are noticeable differences with countries like Brazil, China, India and South Korea (Figures 1.14 and 1.15). As expected, rising GDP per capita has led to a movement of labor from agriculture to urban services. However, while the share of agriculture in GDP declined from 24 percent in 1980 to 11 percent in 2012, 35 percent of total workers are still employed in agriculture in Indonesia. Only Brazil displays a slower structural transformation but GDP per capita has not increased there as much as in Indonesia over the past three decades, being largely stagnant at around US$8,000-US$11,000 in that period (as in a typical case of a "middle-income trap"). Another important difference is that the rise of services (as a share of GDP) in Indonesia has been less rapid than in Brazil, China, India and South Korea.

Figure 1.14. Structural change led to slower decline in agriculture in Indonesia than in South Korea, China and India…



Source: World Development Indicators.

Figure 1.15. …while the increase in the share of services was slower compared with India, China, Brazil and South Korea



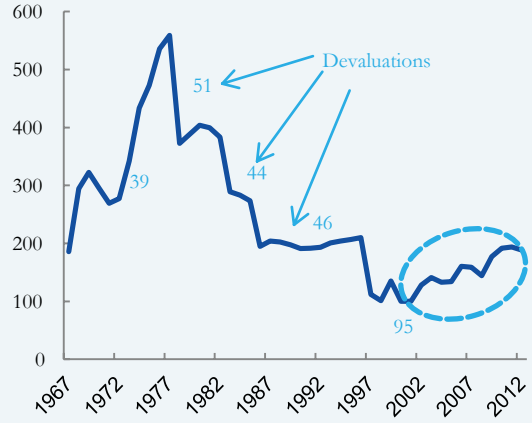
Source: World Development Indicators.

The changes in the agriculture sector itself feature a sharp contrast between estate crops, which benefited from the commodities boom, and food crops, which faced significant challenges. Agriculture grew by an annual average of just 0.6 percentage points in 2003-12, contributing only 10 percent to aggregate growth in that period. This performance reflects the net impact of lackluster growth for most food products, largely offsetting the rise in palm oil and rubber production. The high prices of these products on world markets have supported investment, production and yields in these sectors, and eroded the incentive to invest in large-scale production in other agricultural products, including horticulture (crowding out effect). The OECD (2012) finds that diversification away from food staples into palm oil production and other high-valued commodities drove agricultural total factor productivity in the past decade (explaining 60 percent of agriculture growth in that period).[40] This structural transformation within agriculture, combined with rapid domestic demand for food driven by rising per capita incomes and urbanization, has led to a rapid rise in imports of horticultural products and a movement of labor from agriculture into urban services.

40 OECD Agriculture Policy Review Report, 2012, p.5-6.

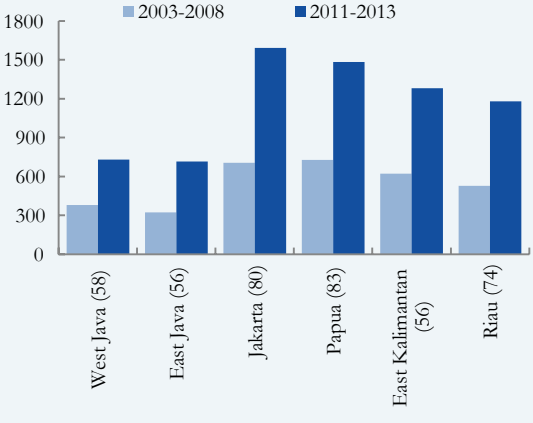
What about manufacturing? After leading overall growth until the 1997/98 crisis, manufacturing has remained subdued in the past decade. The industrial sector (which encompasses manufacturing, mining and quarrying and utilities) contributed an average 1.8 percentage points to growth in 2003-12 or 31 percent. Manufacturing output did not decline in absolute terms (growing by an annual average 4.8 percent in real terms), despite an appreciation of the real exchange rate engendered by the commodities boom (Figure 1.16). As shown in Box 1, large surplus labor on Java (population of 139 million) and moderate increases in real wages in West and East Java, where most manufacturing industries are located, kept manufacturing growth from falling more sharply in 2003-11.

Figure 1.16: The real exchange rate appreciated over the past decade
(Index, 2000=100)



Source: World Development Indicat Source:Bruegel database, see www.bruegel.org
Note: CPI-index based real exchange rates ors.

Figure 1.17: …but minimum wages increased much less in labor-abundant West Java and East Java than in Jakarta and resource-rich provinces
(annual average of monthly nominal provincial minimum wages, Rp'000)



Source: Ministry of Manpower and Transmigration via CEIC, and World Bank staff calculation.

Box 1.1 Did Indonesia experience Dutch Disease[41]

A typical source of Dutch Disease is a rise in the price of non-tradable goods relative to tradable goods (the real exchange rate, or RER). Such a rise in the RER often occurs during commodity booms and/or currency appreciation that can accompany massive capital inflows into a country. However, Dutch Disease is only material if the rise in the RER leads to a shift of resources (labor and capital) away from non-resource tradable sectors towards the resource and non-tradable sectors, inducing a decline in output and exports in the former. The non-resource tradable sectors are often price-takers in global markets and cannot pass the increases on to consumers in non-tradable prices (including wages). Firms in the non-tradable services sector generally have that possibility (of passing on to consumers the increases in prices and wages), which explains why they tend to develop in tandem with commodities booms.

Figure 1.16 shows that Indonesia's RER appreciated in the past decade, following more than two decades of overall sharp depreciation, during which with Indonesia rose as a global manufacturing powerhouse. However, the appreciation of the RER in the past decade is not associated with a decline in manufacturing output and exports. While non-commodity exports have been markedly outpaced by commodity exports, the former still grew modestly in 2003-12 at an aggregate level. Some traditional industries (mainly textiles, wood products and paper products) have performed poorly, while others (e.g., chemicals and machinery and apparatus) have showed remarkable growth.

That Indonesia likely did not experience Dutch Disease has also been found by other studies (IMF 2010).[42] For instance, the IMF found that the "marked appreciation in recent years followed rapid income and productivity gains—mainly earlier in this decade—and served to revert much of the overshooting experienced during the 1997/98 crisis. As a result, today, the exchange rate is broadly in equilibrium with economic fundamentals." (p. 7).

Another key factor explaining the dodging of Dutch Disease (at the aggregate level) is the moderate increases in real wages for most of the commodities boom period in Java, where most manufacturing industries are located. Indonesia has a diverse resource endowments and spatial production pattern. Natural resources are mainly produced in Kalimantan, Papua and Sumatra. In contrast, the bulk of manufacturing industries are located on Java (in West Java and East Java in particular), Indonesia's most populous island with around 139 million people or 58 percent of the total population. The surplus labor in Java has contributed to keeping wage rates in check and maintaining the competitiveness of labor-intensive manufacturing in West and East Java. In contrast wage rates in the more resource abundant regions of Kalimantan, Riau and Papua as well as in Jakarta grew faster (Figure 1.17).[43] Between 2008 and 2012 minimum wages in Indonesia grew, on average, by 10 percent per year. A significant departure from this moderate pace in minimum wage increases occurred however in 2013, with for instance 25 provinces increasing their minimum wage by an average 30 percent and Jakarta increasing it by 44 percent. Going forward, ensuring that wage increases are commensurate with productivity growth is crucial to maintaining competitiveness in Indonesia's manufacturing provinces.

41 The term Dutch Disease refers to the adverse effects on Dutch manufacturing of the natural gas discoveries of the 1960s, essentially through the subsequent appreciation of the Dutch real exchange rate (i.e., the rise in the price of non-tradable goods, including wages, versus tradable goods).

42 IMF Country Report No. 10/285. Indonesia Selected Issues.

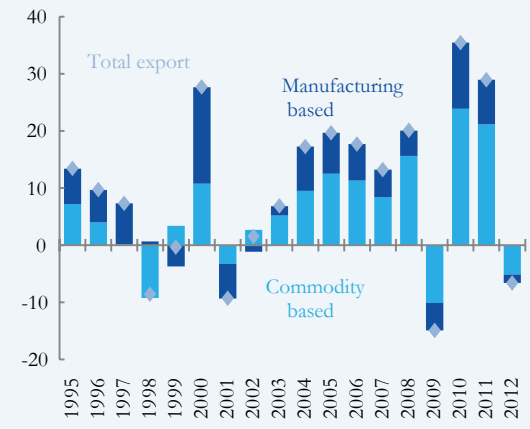
43 In the second quarter of 2013, Java contributed 58 percent to Indonesia's total economic growth. Far behind Java are Sumatra (24 percent) and Kalimantan (9 percent). Within Java, the Greater Jakarta area accounts for 16.5 percent of the country's total economic growth, followed by East Java (15 percent) and West Java (14 percent).

3. Over-reliance on Commodity Exports Has Fueled Vulnerability

Changes in the composition and destination of exports

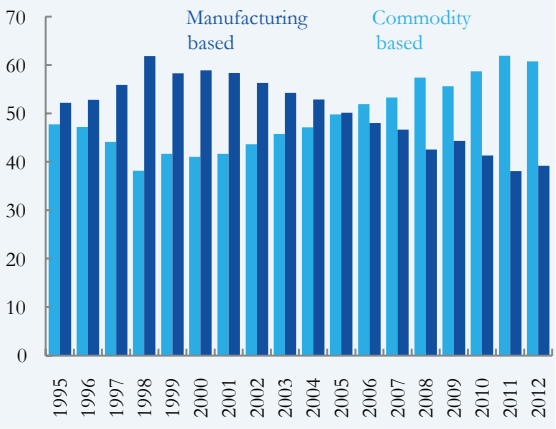
The commodities boom, combined with a rapid increase in domestic demand, has made Indonesia increasingly dependent on commodity exports. As Figure 1.19 shows, commodities have overtaken manufacturing as Indonesia's largest exports. Over two-thirds of the country's exports are commodities or commodity-related manufacturing products. Because most of the commodities are exported unprocessed, the overall "sophistication" of Indonesia's exports has also declined. High-technology exports as a share of total manufacturing exports declined from 16 percent to 11 percent from 2005 to 2008.[44]

Figure 1.18: The contribution of commodities to export growth has exceeded that of manufacturing products since 2003…
(nominal export growth, %; contribution to export growth, %)



Source: COMTRADE via WITS and World Bank staff calculations.

Figure 1.19: …leading to a commodities-dominated export structure since 2006
(share to total export, %)

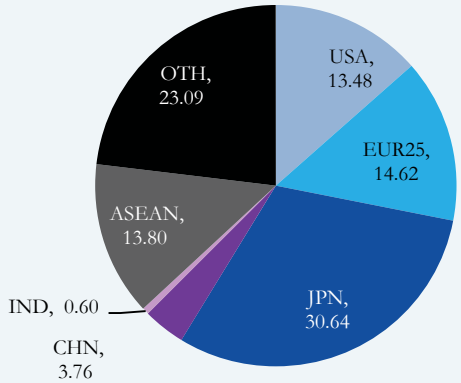


Source: COMTRADE via WITS and World Bank staff calculations.

High commodity prices were accompanied by sharply accelerating demand from within Asia. The increase in commodity prices, for both renewable and non-renewable resources, was accompanied by sharply accelerating demand from neighboring countries. Most noticeable was the quadrupling of exports to India, the tripling of exports to China and, because of its already high starting level, "only" a doubling of exports to Japan. As a result, exposure to ASEAN, China and India increased markedly although the overall exposure to the region remained broadly stable.

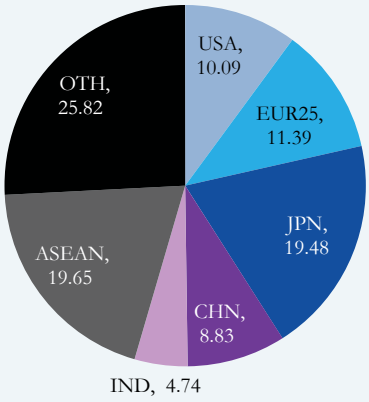
44 It is worth noting that for some commodity products, exporting in an unprocessed form is rather the norm. This is the case for coal for instance. This is also the case for copper concentrate for which most of the value-added is already obtained at the "concentrate" (i.e., minimal processing) level.

Figure 1.20: Exports went largely to Japan, the EU and the US in the 1990s…
(annual average of exports by destination 1990-97, %)



Source: COMTRADE via WITS and World Bank staff calculations.

Figure 1.21: …but the increasing importance of commodities has meant more exports going to China and India post-2003
(annual average of exports by destination 2003-12, %)



Source: COMTRADE via WITS and World Bank staff calculations.

Increased vulnerability to changes in commodities markets

As seen over the past year, the increased reliance on commodity exports could be a source of vulnerability as their prices tend to be highly volatile, potentially exposing the economy to large terms-of-trade shocks that could rapidly translate into mounting external imbalances. Not only do international commodity markets tend to be generally volatile, but the prices of and demand for particular commodities are often very sensitive to a few large buyers, such as (in recent times) China. Along with commodity intensity, therefore, comes significant export price and concentration risk. Of particular interest in this regard are developments in China, both in terms of the level and composition of growth. For example, the IMF estimates that the elasticity of Indonesia's exports with respect to Chinese growth is significant, at 0.7 percent, and presents simulation evidence that an investment slowdown in China sufficient to slow Chinese growth by 1 percent could reduce Indonesia's GDP by 0.3-0.5 percent.[45]

Managing these external imbalances, and especially external financing risks arising from a basic balance deficit and reliance on portfolio and otherinvestment inflows, constitutes one of the key challenges facing Indonesian policymakers, particularly in the context of potential tapering in US quantitative easing from January 2014. As argued in Chapter 3, for the longer term, the structural shift of the economy towards higher productivity is crucial in reducing external balance risks.

45 IMF Country Report No. 12/278, Indonesia Selected Issues: China's Growth Pattern: Implications for Indonesia (p23), 2012

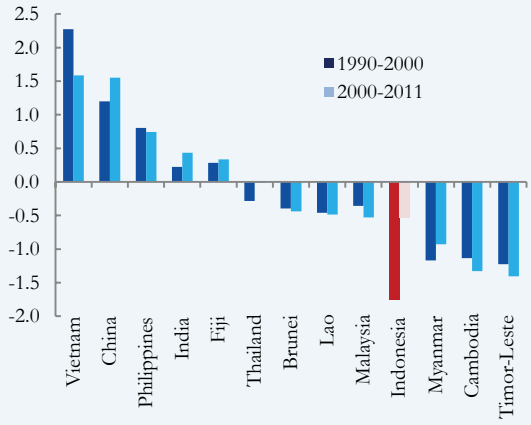
4. The Commodities Boom Has Also Sharpened Environmental Concerns

Growth over the past 10 years has gone hand-in-hand with rapid deforestation and environmental degradation. According to FAO data, Indonesia's deforestation rate reached 2 percent, or 1.87 million hectares, per year in the mid-2000s. Although the latest figures show a decline in the deforestation rate, Indonesia still has one of the highest rates of deforestation in the region (Figure 1.22). Deforestation over the past decade was typically accompanied by forest and land fires, as well as peat conversion thereby augmenting the country's greenhouse gas emissions. Estimates suggest that 80 percent of the Indonesia's greenhouse gas emission originates from land use and land cover changes. A key driver of deforestation and land cover changes has been palm oil plantations, which grew exponentially over the past decade. Substantial economic pressures remain to convert forests to other uses (e.g. mining production, urbanization) and there are substantial governance issues in land-use licensing processes.

According to the World Bank CEA study (2009), Indonesia's natural capital (about one quarter of total wealth) is being rapidly depleted, but not offset by commensurate investments in human or produced capital. The health impacts of outdoor and indoor air pollution are estimated at US$4.6 billion per year, or about 1.6 percent of the country's gross national income (GNI) in 2008. Significant economic losses are also caused by other types of environmental degradation, especially deforestation, soil depletion, and coastal/marine degradation. To date, less than 20 percent of power generation comes from hydroelectric, geothermal and other renewable sources. The large energy subsidies highlighted above (the second-largest expenditure category, behind only transfers to subnational governments) represent a major distortion, encouraging the overuse of energy in all sectors and by households, and undermining investment in renewable energy.

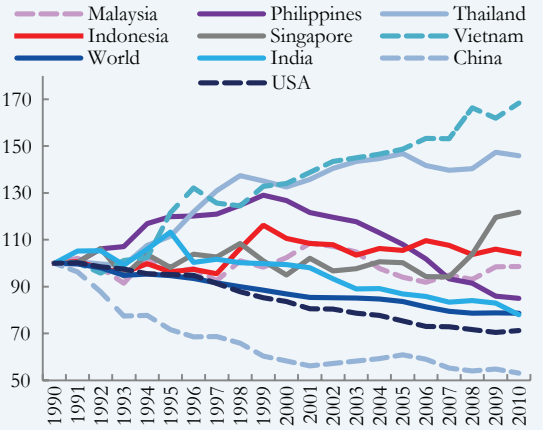
The Government has put forward some initiatives that can help to promote a greener economy, but these initiatives need to be better coordinated and scaled up. For example, in the energy and manufacturing sectors, some new tax incentives have been put in place to encourage investment in the development of geothermal energy and the replacement of the old, inefficient machinery in the textile sector. The national REDD initiative is another important effort to deal with land-use and forest-conversion issues through a national strategy and policy actions, backed by an innovative funding pledge from Norway for disbursement against policy milestones.

Figure 1.22: Although improving recently, deforestation rates in Indonesia are among the worst among peers
(deforestation rates, CAGR, %)



Source: FAOSTAT, 2012 from Malaysia Economic Monitor (MEM) June 2013.
Note: Negative figures denote deforestation.

Figure 1.23: Total primary energy consumption per US$ of GDP
(PPPIndex,1990=100)



Source: US Energy Information Agency

Chapter II. The Economic Transformation's Social Impacts

Chapter II. The Economic Transformation's Social Impacts

Indonesia has successfully restored macroeconomic stability following the severe 1997/98 crisis and has become more prosperous thanks in part to favorable international commodity and capital markets (Chapter 1). But has prosperity been shared widely? Has the poor and near-poor's ability to cope with shocks such as sudden food price increases, illness or floods increased? And has access to quality services, such as education, health, water and sanitation and electricity improved significantly over the past decade?

This chapter addresses these questions. It shows that:

- Sustained growth has helped reduce poverty through significant job creation. Twenty million new jobs were created between 2001 and 2011, 18 million of which were in urban areas, helping Indonesia to halve poverty from 24 percent in 1999 to 12 percent in 2012.
- At the same time, about 65 million people remain highly vulnerable to shocks. This high level of vulnerability reflects the quality of jobs created. Most of the new jobs were created in low productivity (and informal) sectors where real earnings growth is sluggish.
- Income inequality increased in line with the rapid rise in commodity and other asset prices (including land and properties) which proportionately benefited the rich and equality of opportunity indicators have worsened.
- Access to services, such as education, health, water, sanitation and electricity, has improved steadily over the decade but large disparities across income levels and geographical areas remain.

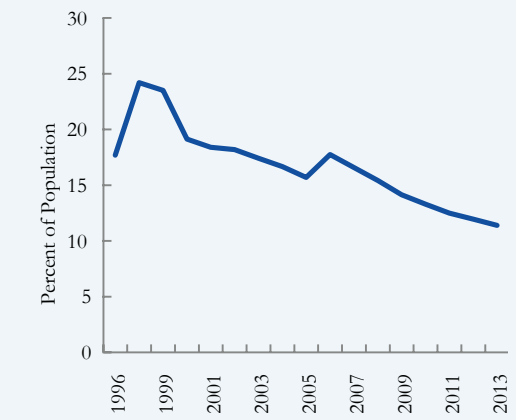
While achievements in poverty reduction are commendable, Indonesia has reached a stage where a wider view of poverty, vulnerability and income inequality is warranted. In particular, because the number of people floating between the poor and the middle class is much larger than the number of poor, more emphasis on supporting the transition of vulnerable people to the middle class is called for, while continuing to strengthen poverty reduction programs targeting the poorest. Such an approach is consistent with a growth strategy that emphasizes productivity growth and a faster structural transformation as discussed in Chapter 3. The rest of the present chapter describes the pattern of poverty, vulnerability and inequality (Section 1); highlights the key drivers of poverty reduction and vulnerability (Section 2) and; reviews progress in access to key services against the backdrop of Indonesia's decentralization that devolved much of the service delivery responsibility to subnational governments (Section 3).

1. Poverty

Trend in income-poverty

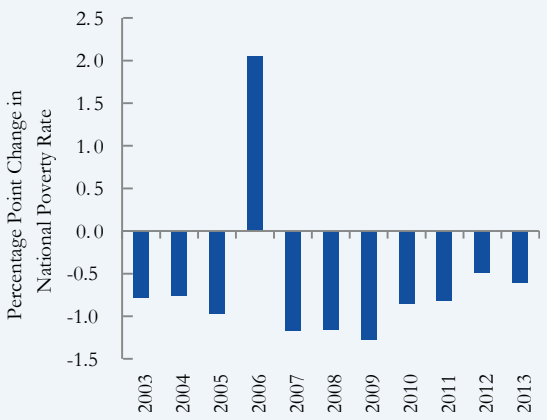
Economic growth and the rise of the services sector in urban areas have been effective in reducing poverty. Remarkably, poverty in Indonesia was halved from 24 percent in 1999 to 12 percent by early 2012 (Figure 2.1). The high rate of poverty in 1999 reflects a sharp rise during the 1997/98 crisis. Nonetheless, the 0.5 percentage point drops in 2012 and 2013 are the smallest declines in the past decade, with the exception of the increase in 2006 due to mainly to a sharp increase in global prices (Figure 2.2).[46]

Figure 2.1: Official poverty rates and annual change, 1996-2013



Source: BPS.

Figure 2.2: Change in poverty, 2003-13



Source: BPS and World Bank staff calculations.

The significant role of growth-driven job creation in poverty reduction

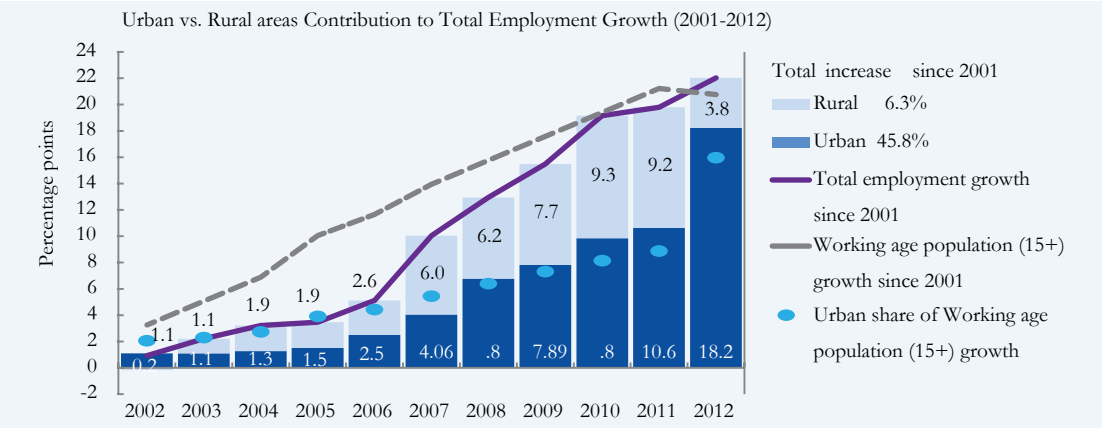
The key driver of poverty reduction has been growth-driven job creation. Indonesia has traditionally been successful in reducing poverty through job creation. In 1990-96, the economy posted average 8 percent annual growth and the poverty rate declined by around 25 percent. Following a sharp reduction in growth and employment creation in 1997-2001 (the Asian financial crisis), both GDP and employment growth rebounded in the second half of the 2000s. In 2007-11, the economy experienced a similar degree of sensitivity of employment to economic growth as in the period 1992-96 (with an employment-elasticity-to-growth ratio of around 0.5). Just as was the case in the 1990s, economic growth generated massive numbers of new jobs, especially in urban areas.

Between 2001 and 2011, 20 million jobs were created, 89 percent of which were located in urban areas. Total urban employment has grown by a total of 45 percent since 2001 and has gradually overtaken rural employment over the past decade. Furthermore, since 2008 jobs in urban areas have been growing faster than the working age population (Figure 2.3). While

46 Indonesia undertook a fuel subsidy reform that year by increasing fuel prices at the pump. The higher fuel prices from the subsidy reform would have played a small part, but were more than offset by temporary cash transfers to the poor.

the working age population has continually increased, since 2005 the share of the employed to the working age population rose from 60 to 64 percent, reaching its mid-1990s levels.[47] A large number of the jobs in urban areas were captured by women. Female workers have less secure terms of employment and are more likely to work part-time (51 percent of women workers work part-time), or be working in the informal sector. The female participation rate remains low at 52 percent, despite a sharp increase registered in urban areas since 2005.

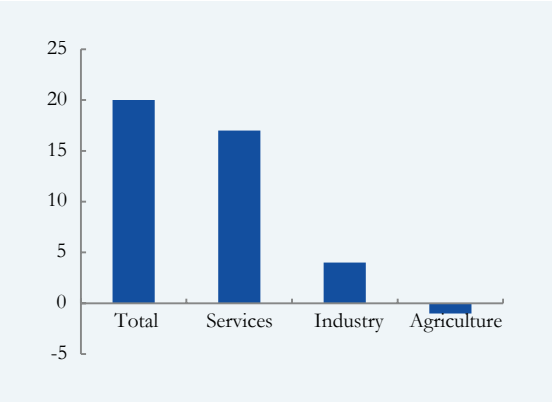
Figure 2.3: Massive numbers of jobs were created, 20 million in total, almost 19 million of which were in urban areas



Source: BPS Sakernas data (employment survey)

Consistent with the transformation of the economy towards non-tradable services described in Chapter 1, this sector was the source of 17 million of the 20 million new jobs created (82 percent). Within services, out of the total job growth, 30 percent occurred in community, social and personal services (where 6.9 million new jobs were created), 28 percent in wholesale, trade and retail (5.7 million new jobs) and 14 percent in construction (2.9 million new jobs). The industry sector (currently 21 percent of total employment) was able to create only 4 million new jobs, while in agriculture (where 35 percent of total workers are still employed) some 860,000 jobs were lost. Within industry, employment in mining, oil and gas rose fast but the labor absorption capacity of these sectors is limited. Most of the jobs created within industry occurred in manufacturing with 3.3 million new jobs created, slightly above construction.

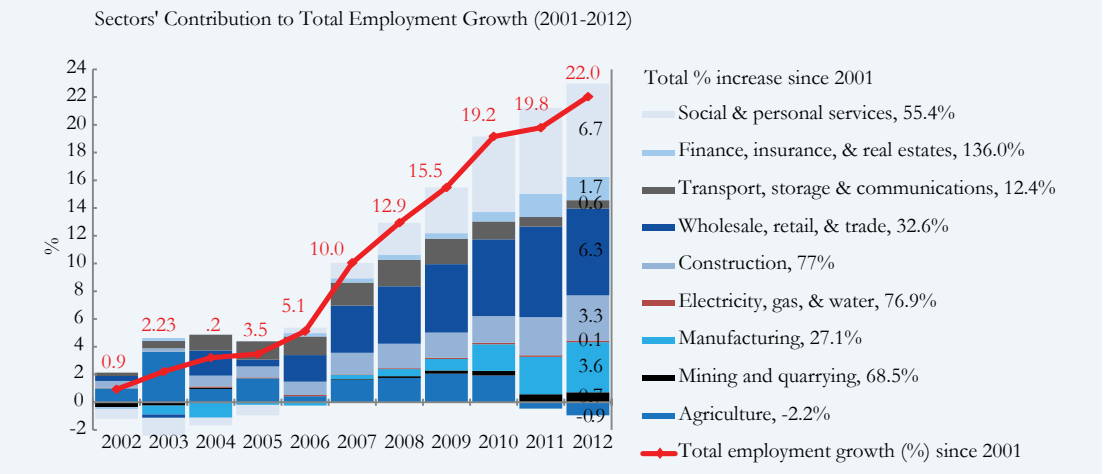
Figure 2.4: Close to 17 million of all new jobs between 2001 and 2011 were created in the services sector
(million)



Source: BPS.

47 Out of a population of 174 million people aged over 15, Indonesia can count on a total labor force of 118 million, of which 110 million are employed (Sakernas, 2012).

Figure 2.5: Most services subsectors created a large number of jobs
(percent)



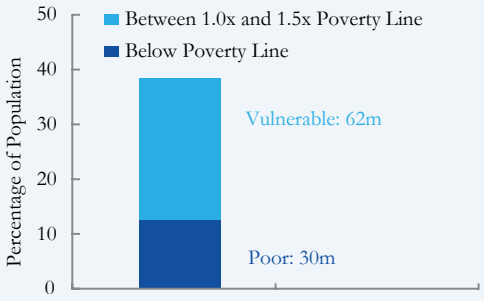
Source: BPS, Sakernas data (employment survey)

2. Vulnerability

Vulnerability to sliding back into poverty remains high

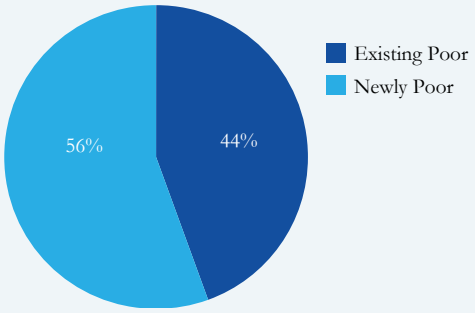
While official poverty is relatively low at 12 percent, an additional 27 percent of the population lives just above the poverty line, and small shocks can drive them back into poverty.[48] In 2012, a significant 65 million Indonesians lived between the official poverty line and less than 50 percent more than that poverty line (Figure 2.6). These individuals, hovering just above the poverty line, are considered highly susceptible to sliding into poverty. In fact, over half of the poor each year were not poor the year before (Figure 2.7), and one quarter of all Indonesians finds themselves in poverty at least once in a three-year period.

Figure 2.6: Close to 40 percent of the population was poor and vulnerable in 2012



Source: Susenas data, World Bank staff calculations.

Figure 2.7: Composition of poor relative to previous year



Source: Susenas data, World Bank staff calculations.

48 Here the vulnerable are defined as those individuals consuming between 1.0 and 1.5 times the poverty line (i.e. living on less than 50 percent more than the poverty line).

Vulnerable households face high food price risks

Food makes up around 65 percent of total poor household consumption. Consequently, even relatively small increases in food prices can have a significant effect on individual welfare, and on the national poverty rate.[49] It is estimated that a 10 percent increase in the overall cost of food would result in a relative increase in poverty of 3.5 percentage points. This was evident in 2006 when food prices picked up significantly at a time when world rice prices surged. By March 2006, the poverty basket inflation was running at 18 percent year-on-year, driven by higher rice and food prices. In 2006, poverty increased from 15.7 percent to 17.8 percent, the first annual increase in Indonesian poverty since the 1997/98 financial crisis.

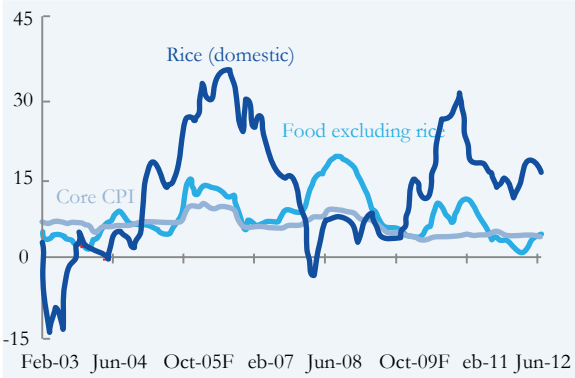
The food item that has the biggest impact on the poor and near-poor is rice. Rice alone makes up 23 percent of poor households' total expenditure. It is estimated that a 10 percent increase in rice prices would result in the national poverty rate being 1.3 percentage points higher than it would otherwise be. For every one poor household that benefits from higher rice prices (as net rice producers), there are three poor households that are net consumers of rice and are harmed by higher prices. In addition, there are important nutritional consequences of reduced purchasing power, as rice comprises 50 percent of the total calorie intake and 23 percent of the total protein intake of poor households' total food consumption. Rice prices were particularly high in 2010-12. Over these three years, rice prices increased faster than any other item in the CPI basket (Figure 2.9).

Imports of rice, to fill the gap between domestic production and consumption, total around 1.0 to 1.5 million tons a year. The Government's near-term objective is to become self-sufficient in rice. To help ensure sufficient food for poor and vulnerable households and to mitigate the impact of rice price increases, the Government has long implemented a subsidized rice program called Raskin (BerasMiskin). Under this program, beneficiaries are entitled to buy around 15kg of rice per month at Rp1,600 per kg, representing a significant subsidy to market prices of around Rp5-6,000 per kg. In 2013, rice was procured for 15.5 million households, or around 25 percent of Indonesia, down from 18.5 million in previous years. Officially this rice is targeted using the national Unified Database of poor and vulnerable households. In practice, Raskin suffers from leakages before rice reaches households, and from informal redistribution of rice to non-beneficiary households, both of which result in substantial dilution of benefits. In fact, household survey respondents report being able to buy only 4kg of Raskin per month. Consequently, the program is not effective in mitigating high food prices for the poor. More efficient management and distribution of public rice stocks is important. Equally important is to further broaden and improve the set of instruments to address food availability, access, and price stability to enhance efficiency and effectiveness.

49 Food price shocks (short run) reflect various domestic demand and supply factors and international food price shocks that sometimes play out simultaneously. On the demand side, key factors are seasonal effects (Ramadan, "Lebaran" or the celebrations at the end of Ramadan and Christmas) and temporary income effects (pay rise, bonus, etc.). On the supply side, prices can suddenly jump due to seasonal effects (harvests), supply shocks (droughts, pests, floods, typhoons, earthquakes and volcanoes) and input cost shocks (e.g. fertilizer prices). Domestic food prices are also affected by adjusted world prices that reflect nominal world prices, shocks to the exchange rate and sudden changes in import regulation (i.e., changes in tariffs, quotas, non-tariff barriers).

Figure 2.8: Food price growth (excl. rice) has been low, but domestic rice price growth has been strong

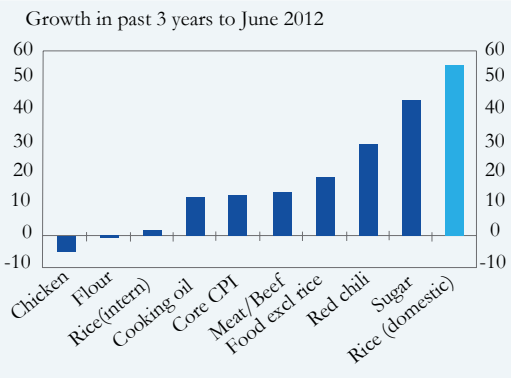
(percent)



Source: BPS and World Bank staff calculations.

Figure 2.9: Rice prices have grown faster than any other item in the CPI basket over the past 3 years

(percent)



Source: BPS and World Bank staff calculations.

Vulnerable households are highly exposed to health shocks

Health shocks have a significant impact on households, not only because of the large out-of-pocket payments associated with the treatment of the illness itself, but because of lost income when a working member of the family falls ill. Out-of-pocket spending accounts for 40 percent of total health spending. This is a high level, especially for the poor and vulnerable. The high level of out-of-pocket spending for health reflects relatively low levels of insurance coverage and shallow protection even among those covered, compounded by generally low levels of public spending on health. Households cope with catastrophic payments for health care by depleting their savings, selling off their assets, and reducing their consumption of food and other necessities. Health care may be forgone early on in an illness, leading to more acute, costly care being needed later on. It is estimated that almost 2.3 million individuals currently fall into poverty annually due to catastrophic health spending.

A large number of individuals, mostly in the "vulnerable" category (i.e., those consuming only 50 percent more than the poverty line), have inadequate or no access to social protection services. About half the population has access to health insurance, including civil servants, the military, about 25 percent of formal private workers, and the poor and near-poor who are eligible for the Jamkesmas program (which is being merged with other social health insurance programs under the single-payer Jaminan Kesehatan Nasional program in 2014).Those who are non-poor and in the informal sector ("the missing middle") have almost no coverage at all. Low insurance coverage combined with generally poor access to good quality health care, drinking water and proper sanitation (see next section), implies that over 40 million workers are at risk of lost or decreasing productivity and wages, due to ill health and prolonged recovery from medical issues. The Government's goal is universal health coverage of all Indonesians by 2019, including workers in both the formal and informal sectors, under the national social security program, but this timeline is tight and universal health coverage will likely take considerably longer.

There are gender differences in vulnerability

Gender differences in terms of opportunities imply that women tend to be more vulnerable to shocks than men.[50] Women constitute most of the self-employed and unpaid family workers, making them more susceptible to personal and financial insecurity. The gender wage gap is larger than in other countries in east Asia, with women only earning about 70 percent of what men earn, in part because of gender differences in choice of fields of tertiary education and, mostly, because female workers tend to have less secure terms of employment and are more likely to be self-employed, doing unpaid family work or working in the informal sector. Being a woman increases the probability of working in the informal sector by 24 percent.[51] Women-owned SMEs are mostly self-employed by necessity. Indonesia's social assistance programs favor female-headed households (FHH) but as typically the sole income earner in the household, female-headed households tend to be more vulnerable to shocks and their poverty rates tend to be more volatile.

Ongoing reforms that aim to increase women's representation in politics and participation in decision-making positions may help reduce vulnerability in the future. In part thanks to Law No.2/2008 on Political Parties and Law No.10/2008 on General Elections, which mandates 30 percent participation by women in parliaments, the rate of women's political participation increased from 11 percent in 2004 to 18 percent in 2009. The past decade has also seen key achievements in the regulatory framework on gender equality in development planning and budgeting. For instance, a gender analysis pathway has been made compulsory in the development of the national and subnational annual development and its budget. However, the implementation of these frameworks remains unclear. Finally, Indonesia is a signatory to most major international conventions upholding principles of gender equality and is one of the few countries that have a dedicated Ministry of Women's Empowerment and Child Protection.

The job market is the key source of vulnerability

Whether an individual is vulnerable or not depends to a large extent on whether he/she is working and on the type/quality of job he/she is in. Table 2.1 reveals some details about the characteristics of the 65 million vulnerable individuals. About 21 million of them are children from poor families; among the 44 million vulnerable adults, about one third (15 million) do not work, 42 percent (18 million) work in agriculture and 10 percent (2.9 million) work in wholesale, retail, hotel and restaurants. The proportion of vulnerable workers within each sector is relatively high in all sectors except communications and banking/finance/business services. For instance, more than a quarter of workers in agriculture, construction and transport can be classified as vulnerable.

50 The World Bank's World Development Report (2011) framework for analyzing gender issues emphasizes four dimensions: endowment, opportunities, voice and agency and cross-cutting dimensions. Gender disparities in endowment (e.g. education and health) have been significantly reduced as shown in the next section.
51 World Bank Indonesia Jobs Report (2010).

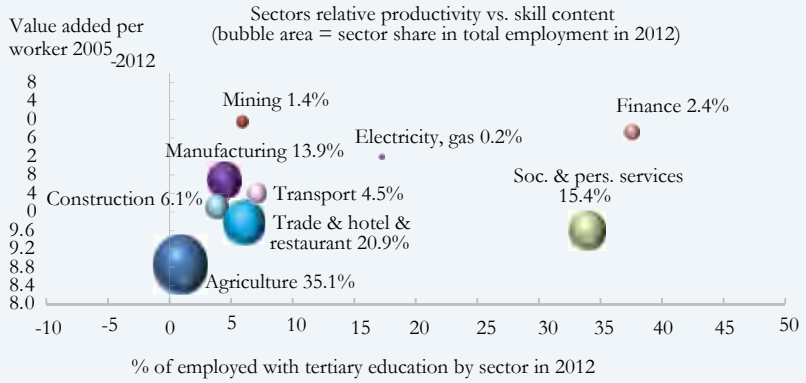
Table 2.1: Vulnerable adults either do not work or mostly work in some well-identified sectors

	# of vulnerable people			Proportion of vulnerable adults to total adults population in each sector	Proportion of vulnerable adults in each sector to total vulnerable adults
	Children (age 10-14)	Adult (age 15+)	Total		
Communication	0	67,198	67,198	12.5	0.2
Banking, financing & business services	0	93,451	93,451	7.5	0.2
Transport	1,617	1,153,040	1,154,657	25.4	2.6
Construction	3,387	1,889,363	1,892,750	29.3	4.3
Public services	9,955	2,349,605	2,359,560	17.6	5.4
Wholesale, retail, hotel & restaurant	38,953	4,555,104	4,594,057	19.8	10.4
Agriculture and other sectors	173,735	18,347,156	18,520,891	28.4	41.8
Not working	20,501,483	15,452,754	35,954,237	26.0	35.2
Total	20,729,130	43,907,671	64,636,801	25.4	100.0

Source: Susenas data, World Bank calculations.
Note: "Working" is defined for individuals above 10 years old as having worked at least day in the past week.

Agriculture and "wholesale, retail, hotel and restaurant" which employ the largest number of vulnerable workers have the lowest levels of labor productivity in the economy. Agriculture and wholesale, trade, hotel and restaurant (dubbed "low-end services") employ 35 and 21 percent of total workers. They happen to be the sectors with the lowest productivity and skill-content in the economy (Figure 2.10). Furthermore, less than 10 percent of workers in these sectors have a tertiary level of education and more than 60 percent do not have a contract. Because of the weight of these sectors in total employment, the overall picture of the economy is one that feature a predominance of low value-added, low skilled, low productivity sectors (Figure 2.10).

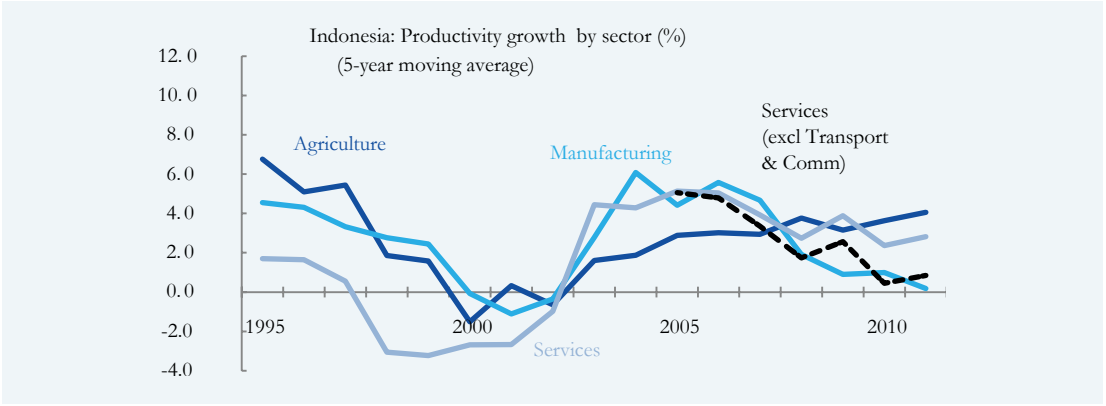
Figure 2.10: Agriculture and low-end services have the lowest levels of labor productivity in the economy



Source: BPS and World Bank staff calculations
Note: Labor productivity is measured as the value-added (in constant 1990 PPP$) per person employed.

In dynamic terms, sectoral labor productivity growth has generally decelerated in the second half of the 2000s with the exception of agriculture. The sharpest decline in labor productivity growth occurred in manufacturing: aggregate labor productivity growth in that sector dropped to only 1 percent in 2010 and close to zero percent in 2011, against more than 4 percent in 2005 following a rebound from the 1998-1997 crisis. Within the services sector, transport and communications were the subsectors that held up well in terms of productivity growth, preventing an otherwise sharper decline of productivity dynamics of the overall services sector (Figure 2.11). Finally, as shown in chapter 1, the rise in agricultural labor was mainly driven by palm oil, rubber and other estate crops that have received large investments over the past decade. Agriculture productivity however remains much lower that its levels in the mid-1990s.

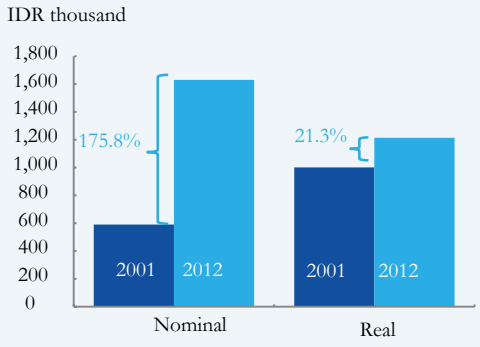
Figure 2.11: Sectoral labor productivity trends
(constant 1990 PPP value-added per worker)



Source: BPS, Bank staff calculations

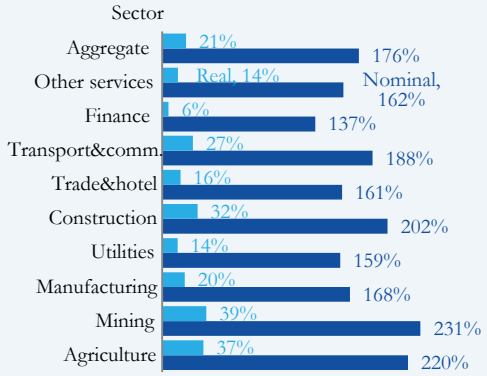
Somewhat consistent with sectoral trends in productivity growth, real wage growth has been relatively modest over the past decade despite rapid increases in nominal wages. Although average nominal wage for all sectors (including both formal and informal sectors) almost tripled between 2001 and 2012, the average real wage rose by only 21 percent in that period. This sluggish rise in real wage is consistent with the weak productivity growth in most sectors combined with a sharp rise in the cost of living (CPI) over 2001-2011. The sectoral breakdown shows important differences: wages in mining have been growing twice as fast as the national average. On the other hand, wages in a potentially skill-intensive sector such as manufacturing have remained constantly below the national average, consistent with that sector's poor productivity growth. These dynamics have had an important effect on poverty and vulnerability, as discussed below.

Figure 2.12: Relative to the huge increase in nominal wages, real wage increases have been sluggish between 2001 and 2012…



Source: BPS, sakernas data

Figure 2.13: …while sector differences in the real wage increases were large between 2001 and 2012



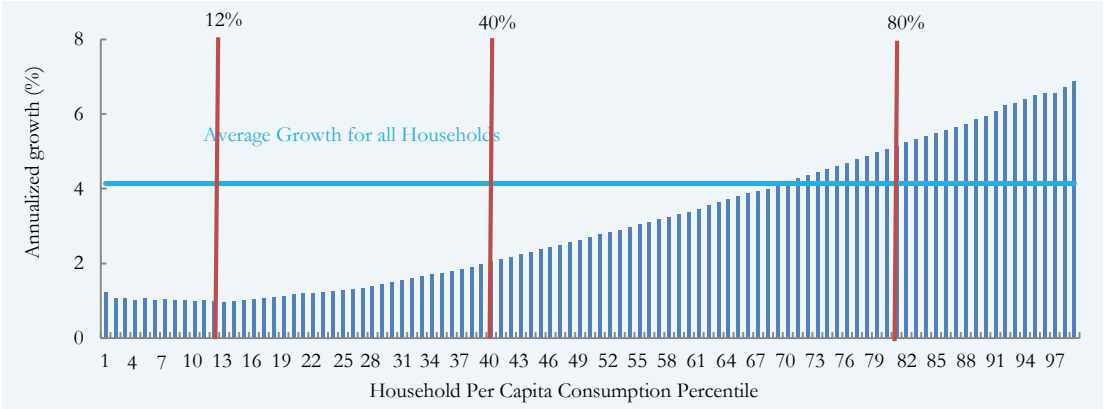
Source: BPS, sakernas data

3. Inequality of income and opportunity

Income inequality has increased over the past decade

Indonesia's poor and vulnerable households have seen a much slower income growth than their most affluent counterparts, leading to a rise in inequality over the decade. Indeed, one reason for persistent poverty and vulnerability, despite sustained economic growth, is that growth has not been shared equally. Between 2003 and 2010, real annual growth of per capita consumption was 1.3 percent for the poorest 40 percent of households, compared with 3.5 percent for the next 40 percent, and 5.9 percent for the top 20 percent (Figure 2.14).[52]

Figure 2.14: Growth incidence curve, 2003-10

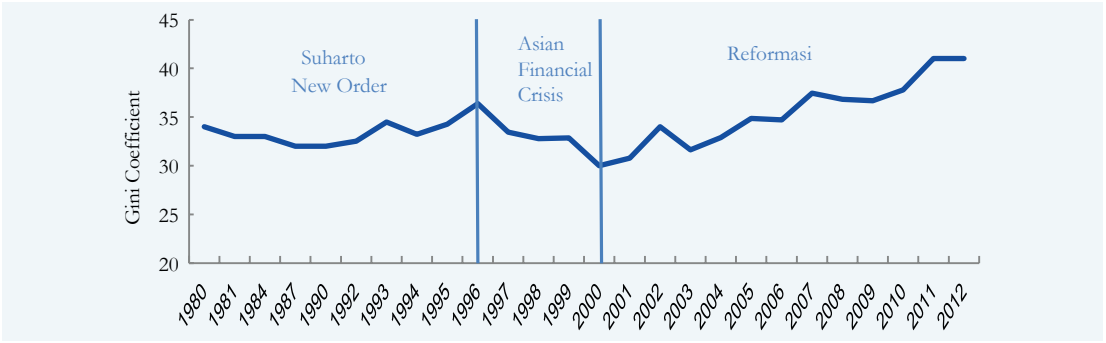


Source: Susenas and World Bank calculations.

52 A Growth Incidence Curve (GIC) shows the annual growth rate in consumption between two periods for each percentile of the distribution. Thus, the GIC indicates how the average consumption growth for all households is distributed across the distribution. See World Bank (forthcoming) *Inequality of Income and Consumption in Indonesia.*

Inequalities in household consumption, as measured by the Gini coefficient, were relatively stable over the final 15 years of the Suharto era, fluctuating between 32 and 36, although beginning to increase towards the end of the period (Figure 2.15). With the rich being most adversely affected during the Asian financial crisis, the Gini fell from 36 in 1996 to 30 by 2000. However, since the recovery from the crisis, it has been steadily rising, reaching 41 by 2012.

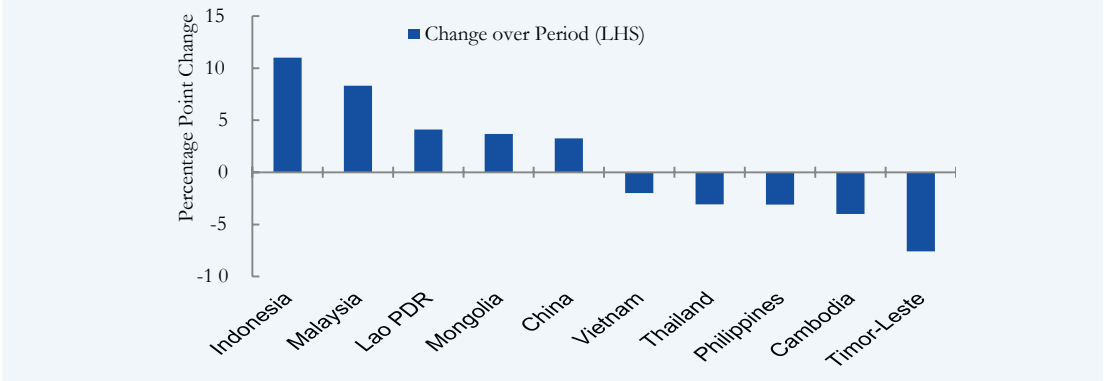
Figure 2.15: Consumption Gini coefficient, 1980-2012



Source: Susenas

Indonesia has experienced one of the fastest rising rates of inequality in the East Asian region (Figure 2.16), although consistent and reliable international comparisons are difficult.[53] The speed of the increase is reason for concern. Arguments have been made that inequality should be expected to rise as a country develops and some people participate earlier in economic growth than others, before falling as the rest of the population catches up.[54] However, there is mixed empirical support for this.[55] More importantly, the speed of the increase in Indonesia raises concerns, even if some increase is part of a natural process of development. Moreover, as discussed below, an increasing amount of consumption inequality in Indonesia is explained by circumstances of birth, which is both inequitable and means the country's human capital base is not being best utilized.[56]

Figure 2.16: Gini Coefficients in East Asia, 2000-12



53 Comparing Gini coefficients across time and countries is difficult, due to different welfare measures (income or consumptions), different welfare aggregates (e.g. whether housing, durables and self-production are included in the consumption aggregate, and in what manner), and different within-country purchasing power adjustments (spatial cost of living). These differences can affect both levels and changes in levels. Moreover, the choice of start and end points also affects trends over time. Work has begun on an East Asian data portal which will facilitate more consistent comparisons.

54 The well-known Kuznets Curve (Kuznets, 1955).

55 See, for example, Clarke (1995), Barro (2000) and Forbes (2000).

56 A decomposition of the Theil L Index of consumption inequality for children under 18 years old indicates 27 percent is due to differences in birth circumstances (predominantly parents' education, urban-rural and regional locations) in 2002, compared to 37 percent by 2012.

Start Year	2000	2004	2002	2002	1999	2002	1999	2000	2004	2001
End year	2012	2009	2008	2008	2005	2008	2009	2009	2008	2007
Start Value	30	37.9	32.6	32.8	39.2	37.6	43.1	46.1	41.9	39.5
End Value	41.1	46.2	36.7	36.5	42.5	35.6	40.0	43.0	37.9	31.9

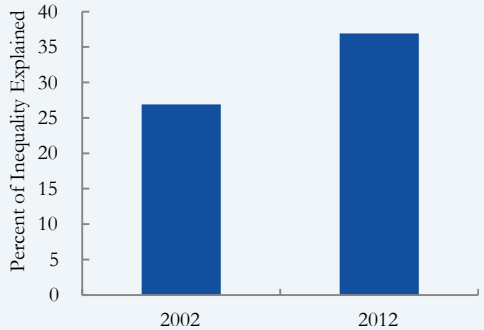
Source: World Development Indicators and Susenas.
Notes: Some coefficients are for income and some for consumption. Change per year has been calculated over a different period for each country, as indicated in the table. All data are earliest and most recent available for the period 2000-2012

Inequality of opportunities has worsened

An increasing amount of inequality can be explained not by a lack of skill or effort, but by circumstances of birth. If inequalities of outcomes, particularly economic, are the result of individual efforts, we may be less concerned. However, if they are due to systemic differences among people in access to opportunities, there is more cause for policy remedies. The World Bank 2006 World Development Report examines inequality of opportunity along three dimensions: health (e.g., access to services), education (e.g., access to schools and teachers) and voice or power (e.g., ability to influence deeper institutions in society, such as governance, access to land, control of labor, and market regulation; power and voice can also be examined within the household). Recent work on the Human Opportunity Index (HOI) has also looked at access to safe water and sanitation, and infrastructure and communications.[57] The key focus of such work is the degree to which opportunity and access vary systemically along dimensions such as gender, race, religion, disability, location, and family background. The HOI approach attempts to quantify some of the contribution of inequalities of opportunity to inequalities of outcome.[58]

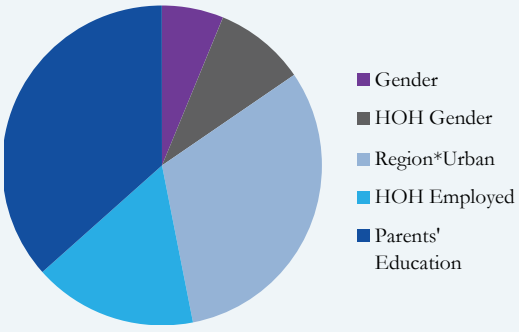
Over the past decade, the proportion of inequality among children explained by differences in characteristics at birth has been increasing. In 2002, 27 percent of child consumption inequality was due to differences in their gender, the gender and employment status of the head of their household, their parents' education, and their region and location of birth. By 2012, this had reached 37 percent (Figure 2.17), driven mainly by parents' education, and growing up in a rural area, as well as the region of Indonesia (Figure 2.18).

Figure 2.17: Proportion of child consumption inequality due to birth circumstances



Source: Susenas, World Bank staff calculations
Note: Decomposition of Theil L (GE 0) for children under 18 living at home

Figure 2.18: Role of birth circumstances in child consumption inequality



Source: Susenas, World Bank staff calculations

57 See, for example, Paes de Barros et al (2009).
58 This calculation will be done as part of an ongoing World Bank on inequality in Indonesia.

The role of the commodities boom in rising income inequality

There is evidence that the commodities boom in 2003-12 played a significant role in the widening income gap observed in Indonesia. Theoretically, the distributional impact of a commodity-price shock can be modest if resources (in particular labor) are mobile across sectors. However, if there are constraints on inter-sectoral factor mobility, the distributional consequences of a price shock might be significant. The low level of labor intensity of most resource sectors (in particular oil, gas and mining) typically prevents the absorption of a significant portion of the labor force in response to a boom in prices. Thus rises in commodity prices tend to disproportionately benefit the owners of assets. Consistent with this, Bhattacharyya and Williamson (2013) show that resource booms tend to exacerbate inequality.[59]

In the case of Indonesia, the commodities boom has played a distinct role in the differentiated growth of income between the rich, and the poor and vulnerable fueling inequality. As seen in Chapter 1, the sharp rise in commodity prices led to a significant wealth effect, manifested in the rise in corporate wealth and the stock market between mid-2000 and 2011. Mining, coal and crude palm oil assets witnessed particularly large price increases in value until March 2011, leading to 20-fold rise in the mining equity price index, a 14-fold increase in the agriculture index and contributing to a 10-fold increase in the overall equity index.[60] Sixteen out of the 21 billionaires in the Forbes 2010 list of Indonesia's 40 richest people owned assets linked to the coal and palm oil sectors. Furthermore, the rich owners of assets such as land, houses, and office buildings in metropolitan areas such as Jakarta have also disproportionately benefited from the sharp rise in land prices over the past decade. The rise in asset prices, which supports income growth for the rich, is in sharp contrast to sluggish growth in real wages of the poor and vulnerable as seen above. Indeed, the gap between rich and poor has widened.

It is important to note, however, that the commodities boom has also indirectly supported the incomes of the non-rich, including the poor, vulnerable and households in the middle class as seen in Chapter 1. Indeed, the commodities boom has had a strong correlation with nominal GDP, and has supported demand of goods and services. Rising demand has powered real GDP growth in the services sector in urban areas, in turn driving employment generation and overall growth. The rich have simply enjoyed a rise in assets (including assets built in urban areas such as office buildings and residences) and income that is much larger than other income categories.

Has fiscal policy helped to redress increasing inequality?

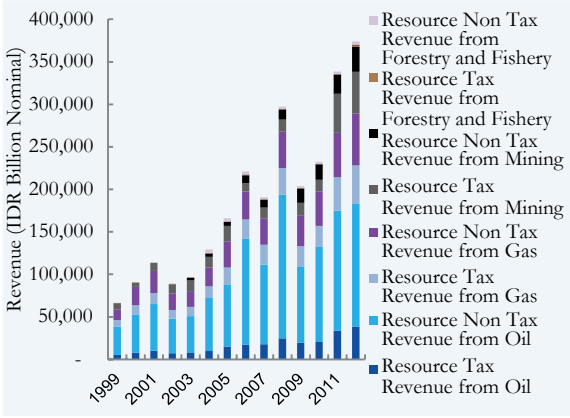
By allocating a large portion of the revenues generated by the resources sector to pro-rich energy subsidies, fiscal policy may have exacerbated inequality. The commodities boom has benefited public finance directly through tax and non-tax payments from the resources sector and indirectly through the spending effect it has generated in the economy. Natural resource revenues (from tax and non-tax payments) increased dramatically in 2003-12 (Figure 2.19). Oil revenues increased more than fourfold between 1999 and 2012 to Rp.182 trillion in

59 Bhattacharyya, S and J G Williamson (2013), "Distributional Impact of Commodity Price Shocks: Australia over a Century", CEPR Discussion Paper 9582, August.
60 The finance sub-index also increased 10-fold while manufacturing saw a 13 times rise.

2012 (US$17 billion), gas revenues fivefold to Rp.105.9 trillion in 2012 (US$10 billion), mining revenues almost fourfold to Rp.78.5 trillion in 2012[61] (US$7.3 billion) while forestry and fisheries revenues increased by 860 percent from a low basis to Rp 6 trillion in 2012 (US$560 million).[62] A large share of the increased government revenues was channeled into energy subsidy spending, which crowded out infrastructure spending (Figure 2.20). For instance, the 2012 spending on fuel subsidies of Rp.212 trillion was equivalent to total central government spending on capital (Rp.140 trillion) and social expenditures (Rp.75 trillion) combined. It was three times the 2012 budget allocation to central government infrastructure spending.

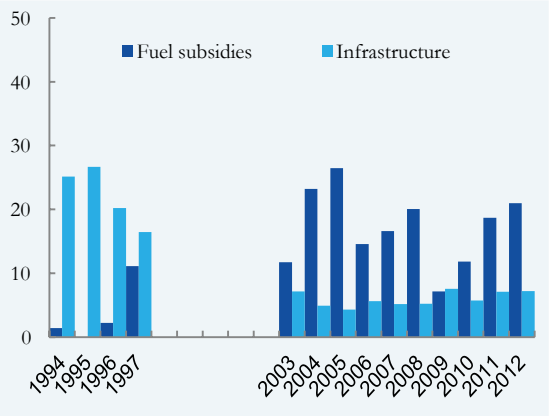
The large expenditures on fuel subsidies are akin to an additional income transfer disproportionately benefiting rich households. About84 percent of all benefits go to the top half of households by consumption, and only 16 percent to the bottom half, 40 percent of benefits go to the richest 10 percent of households, and less than 1 percent to the poorest 10 percent. In addition, not only do the poor (as measured by consumption levels) receive fewer benefits from fuel subsidies, they also are likely to suffer more from the poor provision of infrastructure; they live in the areas that are most flood-prone and often have the most difficulty accessing key basic services.

Figure 2.19: Natural resource revenues increased dramatically in nominal terms
(Rp billion)



Source: Ministry of Finance and World Bank staff calculations.

Figure 2.20: But much of public spending went to fuel subsidies as opposed to infrastructure
(share of total expenditure, %)



Source: Ministry of Finance.

Note: Figure 2.20 does not include the data for 1998-2002 for easier interpretation of the data. The data in 1998-2002 are blurred by two factors: (i) a change in the budget reporting methodology in 2000 and (ii) the 1997/98 Asian financial crisis.

61 Note that for mining, forestry and fisheries, data on non-tax revenues are unavailable from 1998 to 2002. Therefore, we use the period 2003-12 for analysis of the revenues from mining, forestry and fisheries.

62 In 2012, oil made up 49 percent of total resource revenues, gas 29.4 percent, mining 20 percent while forestry and fishery accounted for 1.6 percent. For oil and gas, in addition to company tax, the production sharing contracts provide for non-tax revenues from government equity shares (similar to a profit-based royalty) and government share of the first tranche petroleum (similar to an output-based royalty); signature and production bonuses are additional sources of non-tax revenues. For mining, in addition to company tax, non-tax revenues are mainly collected from output-based royalties, including both ad valorum and specific royalties. Coal overwhelmingly dominates non-tax mining revenues, accounting for 90 percent of mineral non-tax revenues in 2011.

4. Access to Basic Services

Has the economic transformation of the past decade been associated with significantly improved access to basic services? Clearly, the past decade has seen continuous progress in access to key services such as education, health, water and sanitation and electricity. However, progress has been uneven and unequal, leading to wide disparities across geographic and income levels, and undermining the inclusiveness of growth. In general, access to services is disproportionately low for the poor and vulnerable, with the notable exception of education, where remarkable progress was made in access equity.

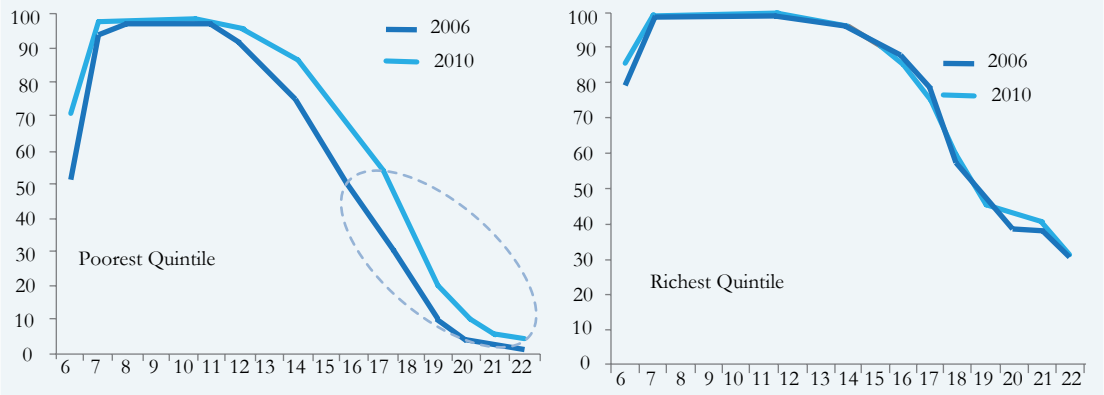
The population's access to quality basic services should be examined against the backdrop of the significant decentralization that occurred in the early 2000s. Since then, subnational governments have taken over primary responsibility for delivering nearly all public services. The assignment of new functions to local governments was accompanied by significant reallocation of funding. Subnational expenditure grew from 2.7 percent of GDP in 2000 to 7.2 percent of GDP in 2011. Today subnational governments manage nearly the same proportion of public spending as the central government, when central government spending on subsidies and interest payments are excluded. The vision and expectation behind this increase in responsibilities and financial capacity were to enhance the response to service delivery needs.

Education

Reflecting Indonesia's clear political commitment to education, the poor's access to education has increased dramatically with children from poor families enrolling earlier and staying in school longer. A constitutional mandate to allocate at least 20 percent of the total government budget to education has led to a more than doubling of spending in real terms since 2002. The biggest payoff for this increase has been improvements in access and equity. The share of 15 year olds from the poorest consumption quintile that are still enrolled in school increased from 60 to 80 percent between 2006 and 2010. However, beyond the age 15, the share of children from the poorest quintile enrolled drops dramatically (Figure 2.21). Access to early childhood education, senior secondary and above still remains low particularly for the poor. In higher education, total participation has increased from 12 percent in 2000 to 26 percent, yet less than 4 percent of 19-22 year olds from the poorest 40 percent enter higher education. Gender disparities are not a problem in terms of access, although boys tend to drop out of all levels of education more than girls.

The current greatest challenge for Indonesia is to improve the quality of education for all income groups. For instance, international tests such as PISA rank Indonesia below many regional peers. In 2012, out of 470,000 15-year old students in 65 countries, Indonesia ranked 57th in reading, math and scientific literacy, scoring 402 out of 600 (against an OECD average of 493). Many parts of Asia scored a lot better: Shanghai (1st, 556), South Korea (2nd, 539), Hong Kong (4th, 533), Singapore (5th, 526), Japan (8th, 520) and Thailand (50th, 421). Other emerging economies outside Asia did better as well: Turkey (41st), Russia (43rd) and Brazil (53rd). Reforms to improve basic education, senior secondary and higher education are underway and remain challenging. See Chapter 5 and World Bank (2012) for more details.

Figure 2.21: Percentage of children enrolled by age (%)

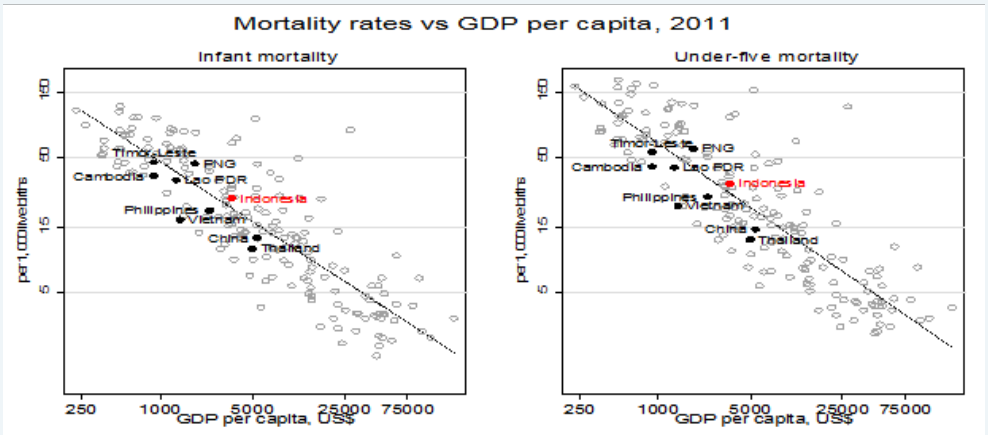


Source: World Bank (2013)[63]

Health

Indonesia has made steady progress on several key population health outcomes over the past few decades. Life expectancy has steadily increased to almost 70 years in 2011, up from about 45 years in 1960. The under-five mortality rate has declined steadily from 216 per 1,000 live births in 1960 to 82 in 1990 and 32 in 2011. At current trends, Indonesia is projected to meet the child-health related Millennium Development Goal (MDG) which calls for a two-thirds reduction in under-five mortality between 1990 and 2015. Indonesia's overall achievements in this indicator are broadly consistent with what might be expected for its level of income. Nevertheless, many comparator countries in the region such as the Philippines, Cambodia, Vietnam, and Thailand perform far better than Indonesia relative to their income levels in the area of infant and under-five mortality (Figure 2.22).

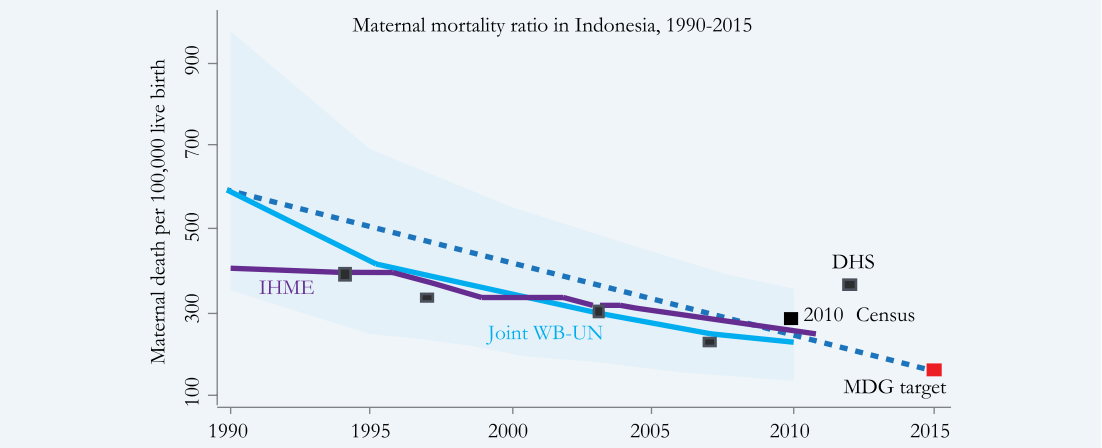
Figure 2.22: Indonesia child and infant mortality is about average for its income level



Source: WDI

63 World Bank (2013): Spending More or Spending Better: Improving Education Financing in Indonesia, in collaboration with the Ministry of Education.

Figure 2.23: Maternal mortality ration trends in Indonesia, 1990-2015



Source: Joint WB-UN estimates Indonesia census
DHS; Institute of Health Metrics and Evaluation (IHME)
Note: Shaded are represents joint WB-UN estimation uncertainty

However, the Indonesian health sector faces considerable challenges. These include the relatively poor state of maternal health, a "double burden" of nutrition, persistent geographic and income-related inequalities in access and health outcomes, and high levels of out-of-pocket (OOP) spending for health despite high and increasing coverage rates. The maternal mortality ratio, recently estimated at 220 per 100,000 live births, is higher than that of India and Myanmar, and much higher than what would be expected for Indonesia's income level. At current trends, Indonesia will miss the MDG target for maternal health (Figure 2.23). Although utilization of maternal health services such as antenatal care and skilled birth attendance is relatively high, only 63 percent of deliveries occur in health facilities.

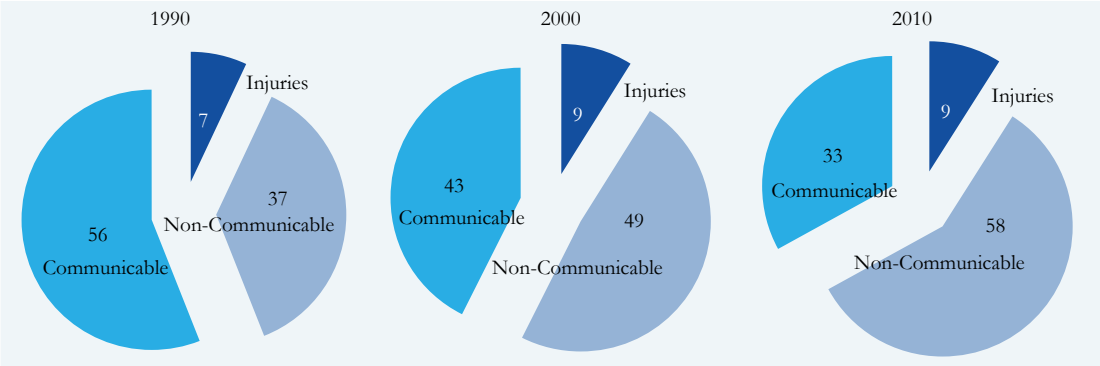
Another key challenge is child malnutrition, contrasting with over-nutrition problems in older children and adults and raising the propensity of non-communicable diseases. Indonesia is on-track to attain the nutrition-related MDG related to reducing the prevalence of underweight among children under five (current estimates place the prevalence rate around 18 percent). However, reducing the prevalence of other malnutrition-related indicators such as early childhood stunting remains a challenge.[64] Stunting increases the propensity of becoming overweight and of cardiovascular diseases during adulthood. Changing consumption patterns and lifestyles associated with increasing urbanization are exacerbating the situation, such that over-nutrition problems are already affecting the majority of adults. Unless action is taken now, not only tackling maternal and child under-nutrition but also tackling the over-nutrition problems in older children and adults, the prevalence of non-communicable diseases (NCDs) will increase dramatically, undermining Indonesia's economic progress in coming decades.

In fact, NCDs are becoming one of the biggest health challenges facing Indonesia. NCDs now account for the largest share of the overall burden of disease in Indonesia. Whereas in 1990 only about 37 percent of morbidity and mortality in the country was due to NCDs, by 2010 this number had risen to 58 percent (Figure 2.24). This trend is expected to continue in

64 RisetKesehatanDasar (Riskesdas) 2010 estimates giziburuk (4.9 percent); gizikurang (13 percent).

the coming years, not just in Indonesia but also across the region. From a health financing and service delivery perspective, what sets NCDs apart is their chronic nature: they are generally typified by long durations and slow progression rates, but they can also result in rapid premature death (e.g., with stroke and cardiovascular conditions). NCDs are also generally more expensive to treat and require sustained case management, often requiring multiple contacts with the health system over one's lifetime. Management of NCDs also requires primary care services to play an important and effective role in screening and delivering preventive interventions which, for most NCDs, are far more cost-effective than treatment at advanced stages of progression. There is also evidence to suggest that NCDs are more likely to result in catastrophic health spending, placing households at risk of impoverishment.

Figure 2.24: Burden of disease by cause in Indonesia, 1990-2010
(%)



Source: IHME

In general, the performance of the health system in Indonesia reflects a host of factors, including relatively low public spending in health, low household access to formal insurance, shallow financing protection among those with formal insurance coverage, poor quality, and delivery issues related to Indonesia's big-bang decentralization (see below). Public spending on health is only 0.9 percent of GDP in Indonesia, much lower than Thailand (2.9 percent), China (2.7 percent), and Vietnam (2.6 percent). In 2012, health claimed only 5.3 percent of total public spending, and less than 2 percent of central government spending (compared with 18 percent of central government spending on fuel subsidies, for instance). At the same time, more than half of the population still remains without any health insurance coverage despite progress in the past decade. As mentioned above, OOP spending remains high, accounting for 40 percent of total health spending.

Water and sanitation

Access to safe water and sanitation, a major factor in health and overall welfare, has increased since 2001 but is still below 70 percent of the population. According to household survey data (Susenas), access to safe water has increased from 47 to 64 percent between 2001 and 2012. Households' access to sanitation also increased, albeit only from 54 to 67 percent in that period. Still, Indonesia lags behind the Philippines and Vietnam, as well as Malaysia and Thailand. A 2008 study estimated poor sanitation nationwide cost US$6.3 billion annually in health care costs, lost productivity, water resource and fishery losses, declining land

values and tourism losses. Sewerage coverage is minimal, with only 2 percent of urban areas having access to centralized systems. Of the estimated 85,000 tons per day of solid waste generated by Indonesia's urban population of 110 million, only about 40 percent ends up in landfills, with many of these landfills being open dumps. In rural areas, while the number of community-managed piped water schemes has grown steadily, these cover less than 20 percent of the rural population and there is inadequate emphasis on sustainability of operations.

A number of steps have been taken to improve delivery in the water sector, but progress remains uneven. The Government undertook legislative and regulatory steps to improve delivery in the water sector in the mid-2000s (Water Resources Law No. 7/2004 and the Government Regulation No. 16/2005). In rural areas, the Government is scaling up community-based schemes for both water and sanitation, including a community-led sanitation program targeted to reach 20,000 villages by 2014. In urban areas, there have been some improvements in the operational and financial performance of public urban water utilities over the past decade, with the number of utilities classified as 'healthy' increasing from 38 to 173 between 2004 and 2012. However, weak capacity and governance, and the lack of access to financing, remain key constraints. The Government has launched debt restructuring, and loan subsidy and guarantee schemes, although to date these initiatives remain fragmented and their uptake relatively slow. Meanwhile, efforts to expand sewerage and sludge management systems remain at a nascent stage.

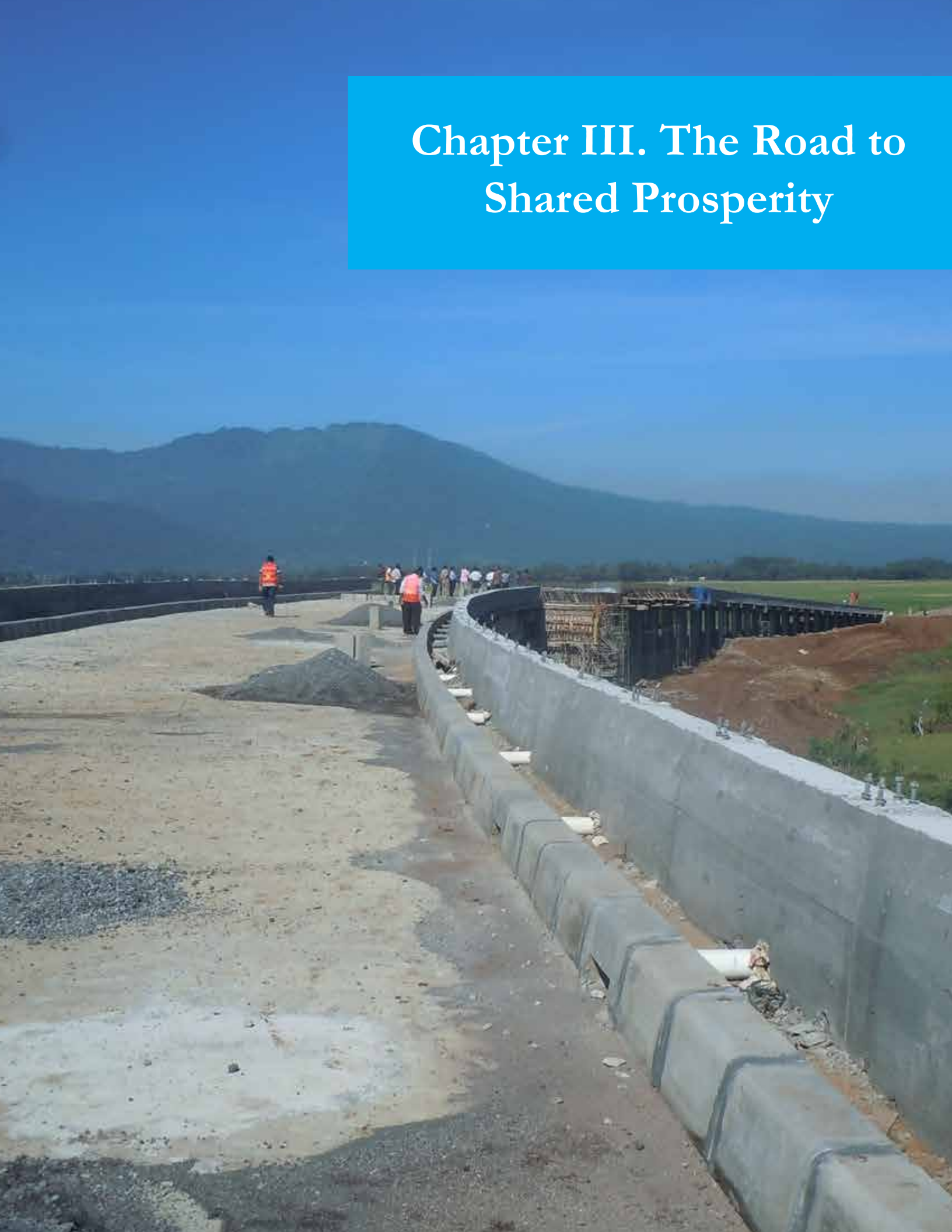
Electricity

Access to electricity, largely governed by the state-owned electricity utility, PLN, has progressed steadily over the past decade but millions of individuals still lack reliable electricity. According to the latest Susenas data (household survey), the percentage of households with access to electricity increased from 86 percent in 2001 to 95 percent in 2012 (92 percent of households were served by PLN against 3 percent connected from non-PLN sources). However, this statistics focused on the demand-side are in contradiction with official data from PLN, which point to a household electricity coverage rate of 74 percent. This discrepancy reflects large differences in quality (number of continuous hours of access) and a large number of households have unreliable or low quality access.

To further increase access to electricity, the Government strategy consists of improving the regulatory framework, strengthening the enforcement of existing regulations and boosting investments. The recently enacted Energy Law and the Electricity Law provide a renewed legal framework for the energy sector, with an emphasis on economic sustainability, energy security, and environmental conservation. Following a first phase in the early 2000s, a second "Fast-Track Program" to construct an additional 10,000 MW of capacity has been launched, of which 60 percent will be from renewable resources, with geothermal accounting for about 4,800 MW and hydropower for most of the rest. Domestic consumption of petroleum products in the country has been heavily subsidized, which has supported the development of power generation largely based on diesel and other petroleum-based fuels. The country has been unable to significantly reduce its dependence on petroleum-based fuels, with a fast-growing demand from the transport sector and shortages of natural gas in the domestic power generation market as about half of total gas production is exported.

Part 2
Indonesia in the Next Decade: Generating Prosperity

Chapter III. The Road to Shared Prosperity



Chapter III. The Road to Shared Prosperity

Within the next two decades, Indonesia aspires to generate prosperity, avoid a middle-income trap and leave no one behind as it tries to catch up with high-income economies. These are ambitious goals. Realizing them requires sustained high growth and job creation, as well as reduced inequality. Can Indonesia achieve them? This report argues that the country has the potential to rise and become more prosperous and equitable. But the risk of "floating in the middle" is real. Which pathway the economy will take depends on: (i) the adoption of a growth strategy that unleashes the productivity potential of the economy; and (ii) consistent implementation of a few, long-standing, high-priority structural reforms to boost growth and share prosperity more widely. Indonesia is fortunate to have options in financing these reforms without threatening its long-term fiscal outlook. The difficulties lie in getting the reforms implemented in a complex institutional and decentralized framework. But Indonesia cannot afford to not try harder. The costs of complacency – and the rewards for action -- are too high.

This chapter (i) highlights the key domestic and external factors that will shape economic prospects as well as the risks and potential cost of complacency; (ii) describes the growth strategy that is likely to help Indonesia realize its aspirations; (iii) identifies key priority areas for reforms that will be elaborated on in the next chapters of the report and (iv) discusses specific reforms options to address cross-cutting implementation challenges.

1. Key Opportunities and Risks

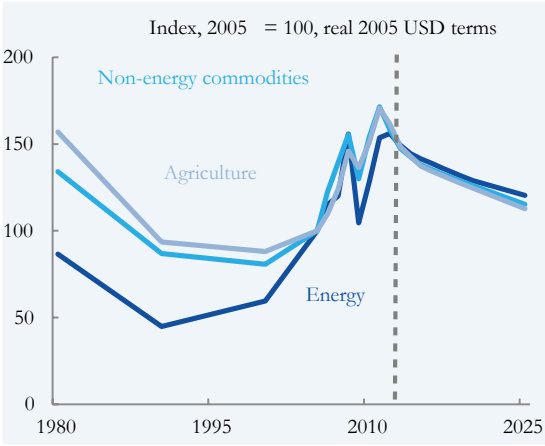
Over the next decade, four domestic and external factors—which good policies can turn into powerful drivers of growth, or "pull factors" —will shape economic prospects. These factors are Indonesia's demographics, the urbanization trend, commodity prices, and developments in China.

Key opportunities

- **Demographics.** Indonesia is fortunate to have abundant labor. Between 2013 and 2020, the working-age population will increase by 14.8 million, reaching 189 million from the current 174 million. Today, 50 percent of the population is under the age of 30. This increasingly educated and IT-savvy youth is an asset that can be used to boost overall productivity and economic growth. With the right policies in place to utilize this labor, Indonesia is poised to benefit from a demographic "dividend", before the population starts to age in 2025-30.
- **Urbanization.** Urbanization is increasing at an annual pace of about 4 percent, making Indonesia one of the most rapidly urbanizing countries in the world. By 2025, 68 percent of the population is projected to live in urban areas, compared to 52 percent in 2012. As income rises and existing large metropolitan areas such as Jakarta and Surabaya become saturated, the demand for consumer durables, shopping space and housing will increase significantly in smaller cities. Connecting these cities and their inhabitants to rural areas, metropolitan areas and the global economy will be essential to attracting firms and achieving shared prosperity. Empirical evidence shows that urbanization supports growth and poverty in Indonesia only in the presence of adequate infrastructure (Lewis, 2014).

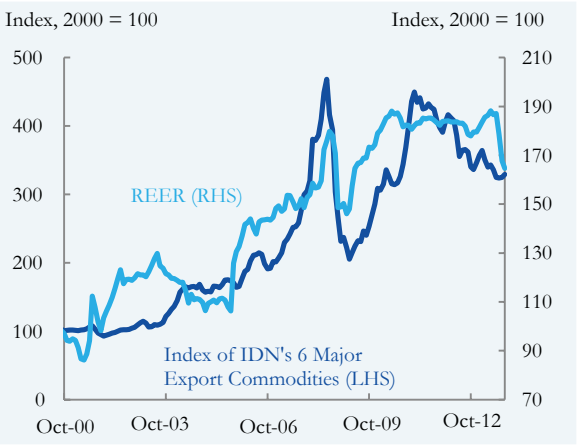
- **Global commodity prices.** The softening of commodity prices since 2011 poses challenges for Indonesia in the short term, as seen in their impact on Indonesia's trade balance, but it offers an opportunity to enhance the quality and diversity of investments in Indonesia. Over the past decade, high commodity prices tilted investment incentives in favor of the resource sector and non-tradable sectors (e.g., the real estate sector) against manufacturing and other tradable sectors. The share of manufacturing in total investment dropped to 12 percent in 2002-11 against almost one-fifth in 1990-96. Going forward, lower commodity prices should increase the relative profitability and attractiveness of manufacturing and can help Indonesia develop its industrial base. Commodity price falls over the past two years, through their impact on the current account, are now translating into depreciation in the real effective exchange rate, helping manufacturing exports and competitiveness. With reforms to reduce the constraints faced by manufacturing firms (see below), weaker commodity prices may be a blessing in disguise.

Figure 3.1: Commodity prices are projected to decline further over the next decade
(index, 2005 = 100; real commodity price indices)



Source: Bank staff using UN population data

Figure 3.2: Indonesia's real effective exchange rate is now adjusting to recent commodity price falls
(index, 2000 = 100; weighted commodity price index, real effective exchange rate)



Source: Bank staff calculation using UN population data

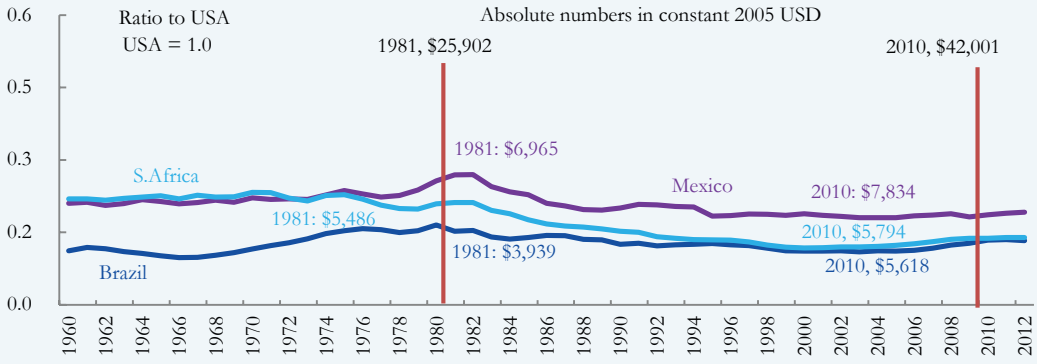
- **Developments in China.** China's rapidly rising wages present Indonesia with a potential in regaining a comparative advantage in labor-intensive export sectors. China's nominal wages have grown by an annual average of almost 15 percent since 2001 which, together with slowing productivity growth in low-skilled sectors in recent years, has seen Chinese unit labor costs grow by almost 70 percent since 2005 (Economist Intelligence Unit, 2012). Meanwhile, ongoing Yuan appreciation, with the real effective exchange rate up 30 percent since 2005, is further eroding China's competitiveness in manufactured goods. These pressures, combined with slower overall economic growth as China rebalances, are likely to prompt investors to look beyond China's coastal areas. These dynamics offer ASEAN countries, including Indonesia, an opportunity to attract more investments in the manufacturing industries.

However, while none of these potentially favorable factors will be captured without reforms, two risks remain: a risk of a slowdown in long-term growth and a risk of growth not being inclusive.

Risk of a growth slowdown

International experience shows that growth slowdowns can occur at all levels of income (Bulman et al, 2012). Recent evidence suggests that their frequency is higher for middle-income countries (IMF, 2013). As an example, Brazil grew fast in the 1960s and 1970s. But from 1981, when its GDP per capita stood at US$3,939 (slightly above Indonesia's GDP per capita today), it suffered a prolonged relative growth slowdown, until 2004.[65] Similarly, also starting from 1981, when its GDP per capita was US$6,965, Mexico saw more than 20 years of slowing growth. Figures 3.4 and 3.5 show clearly that difficulty in managing shocks have led to repeated boom-bust growth pattern which held prevented significant progress in GDP per capita. These examples suggest that Indonesia cannot take its solid growth performance for granted. Instead, this growth was partially driven by a very favorable external environment: the commodity boom of 2003-11 combined with low global interest rates since 2009 supported corporate revenues, household incomes and government revenues, and led to a significant jump in domestic demand.[66] But, since 2011, commodity prices have softened significantly. With the normalization of US growth, the Fed's quantitative easing policy—which led to low global interest rates—is being gradually unwound, increasing financing costs. Without structural reforms, the risk of a growth slowdown for Indonesia is very real.

Figure 3.3: Brazil, Mexico and South Africa's GDP per capita, relative to the US and in absolute terms

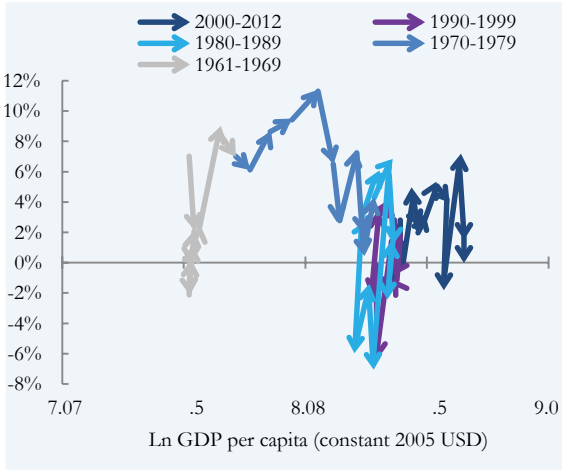


Source: World Bank, World Development Indicators

65 A commodity-rich country similar to Indonesia, Brazil benefitted significantly from a commodity boom in 2004-11. This favorable external factor explains parts of the strong growth recovery in that country in that period.

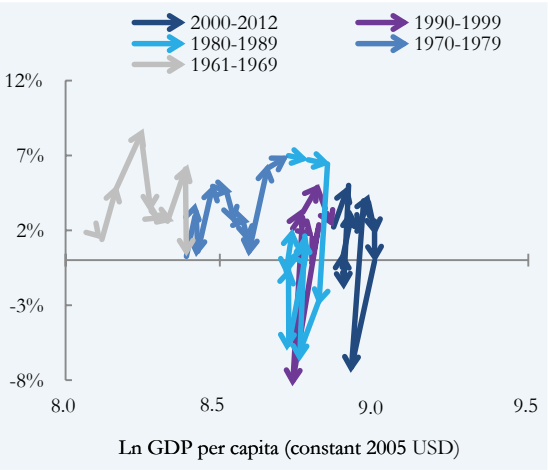
66 More specifically, the direct rise in the value of resource assets (palm oil, rubber, coal, gas, etc.), as well as the value of other assets purchased on the back of commodity incomes or wealth (real estate properties, land and securities), significantly encouraged consumption and investment against these assets and generated multiplier effects in the economy.

Figure 3.4: GDP per capita changes in Brazil
(in response to GDP growth)



Source: World Bank, World Development Indicators

Figure 3.5: GDP per capita changes in Mexico
(in response to GDP growth)



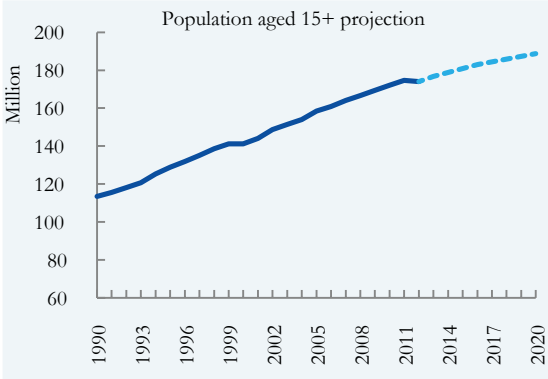
Source: World Bank, World Development Indicators

Risk of growth not being inclusive enough

Even if Indonesia manages to avoid a prolonged growth slowdown, growth may not be inclusive. From 1999 to 2012, poverty was cut by half: from 24 percent to 12 percent. However, in 2012, about 65 million people hovered between the national poverty line and 50 percent above the latter. They and the poor are highly vulnerable to food price increases, health shocks and natural disasters. Vulnerability persists partly because the poorest families enjoy only a very small increase in real income, compared to those more fortunate. As seen in Chapter 2, in 2003-10, real growth of per capita consumption was 1.3 percent per annum for the poorest 40 percent of households, compared with 3.5 percent for the next 40 percent, and 5.9 percent for the top 20 percent. Moreover, consumption inequality in Indonesia is increasingly determined by access to opportunities. In 2002, 27 percent of child consumption inequality was due to differences in their gender, the gender and employment status of the head of their household, their parents' education, and their region and location of birth. By 2012, this reached 37 percent. Going forward, equitable growth needs to be fostered and not taken as granted.

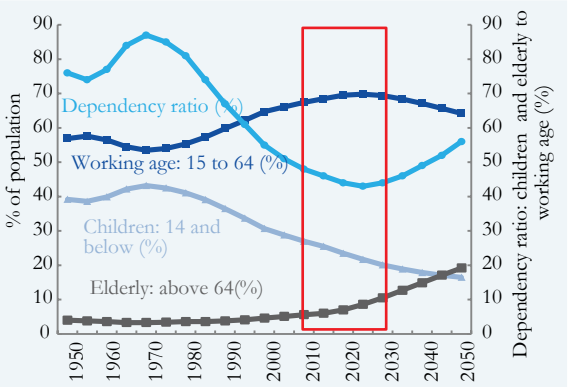
A key dimension of growth inclusiveness is job creation. In the context of Indonesia, the inclusiveness of growth cannot be separated from the level of growth itself. Indeed high growth is needed in part because millions of individuals will reach working age and enter the labor market in the next decade or so. As Figure 3.6 shows, the population of working age is projected to increase significantly in the next 10 years before fading away as the dependency ratio bottoms out. As a result, between 2013 and 2020, the active population will increase by 14.8 million in Indonesia, reaching 189 million from the current 174 million (Figure 3.5). Although not all of them will seek employment, the majority (maybe overwhelming majority) of them will do so. In the next 10 years, labor market participation is likely to increase gradually as progress in education and rapid urbanization are expected to support greater labor market participation of women (which is currently only 52 percent compared with 86 percent for working age men) and the youth.

Figure 3.6: Projection of the population in working age (15+)



Source: World Bank, World Development Indicators

Figure 3.7: The demographic dividend is projected to continue until 2030 before reversing



Source: World Bank, World Development Indicators

The task is thus to create millions of jobs in order to further reduce poverty and strengthen the middle-class. This can only be done by nurturing fast-growing economy given current employment elasticity. In the period 1990-2012, the estimated elasticity of employment to growth was 0.5, meaning that 1 percent in GDP growth translated into 0.5 percent employment growth, on average across sectors.[67] Using this estimated elasticity, it is possible to project future employment under different growth scenarios: a "current scenario", which projects real GDP growth on the basis of the trend observed between 1990 and 2012 (i.e., an average annual real growth rate of 5 percent), a "full potential" scenario, which projects a 6.5 percent yearly growth rate, and a "pessimistic" scenario, assuming a 4.0 percent growth rate reflecting for instance a persistent economic slowdown.[68]

To guard against a fall in the employment rate, growing at the country's full potential is required. Under the "full growth potential" scenario, the country would create 12.4 million new jobs by 2020, which would lead to an increase in the employment rate to 65.3 percent. Under the "current growth" scenario, the economy would generate 10.2 more million jobs by 2020, leading to only a modest increase in the employment rate, below 1 percentage point (from the current 63.7 to 64.1 percent), as shown in Figure 3.4. Finally, under a "pessimistic growth scenario", new job creation would reach only 7.3 million by 2020, which would imply a reduction in the employment rate to below today's level, a scenario that would undermine the country's efforts to further reduce poverty.

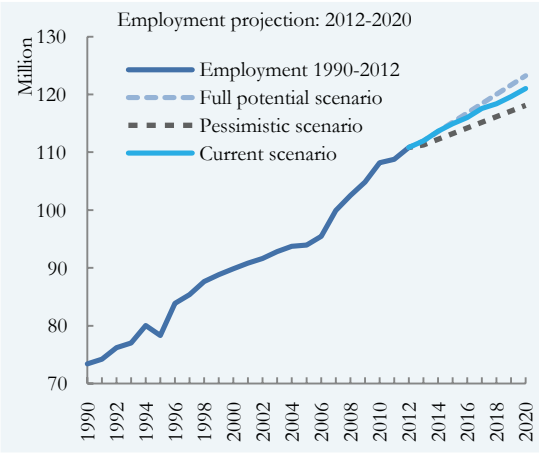
For a labor-abundant economy that needs to absorb millions of new entrants in the labor market, growing by 6.5 percent versus 5 percent makes a huge material difference. The difference in terms of job creation is more than 2.2 million jobs over the eight years! And if

67 The elasticity of employment to growth has been estimated using panel data on value added and employment composition for 9 economic sectors between 1990 and 2012. The estimation yielded an elasticity of 0.5, and slightly higher (0.54) for the sub-period 2000-12. The latter is identical to the elasticity estimated for the Philippines between 1997 and 2010 (Philippines Development Report, The World Bank, September 2013).

68 In 2011, using a growth accounting methodology, the IMF estimated Indonesia's growth potential at 7.0 percent. We assume here a slightly lower growth potential, in light of the two fundamental shifts in the global environment, namely softer commodity prices and high cost of borrowing in line with prospects of US Fed's tapering, and the adjustment of Indonesia's economy to these shocks. IMF Article IV (2011). Selected Issues.

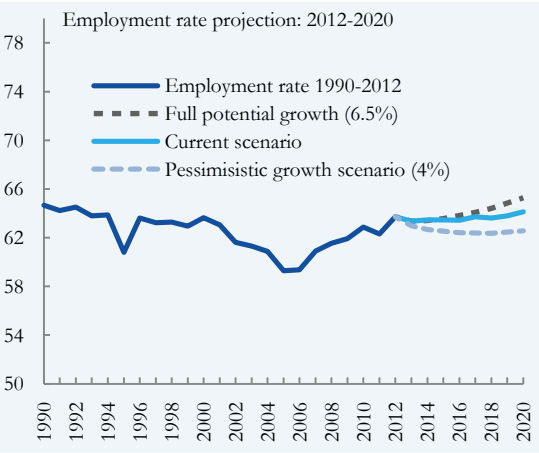
past trends are any guide, this difference will translate into different welfare outcomes. As seen in Chapter 2, in 2001-11, rapid economic growth allowed the creation of 20 million jobs which helped to cut poverty significantly. In the next decade, job creation will continue to be the key lever for poverty reduction in Indonesia.

Figure 3.8: Total employment under different growth scenarios



Source: World Bank staff using UN population data

Figure 3.9: The employment rate under different growth scenarios



Source: World Bank staff using UN population data

2. Growth Strategy

Given the opportunities and risks discussed above, and Indonesia's aspiration of shared prosperity, what would be the country's best growth strategy going forward? Quite simply, a country can increase its income per capita by a combination of improving labor productivity or increasing the share of the population employed.[69] Because the latter increases very slowly over time, cross-country evidence shows that 92 percent of the differences in GDP per capita across nations (a proxy of prosperity) are explained by differences in aggregate labor productivity (IMF, 2013). Thus, for Indonesia's GDP per capita to converge rapidly to high-income economies, boosting economic growth through increasing labor productivity will be crucial. A productivity-driven growth strategy is also important for Indonesia to reduce vulnerability and enhance competitiveness in the private sector. Indeed, the political pressure for increasing wages is unlikely to weaken in Indonesia. In this context, the only way to accommodate wage increases without jeopardizing competitiveness is to increase labor productivity.

Aggregate labor productivity growth has two sources. First, a movement of labor (and capital or other inputs to production) from low to higher productivity growth sectors increases aggregate productivity of an economy (this is called "structural change effect", see McMillan and Rodrik, 2011). For instance, when workers leave agriculture and work in higher productivity sectors (e.g., as a result of investment in agriculture that increases yields), the aggregate productivity of the economy increases. The second source of aggregate productivity growth is productivity growth within economic sectors, e.g., higher productivity in agriculture, thanks to the use of higher-yielding seeds or higher productivity in manufacturing thanks to the entry of new innovative firms.

69 This proceeds the decomposition of GDP per capita as follows: $\frac{GDP}{Population} \equiv \frac{GDP}{Workers} * \frac{Workers}{Population}$. $\frac{GDP}{Workers}$ is the aggregate labor productivity and $\frac{Workers}{Population}$ the proportion of the total population employed.

The good news is that productivity gaps across Indonesia's economic sectors are, providing scope for boosting productivity through structural change. Table 3.1 shows the gap in labor productivity levels between agriculture and other sectors of the economy, measured as the ratio of sectoral productivity to agriculture. Moving a worker from agriculture to the low-end services subsectors (wholesale and retail trade and personal, social services and construction) leads to a doubling of productivity on average. This movement has largely occurred over the past decade and has been the key driver of poverty reduction. Seventeen of the 20 million jobs created in 2001-11 occurred in services, mostly in the low-end segment. Today, more than 50 percent of workers are employed in agriculture and low-end services. In the years to come, Indonesia should seek to expand the movement of labor and job creation in the manufacturing sector and high-end services.[70] Despite the sharp decline in manufacturing productivity *growth* in the past decade, the average productivity of workers in manufacturing industries remains fully five times higher than that in agriculture.[71] Indonesia will see rising productivity growth if most of the 15 million additional individuals that will join the labor force by 2020 are employed in manufacturing and high-end services (versus low-end services).

The scope for increasing "within sector" productivity growth is also large in Indonesia. This type of productivity growth typically requires greater use of capital by workers (more modern machines and equipment), improvements in the quality of labor (better trained workers), adoption of new technology (including through FDI and joint-venture with foreign firms) and competition within sectors that lead to a larger number of efficient firms. The Government of Indonesia has, in its development plans, stated its objective of upgrading the country's industries to enhance value-addition. International experience shows that countries that are successful in achieving this have (i) adopted a clear and consistent industrial strategy; (ii) removed regulatory and administrative bottlenecks to investment and business conduct and; (iii) partnered and coordinated with the private sector to supply the right skills, infrastructure and specific institutional support in the sectors where the country has latent or overt comparative advantage. As shown below, important multi-faceted reforms will need to be implemented if Indonesia is to realize this.

Table 3.1: Labor productivity differences across sectors remain significant
(Sector labor productivity (real terms) compared with labor productivity in agriculture)

Sector	2000-03	2005-08	2009-12
Agriculture	1.0	1.0	1.0
Low-end services	2.4	2.5	2.2
Manufacturing industries	5.7	5.8	5
Transport and communication	2.8	3.5	5.5
Financial services	21.5	20.5	14.6
Mining and quarrying	46.8	26.7	18

Source: BPS and World Bank staff calculations.

Moving to a productivity-driven growth model will be a significant switch for Indonesia. Over past decades, growth has in large part been supported by capital accumulation and employment growth with limited contribution of total factor productivity (TFP). Van Der

70 The skills requirement for entering the high-end services sector is however higher, implying that the scope for job creation in manufacturing is much larger given the average levels of skills in the labor force.
71 In the past decade, labor productivity in agriculture increased (driven by rubber, palm oil, coffee and tea) and dropped to almost zero in manufacturing. The sharpest decline in labor productivity growth occurred however in mining and quarrying. See Chapter 2.

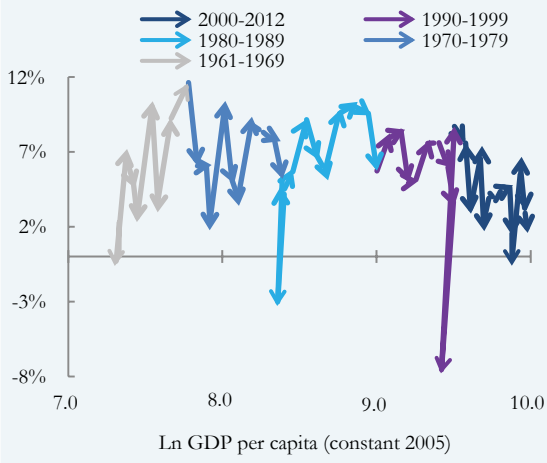
Eng (2008) finds that TFP explained only 33 percent of growth in 2000-07 and played no role in growth prior to 2000.[72] This is to be contrasted with China and South Korea, where TFP explained more than 50 percent of growth during that period. The aggregate productivity level of Indonesia—measured by average value-added per worker- is also low by regional standards. For instance, Malaysia's average productivity per worker is more than 5 times Indonesia's. Average labor productivity in Indonesia is also lower than in Thailand, the Philippines and China (Chapter 3). Differences in productivity reflect the structure of economies. In Indonesia, more than 50 percent of workers are in two low productivity sectors: agriculture and the low-end services subsector (retail trade, hotels & restaurants). This weighs heavily on average productivity.

3. Priority Reform Areas

The reform agenda for high, sustained, growth encompasses two components: (i) good macroeconomic management to prevent the build-up of imbalances and maintain macroeconomic stability and (ii) structural reforms to support Indonesia's long-term growth agenda. Both are necessary to ensure steady growth toward high-income status.

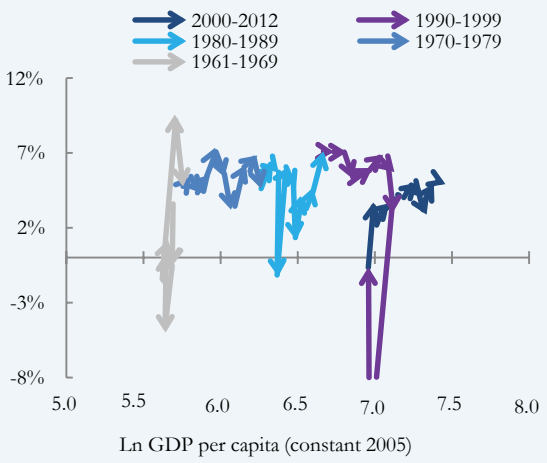
The good news is that when it comes to macroeconomic management, Indonesia's track record is overall solid, resembling much more South Korea's than (Figures 3.5 and 3.6). Indonesia has had its lot of destructive crises: two big financial crises, in the mid-1960s and in 1997/98 and many natural disaster crises, the largest of which was the 2004 Tsunami. Because of their magnitude, these crises have engendered major casualties with a material impact of GDP per capita. For instance, with the 1997/98 Asian financial crisis, Indonesia's GDP per capita contracted by 14.5 percent, the largest of any country affected by that crisis. It took 6 years for Indonesia to retrieve the level of GDP per capita the country reached in 1996—not a bad performance given the magnitude of the shock.

Figure 3.10: GDP per capita changes in South Korea *(in response to GDP growth)*



Source: World Bank, World Development Indicators

Figure 3.11: GDP per capita changes in Indonesia *(in response to GDP growth)*



Source: World Bank, World Development Indicators

72 Van der Eng, Pierre (2008) 'Capital Formation and Capital Stock in Indonesia, 1950-2007.' Working Papers in Trade and Development No.24. Canberra: School of Economics, ANU College of Business and Economics, Australian National University.

Indonesia's experience of crisis management in 2009 illustrates how a pro-active stance and response can mitigate the potential negative impact of global volatility. In late 2008, domestic bond yields and the exchange rate came under pressure, and there were concerns Indonesia could be entering another crisis period, similar to 1997/98, despite the strong macro positions. But, the authorities responded proactively to these pressures, and allowed the exchange rate to adjust. A responsive fiscal stimulus package, focusing primarily on tax adjustment, helped. A contingent financing facility with development partners, including the World Bank, in early 2009 served to send a signal of further lines of defense to markets. A range of other measures to improve crisis monitoring, preparedness and response were put in place. Thanks to these measures, growth reached 4.6 percent in 2009 and moved to 6.2 percent in 2010.

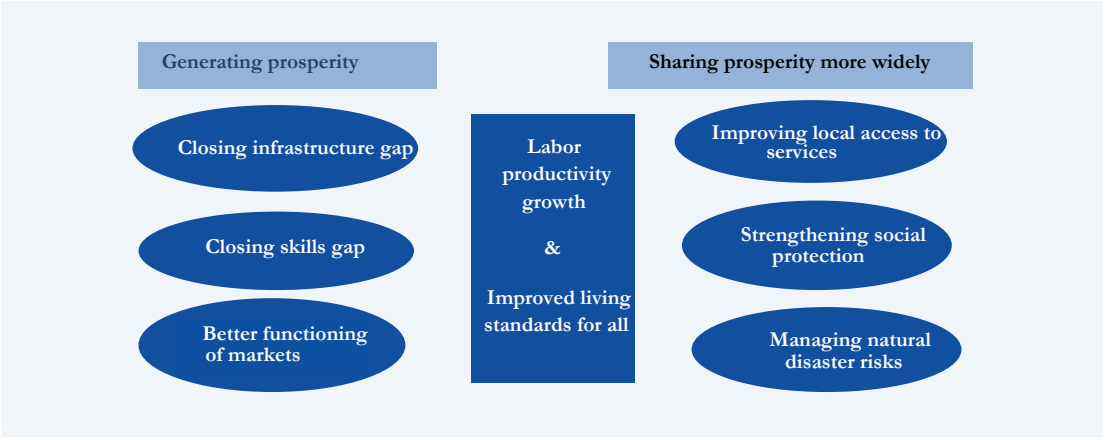
Since May 2013, Indonesia has had to adjust to a changing world, against the background of a current account deficit that moved into deficit in 2012, following 15 years of yearly surplus.[73] With the US Fed monetary "tapering" of its quantitative easing policy and softer commodity prices, monetary policy has tightened while the rupiah has been allowed to depreciate significantly (24 percent between January and December 2013), broadly supporting macro stability. Notwithstanding the progress however, given the continued uncertainty in the global environment, there remains a need for continued efforts in these areas of crisis preparedness, and the quality of fiscal spending, particularly the burden of fuel subsidies, can be improved further, notwithstanding the overall balance sheet strength.

The structural reform agenda can be decomposed in two inter-related and intertwined components (Figure 3.12). Policies aimed at supporting productivity and overall economic growth. Three policy priorities are identified and discussed thoroughly: (i) closing Indonesia's infrastructure gap (chapter 4); (ii) closing the skills gap in the labor force (chapter 5) and (iii) improving the functioning of product, labor, land and financial markets (chapter 6). These policies would not only relax constraint on growth but would help unleash the productivity and competitiveness potential of the country, in a mutually reinforcing way.

The second component of the structural reform agenda comprises reforms to ensure that the prosperity generated in shared more widely. As shown in chapter 2, a large number of households classified as non-poor in terms of income/consumption are poor in many other dimensions, including access to decent housing, transportation, water, sanitation, health and education. At the same time, despite Indonesia's success in reducing poverty, the slowing pace of progress in recent years and high vulnerability remain a concern. Finally, Indonesia's hard-fought poverty reduction outcomes are constantly under threat, due to the country's vulnerability to natural disasters such as earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires. Addressing these issues would be crucial in fostering an inclusive and resilient society. Chapter 7 discusses policy option to increase access to quality essential services for all; Chapter 8 is on strengthening social protection, social security and social assistance (chapter 8) and chapter 9 discusses the importance of and policy options to manage natural disaster risks and build resilience better.

73 As discussed in chapter 1, the movement of the current account into deficit mainly reflects the sharp decline in commodity price since 2011 which has dramatically reduced exports while strong GDP growth meant high import growth.

Figure 3. 12: The DPR's policy focus:



The proposed policy focus is consistent with Indonesia's Master Plan for "Acceleration and Expansion of Indonesia's Economic Development 2011-2025" (MP3EI). The MP3EI is based on three pillars: (i) fostering centers of growth across economic corridors by facilitating industrialization; (ii) strengthening national connectivity to link growth poles across and within economic corridors; and (iii) complementing connectivity by improving human resources capabilities and increasing investments in R&D. The plan sets an ambitious target for Indonesia to grow above7.0 percent annually through 2025. Under the plan, the private sector has a central role in driving economic development, particularly in generating investments, creating employment opportunities and fostering innovation.

4. Addressing cross-cutting Implementation Challenges

The public administration plays an important role in delivering both the regulatory legal environment and services vital for a prosperous and equitable state. As the economy grows, the administration has to be responsive in providing a sound regulatory climate to sustain investment and to deliver core infrastructure and services for the needs of individuals and companies – including roads, health care, environmental safety, etc. However, some of the systems and practices within the public administration will not serve its future needs and could undermine future growth.

Public administration during the Suharto "New Order" era was highly centralized and hierarchical. Decision making was largely confined to a small core in the central government in Jakarta, reflected in the planning processes led by Bappenas, and personnel management carried out by MenPAN-RB. Once policies were established at the center the focus of the administration was on establishing regulations and operating procedures to instruct the implementation of the policies.

Following the crisis of 1998 it was recognized that this centralized model was no longer appropriate and a range of political and administrative reforms emerged. These included the extensive decentralization initiative, a more active role of the parliament in the conduct of economic and fiscal policy, and the emergence of a range of alternatives sources of policy within the bureaucracy.

In spite of the changes in the roles and responsibilities of the public institutions many of the elements of the pre-1998 era structures remain. A central planning function continues with annual, five year and long term plans, MenPAN-RB continues to control the administrative apparatus, and while there are now multiple stakeholders formulating and implementing policy at both the national and sub-national level there are no effective coordination mechanisms across government. The outcome has been poor delivery of services by government institutions, inconsistent policy settings across sectors, and a lack of responsiveness of the administration to the priorities of the government and citizens.

To support a rapidly developing economy attention needs to be given to refocusing the public administration to establish:

- A stronger Center of Government to manage the policy process and resolve policy conflicts
- Streamlined bureaucracy for enhanced accountability
- More strategic management of human resources across the public administration
- Better planning and budgeting procedures to deliver improved results with public spending
- Stronger accountability for service delivery at the local level

Stronger Center of Government

As the roles and functions of the State grow in size and complexity, there is an increasing need for a strong Center of Government (CoG) to coordinate policy development across sectors and to manage competing demands amongst ministries and agencies. The specific institutional roles within the CoG vary by country based on the structure of the government, but there remain several core functions that must be played to link long term policy planning with the allocation of resources and to manage potential conflicts in policy directions that may occur. In this regard, CoGs works best when there is a close working relationship between the head of the government and the minister of finance, but not all core functions relate to budget. In 2004 OECD/Sigma provided an outline of some of the core functions one would expect in an effective CoG.[74] Those functions include:

1. strategic planning & annual work planning
2. policy document review: quality assurance; inter-ministry mediation
3. monitoring government performance
4. coordination of horizontal policies/priorities
5. preparation of government/cabinet sessions
6. legal conformity of draft laws

In Indonesia several different institutions, starting with the Presidential Administration, play some role in the coordination of policies including the three Coordinating Ministries, the Ministry of Finance, Bappenas, MenPAN-RB, the Vice President's office, the delivery units (UKP4 and TPN2k), and others. However, ministries have been able to implement new policies and regulations that conflict with other regulations or that conflict with the President's policy objectives. Policy management is also more difficult because of the challenges to coordinate separate planning and budgeting processes for different parts of the

74 SIGMA Paper 35: Coordination at the Centre of Government: The Functions and Organization of the Government Office (OECD; Paris, 2004).

budget. In the future, Indonesia authorities may want to consider how to refine the mandates and functions of the various institutions that support the CoG, and to empower the President's Office (or its designate) to play a stronger role in managing the policy process.

Streamlined Bureaucratic Procedures and Structures

Organizational structures and heavy bureaucratic processes are obstacles to Government implementing its policy commitments and reform objectives. Over-specified regulations, overlapping institutional structures, lack of delegation of authority, and diffused decision-making all contribute to a culture of inaction within the public administration. The state apparatus, including the government processes, and structures has not benefited from the same scope of reform as other parts of the State.

The current Bureaucracy Reform (BR) concept has centered on documenting reform plans in pre-determined reformed areas, but it is questionable whether it has led to substantial productivity gains despite the increasing wage bill costs. BR allowances are granted based on vetted reform plans and not on actual reform outcomes and increased productivity. Going forward, the Government may wish to consider refining the approach to BR to focus on streamlining decision-making and accountability, empowering institutions and managers to take decisions, and providing more flexibility for institutions to manage for results rather than manage compliance with regulations. Institutions could be encouraged to rationalize ex-ante controls and to replace them with a hierarchical line of delegation of authority and a corresponding line of accountability.

Strategic Management of Human Resources

The effectiveness and efficiency of the public administration, including front-line service delivery, is affected substantially by the quality of the human resources. While the implementation of bureaucratic reform has enhanced the transparency and effectiveness of recruitment and the levels of compensation for staff, some substantial challenges remain ahead for the public sector. The functions of institutions will change over time, and human resource policies need to enable institutions to adapt to the new requirements. The quantity of staff may remain unchanged in the aggregate, but the composition of skills across the ministry or agency may need to change substantially.

Currently, institutions face substantial rigidities in changing the composition of employment within their institutions; so even when a function is no longer needed the institution lacks mechanisms to release the associated staff. The public administration would benefit from more strategic management of its human resources to identify the functions and skills where staff will and will not be needed in the future. This would need to be accompanied by some flexibility to adapt the organizational structures to the business needs of the agency. For example, rigid adherence to span of control norms may not be appropriate, while some functions may be dissolved in order to focus on more strategic priorities.

The incentives for motivating staff performance will also be critical to achieving greater organizational accountability. The 2014 law on the civil service (ASN) could represent a major change in how the government administration is managed and will perform. However, the

precondition is that 20+ implementing regulations required under the law are drafted in a way that supports reform rather than the status quo. The two-year window given for preparing and issuing these regulations is important. If drafted well they can enhance the professionalism of the civil service by strengthening merit-based recruitment and promotion and by increasing the internal equity and transparency of the pay system.

Delivering results with public spending

In recent years public spending has increased substantially in real terms but citizens see little evidence of improvement in the quality of infrastructure or public services. For instance Government spending on the national road network tripled between 2005 and 2011, but average costs also rose three-fold, and therefore outputs did not increase in line with higher spending. As discussed chapter 4, Indonesia needs to make a substantial investment in infrastructure and enhanced public services if it is to meet the future needs of the country. To deliver this effectively requires changes in both the strategic planning of resources, and how performance is instilled in the spending of the administration.

The planning processes used by the government are fragmented and fail to support a strategic allocation of resources. The five year plan attempts to provide a framework for national engagement in a sector – covering central and local government and the private sector. While the scope of engagement is broad, the activities covered are limited. For example, only about one quarter of central government expenditure is covered by the plan – i.e. capital and related operating costs. Personnel expenditures, subsidies and transfers are beyond the scope of the plan while revenue policies are not considered. The outcome is that important trade-offs such as between fuel subsidy expenditures and high value infrastructure investment are not given attention during the preparation of the budget. Going forward there is a need to make the planning processes more strategic and integrated.

Since 2000 a number of performance management processes have been introduced, but the results have been disappointing so far. Line agencies furnish separate performance reports to the central agencies using a large number of performance indicators – for example, the Government's budget document contains over 40,000 output indicators while other countries have less than 10 percent of this number. In most cases the performance information is not linked to resource management decisions. While steps are being taken to simplify the indicators and link reporting to budget decisions but the effect will be limited unless line agencies are given more responsibility to manage resources.

Refocus Local Governments to be Accountable for Improving Service Delivery

Despite substantial transfers to subnational governments, regional autonomy has failed to deliver the improvements in local public services that were expected when launched in 2001. Transfers to subnational governments now make up about one-half of the state budget, net of subsidies and interest payments, (about 6 percent of GDP), and over 80 percent of this amount accrues to subnational governments at the lowest level—kabupaten/kota. However, the quality of services is problematic:

- School enrollments have increased at all levels of education but Indonesian children's performance on international learning assessments has remained stagnant in math and

deteriorated in science.
- While the length of local roads has increased the overall quality has deteriorated.
- The percentage of households with access to safe water has actually dropped from 50 percent to 48 percent since 2001.

International experience reveals that weak accountability and poor local public services go hand in hand. Accountability here comprises two separate dimensions: (1) a demand by citizens for improvements to service quality, and (2) a response by local governments to meet constituents' demands. Addressing the poor performance requires measures focused on each dimension.

Till now there has not been much pressure exerted by citizens on service providers to improve the quality of services. This may be because they are reasonably satisfied with the quality of service they receive. Conversely it could be that citizens are unaware of the limited quality of the service, or how to express their demands. International experience shows a variety of approaches have been helpful for improving citizen engagement. These include sharing information about public service quality with local citizens, including comparative studies of one locality with other similar ones.

From the perspective of service providers there are a number of constraints imposed by the current funding mechanisms that inhibit performance. First, there is a one-size fits all approach in the intergovernmental finance system, despite the diversity of issues faced by regions in Indonesia. The uniform treatment of heterogeneous subnational units in policy design and implementation is a problem for the proper resourcing of provinces and districts. Large municipalities, small- and medium-sized cities, and rural districts are all treated more or less equivalently from a fiscal point of view. Furthermore, perverse incentives in the grant allocation system encourage spending on salaries and administration at the expense of a more balanced use of resources that promotes service delivery outcomes.

Chapter IV. Closing Indonesia's Large Infrastructure Gap

Chapter IV. Closing Indonesia's Large Infrastructure Gap

Indonesia has lost more than 1 percentage point of additional GDP growth due to under-investment in infrastructure, chiefly transportation. Firm surveys show that problems with transportation are among the worst business constraints for manufacturing firms. Household and village survey data show that one-quarter of urban populations and more than half of rural dwellers have poor access to transport services. Prohibitive transport costs undermine the competitiveness of firms. Raw material producers find themselves unable to tap growing opportunities linked to final consumer demand. It is cheaper to import oranges from China than to source them from Kalimantan. Realizing Indonesia's growth and structural transformation goals will depend, to a large extent, on closing the country's large infrastructure gap.

Despite rising government spending in recent years, Indonesia's core infrastructure stock, such as road networks, ports, electricity, telecommunication facilities, has not kept pace with economic growth. In real terms, the infrastructure stock grew by only 3 percent annually in 2001-11, against 5.3 percent for GDP growth. The slow growth in the infrastructure capital stock, in a context of high economic and vehicle fleet growth, contributes to serious major gaps, congestion problems and poor logistics performance, seriously undermining productivity growth, competitiveness and poverty reduction efforts.

Going forward, closing fully or partially the infrastructure gap would support growth and prosperity through several channels. As the investments are being made, the spending effect would support short-term growth and jobs. As the investments translate into infrastructure stock, private investment is crowded-in and the productive capacity, productivity and long-term growth are supported. And as infrastructure services are delivered, firms' competitiveness increases and the population's access to services is improved.[75] Aggressively boosting investments in infrastructure would thus be transformational for Indonesia.

The Government is trying to close the infrastructure gap through the Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional, RPJMN) and the Master Plan for the Acceleration and Expansion of Indonesia Economic Development(Master Plan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia, MP3EI).A number of policies and initiatives were introduced, including significant budget increases for capital spending and a strengthened institutional and regulatory framework for Public Private Partnerships (PPP). However, overall progress on infrastructure output and services on the ground remains slow, due to a range of implementation and coordination challenges reviewed in this chapter.

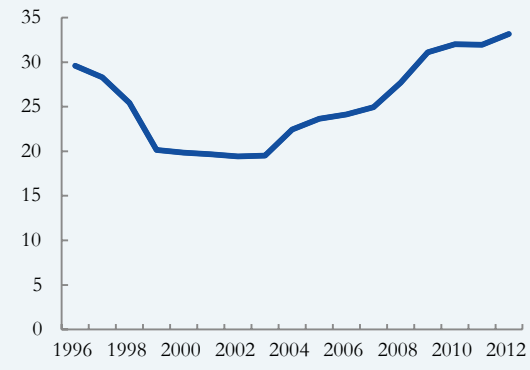
75 Indeed, theoretically, augmenting the stock of public capital through investment in infrastructure directly raises the productivity of other factors (e.g., labor, land) and stimulates economic output. As shown by Barro (1990), it can increase the long-term growth trajectory of an economy under certain conditions, e.g., presence of economies of scale. There are indirect effects as well. Availability of high quality infrastructure may reduce the need for own-provision of certain inputs such as roads, water or electricity (Agenor and Moreno-Dodson, 2006) and support the formation of human capital (Galaini et al., 2005).

1. Under-Investment in Infrastructure and the Cost to the Economy

Indonesia's total investment ratio has recovered in recent years

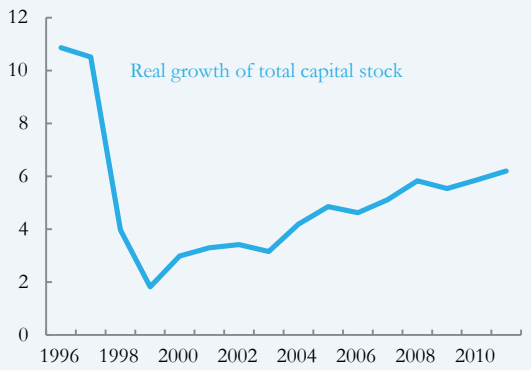
Indonesia's investment ratio has remarkably increased in recent years, even exceeding the levels of before the 1997/98 crisis. Gross fixed capital investment (construction, machinery and equipment, transport and equipment) grew by an average annual growth of 8.0 percent between 2001 and 2011, leading to nominal investment ratio of 33 percent of GDP in 2012 and contributing to Indonesia's high economic growth in recent years. As a result, Indonesia's overall capital stock ratio-to-GDP has risen from an estimated 1.7 times GDP in 1995 to 2.1 times GDP in 2011.

Figure 4.1: Investment ratio
(as a % of nominal GDP)



Source: BPS and World Bank staff calculations.

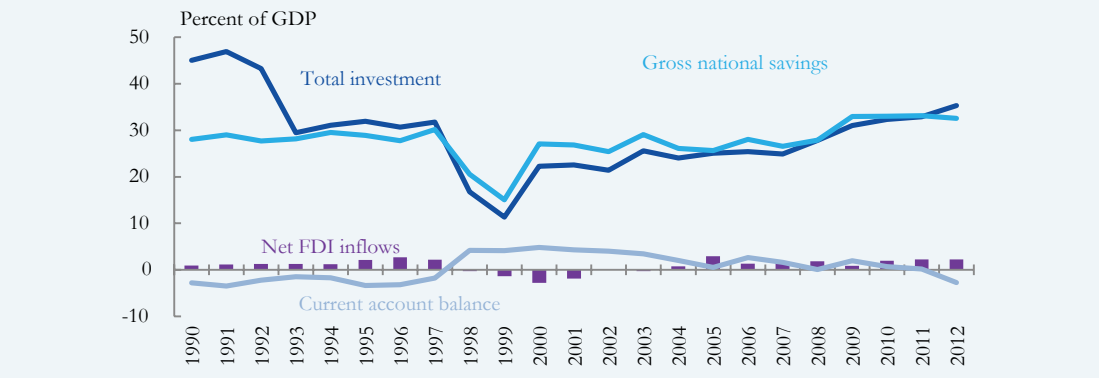
Figure 4.2: Real growth of total capital stock
(%)



Source: BPS and World Bank staff calculations.

Sustaining, or increasing, investment above this level will require Indonesia to: (i) mobilize foreign savings and channel these into long-term productive investments, such as infrastructure; and/or (ii) boost the level and availability of investment financed from domestic savings. Boosting the latter being a long-term endeavor (given the age structure of the population and the limited availability of adequate saving instruments in the financial sector), much emphasis is warranted on foreign direct investment (FDI). While the flow of FDI into Indonesia has continued to rise in recent years, at 2 percent of GDP, there is much room to catch up with Malaysia and China where the ratio stands at around 4 percent of GDP.

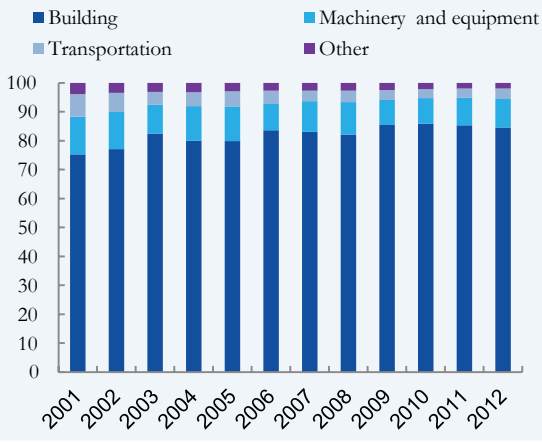
Figure 4.3: Investment, savings and current account deficit



Source: BPS.

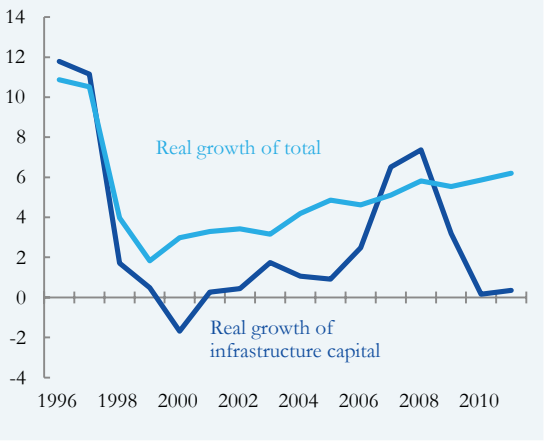
But improving the quality of investment will be even more important going forward. Much of the capital stock increase is related to construction (housing, shopping outlets and other buildings), while other forms of capital have played a smaller role.

Figure 4.4: Composition of investment



Source: BPS and World Bank staff calculations.

Figure 4.5:Infrastructurecapital stock growth



Source: October 2013 IEQ and World Bank staff calculations.

However, infrastructure investment (as a proportion of GDP) is lagging behind…

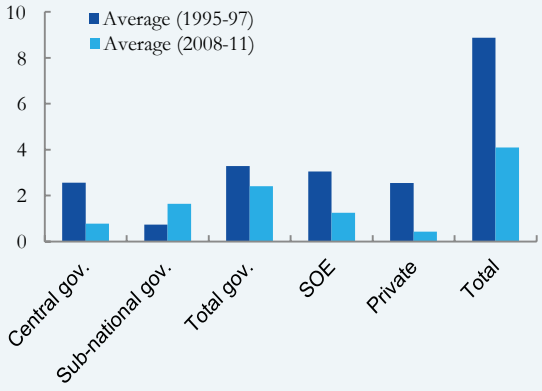
Indonesia's total investments in infrastructure collapsed during the 1997/98 financial crisis and have not fully recovered since. Total infrastructure investment declined from an average 7 percent in 1995-97 to around 3-4 percent of GDP in recent years. The level of investment in infrastructure in Indonesia is much lower than that in neighbouring countries such as Thailand, and Vietnam where it has exceeded 7 percent of GDP, not to mention China where it has stood at 10 percent of GDP over the past decade.[76] The relatively low infrastructure investment in Indonesia has resulted in a slow real growth in the infrastructure capital stock (road networks, ports, power, telecommunications, waterways, etc.) since the 1997/98 crisis (Figure 4.5).

The decline in infrastructure investment as a proportion of GDP is broad-based across government, state-owned enterprises (SOEs) and the private sector (Figure 4.6). Private sector investment experienced the biggest fall, a particular concern given the increasing focus on public-private partnerships (PPP) to finance Indonesia's infrastructure development.[77] SOEs' investment also dropped by about 1.8 percent of GDP. Total (local and central) government investment declined by 0.9 percent from an average of 3.3 percent of GDP during 1995-97 to 2.4 percent of GDP over 2008-11. The recent uptick in Indonesia's infrastructure investment ratio reflects a rapid rise in investments by subnational governments, partly compensating for the sharp decline in private sector, state-owned enterprise (SOEs), and central government investments (Figure 4.6). Subnational governments are now the largest source of infrastructure spending in Indonesia (Figure 4.7).

76 See the March 2013 IEQ for the World Bank's recent estimates of infrastructure investment in Indonesia and for the regional context see Asian Development Bank; World Bank; Japan Bank for International Cooperation (2005) Connecting East Asia: *A New Framework for Infrastructure.*

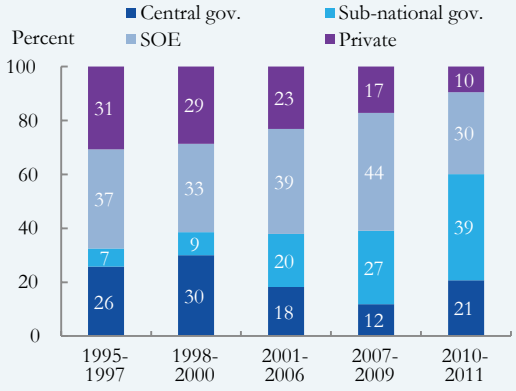
77 See discussion of the government Master Plan for the Acceleration and Expansion of Indonesia Economic Development-MP3EI below.

Figure 4.6: Infrastructure investments have fallen sharply with the exception of subnational governments
(nominal infrastructure investment levels as share of GDP, percent)



Source: March 2013 IEQ and World Bank staff calculations.

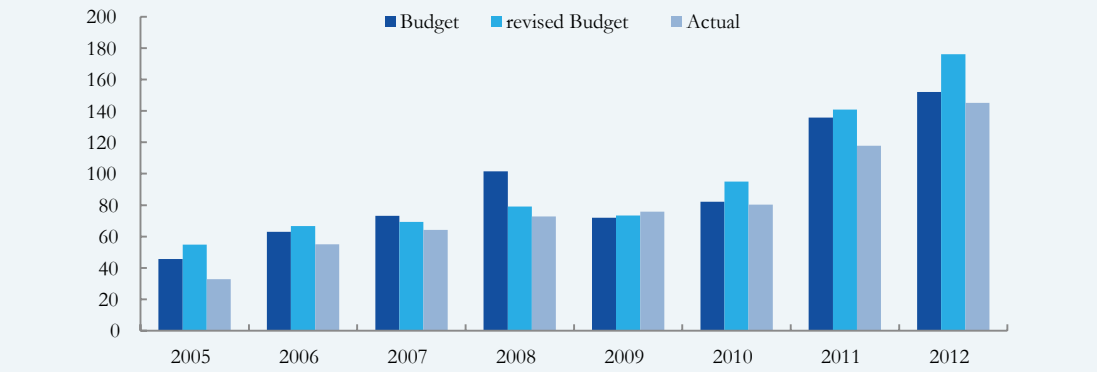
Figure 4.7: Subnational governments have become the largest source of infrastructure spending
(% of total)



Source: March 2013 IEQ and World Bank staff calculations

The Government has demonstrated a strong commitment to increasing infrastructure funding through significant increases in capital expenditure allocations. As Figure 4.8 shows, the central government's actual capital spending increased steadily over the past three years, even if it typically fell short of the amount allocated due to a less-than-100-percent execution rate (the latter averages 84 percent in recent years). In 2013, the central government's capital spending allocation reached Rp 188 trillion, or 2.0 percent of GDP and, for 2014, the recently approved allocation stands at Rp 184 trillion (or 1.8 percent of GDP). However, compared with estimated investment needs identified by the RPJMN, these allocations were insufficient.

Figure 4.8: Actual capital spending increased steadily but fell short of allocations in recent years
(Rp trillion)

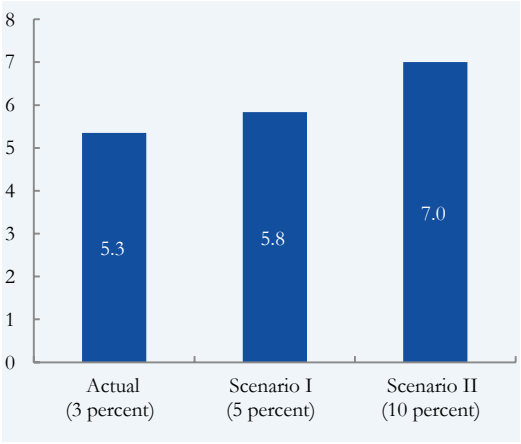


Source: Ministry of Finance.

…imposing higher costs in terms of economic growth…

Indonesia's economic growth in 2001-11 would have been much higher had the country devoted a higher share of the GDP to infrastructure.[78] Infrastructure investment growth has neither kept space with real GDP growth nor the overall capital stock. As a result, Indonesia's infrastructure capital stock has gradually declined relative to output and as a share of the total capital stock over the past decade.[79] In 2001-11, Indonesia's real infrastructure stock grew by 3 percent annually, against 5.3 percent real GDP growth in that period. Assuming a causal relationship between changes in infrastructure capital stock and changes in output, had the growth rate in infrastructure capital stock stood at 5 percent instead of 3 percent, real GDP growth would have been 5.8 percent, a 0.5 percentage difference. Real GDP growth would have reached 7.0 percent if the real infrastructure growth had stood at 10 percent (Figure 4.9).

Figure 4.9: Growth would have been higher with higher investments in infrastructure
(average real GDP growth over 2001-11 under different infrastructure capital stock growth scenarios, percent)



Source: See World Bank IEQ March 2013.

…and under-investment cuts across most key infrastructure subsectors

(i) Road infrastructure

Despite recent progress, a decade of under-investment in road infrastructure has contributed to serious capacity gaps, congestion problems and poor logistics performance. The road sector accounts for 40 percent of total infrastructure investments and plays a critical role in facilitating inter-urban passenger movements and in linking communities and markets throughout the country. The Government has increased road infrastructure expenditure to Rp.70 trillion/year (about US$6.0 billion/year), and road investment has now returned to 1.6 percent of GDP, the same amount as before the 1997/98 financial crisis (World Bank, 2012).[80] Nonetheless, this level of investment trails the amount required by the rapid growth in the vehicle and motorcycle fleet on Indonesia's roads (11 and 16 percent annual growth between 2001 and 2011, respectively), leading to lower capacity and enormous pressures and congestion.[81] Progress with expressway and toll-road development has been particularly slow. In 2012, toll road length was only 778 km versus 3,000 km in Malaysia and 65,065 km in China. Yet Indonesia's first toll roads were built in 1978.

78 For more details on the estimation of Indonesia's infrastructure stock and its implications for the economy see Indonesia's Economic Quarterly, in October 2013 on which this section draws.

79 In particular, infrastructure capital stock has not kept pace with the overall increase in capital stock (of which infrastructure is a part of) leading to a decline in the ratio of infrastructure capital stock to the total capital stock. For more details, see World Bank's October 2013 IEQ.

80 World Bank (2012): Investing in Indonesia's Roads: Improving Efficiency and Closing the Financing Gap - road sector public expenditure review 2012.

81 Large spending on fuel subsidy creates a perverse incentive of supporting the growth in vehicle fleet while reducing the budgetary space to increase central government spending on infrastructure resulting in reduced life expectancy of road infrastructure.

The investment requirement to narrow the gap with high-performing regional peers and converge towards best international standards is enormous. The rehabilitation of unserviceable roads, the widening of national roads and the construction of new inter-city expressways, urban expressways, national roads and regional roads would require between US$60 and US$85 billion. To fully meet international standards, it is estimated that total investment to the tune of US$120 billion is required.

The quality of the increased spending is also an issue. Spending on national roads has increased threefold between 2005 and 2011, but has only led to a 20 percent output increase in terms of roads preserved and developed. From 2005 to 2011, the national road network was mostly extended through the re-classification of 8,000 km of main roads, especially through minor widening of strategically located roads. But these efforts will not further the goal of developing a high-standard arterial network that will best meet the needs of the economy. Lack of maintenance of subnational roads is a serious concern as new road development takes priority over road maintenance. It is estimated that adequate subnational road maintenance would require doubling the current spending level (World Bank, 2012).

Low connectivity between cities and ports also constitutes a constraint to competitiveness and growth. As centers of economic activity, cities need to be well connected to markets. With the limited number of, and access to, ports, airports, railways and road-based logistics transportation, shipping costs within Indonesia are often more expensive than the costs of importing from Singapore or China. Access between cities and rural areas also needs to be improved, as cities should be well connected to markets and sources of inputs. In particular, the transport has the largest immediate impact on firms and household, while being a key factor in the access to essential services such as health and education. The road sector plays a critical role in linking communities and markets throughout the country.[82] Consequently, its efficient functioning is important for sustaining growth and reducing poverty. The example in Box 4.1 illustrates the link between the costs of poor transportation and the incomes of cattle producers in Sumbawa.

82 The road sector assures 70 percent of freight-ton movements and 82 percent of passenger-km.

Box 4.1: The cost of poor access to infrastructure services: cattle producers from Sumbawa would have been richer with better transport services

Because of its favorable agro-ecological conditions for raising cattle, Sumbawa (West Nusa Tenggara) is Indonesia's largest producer of cattle. In 2012, this region represented 10 percent of the country's production of livestock. In its current form, the supply chain of cows from Sumbawa to Jakarta involves (i) transporting the cows by local trucks from farmers to Bima (the closest local port to main farm locations), (ii) shipping them in special vessels to Surabaya (662 km from Bima) and (iii) further transporting them by trucks overland from Surabaya to Jakarta (another 660 km)—see map below.

The transportation cost breakdown helps identify the segments of the supply chain where costs are the highest. The cost breakdown shows that about 35 percent of the total costs are incurred within a short distance (20 km), while bringing the cattle from the farms to the port of Bima. This includes waiting time before the trucks can enter the port of Bima. Local collection of cattle in Sumbawa is poorly organized, causing traders spending considerable time finding out which farmers have cattle ready for sale.

Transporting the cows from Bima to Jakarta accounts for 50 percent of the total transport costs. It includes loading in Bima, shipping to Surabaya, port charges in Surabaya and trucking from Surabaya to Jakarta. Local taxes and duties account from 15 percent of total costs.

By the time the cows arrive in Jakarta, high transportation costs have made them uncompetitive vis-à-vis imports. Indeed, it is cheaper to import livestock from Australia to Jakarta and Surabaya than from eastern Indonesia (controlling for quality). Improving supply chain at the local level and upgrading of port in Bima would dramatically improve the competitiveness of Sumbawa in supplying cattle.

(ii) Port infrastructure

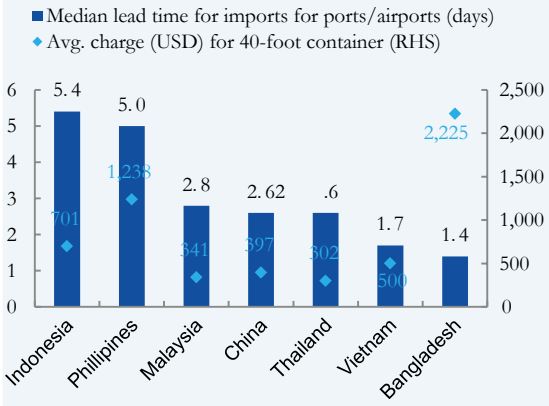
For an archipelago economy, the efficiency of ports is crucial. Despite this, port capacity remains very limited in Indonesia. Tanjung Priok, the country's largest port handling over two-thirds of total merchandise trade, has a capacity of only about 6 million 20-foot equivalent units (TEUs) per annum versus 10.5 million TEUs per annum in Laen Chabang Port (Thailand) and 30 million TEUs per annum in Singapore. While ongoing investments could increase Tanjung Priok's capacity to 11 million TEUs by 2017, when the new international container terminal will come on stream, Indonesia will still lag behind Thailand and Singapore as these countries are also implementing ambitious expansion plans.[83]

Currently, Indonesia compares poorly with other developing Asian countries on trade logistics measures such as container charges and import lead times (Figure 4.10).[84] Despite tangible improvements in the port's management and productivity in recent years, container

83 By 2018, Singapore and Thailand target a capacity of 55 and 18 million TEUs per annum respectively.
84 For more details on Indonesia's port logistics performance, see World Bank's October 2013 IEQ.

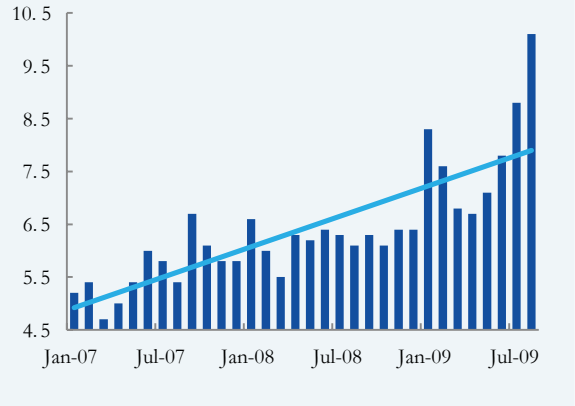
"dwell time" has been highly variable and increasing.[85] For goods that are intermediate products in a supply chain, on-time delivery is crucially important. In some cases regulatory uncertainty on the port of entry is a source of delay (some agricultural products can only enter Indonesia through the port of Surabaya). Lack of reliability and high levels of uncertainty bring costs that can potentially discourage investments, increase inventories and associated storage costs, and dampen the scale expansion of an enterprise. The example of an ice cream company in Java, described in Box 4.2, illustrates this.

Figure 4.10: Indonesia's cost and efficiency lags most regional competitors
(import lead time, days, and container charges, US dollar)



Source: Logistics Performance Indicators 2012, World Bank

Figure 4.11: Container dwell time has been increasing at Tanjung Priok, Indonesia's main port
(average import dwell time, days)



Source: Jakarta International Container Terminal (JICT)

Box 4.2: Access to imported input and performance of an ice cream company in Java

This ice cream factory in Java, employing 400 workers, is a fine example of a booming business: demand is growing annually by more than 20 percent; the factory is gradually upgrading/modernizing production lines and is now exporting to Malaysia, Singapore, Vietnam and Australia. The milk powder, a key input, is imported from Australia. Local milk has been tried, but its lower quality and unreliable supply meant reduced customer satisfaction with the quality of the ice cream and much lower sales and competitiveness. Hence, until the quality and reliability of domestic milk increases dramatically, domestic sourcing is not a viable option for the company.

But the expansion plans beyond 2014 are clouded by a number of factors, the most crucial of which is certainty and timeliness of access to imported inputs.[86] requent changes in agricultural import policies create uncertainty about access to imported input. For instance, customs clearance is sometimes delayed because it is not clear whether milk powder is among the agricultural products that should enter Indonesia through the Port of Surabaya. Additionally, once released, it may take containers from to 3 to 8 hours to reach the factory due to road congestion.

85 Dwell time is defined as the elapsed time that cargo spends within the port limits, from the moment it is unloaded from the vessel and is on the ground until it leaves the port premises by road or rail. Lowering dwell times allow ports to increase volume, revenue and foster competition with other similar ports in the country or regionally. Dwell time figures are commonly used to attract shipping lines and cargo traffic to a port, giving port authorities and container terminal operators strong incentives to improve this performance indicator.

86 Other difficulties include securing industrial land in the ideal greater Jakarta area.

(iii) Power

At 74 percent (according to PLN data), Indonesia's electrification ratio is below many of its neighbors, including Malaysia, Thailand and China (close to 100 percent). As shown in chapter 2, the access rate looks much better when examined from household surveys, as these include all forms of electricity, including illegal and poor quality connections. It is estimated that closing the gap would require 66.8 GW of incremental generation capacity and 477 TWh power supply capacity for a total investment over US$200 billion. If the objective were to close the gap in the next 10 years, that would mean an investment of US$20 billion per year.

Other key challenges facing the power sector include: (i) high transmission losses and significant electricity theft[87]; (ii) high subsidization (about US$10 billion in 2012) reducing the capacity of PLN to invest; and (iii) the reliance of most power generation on conventional fossil fuel sources, such as oil, natural gas and coal. To date, less than 20 percent of power generation comes from hydroelectric, geothermal and other renewable sources. The recently enacted Energy Law and Electricity Law provide a renewed legal framework for the energy sector, with an emphasis on economic sustainability, energy security, and environmental conservation. A second "Fast-Track Program" to construct another 10,000 MW of capacity has been launched, of which 60 percent will be from renewable resources, with geothermal accounting for about 4,800 MW and hydropower for most of the rest.

(iv) Water supply and sanitation

Access to safe water and sanitation stood at 64 percent and 67 percent, respectively, in 2012, behind the Philippines, Vietnam, Malaysia and Thailand. In rural areas, while the number of community-managed piped water schemes has grown steadily, they cover less than 20 percent of the rural population and there is inadequate emphasis on sustainability of operations. Sewerage coverage is minimal, with only about 2 percent of urban areas having access to centralized systems. Of the estimated 85,000 tons per day of solid waste generated by Indonesia's urban population of 110 million, only about 40 percent ends up in landfills, with many of these landfills being open dumps. The cost associated with these outcomes is high, including contamination of fresh water sources, health care costs, productivity losses and water fisheries losses. A 2008 study estimated these costs at US$6.3 billion annually.

Water supply mainly managed by Indonesia's PDAMs (Perusahan Daerah Air Minum), water utility companies that are owned by district governments with a large network of facilities throughout the country (there are 328 PDAMs in total) are responsible for water supply and for regulating the sector. In rural areas, the Government is scaling up community-based schemes for both water and sanitation, including a community-led sanitation program targeted to reach 20,000 villages by 2014. In urban areas, there have been some improvements in the operational and financial performance of urban water utilities over the past decade, with the number of utilities classified as 'healthy' increasing from 38 to 173 between 2004 and 2012. It is estimated that about half of Indonesia's piped water is lost in transmission. A key challenge is to improve the performance of the PDAMs.

87 It is estimated that 10 percent of the power is lost during transmission and distribution, against 4 percent in Malaysia and 6 percent in Thailand (McKenzie, 2012).

Beyond the necessary restructuring of many PDAMs, capacity-raising investment needs are large. Indonesia's National Development Planning Board (Bappenas) estimates that investments in several areas is required: (i) the construction and rehabilitation of water treatment plants; (ii) the development of water supply pipework; (iii) the expansion of the centralized sewerage system; (iv) the development of communal sewerage and disposal system; and (v) the restoration of rivers and lakes to conserve watershed. For Indonesia to close the gap with the Philippines and Malaysia, an investment of US$64 billion is required.

(v) Water resources

Indonesia is keen in developing/mobilizing its water resources, consistent with its objective of food security, especially in rice which represents 24 percent of the poor's budget. Although the country enjoys abundant precipitation, water resources are under stress. Indeed, the distribution of precipitation and water resources is uneven, punctuated by a monsoon climate that creates floods during the wet season and water shortages during the dry season. Due to poor maintenance of existing irrigation systems (which reflects the fact that there is no cost-recovery system and little engagement of local governments), the percentage of irrigation infrastructure in good condition has declined over the past decade, while urbanization has caused a reduction in total irrigated areas. Going forward, demand for rice is projected to continue rising in absolute terms (even if the share of rice in households' budget is likely to decline), while urbanization will encroach further irrigated land, calling for greater efficiency in water resource management.

The challenges going forward include: (i) the maintenance of existing irrigation schemes despite urbanization and industrialization pressures; (ii) managing river catchments to prevent flooding; and (iii) development of dam storage. Development of large new rice fields will be difficult due to conversion of land to more lucrative uses. Thus enhancing productivity in rice production by investing in R&D and extension and better management of existing irrigation schemes would be sensible. Nevertheless, investment needs in the water resource sector are not trivial. According to Bappenas, investment needs to enhance the performance of integrated water management, develop multi-purpose reservoirs, enhance the management of major city flood prevention schemes, enhance coastal protection infrastructure and increase food supply by increasing the potential in swamplands. All of these measures would help to close the gap with Thailand by 2019 and would cost about US$81 billion.

2. Not Only About Money

The under-investment in infrastructure discussed above partly reflects complex institutional and regulatory issues. The key challenges have been: (i) dealing with land acquisition; (ii) ensuring coordination across various agencies, between central and subnational governments and across different plans; and (iii) putting in place a PPP framework.

Land acquisition complexities

A lack of clarity in regulations governing land acquisition and the compensation to landowners has caused delays to infrastructure projects, particularly toll roads. Presidential Regulation No.36/2005 on Land Acquisition for Infrastructure Development was ineffective in supporting land acquisition for public purposes because the rules and procedures in the regula-

tion were vague in the face of a complex problem. Indeed, as in many developing countries, it is not unusual that many individuals claim the rights to land when that land is needed for a public project. Legitimate or illegitimate landowners also frequently hold onto their land to benefit from an appreciation in value or enhance their negotiating power. Thus investors in infrastructure, whether public or private, have to overcome this hurdle before shovels hit the ground, leading to higher costs and significant delays. Land acquisition is one of the key factors behind the slow execution of infrastructure projects in Indonesia, and perhaps also behind the reluctance of the private sector to invest on a large scale in this sector.

Land Acquisition Law No. 2/2012 for Public Infrastructure and its associated Presidential Regulation bode well for addressing these challenges. Drawing on the lessons from the 2005 regulation, it is more specific in most areas and can significantly improve the procedures for acquiring land for public infrastructure.[88] Areas of significant improvement include the process for land valuation, the mechanisms for grievances, and the compensation for affected or displaced individuals.[89] For instance, the new regulation provides specifics about the inventory of affected people and assets, the consultation process, the compensation, and the dispute settlement. It also sets a specific timeframe for each of the acquisition stages and sub-stages, including the maximum time that a court may take to resolve disputes related to land acquisition. The new Land Law and Presidential Regulation are expected to improve the clarity and transparency of the land acquisition process, and strengthen public confidence in the Government's efforts to advance the infrastructure agenda.

Coordination issues

Coordination across different ministries, levels of government, plans/strategies have also been a key bottleneck to infrastructure development. Indonesia has transitioned from a system in which infrastructure was planned and implemented at the central level to a system in which infrastructure planning and implementation require stronger coordination between central and local governments. With decentralization in 2001, subnational governments have acquired major responsibilities, and now play a key role in managing provincial and district infrastructure networks. For instance, provincial and district roads now account for over 80 percent of Indonesia's total road network. Thus any project cutting across district lines requires lengthy consultations, discussions and coordination. In addition, the various infrastructure development plans at the central, provincial and district levels are not mutually consistent.

The first phase of implementation of the MP3EI aims to integrate different national, regional and sectoral (one-dimensional) plans into a single integrated roadmap for action. In particular, to strengthen national connectivity, components from four different government plans will be integrated: (i) the National Logistics System (Sislognas); (ii) the National

88 A Presidential Regulation No. 71/2012 sets the institutional arrangements for implementing the law.

89 In 2012, the GoI issued several pieces of legislation relating to land acquisition to be carried out for projects of public purpose (Law No. 2/2012 in January 2012; Presidential Regulation No. 71/2012 in August 2012; and technical guidelines issued by the relevant ministries). These replaced previous presidential regulations that had been unable to support accelerated infrastructure development in Indonesia while ensuring that people affected by the negative impacts of associated land acquisition were adequately protected. Pursuant to Law No. 2/2012, Presidential Regulation No. 36/05 as amended is valid until 31 December 2014. The new legislations procedure applies to the acquisition of land under the authority and control of the National Land Agency. If land needed is under the authority of other ministries such as Ministry of Forestry, then before such land can be dealt with under the new legislations procedure, it must be released from forest zoning pursuant to applicable forestry legislation or other relevant legislation like mining, natural gas, etc

Transportation Systems (Sistranas); (iii) the National and Regional Development Plans (RPJMN and RTRWN); and (iv) the Information and Communication Technology (ICT) plan. In order to ensure effective implementation of the various strategies, the plan calls for a new dedicated committee chaired by the President to enhance efficiency in coordination, monitoring, evaluating, and strategic decision-making.

Public-private partnerships (PPP)

The private sector's involvement in infrastructure development has significantly declined over the past decade. This reflects the uncertainties surrounding land acquisition and inter-government and inter-agency coordination. It also reflects poor project selection and the inability of the bureaucracy to produce a strong pipeline of bankable PPP projects.[90] For instance, the Government has identified 58 projects spanning 11 different areas including toll roads, maritime transportation and water resources, slotted for funding through PPP schemes, for a total value of US$51.2 billion in the period 2010-15 (PPP source book 2012). By 2012, however, only three projects were considered "ready for offer", 26 projects were categorized as "priority" and 29 as "potential PPP projects". Toll roads particularly have been targeted for PPP financing: the three "ready for offer" projects totaling US$764 million include a toll road project accounting for 83 percent of the total (US$628 million), while the 26 Priority PPP projects include 13 toll roads totaling US$32.5 billion or 85 percent of the total value of the 26 projects.

To accelerate the execution of viable PPP projects, the institutional architecture supporting PPPs is being strengthened. The legal framework for PPPs has been amended to allow the private sector to invest in the development and operation of financially viable infrastructure projects without being obliged to enter into a joint-venture with an SOE. Various incentive mechanisms have been established. These include the Indonesia Infrastructure Guarantee Fund (IGF), Indonesia Infrastructure Finance Fund and SMI, the Viability Gap Financing (VGF) program, and more recently, a PPP Unit and Project Development Facility (PDF). The challenge now is to make these institutional mechanisms operational and well-coordinated (including developing detailed operational procedures to implement the provisions of VGF so that VGF support can be channeled to well-prepared PPPs). Such an achievement would send an important signal to investors and, combined with efforts to tackle land acquisition and coordination issues, would enhance the public and private sector's confidence in the system.

3. Policy Options

Going forward, closing Indonesia's infrastructure gap entails: (i) mobilizing funding for infrastructure development; (ii) improving infrastructure planning and coordination processes; and (iii) addressing land acquisition complexities.

Mobilizing funding for infrastructure development

Closing Indonesia's investment gap in quantity and quality requires:

- **Continuing to increase budget allocation for infrastructure development.** To finance this, reducing energy subsidy spending and improved revenue mobilization will be necessary in the absence of a significant increase in borrowing.

90 Potential use of PPP scheme requires a Value for Money (VFM) analysis to decide whether the project is better financed through the national budget, or by PPPs. When a project is economically viable but has borderline financial viability, a combination of public (Viability Gap Funding, VGF), private and/or donor financing can be appropriate.

- **In recent years, the central government has spent much less on infrastructure (less than 1 percent of GDP) than it has on fuel subsidies (about 2.6 percent of GDP).** Total government spending on infrastructure, i.e., spending of the central and subnational government stood at 2.5 percent of GDP, slightly lower than fuel subsidy spending. Thus eliminating energy subsidies while adequately compensating the poor could unlock financing to allow central government spending on infrastructure to more than double.
- **Increasing revenue collection could further increase the fiscal space for higher infrastructure spending.** At 18 percent of GDP (tax revenue 12 percent of GDP and non-tax revenues 6 percent), Indonesia's total revenue coverage is far below that of emerging economies. According to the IMF, Indonesia's tax gap is 5 percent of GDP.[91] Based on the experience of the past decade, during which Indonesia succeeded in increasing tax revenues only modestly, from 10 to 12 percent of GDP, raising revenues significantly would require deep reform of the tax administration.
- **The Government's debt-to-GDP ratio stood at 24 percent of GDP in 2012.** This low level of debt creates space for additional significant infrastructure financing, while still keeping the debt ratio at low levels by international standards (and predicated on efficient infrastructure investment that would also lift the rate of growth and ultimately support public revenues). The recent infrastructure funds created at the regional and global level offer an opportunity to finance infrastructure on relatively favorable terms, at a time when global borrowing costs appear set to increase. These funds include the ASEAN Infrastructure Fund (AII) of which Indonesia, along with other ASEAN member countries and the Asian Development Bank, is a shareholder. The World Bank is also working on setting up a global infrastructure fund.

- **Spending re-allocation would also be helpful for subnational governments' investments in infrastructure.** Subnational governments' average spending on personnel comprises over 40 percent of total expenditure budgets at the expense of operations, maintenance, and capital investments.[92] One of the main reasons lies in the inter-government fiscal transfer system. Ninety percent of local government budget is constituted of fiscal transfers from the central government, the largest component of which (60 percent of total) is a block grant that is not tied to performance. The component of the fiscal transfers that is most amenable to performance-tying is the Special Allocation Fund (or DAK), which accounts for only 6 percent of total transfers. A move towards performance incentives designed with a view to explicitly improving infrastructure service outcomes would support greater investment in infrastructure by local governments.
- **Leverage private sector financing through PPP schemes. Indonesia's PPP framework is being strengthened.** The VGF and the IGF, once fully operational, will be important vehicles. However, while private investment in public infrastructure is important for Indonesia's growth, improving Indonesia's infrastructure endowments will require an increased effort by all stakeholders—national and subnational governments, as well as SOEs and private investors.

91 IMF (2013): World Economic Outlook, September 2013, Special Focus.
92 World Bank (2012): Subnational Public Expenditure Review.

- **Strong focus on efficiency.** The need to ensure fiscal sustainability and competing demands for public funds also argue for a strong focus on efficiency, including ensuring the smooth operation and maintenance of existing infrastructure and, more broadly, on improving the quality of public investment management to deliver effectively on the priority public infrastructure needs of the economy.

Coordination/engagement with ASEAN

Continued coordination/engagement with regional partners within ASEAN is an important lever that can support Indonesia's connectivity goals. ASEAN members have committed to the successful implementation of an ASEAN Economic Community (AEC) Blueprint in 2015 (single production base). To realize this goal, ASEAN members have committed to step up trade facilitation by establishing a Single Window that enhances customs data exchange, increases the use of ICT for border agencies, and increases transparency in border clearance processes. ASEAN has also introduced an ASEAN Connectivity Master Plan to further support commitments to establish the AEC. The Master Plan aims to accelerate implementation of cooperation initiatives and investment projects across ASEAN that can better connect member states through: (i) physical connectivity (ICT, infrastructure, and energy); (ii) institutional connectivity to facilitate trade and investment; and (iii) people-to-people connectivity.

Chapter V. Closing the Skills Gap in the Labor Force

Chapter V. Closing the Skills Gap in the Labor Force

High and sustained growth as well as greater workers' earnings hinge crucially in upgrading the skills of Indonesia's large labor force. Developing skills will also be crucial to leverage the opportunities created by the opening of ASEAN and increasing middle-class demand. Without the right skills among the labor force, the planned freeing of movement of skilled labor across ASEAN may help firms through the availability of a larger pool of skilled labor but risk crowding out Indonesian graduates in the labor market. Without the right skills sets among the young entering the labor force, the demand for higher quality products and services from Indonesia's growing middle-class may be satisfied by importing foreign goods as opposed to increasing the value-added of domestic firms. Finally, without ensuring that poorer segments of the population have the skills to contribute towards these trends, even if the overall productivity gains are realized, the benefits will fail to reach to the poorest and most disadvantaged groups in society

While Indonesia's strong commitment to support education is paying off in terms of numbers of graduates, the next battle is that of quality.[93] Indonesia will probably count one of the largest numbers of college-goers in the world in the years to come, but will the graduates enter the labor market with the right skills? Clearly, the priority should be to gradually shift from ensuring greater access to education to a skills development agenda, targeting both those enrolled in schools and those already employed. This chapter briefly fleshes out the main issues and challenges in the skills development agenda and outlines some policy options to address them.

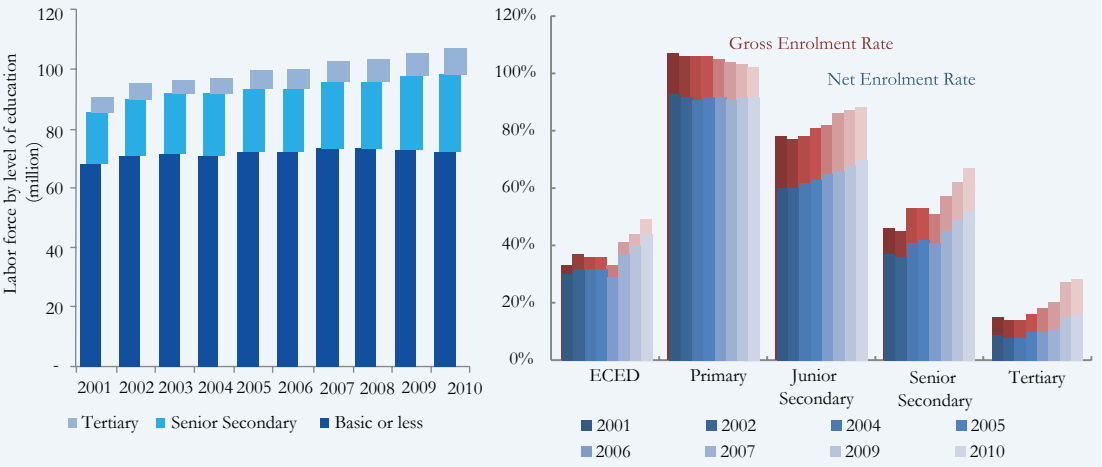
1. Indonesia's Scorecard to Date

The labor force is more educated...

Indonesia's labor force is rapidly becoming more educated. Most of the expansion of the labor force over the past decade has been in senior secondary and tertiary education graduates. As a result, while the majority of the population still has at most only completed basic education, there are now more than 30 million senior secondary graduates and more than 10 million tertiary education graduates in Indonesia's labor force. Over the past five years, the labor force with tertiary education has increased by more than 1 million annually and the labor force with senior secondary by more than 2 million annually. These numbers are likely to increase in the near future, driven by the Government's policies to provide universal access to senior secondary education through a compulsory 12 years of education, and doubling enrollment in higher education by 2020. As enrollment rates continue to increase, the rate of growth in the educational attainment of the labor force will likely accelerate. Under reasonable assumptions,[94] the number of Indonesians with tertiary education will more than double over the next 10 years.

93 The importance of human capital in and of itself to economic growth has been much stressed in the endogenous growth theory literature, starting with Romer (1986) and Lucas (1988).
94 Using linear growth in enrollment rates in higher education.

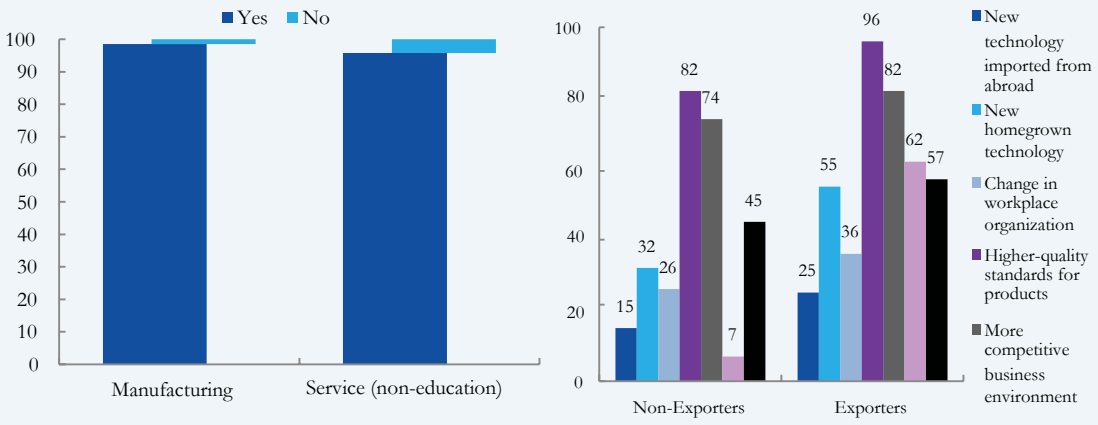
Figure 5.1: Total labor force and enrollment rates by level of education, 2001-10



Source: Sakernas for labor force, 2001-10 (February round); Susenas for enrollment rates (February round).

At the same time, the demand for skilled workers is high and increasing. When asked in a survey conducted by the World Bank in 2008, employers almost universally considered that skill requirements will increase, identifying higher-quality standards, a more competitive business environment and export orientation as the main drivers for increased requirements. This is in line with Indonesia's ambitions to become a high-income economy, macroeconomic trends (ASEAN, China's raising wages) and the raising middle class (which will demand higher quality products and services).

Figure 5.2: The demand for skills is increasing



Source: Skills for the Labor Market in Indonesia, World Bank (2011).

…but many graduates enter the labor market without the right skills

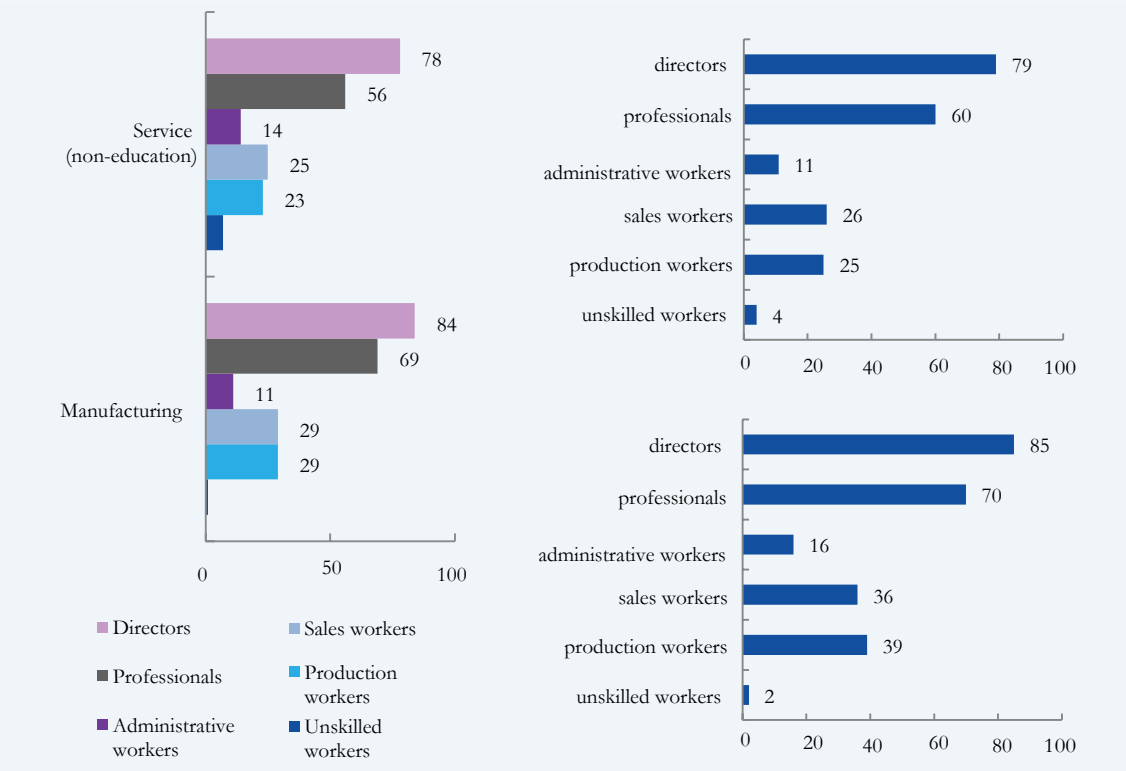
But education is not a synonym of skills. If quality of education is low, attending school does not guarantee that students learn. In addition, the skills required in the labor force are not necessarily limited to those learned traditionally in schools. Skills demanded in the labor market

go beyond technical and cognitive skills, and include behavioral / character (i.e. perseverance) and social skills (i.e. team work), but these skills are not measured through traditional surveys.[95] In the absence of such mapping of skills demand and supply, there are two main ways to identify these skills shortages: i) asking employers (the receivers of these skills) through surveys and ii) looking at the labor market performance of graduates.

a) Employer surveys

A first sign of skills shortages is that employers report difficulties in filling semi-skilled and skilled positions. In a survey of employers carried out by the World Bank in 2008, two-thirds of them complained that finding employees for professional and manager positions was either 'difficult' or 'very difficult'.[96] This was especially the case for exporters and manufacturing firms (as opposed to services). Almost 70 percent of employers in manufacturing reported finding it 'very difficult' to fill professional-level positions (engineers and similar). Exporters even reported difficulties in finding skilled production workers to meet their higher quality standards.

Figure 5.3: Share of firms identifying that task of finding workers very or rather hard, by type of job



Source: Skills for the Labor Market in Indonesia, World Bank (2010).

95 There are several initiatives to try to understand and define these skills better,[95], including World Bank's Skills Toward Employment and Productivity (STEP) Skills Measurement Survey, OECD's Programme for the International Assessment of Adult Competencies (PIACC), UNESCO. However, these tools are not yet available in Indonesia.
96 Skills for the Labor Market in Indonesia (2011).

The reasons for these difficulties vary by sector. Some sectors report insufficient graduates as the reason (for example, in textiles), whereas other sectors complain about the skills of existing graduates (for example, in rubber and plastics). This suggests two types of mismatches. On the one hand, the education system does not seem to be providing enough graduates in certain areas (for example, through vocational senior secondary education in the textile sector). On the other, even when enough graduates are produced, they may not have the right skills. These mismatches have likely increased since 2008. In 2009, about 60 percent of Indonesian firms were reporting that skills were a constraint. Almost 20 percent considered them a severe constraint.

Figure 5.4: Reasons for skills mismatches according to employers, 2008
(% return)

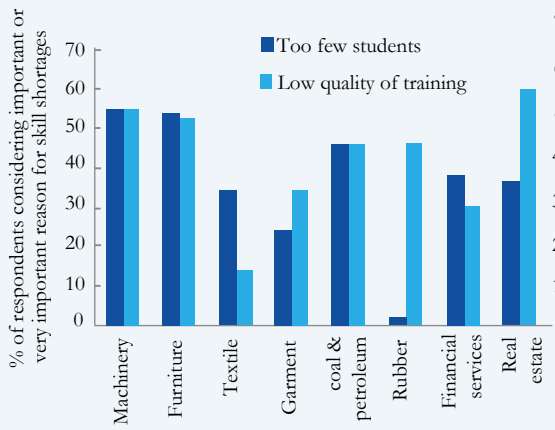
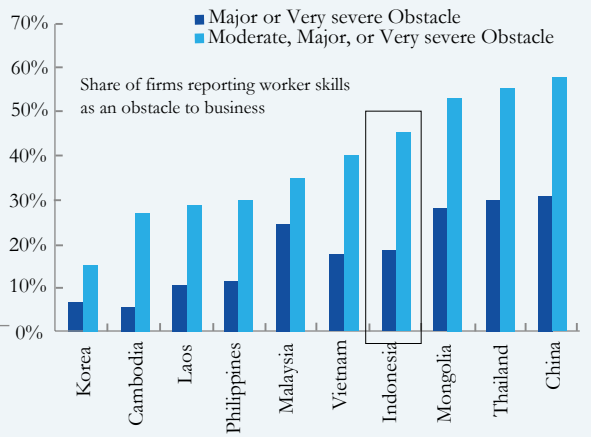


Figure 5.5: Reasons for skills mismatches, comparing Indonesia with regional peers

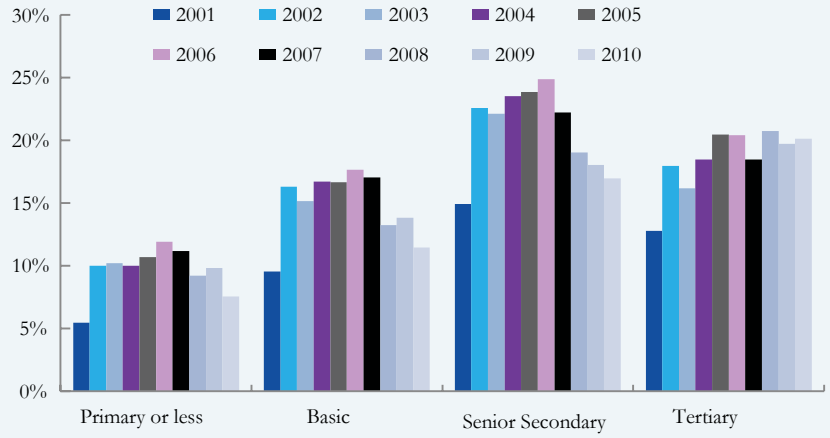


Source: Investment climate surveys, latest year (2009 for Indonesia)

b) Labor market performance of graduates

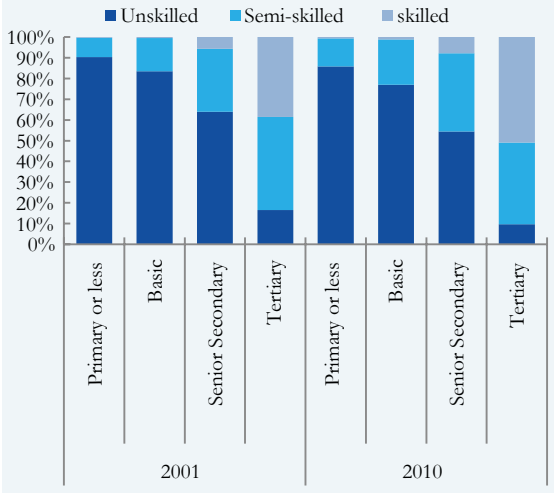
While employers struggle to find the right skills, unemployment rates for educated youth are higher than for non-educated youth. The unemployment rate for 20-29 year olds is almost twice as high for senior secondary and tertiary graduates than for basic education graduates. The rate went up for tertiary graduates between 2001 and 2005 and has remained stubbornly high since then. The rate has come down significantly for senior secondary graduates, however. But the fact that graduates find jobs does not mean they are equipped with the right skills. Unemployment in the hopes of finding a job may be considered a luxury for most, which may lead to graduates accepting lower quality jobs because of need.

Figure 5.6: A framework of accountability of higher education institutions



In fact, more than half of senior secondary graduates are employed in unskilled occupations (blue-collar, laborers in agriculture) and half of young tertiary graduates are employed in occupations below their level of education (Figure 5.7). According to the Employer Skills Survey, 25 percent of senior secondary graduates do not meet the expectations of the employers.[97] Approximately a quarter of employees with senior secondary education are considered of poor quality. Further, only 7 percent of them are considered to be "very good" and most of them are considered "fair". There are no significant differences between the quality of graduates from the general track and from the vocational track.

Figure 5.7: Type of occupation for senior secondary graduates, 2001-2010



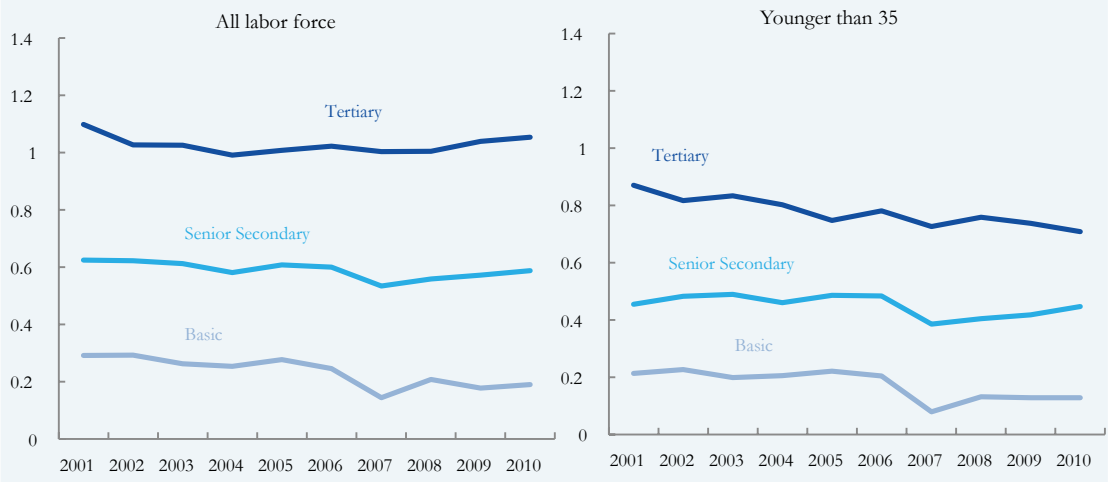
Source: World Bank calculation using Sakernas

That a large number of tertiary educated individuals work in low-skill occupations is a good indicator that despite holding the degree needed for higher level occupations, they lack the right skills. These percentages have gone down since 2001, which may indicate that the quality of graduates has improved. Still, a significant share of recent graduates has entered the labor market without the necessary skills to succeed, which has pushed them into unskilled positions. The country has invested a lot in these graduates, and even if their skills do not meet the demands in the labor market, they have a stronger skill base than school dropouts. With some skills upgrading, these young educated workers are best positioned to drive the economic transformation Indonesia is aspiring to.

97 Skills for the Labor Force in Indonesia, World Bank, 2012

These mismatches are partly behind the recent decline in the returns to education for young graduates. The returns to senior secondary show a slight decline since 2006, though they are increasing slightly in recent years. However, these are the returns only for those graduates employed for wages, which excludes many unskilled positions. The decline in returns to higher education is still small, and it is not in all sectors. The sectoral distribution of employment goes a long way in explaining the broad indicators of labor market performance of graduates, which is a sign of these mismatches.

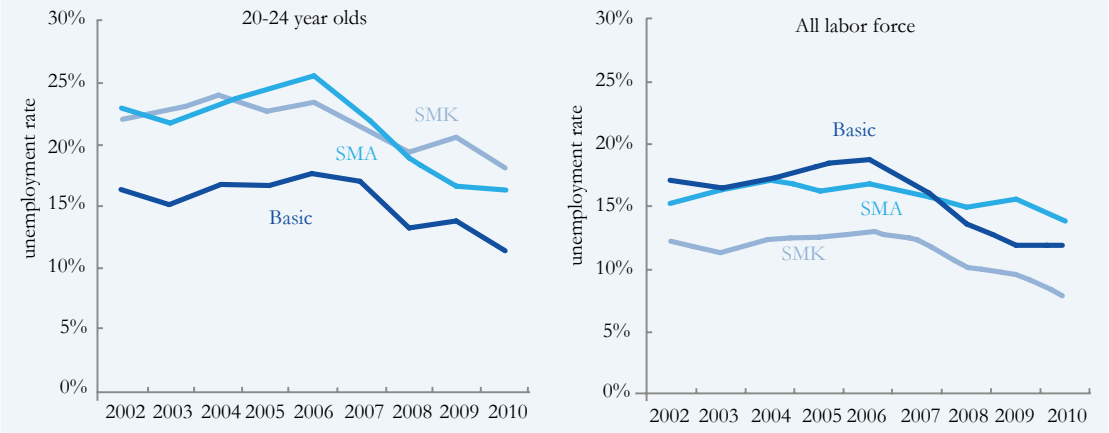
Figure 5.8: Trends in returns to education, all labor force and younger than 35, 2001-10



Source: Authors' calculations using Sakernas, employed for wages.

Comparing the labor market outcomes of graduates of two senior secondary tracks (general and vocational) indicates that unemployment rate upon graduation are similar between general and vocational graduates. While this comparison does not account for the different characteristics of general and vocational students, other research have shown that these differences are consistent even controlling for these factors. Chen (2009) finds that there are no significant differences in terms of unemployment. Comparing vocational and general graduates who do not go to college, vocational graduates seem to have a better chance of obtaining a job upon graduation. However, this simple comparison does not take into consideration the fact that a significantly larger proportion of general graduates go to college. Newhouse et al (2009) showed that there is no significant earnings difference for fresh graduates, but the earnings of vocational graduates depreciates much faster after 7-8 years. Looking at the average wage of graduates for both streams who did not continue on to higher education, the positive wage differential for vocational graduates has been reduced in recent years.

Figure 5.9: Unemployment Rate for SMA and SMK Graduates, Age 20-24



Source: Sakernas (various years).

Comparing the returns to education for each track confirms their similarity. Taking only those with senior secondary as their highest degree, vocational graduates have traditionally enjoyed a small premium in the labor market over general graduates, but this premium has decreased in recent years. While the difference increased slightly again in 2010, the differences are not large. Considering unemployment rates and returns to education, the two tracks do not seem fundamentally different in their capacity to equip graduates with skills for the labor market.[98]

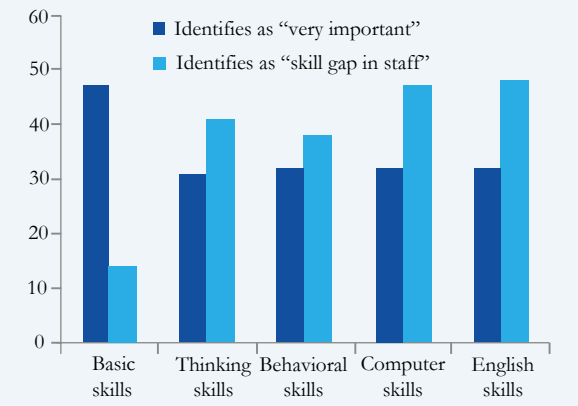
In tertiary education, there is a clear disconnect between the types of study and the sectors demanding graduates. While some sectors struggle to find skilled professionals, most tertiary education graduates enter the services sector, especially public services (mainly education, health and government administration). Teacher training colleges in particular account for almost one-third of all tertiary education graduates entering the labor force. Perhaps driven by higher expected wages promised by the recent Teacher Law, more students are choosing the teaching profession. However, because all these graduates cannot be absorbed into civil servant positions, they end up working under poor conditions as contract teachers, where the pay is one-third of the starting salary of regular teachers. This has resulted in rapid declines in the average salaries of graduates from teacher training colleges. Nonetheless, in perhaps the best example of the disconnect between the system and the labor market, the demand for places in teacher training colleges continues to increase and reached an all-time high in 2013.

Skills shortages are related to the quality and relevance of education

The origins of the skills shortage start with the quality of basic education. In order to be prepared for the labor market, graduates need first and foremost, a strong base of basic skills. When asked in 2008, employers cite basic skills as the most important. Thinking skills and behavioral skills follow. An important role for both general and vocational tracks of senior secondary is thus to provide students with a strong basic skills, to prepare them for the labor market and for further education. Hanushek and Wossmann (2008) highlight the importance of the cognitive skills of the population, rather than mere school attainment.

98 See Cerdan-Infantes and Mileiva (forthcoming), World Bank, for an analysis of the relevance of higher education using labor market outcomes of graduates.

Figure 5.10: Types of skills identified by employers are very important

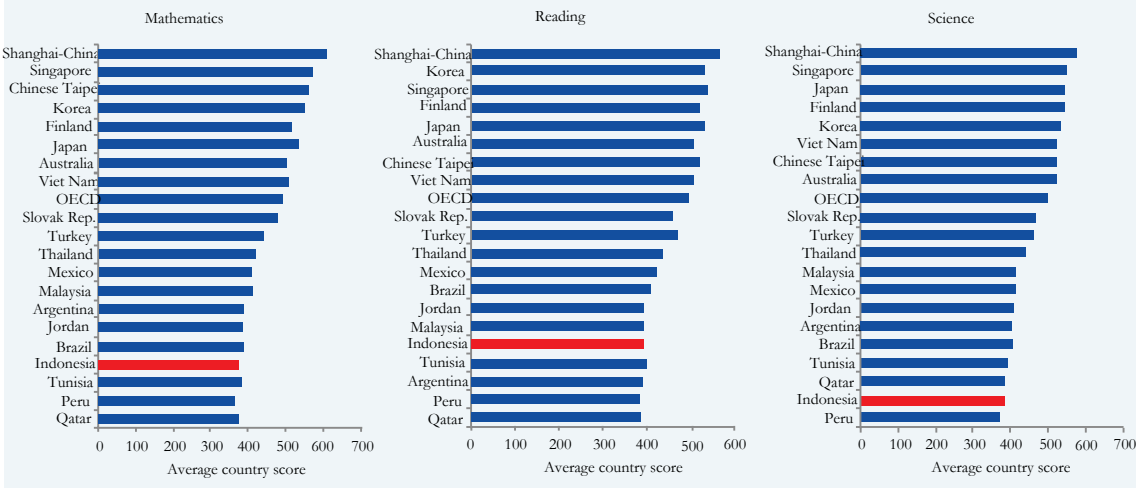


Source: World Bank, Skills for the Labor Market in Indonesia, 2011

Hanushek and Wossmann (2008) measures cognitive skills of different countries by comparable international tests of mathematics, science, and reading. They find that cognitive skills are highly related to individual earnings, the distribution of income, and to economic growth.

Indonesia continues to perform poorly in learning assessments, comparing unfavorably with other middle income economies and East Asian neighbors. PISA tests 15 year olds who should still be enrolled in junior secondary, so these results are not a reflection of senior secondary education quality. However, they do reflect the skills that senior secondary students come with. For example, 15 year-old students in Indonesia register learning levels well below their counterparts in VietNam even though per-capita income is higher.

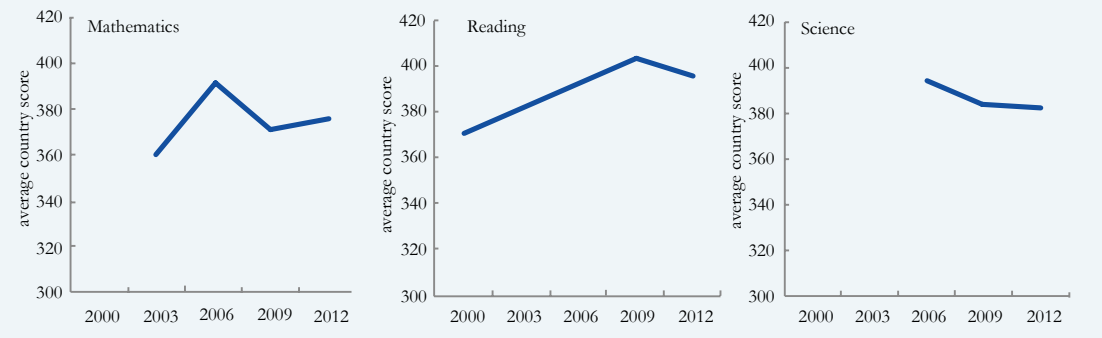
Figure 5.11: Average score in math science and reading, 2012



Source: OECD Pisa 2012 Results: What Students Know and Can Do: Student performance in reading, mathematics and science.
Notes: 15 year old students in Indonesia are expected to be in the last grade of junior secondary school and have completed 9 years of formal basic education.

Despite large increases in public and private investment over the last decade the quality of education has not improved as much as expected. In reading, gains have been relatively rapid compared with other countries. For example, Indonesia was ranked in the top tercile when annualized improvements in reading achievement were compared. In mathematics, Indonesia ranks relatively poorly in terms of the magnitude of improvements. While improvements have been seen over the long term, more recent changes in learning achievement paint a more worrying picture. Since 2006, mathematics achievement has declined and there has been no statistically significant change in reading and science scores.

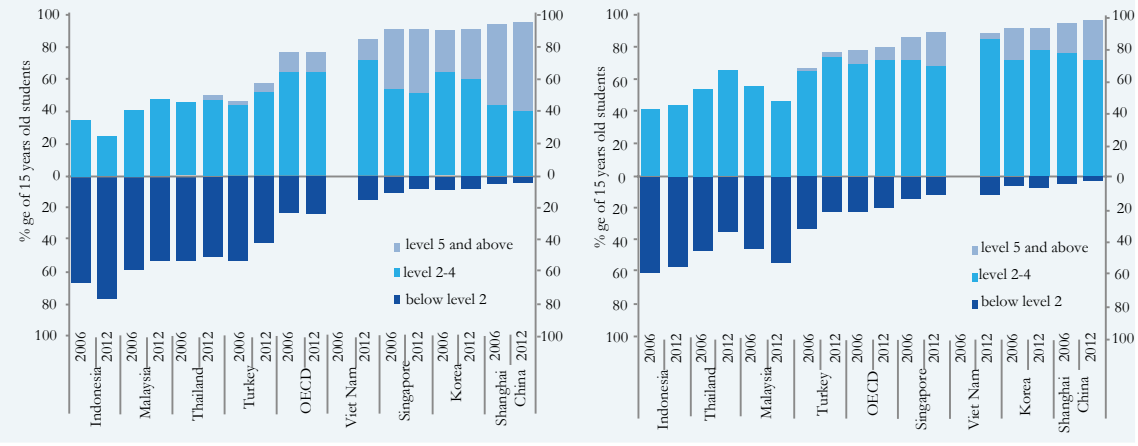
Figure 5.12: Improvements in learning over recent times have been small



Source: OECD PISA
Notes: One standard deviation is equivalent to 100 test score points. Changes between 2003 and 2012 are statistically significant for mathematics and changes between 2000 and 2012 are statistically significant for reading. Changes in science scores are not statistically significant.

Average levels of learning hide significant differences in mathematics and reading proficiency levels. In Indonesia, the majority of 15 year-olds fall below level 2 proficiency. In some countries this low skill level is associated with student difficulties in continuing into higher education and making a successful transition into the labor market. Moreover, in 2012 three-quarters of Indonesian students were at level 1 or below. In mathematics students scoring at this level are only able to do 'very direct and straightforward mathematical tasks, such as reading a single value from a well-labeled chart or table'. Trends also suggest limited improvement in proficiency levels between 2006 and 2012.

Figure 5.13: The proportion of Indonesian students leaving basic education without a good skills base is very high



Source: OECD

2. Policy Options

Ensuring that the workforce has the right skills to support high and sustained growth requires a three-pronged strategy. First, there is a clear need to improve the quality of basic education, starting with early childhood education. Skills beget skills, and a strong base of cognitive skills is needed to acquire the higher-level skills that will be needed by the workforce if it is

to realize such a large-scale economic transformation. However, raising the level of skills of the general population through basic education will necessarily take time. Even if the educational system could be perfected instantly, the first graduates would only join the workforce in about 20 years' time. It is therefore essential to find short- and medium-term solutions for the current skills constraints: the second and third prongs of the strategy are thus improving the relevance of feeders into the labor market (technical and vocational education, and tertiary education) and upgrading the skills of the existing labor force.

Focus on quality and skills, not only expansion

Continuing to increase access to education will not bring about the expected benefits if the expansion is done at the expense of quality. After achieving near universal access to 9 years of education, the GoI is focused on expanding access to 12 years of education (including senior secondary). The goal of senior secondary education is to prepare students for transitioning to either the labor market or for tertiary education. Regardless of their destination, graduates need to be equipped with a solid foundation of basic skills. These skills have been shown to be demanded by employers and they also set the base for further study, be it in university or in more vocational oriented courses (diplomas, community colleges). In expanding access to senior secondary education, it is thus important to ensure that both tracks general (SMA) and vocational (SMK) provide these graduates with basic skills (i.e. math, language) by strengthening the quality assurance system and balancing the content of both tracks.

Establishing hard targets on the division of the general and vocational tracks is not necessary if both tracks are of good quality and if both offer paths for continuing education. The performance of graduates from both tracks in the labor market suggests that neither track is significantly better than the other without further study. Vocational secondary school might provide a fast route for training mid-level skilled workers for the immediate needs of the labor market, but it may not provide graduates with a sufficient foundation of general skills that makes them malleable for the future. On the other hand, graduates from the general track who do not enter tertiary education likely lack sufficient job-relevant skills. There is a need to offer opportunities of obtaining necessary labor market skills through practical experience and vocational courses, especially of community colleges and non-university tertiary degrees. Success lies in finding the right skill mix in both tracks, the permeability between tracks and opening up paths for continuing skills acquisition for vocational graduates.

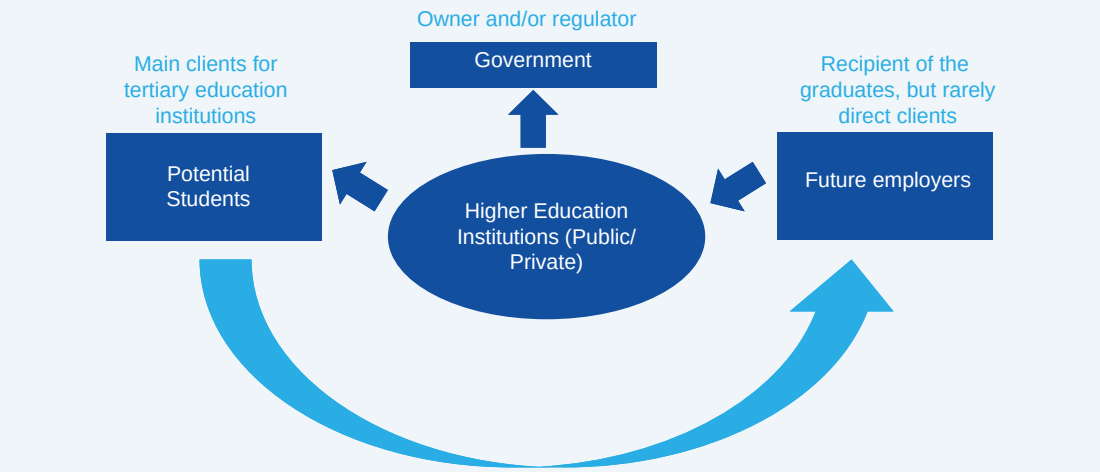
Improve relevance of feeders into the labor market: vocational education and tertiary education

Making vocational education and tertiary responsive to employer needs is a priority. In the absence of the right policies, education institutions tend to be isolated from the labor market.[99] They naturally to their 'clients', comprising potential and current students, as well as their owners or regulators. As a result, if students' demands are not in line with the labor market (because of lack of information, for example) or the regulatory framework prevents educational institutions from responding to the demands of their 'clients' (rigidity, for example), then these institutions will not respond to the demands in the labor market.

99 Putting Higher Education to Work, World Bank, 2013

The key aspects of the tertiary education system are information and incentives, both of which are problematic in Indonesia. Without information about labor-market trends (for students, employers and educational institutions) and about the quality of institutions (quality assurance), the choices of potential students will not be aligned with those of the labor market, and educational institutions will not have the incentives to align their offerings to the demands of employers. If employers cannot properly distinguish between good and bad educational institutions, then the rewards for their graduates will not be clear either. But information is not enough. Even if the right information is in place, it is still important to provide the right incentives. This requires autonomy and accountability, incentives for performance (especially in public institutions) and opportunities for direct links between institutions and employers (for example apprenticeships, staff exchanges, research collaboration). Advanced tertiary education systems go beyond these basic elements and attempt to address further disconnects: between higher educational institutions themselves, between higher educational and training institutions, and between senior secondary and tertiary education (in addition to the role of tertiary educational institutions as catalyzers of innovation). Both information and incentives are problematic in Indonesia.[100]

Figure 5.14: A framework of accountability of higher education institutions



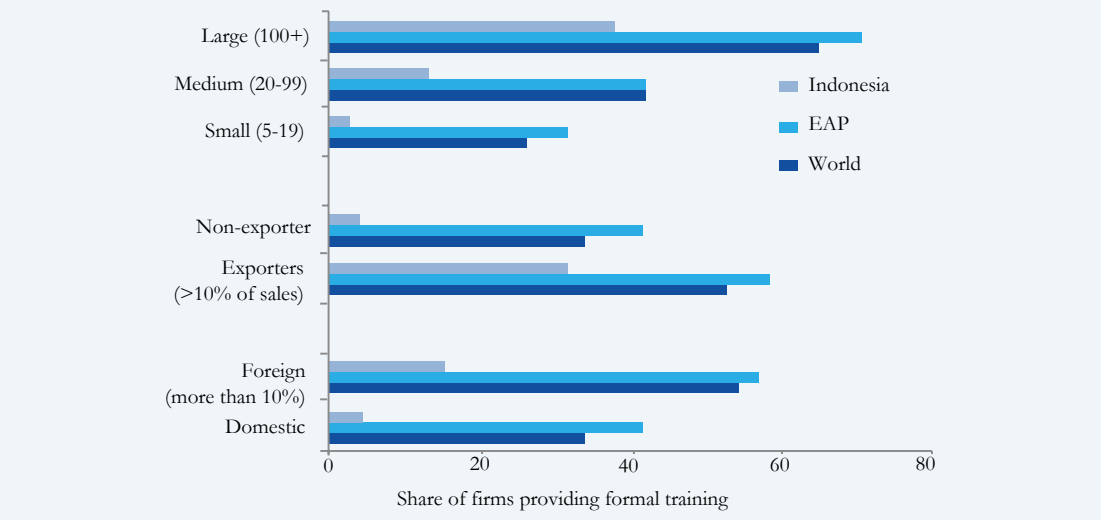
Source: World Bank staff elaboration.

Upgrading skills of existing labor force

There is a need to address the skills shortages of those already in the labor market – and the institutional set-up to develop a professional certification system and competency-based training is largely established. However, the training system should be expanded, better coordinated and have strong employer participation. Coverage of the training system is very low, with only about 5 percent of the labor force reporting having received any formal training. On-the-job training is rare, with firms in Indonesia much less likely to report offering opportunities for training to their employees than in other countries in the region (even large Indonesian firms). Supply is limited and most existing training-providers are concentrated in low-value-added areas (such as beauty salon and spa skills and basic computer skills).

100 See Relevance of Higher Education for the Labor Market in Indonesia, Cerdan-Infantes and Mileiva (forthcoming).

Figure 5.15: Share of firms providing training opportunities to employees, 2009



Source: World Bank, Enterprise Survey 2009.

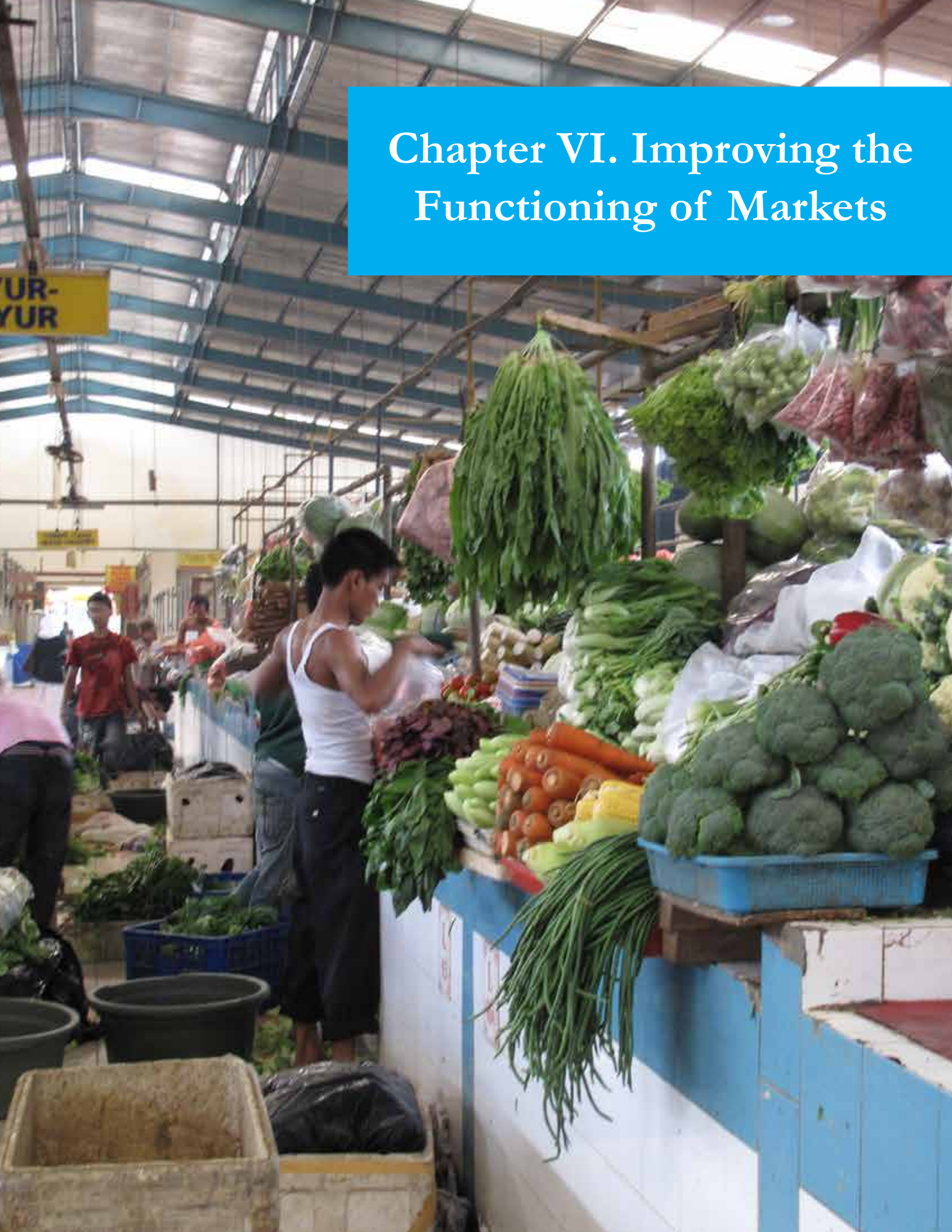
More resources are needed for training, but they should not all come from the public sector. Skills upgrading is not the responsibility of the public sector, since firms and individuals also benefit from the upgrading. Resources should come from both public and private sources, by using public funding strategically to incentivize private spending from employers. For example, many countries have implemented training funds from both public and private sources to incentivize training by partially subsidizing it

Improve quality of training and the use of training based on competencies by incentivizing quality improvements from training providers. Accreditation is largely voluntary at the moment and there are no consequences of not going through the accreditation system. Competency based methodologies are rarely used in training. The increase in public funding should go to incentivizing these changes. Again, training funds are a possible tool to incentivize these changes in training providers, if these are used as conditions to access funds.

Accelerate expansion of supply of quality training institutions that deliver relevant training in higher value-added skills in strategic sectors. The current supply of training providers is concentrated on low skilled occupations, while there is an undersupply of training providers in strategic sectors of the economy that require larger fixed investments to be established (food products, manufacturing). Expanding this supply will be critical to ensure skills upgrading happens in the right sectors.

Incentivize training for specific group through demand side subsides. Small and medium size enterprises tend to underinvest in their workers because of logistical constraints, since the cost of sending one worker to training means stopping production. Hard to employ populations most in need of retraining may face financial constraints to access training, even if that training is relevant and of good quality. Strategic industries may also face short time constraints in developing training providers. Public investment are thus best be used to target these populations on equity and productivity grounds.

Chapter VI. Improving the Functioning of Markets



Chapter VI. Improving the Functioning of Markets

Well-functioning product, labor, financial and land markets are critical drivers of productivity growth and are central the overall efficiency and competitiveness of any economy. These markets act as a lubricant allowing the expansion of individual sectors and the movement of resources across sectors. They determine whether resources (workers, talents and capital) can move flexibly across sectors or remain bottled up in low-productivity uses.

In Indonesia, regulations governing entry, investment and business conduct in many sectors have become complex and uncertain, often sending mixed signals to investors. In addition, difficult access to factor markets such as capital and land puts productivity levels and economic growth below their potential. At the same time, some provisions of the labor law (e.g. severance pay) impedes labor mobility and in practice neither protect workers nor facilitate formal employment—a loose-loose equilibrium. The minimum wage setting mechanism has become cumbersome and unpredictable, increasing uncertainty.

Although reforms of product and factor markets (in particular labor market) are difficult and politically sensitive, then yield high payoffs for the economy and ordinary citizens. This chapter reviews the key issues in Indonesia's investment climate and key factor markets.

1. Improving the functioning of product markets

Key relevant product market/ investment climate issues

Changing external conditions will force investors and financial intermediaries to pay more attention to investment climate issues than over the past decade. As shown in Chapter 1, over the past decade, high commodity prices and low global interest rates have supported a robust recovery of private investment in Indonesia. After falling dramatically after the 1997/98 crisis, Indonesia's investment-to-GDP ratio has recovered strongly over the past five years, moving up to 32 percent in 2012 (compared with ratios of 27 percent in South Korea, 30 percent in India and the extremely high 46 percent in China, for example). While much of this increase has been due to rising investment prices, real investment growth has averaged an annual 8.4 percent over 2008-12 (up from 7.6 percent over 2003-07), and has tracked commodity prices. But as we enter a medium-term period of higher interest rates and stagnant or falling commodity prices, investment growth is slowing down. As competition for scarcer capital becomes stiffer, investors and financial intermediaries will give more weight to investment climate issues that may undermine returns to investments.

Indonesia's investment climate trails the country's main regional competitors at the aggregate level. The weak business environment is reflected, for example, in the World Bank Group's Doing Business rankings. Indonesia is currently at 120th place (out of 185 economies), slightly improved on the rankings it has had over the past few years. This performance is below the regional (East Asia and Pacific) average and its peer countries' performance: the Philippines, China, Thailand, and Malaysia ranked 108th, 96th, 18th, and 6th, respectively. Indonesia's overall performance is only slightly better than India and Cambodia. It takes 47 days to start a business in Indonesia compared with only 6 and 2.5 days in Malaysia and Singapore, respectively. While companies in Thailand can obtain an electricity connection in 35 days, it takes 101 days to obtain an electricity connection in Indonesia.

Although some actions are taken by the government to facilitate investment and business conduct in some sectors, recent business regulation measures have, in fact, sent mixed signals to investors and revealed contradictory aspirations. On the one hand, a comprehensive action plan to address the regulatory environment for SMEs (actions that are likely to be reflected in next year's Doing Business report) announced on October 25, 2013 strongly signals a willingness to address some key weaknesses in the business environment. While it seemed unlikely in early 2013 that there would be much progress on business environment reform, the October policy package and its subsequent, ongoing implementation are an indication that the GoI has renewed its efforts to reduce red tape for Indonesian businesses, at least in some areas. The announced action plan consists of seventeen actions across eight "Doing Business" areas (aligned to eight of the ten indicators in the World Bank Group's "Doing Business" country rankings).[101] On the other hand and in sharp contrast, a large number of sector-specific laws and measures announced recently are either inconsistent with previous laws or create confusion about the direction of investment climate reforms in Indonesia. Box 6.1 summarizes the inconsistencies and uncertainties around various laws. The uncertainty created by these recent laws and regulations is a recipe for reducing the quantity or quality of much needed investments and can significantly reduce the country's long-term competitiveness.

The Government's recent approach in trying to move up the value chain is to legislate and regulate first, then negotiate with private actors whose investments are needed to realize the government's objective. This approach contrasts with the one adopted in most successful countries, where sound analysis and a strong partnership with the private sector in identifying and coordinating the needed investments and other industry-specific needs were used as a first step.

101 To ensure the implementation of this policy package, and in a signal of good coordination towards making progress on these reforms, the Government has established a joint monitoring team with different government agencies, including the Presidential Working Unit for Control and Supervision on Development (UKP4).

Box 6.1: The inconsistencies and uncertainties around various laws

In 2007, Law No. 25/2007 on Investment was passed to provide much needed clarity, especially for foreign investors. The law states that all sectors and subsectors are entirely open to investment, unless otherwise specified in the comprehensive "negative list" issued by the President (DNI, for Daftar Negatif Investasi). In 2009, however, a new Postal Law imposed potential limits to investment in postal and courier services, contradicting the earlier investment law and DNI list. Because of ongoing contradictions even before 2007, not only in the law but also in the implementing regulation and the different agencies' interpretation of the regulations, companies in the industry remain uncertain what the precise foreign equity limit in the sector is or who could provide authoritative guidance.

In 2010, a new Horticulture Law explicitly limited foreign investment in agriculture to 30 percent. The new law directly contradicted the Investment Law and the DNI list (updated 6 months before passage of the Horticulture Law) which allowed for foreign ownership in agriculture up to 95 percent of equity. In January 2013, a number of implementing regulations for the Horticulture Law were issued, imposing a temporary ban on the import of 15 products, including onions and shallots, and import quotas on 11 more. The products' prices rose rapidly, contributing to the increase of the inflation rate. Reversing course over the unequivocally negative impact of the policies, the regulations were amended to scrap some restrictions and simplify import approval for others. After all the back and forth, uncertainty remains among implementing agencies over the correct interpretation of the revised regulations.

In the mining sector, the conflicting messages have been particularly noteworthy, as the Government has reversed its policy on an announced ban of raw mineral exports. Under the new Mining Law of 2009 and its implementing regulation issued in 2012, the export of unprocessed minerals was to be banned completely. The Government issued conflicting statements about exemptions to this ban, adding to the sense of regulatory uncertainty across all sectors. Irrespective of how the law is ultimately being applied, it is clear that the repeated reversals have had a negative impact on the business environment.

At the end of December 2013, the parliament passed a new industry law, which provides the Minister of Industry with new, sweeping authority to intervene in the market and even in individual firms' decisions. Much of the law's impact will depend on implementing regulations, but already now it creates additional uncertainty among both foreign and domestic businesses and investors.

The ongoing protracted attempt to update the DNI is indicative of a broader debate in Indonesia on the relative importance of foreign involvement on economic growth. Despite the government's announcement, as part of the August policy package, that updating the DNI (i.e. opening more sectors to foreign investment) was a policy priority, the DNI has taken several months to develop. As of this writing, it still has not yet been issued. There is a sense—expressed by different parties in the media, exerting their influence on the political process—that Indonesia's resources and its economy need to be better protected from foreign investment, while some domestic business interests are voicing their support for the protection of selected sectors from foreign competition. With a looming national election, it remains to be seen how much influence these voices will exert on economic policy formation in the coming months.

Policy options

To successfully upgrade the country's industries, a ***consistent industrial strategy*** **elaborated in partnership with the private sector is needed.** Such industrial policy could usefully reflect lessons from industrial policy around the world. In particular, a coordinated approach to identifying and removing binding constraints such as sector-specific infrastructure, skills and institutional support is needed. **To ensure adequate implementation, a key option**, a strengthened policy formation process is needed. As discussed in section 3 below, the creation of a "center

of government" i.e., a unique institution that coordinates policy development across sectors and to manage competing demands amongst ministries and agencies, can help. Indonesia authorities may want to consider how to refine the mandates and functions of the various institutions that support the CoG, and to empower one institution, e.g., the President's Office (or its designate) to play a stronger role in managing the policy process. This would be crucial to ensure that (a) market competition-driven innovation is fostered; (b) FDI and frontier technologies keep coming, and (b) Indonesia benefits as fully from the FDI as it should. A strengthened policy formation should also better address genuine concerns of Indonesians that the public interest be protected, and should enable the Government to push back against more narrow business interests and requests for protection.

On the "Doing Business" areas, decentralization offers some proof of what is possible. With decentralization, much of the political authority to influence and reform the business environment is held at the subnational (provincial and local/municipal) level. Now, regional variation offers proof of what is possible through optimization of procedures within existing legal frameworks. According to the Subnational DB study (2012), obtaining a construction permit in the city of Bandung, for example, takes on average 44 days, while in the capital Jakarta, less than 150 km away, the same procedure takes on average 158 days, more than 3 times as long. To start a business in the city of Palangka Raya, 27 days are needed for the official procedures, while the same steps in Jakarta take almost twice as long, 45 days. These variations indicate that improvements of the regulatory environment can be achieved independently of reforms (or lack thereof) at the national level. For instance, in a welcome move, the new Governor of Jakarta has recently indicated that measures to reduce lengthy procedures to start a business will be taken.

2. Reducing labor market rigidities and uncertainties

Key relevant labor market issues

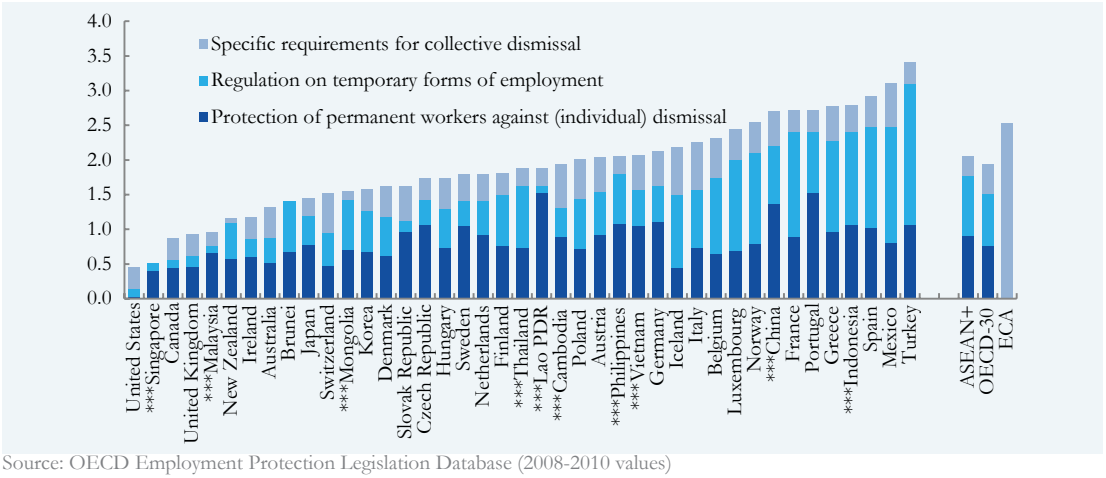
Figure 6. 1: Country Comparisons of Rankings on the Ease of Doing Business 2014

Source: WBG Doing Business 2014 Report

A few provisions of the labor law impose high costs to firms and impede formal employment and productivity growth. In 2003, the Government introduced a Labor Law that significantly improved workers' rights and made hiring more flexible. However, the law made it more costly to fire workers. In particular, the provision mandating that severance pay should be at least 100 weeks of wages is considered by firms as a de facto tax on employing formal workers, especially young educated ones, and is an example of the unintended distortions in the labor market that can be caused by well-intentioned regulation; This provision of the labor law puts Indonesia's labor market legislation among the most rigid in the region according to the OECD (Figure 6.2). Singapore and Malaysia for instance are at the level of rigidity of Anglo Saxon countries while Indonesia, China, Vietnam and the Philippines clearly stand out for having the stricter regulation.

The majority of companies adjust to the high severance pay provision by either not formally signing a contract for workers or resorting to short-term contracts that by law are capped at three years. The fewer formal companies that abide by the labor law incur high costs. Hiring formal workers is discouraged, as employers have to deposit in an escrow account accrual for severance pay to be able to pay for several payment if they decide to fire their workers. At the same time, when a worker decides to voluntarily quit a company, only a part of the severance pay is paid. The system creates an incentive for employers to go informal and for workers to be fired: a lose-lose equilibrium.

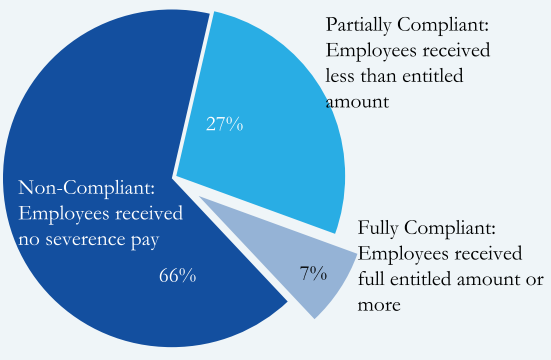
Figure 6.2: Labor Market Legislation Index in Indonesia and Elsewhere



Source: OECD Employment Protection Legislation Database (2008-2010 values)

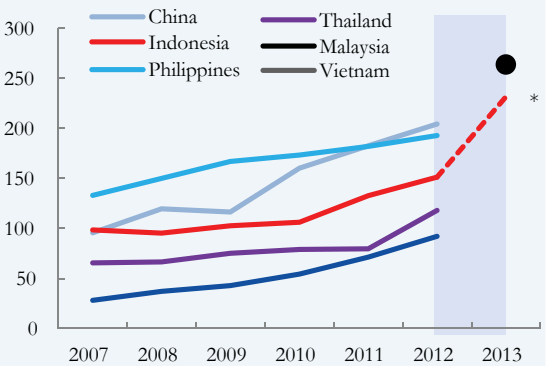
As a result, while unintentionally undermining the hiring of formal workers, the rigidity in firing does not protect workers effectively. The percentage of workers to which the legislation applies is indeed small. For instance, regarding severance pay, a survey of terminated workers suggests that a majority of the latter did not receive any severance payment while the majority of those who received payment obtained less than the entitled amount (Figure 6.3).

Figure 6.3: The large majority of terminated workers report not having received severance pay…



Source : Indonesia Jobs Report: Towards Better Jobs and Security for All (World Bank, 2010)

Figure 6.4: Minimum Wage, Indonesia versus Neighbors (USD/month)



Source : Indonesia Economic Quarterly, Policies in Focus (World Bank, December 2012)

The minimum wage setting process is another critical labor market issue. Indonesia followed a prudent minimum wage setting policy for most of the past decade or so but since 2010, there is a significant departure from the moderate pace in minimum wage increases (as seen in chapter 1). In 2013, 25 Provinces increased their minimum wage by an average 30 percent and Jakarta increased it by 44 percent. This increase certainly reduced significantly Indonesia's nominal wage advantage vis-à-vis China as China's average labor productivity is indeed much higher than Indonesia's. Indonesian formal labor-intensive firms in manufacturing and services seem however more concerned about the uncertainty around the minimum wage setting process and the threat of future high increases.[102]

However in practice, the percentage of workers to which the minimum wage legislation applies is very small (Figure 6.6). This reflects three inter-related factors: (i) A large number of workers are self-employed. In 2011, 61 percent of workers declared being self-employed; (ii) about 54 percent of workers operate in the informal sector and over 80 percent of workers (including formal) do not have a contract and; (iii) government capacity to enforce compliance with minimum wage legislation is quite limited. Compliance enforcement requires coordination at the central level, between the Ministry of Manpower and relevant ministries, as well as between central and local governments and relevant actors (District Governors and Wage Councils).

Figure 6.5:…while compliance with minimum wage legislation is limited

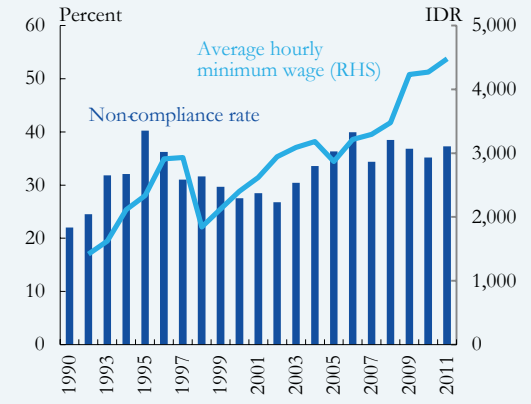
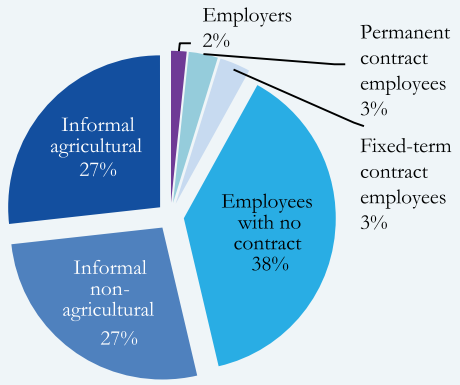


Figure 6.6: About 80 percent of workers do not have contracts



Source: Statistics Indonesia (BPS), Sakernas 2008.

Although the labor legislation provision such as severance pay and minimum wage do not affect the majority of workers in Indonesia, they can impede productivity growth and structural transformation through various mechanisms. For instance, workers' movement into formal sectors is constrained as (i) workers who want to move are not compensated fully for severance by their employers if they leave voluntarily and; (ii) employers in formal sectors

102 The minimum wage-setting process is complex. Negotiations and final agreements take place at the province and sectoral level (and often at the district and sub-sector level), making communication and compliance with new formula-based adjustments more difficult. More generally, ensuring the compliance of firms and employers to minimum wage regulations is not easy, and requires monitoring and coordination at the central level, between the Ministry of Manpower and relevant ministries for effective implementation, as well as between central and local governments and relevant actors (District Governors and Wage Councils).

account for the high potential cost of dismissal and the uncertainty around minimum wage increases when making hiring decision. As result, movement of workers occurs mostly between informal and semi-formal companies. This may explain why agriculture still employs 35 percent of workers while the contribution of this sector to GDP has declined to 11 percent and why the overwhelming majority of workers in services sectors are in low-end, low-productivity, informal activities. In addition to undermining movement of workers to formal sectors, uncertainties around the trajectory minimum wage is a deterrent to investments in formal sectors, in particular in manufacturing.

Policy options

For Indonesia's labor market to support workers' mobility and structural transformation, a revision of the severance pay provision of the labor law will be needed. The labor Law enacted in 2003 significantly improved workers' rights and made hiring more flexible. However, the provision of the law mandating that severance pay should be at least 100 weeks of wages is an example of a well-intentioned provision that has led to a "lose-lose" outcome. The majority of companies adjust to the high severance pay provision by either not formally signing a contract for workers or resorting to short-term contracts (80 percent of workers do not have a formal contract). The fewer formal companies that abide by the Law have to deposit cash accrual for severance pay in an escrow account to be able to pay for the severance if they decide to fire their workers. At the same time, when a worker decides to voluntarily quit a company, only a part of the severance accrued is paid. In 2011, only 7 percent of dismissed workers received full severance pay. Thus, the severance pay neither protects workers nor encourages formal employment. As a result, for instance, workers leaving farm or rural non-farm activities are stuck into slightly higher but still low-productivity informal sectors. *Revising the severance pay provision of the labor Law* could significantly improve the functioning of the labor market.

The minimum wage setting process is another critical labor market issue to tackle in improving the functioning of the labor market. Since 2011, there is a significant departure from the moderate pace in minimum wage increases observed over most of the past decade. In 2012, 25 Provinces increased their minimum wage by an average 30 percent and Jakarta increased it by 44 percent. While workers in Jakarta see these increases as "normal" given the cost of living in this metropolitan area, in the absence of commensurate labor productivity increases, Indonesia's competitiveness and firms' capacity and incentive to create jobs in the formal sectors are reduced. Perhaps even more problematic is the uncertainty of the minimum wage setting process, which can encourage firms to replace labor by capital when they make their investment/expansion decisions.[103] To support formal job creation and structural transformation, consultations between employers, workers and the Government in view of *adopting new minimum wage setting formula based on cost of living, inflation and productivity* (as mandated by a recent Presidential guidance) is crucial.[104]

The Government has announced a revision to the minimum wage setting process on 23 August 2013, as part of a policy package designed to address Indonesia's external imbalances.[105] The change to the mechanism for setting provincial minimum wages outlined

103 See Indonesia Economic Quarterly, October 2013 for more details.
104 A more thorough diagnostic of Indonesia's financial sector is warranted in order to identify specific, high priority reform areas.
105 A significant share of high-wealth savers have actually chosen to intermediate their resources offshore.

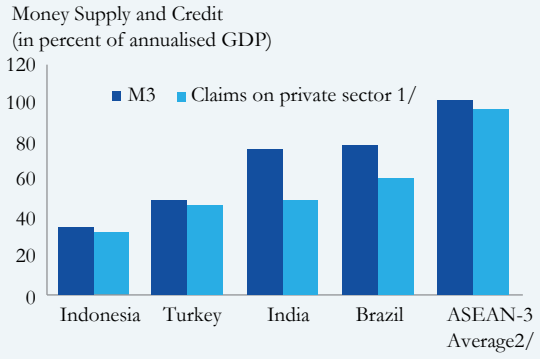
a mechanism for achieving a more certain, simple, and fair minimum wage setting process. The aim is to make employers, workers and job seekers better off by promoting a more evidence-based and less politicized wage-setting process. This is expected to lead to more predictable annual increases, and, by introducing improvements in the governance structure, reduce the scope for discretionary decision making.

3. Deepening Financial Markets

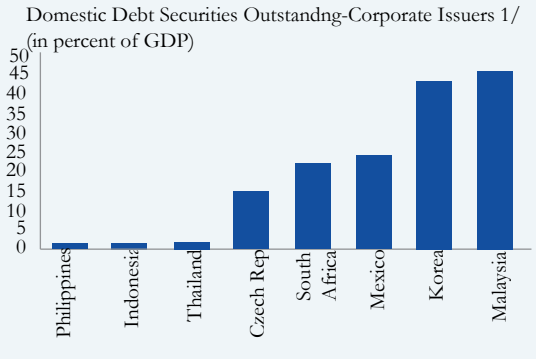
Key relevant financial market issues

There is ample evidence that enterprises in Indonesia are credit constrained (IMF 2012). Firms, to a large extent, tend to rely more on retained earnings than on bank credit for the expansion of their activities, which in turn means that current cash flow becomes the major factor in investment decisions. This has significant implications for the types of investments taking place in the economy, particularly in innovative firms that usually have negative cash flows in the early stages of operation, and need bank or non-bank financing to grow and create high quality jobs. The credit constraint faced by firms reflects the lack of depth of Indonesia's financial market. The financial sector is dominated by banks (78 percent of assets) and its claims to the private sector stand at only 35 percent compared to close to 100 percent on average for Malaysia, Thailand and the Philippines. Capital markets are thin with corporate domestic debt securities (outstanding) accounting for less than 5 percent of GDP, similar to Thailand and the Philippines but much lower than the 45 percent for Malaysia. Pension fund assets are also relatively low compared to the size of the economy (5 percent compared to 10-15 percent in the Philippines and Thailand and 40 percent in Malaysia).

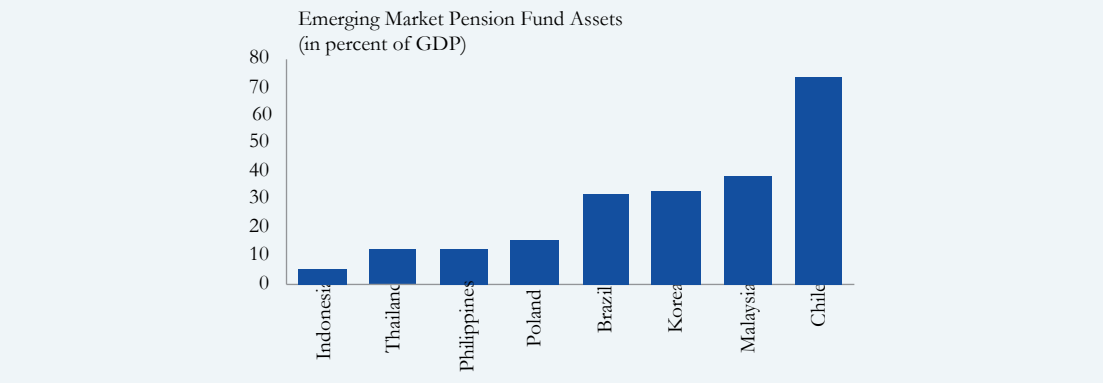
Figure 6.7: GDP Key financial market indicators



Source: CEIC data Co. Ltd; IMF, Integrated Monetary Database; and IMF staff estimates.
Note: 1/ Claims on private sector credit at Financial Corporation Survey Level, 2/ Includes Malaysia, Thailand and the Philippines.



Source: Bank for International Settlement; IMF, *World Economic Outlook*; IMF staff estimate.
Note: 1/Includes financial institutions and other corporate issuers.



Source: Economist Intelligence Unit: Investment Company Institute; CEIC Data Co, Ltd.; IMF, *World Economist Outlook*; and IMF staff estimate

Policy options[106]

A part of the shallowness of Indonesia's financial market will be difficult to overcome because it reflects deep risk aversion behavior: following the 1997-98 financial crisis, both savers and investors moved into the shorter end of the maturity spectrum. Insurance, investment funds, and corporate bonds issuance, for example, have grown in recent years but still do not contribute significantly to the pool of domestic long-term savings and investments.[107]

Public policy can however nudge the system toward greater financial depth. For instance, the development of the corporate bond market appears particularly constrained by strict investment requirements, high underwriting costs and weaknesses in the execution regime. International experience emphasizes the role of building a credible legal system that allows for the effective enforcement of contracts and property rights and provides investor protection. Financial contracts are defined and made more or less effective by legal rights and enforcement mechanisms. From this perspective, improving Indonesia's legal system would facilitate the operations of markets and intermediaries. This relates to improving the quality of the business environment more broadly, as financial sector actors, just as investors themselves, need a minimum level of certainty when making long-term financing decisions.

The recent reforms of the social security regime further present an opportunity to deepen financial markets. The newly created Social Security Organizing Body (BPJS), which replaces JAMSOSTEK, will be expected to cover ten times the number of workers it does now (from 12 to 110 million, at least), which will multiply by a significant factor the amount of assets under management and would require a re-assessment of BPJS's investment strategy. By regulation, JAMSOSTEK was not allowed to invest in instruments rated less than A-, with most funds invested in government bonds and bank deposits. Given that BPJS is set to become the largest institutional investor the market, this presents an opportunity to widen the choice of eligible investments, including corporate obligations that are not A rated. In this connection, moving into an investment strategy of higher risk (and presumably higher reward) would of course need to be accompanied by tighter transparency and accountability requirements. In addition, private

106 A more thorough diagnostic of Indonesia's financial sector is warranted in order to identify specific, high priority reform areas.
107 A significant share of high-wealth savers have actually chosen to intermediate their resources offshore.

sector institutional investors, such as insurance companies and private pension and mutual funds, should be allowed to similarly widen its spectrum of investment opportunities, including in the infrastructure bonds market. Finally, in order to enhance market depth and liquidity, regulations should be put in place to regulate the creation of special investment vehicles and to allow the conduct of repurchase agreements with private corporate obligations.

4. Land markets

A lack of clarity in regulations governing land acquisition and the compensation to landowners has caused delays to infrastructure projects, particularly toll roads. The rules and procedures in the regulation of a 2005 Presidential Regulation on Land Acquisition for Infrastructure Development are indeed vague in the face of a complex problem. Indeed, as in many developing countries, it is not unusual that many individuals claim the rights to the same piece of land. Legitimate or illegitimate landowners also frequently hold onto their land to benefit from an appreciation in value or enhance their negotiating power. Thus investors in infrastructure, whether public or private, have to overcome this hurdle before shovels hit the ground, leading to higher costs and significant delays. Land acquisition is one of the key factors behind the slow execution of infrastructure projects (especially roads and electricity) in Indonesia, and perhaps also behind the reluctance of the private sector to invest on a large scale in this sector.

A new Land Law is, however, expected to improve the clarity and transparency of the land acquisition process, and strengthen public confidence in the Government's efforts to advance the infrastructure agenda. Drawing on the lessons from the 2005 regulation, the new land Law is more specific in most areas and can significantly improve the procedures for acquiring land for public infrastructure.[108] Areas of significant improvement include the process for land valuation, the mechanisms for grievances, and the compensation for affected or displaced individuals.[109] For instance, the new regulation provides specifics about the inventory of affected people and assets, the consultation process, the compensation, and the dispute settlement. It also sets a specific timeframe for each of the acquisition stages and sub-stages, including the maximum time that a court may take to resolve disputes related to land acquisition. Barring any unforeseen implementation hurdle, the new Law should help.

108 A Presidential Regulation No. 71/2012 sets the institutional arrangements for implementing the law.

109 In 2012, the GoI issued several pieces of legislation relating to land acquisition to be carried out for projects of public purpose (Law No. 2/2012 in January 2012; Presidential Regulation No. 71/2012 in August 2012; and technical guidelines issued by the relevant ministries). These replaced previous presidential regulations that had been unable to support accelerated infrastructure development in Indonesia while ensuring that people affected by the negative impacts of associated land acquisition were adequately protected. Pursuant to Law No. 2/2012, Presidential Regulation No. 36/05 as amended is valid until 31 December 2014. The new legislations procedure applies to the acquisition of land under the authority and control of the National Land Agency. If land needed is under the authority of other ministries such as Ministry of Forestry, then before such land can be dealt with under the new legislations procedure, it must be released from forest zoning pursuant to applicable forestry legislation or other relevant legislation like mining, natural gas, etc.

Part 3
Indonesia in the Next Decade: Sharing Prosperity More Widely

Chapter VII. Improving Access to Quality Services for All

Chapter VII. Improving Access to Quality services for All

While generating prosperity, which involves growth in average incomes and job creation, i.e., an increase in the "size of the pie", is central to enhancing people's well-being, it is not enough. Improving living standards is not only an income story. Greater access to good quality essential services, which only partially depends on incomes, is necessary. In Indonesia, a large number of households classified as non-poor are poor in many dimensions including poor access to decent housing, transportation, water, sanitation, health and education. For households residing in urban as well as rural areas, especially the poor, vulnerable and some in the middle-class, greater income and prosperity will not translate fully into enhanced living standards as long as access to key services is not improved.

The past decade has seen overall progress in the population's access to key services such as education, health, water and sanitation and electricity. However, the progress has been uneven and unequal, leading to wide disparities across geographic and income levels, and undermining inclusive growth. For all basic services, access is disproportionately lower for the rural population, even if in some areas the progress has been remarkable in rural areas as well. Yet, even in urban areas, access to high quality services such as inner-city transportation, transport links to markets and other cities, water and sanitation, and affordable housing remain poor relative to Indonesia's wealth and level of income. Going forward, as income poverty further declines, the extent of non-income poverty will come to the fore and will need to be tackled more aggressively to foster a more inclusive society.

The high hopes placed on decentralization reforms to improve public services for all are yet to fully materialize. Thirteen years after the beginning of Indonesia's decentralization, formal subnational state institutions of governance have become more active from the district to the village level. Where good leaders have emerged from the democratic process, the constraints imposed by the system (e.g., flaws in the inter-government fiscal transfers, see below) have not prevented remarkable progress. But in most cases, the constraints imposed by the decentralization framework combined with weak governance have led to inadequate service delivery. Providing good quality services for all rests a multi-dimensional set of policies to improve public finance management and strengthen demand-driven community programs.

1. Poverty and Institutional Context

Trends in urban and rural poverty[110]

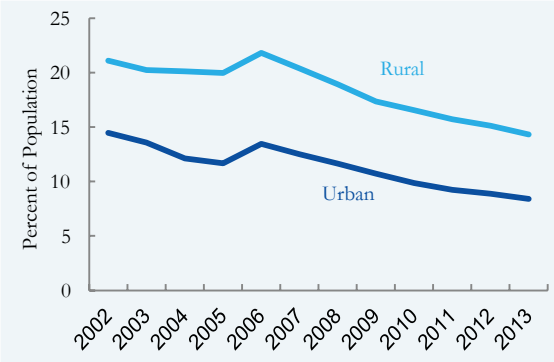
At 8.4 percent in 2013, urban consumption-poverty rate is much lower than in rural areas (14.3 percent) and has steadily declined over the past decade (it was 14.5 percent in 2002). As discussed in Chapter 2, the sharp decline in urban poverty is largely a job creation story. Mas-

110 The definition of "urban" and "rural" follows the Statistics Agency (BPS) Regulation. Urban/Rural is determined by considering a village-level administrative area and assessing the extent to which it meets a large number of criteria including population density, percentage of agricultural households, percentage of household with access to land-line telephone and electricity, availability of school facilities, hospital and market. Based on this definition, a village (desa) can either be categorized as urban or rural. The 2011 Village Census (PODES, 2011) shows that around 10 percent of Indonesia's 69,700 villages are classified as urban areas.

sive jobs were created in urban areas, as rapid urbanization and strong GDP growth supported the expansion of firms, especially in the services sectors. Rural poverty has enjoyed a similar rate of reduction as in urban areas over the past decade. However, it remains nearly twice as high, at 14.3 percent in 2013, compared with an 8.4 percent urban rate (Figure 7.1). As with poverty nationally, rural poverty rates are highest in eastern Indonesia (nearing 40 percent in Papua), but almost half of all rural poor live in Java (Figure 7.2), highlighting the policy need to focus on all regions of the country when addressing rural poverty.

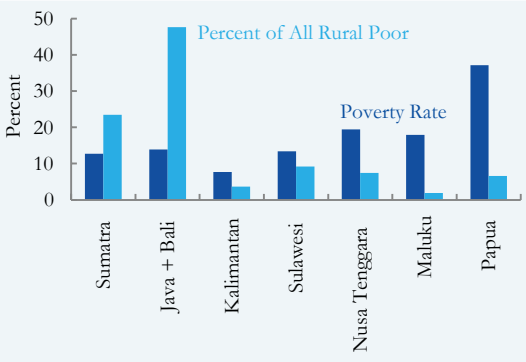
The decline in rural poverty reflects a number of factors, including an outmigration of low productivity workers to urban areas, which increased the contribution of productivity to growth in agriculture. Although agriculture contributed only 10 percent to aggregate growth on average in that period (see Chapter 1), total factor productivity (TFP) explained 60 percent of that growth (OECD, 2012). This increase in TFP was supported by a diversification away from food staples into palm oil, rubber, coffee and tea production, all of which have seen rapid increases in world prices.[111] Rural dwellers have also indirectly benefited from growth and the sharp recovery in urban job markets since the mid-2000s (remittances and linkages with growing proximate urban markets).

Figure 7.1: Urban and rural poverty, 2002-13



Source: BPS.

Figure 7.2: Rural poverty by region, 2013



Source: Susenas and World Bank calculations.

Changes in the institutional context: decentralization

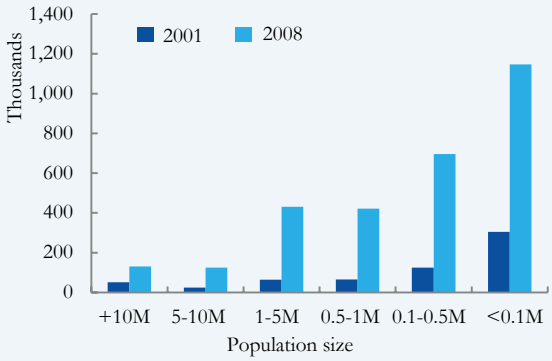
Indonesia underwent a swift transition to democracy in 1998 followed by "big-bang" decentralization in 2001. In 2005, subnational governments (provinces, regencies (kabupaten) and municipalities (kota)) held their first direct elections.[112] At the same time, significant responsibilities were devolved to districts and municipalities. Clearly, the empowerment of subnational governments over the past decade has made them increasingly critical in achieving Indonesia's development goals.

Consistent with the increased responsibilities, local governments were given extensive expenditure responsibilities while the tax system remains mostly centralized.[113] The assignment of new functions to the subnational level was accompanied by a massive reallocation

111 OECD Agriculture Policy Review Report, 2012, p.5-6.
112 Regencies and municipalities form what is often referred to as "districts".
113 Some transfer of tax responsibility has occurred since property and transfer of property taxes have now become local taxes.

of funding—subnational expenditure grew from 2.7 percent of GDP in 2000 to 7.2 percent of GDP in 2011. Subnational-governments now manage about half of total core public spending (i.e., excluding central government subsidies and interest payments). The vision and expectation behind this increase in subnational governments' responsibilities and financial capacity were to enhance service delivery.

Figure 7.3: Per capita spending on infrastructure varies by metropolitan size



With decentralization most of the responsibilities for providing public services, including infrastructure, fall on subnational governments (SNG). However, the largest expenditure item for most SNGs in Indonesia is salaries, which leaves little room for capital investment in infrastructure. On average from 1997 to 2009, SNGs' investment in capital infrastructure was only 0.72 percent of total GDRP. Meanwhile, per capita infrastructure spending varies depending on city size (Figure 7.3). Metropolitan areas with populations of over 10 million and populations of 5 to 10 million spent similar amounts on infrastructure, while metropolitan areas with populations of 1 to 5 million spent comparable sums as cities with populations of 0.5 to 1 million. However, the metropolitan areas with populations of 1 to 5 million have lower GRDP per capita compared with other cities/metropolitan areas, while cities with populations of 0.5 to 1 million have the highest GRDP per capita in the country. This shows that investment efficiency also differs depending on city/metro size, as higher spending on infrastructure does not always result in higher economic returns.

2. Access to High Quality Services in Urban Areas

For Indonesia, closing the gaps in access to high quality basic services access would greatly enhance living standards and the quality of urbanization for all. Shaping urbanization to enhance living standards for urban populations entails, at different degrees depending on the region, improving access to a few key infrastructure services (where the gaps are highest), affordable higher quality housing, as well as better connectivity to markets and other cities.

Access to basic infrastructure in Indonesia's urban areas is better than in rural areas and has improved overtime, but the quality of urbanization could greatly improve with higher quality water, sanitation and transport services. In 2012, 77 percent of Indonesia's urban population had access to safe water (versus only 51 percent in rural areas) while76 percent had access to sanitation (versus 59 percent in rural areas). These averages hide large variations across provinces. For instance for access to safe water, the lowest rates in Bengkulu and Gorontalo (40 and 50 percent, respectively) contrast sharply with the high rates in Jakarta and Bali (91 and 84 percent, respectively). For sanitation, the low rates in most provinces in Sulawesi contrast with the high rates in Riau and Kepulauan Kalimantan. These differences notwithstanding, the quality of sanitation services is generally low. For instance, sewerage coverage exists in only 11 cities, while only 2 percent of the urban population had access to centralized sanitation systems in 2009.

Low rates of sewerage and sanitation coverage and weak solid waste management collection and management system cause widespread contamination of surface and groundwater. About 85 percent of small cities and more than 50 percent of medium cities dispose of their waste in open dumps. As a result, Indonesia has experienced repeated local epidemics of gastrointestinal infections and has the highest incidence of typhoid in Asia. Furthermore, the relatively poor performance of local water utilities has contributed to excessive reliance on private wells, and excessive groundwater extraction and subsidence in parts of urban Indonesia. Government Regulation No. 81/2012 provides a basis for action in improving the management of solid waste. The Ministry of Public Works is supporting subnational governments to improve the infrastructure facilities to manage municipal solid waste, including landfills. Enforcement of regulations and implement however need improvement.

Transportation services are another key issue for urban dwellers as data from Susenas reveal that 26 percent of urban residents have poor access to transport services. Lewis (2014) finds that many cities in Indonesia fail to invest enough in infrastructure to keep pace with the increasing demands of rapidly growing cities. This causes increasing congestion, as the existing infrastructure becomes inadequate in serving the growing population and expanding economic activities. Chapter 4 highlights the large investment gaps and needs in basic infrastructure, including transport, safe water, sanitation and drainage at the national level. Chapter 6 highlights the challenges and opportunities for developing local transportation services in urban areas.

In addition to transport, water and sanitation, the other key factor in urbanization quality in Indonesia is affordable, higher quality housing. Indonesia is rapidly urbanizing with a young population that will demand housing. So far, the majority of housing needs in Indonesia (around 80 percent) have been met by incremental and self-built housing. However, access to urban land is declining and prices are rising (nationwide residential property price growth was 10.7 percent year-on-year in Q2 2013) while financing is now tightening and is likely to remain tight in the years to come. In brief, the affordability of housing is declining, especially for low-income groups. While estimates of Indonesia's housing deficit vary, all indicate a significant backlog in supply. One analysis for the 2001-07 period estimates a deficit of 1.7 million units, and suggests that in order to meet future needs between 600,000 and 900,000 housing units should be built per year. This number increases as urbanization continues. For the period 2014-21, it is estimated that 700,000 to 1 million units of housing per year will be needed.

3. Access to Improved Essential Services in Rural Areas

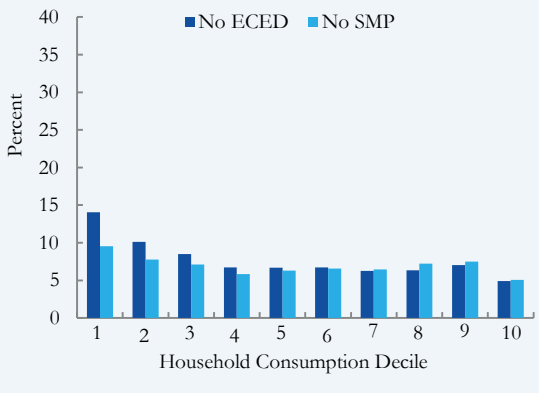
Despite progress over the past decade, in general access to quality services is significantly lower for rural households, with the notable exception of primary education, where remarkable progress was made in access equity. The gap in access between urban and rural areas is largest for water and sanitation but is prevalent for all essential services.

Most rural children now have access to education facilities nearby. Almost all children have a primary school (SD) in their village or neighborhood. Less than 10 percent of rural children do not have a junior secondary school within 6km (Figure 7.4), although this increases to around 35 percent when considering schools within 1km. Nonetheless, access still favors

children of wealthier households; rural children in the poorest consumption decile have twice the chance of lacking access than children in the richest decile. The same pattern holds for early childhood development centers (ECED), where 14 percent of children in the poorest decile lack an ECED center within 6km (increasing to 21 percent within 1km), compared with just 5 percent in the richest decile (10 percent within 1km).

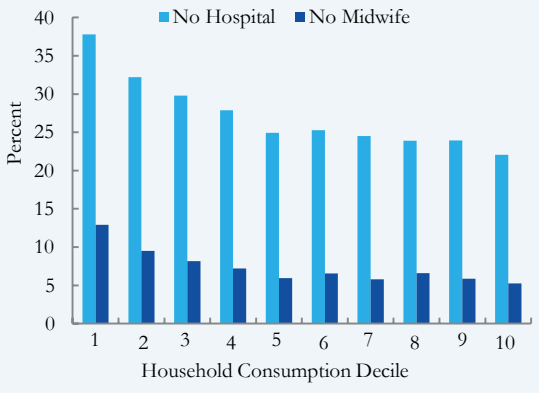
Access of rural children to health care is considerably lower than for education (Figure 7.4). Over one quarter do not have easy access to a hospital, with the lack of access for those in the poorest decile nearly twice that of the richest. A midwife in the village is more common, but still favors richer households. Delivery challenges are particularly acute with enormous supply-side constraints outside of Java/Bali, Sumatra and Sulawesi. At the national level, there is a sharp shortage of doctors. The ratio of doctors in Indonesia is 0.2 per 1,000, one of the lowest in the region. The availability of hospital beds is also low relative to demand. In terms of inpatient capacity, Indonesia faces an estimated shortage of 13,875 beds. This shortage in doctors and hospital beds leads to rationing. Rural and remote areas are disadvantaged in that they not only have fewer health facilities but also face the difficulties associated with the retention of health personnel. Access to high quality care is also constrained by the lack of basic amenities and medical equipment in Puskesmas (community health centers) and other health facilities especially for key services such as antenatal care, basic obstetric care, and non-communicable diseases.

Figure 7.4: Child 0-15 access to education by rural household per capita consumption decile, 2011



Source: Susenas and World Bank calculations.
Note: No ECED or SMP within 6km. Deciles are for per capita household consumption.

Figure 7.5: Child 0-15 access to health by rural household per capita consumption decile, 2011

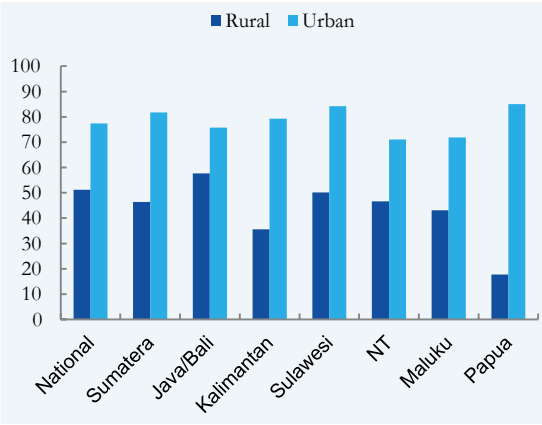


Source: Susenas and World Bank calculations.
Note: No easy access to hospital. No midwife in village. Deciles are for per capita household consumption.

Indonesia's high maternal mortality ratio (220 per 100,000 live births) is mostly driven by rural areas and is at odds with universal maternal health coverage since 2011. Askes (formal public sector social insurance), Jamsostek (formal private sector social insurance), and Jamkesmas (social health insurance program for the poor and near-poor) include maternal health benefit entitlements. Since 2011, those not covered by existing health insurance programs have coverage through Jampersal, a central government-financed program that provides a comprehensive maternal health benefit package. Jamkesmas and Jampersal promote institutional delivery in public and private facilities to reduce the risk of maternal deaths associated with home deliveries. The Government has also invested in improving basic and comprehensive obstetric and neonatal emergency care to strengthen referral and management of maternal and neonatal complications.

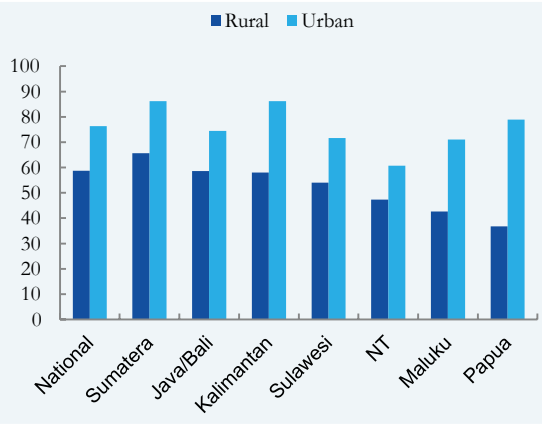
Rural dwellers are behind on all indicators of access to basic services such as safe water, sanitation, and electricity and housing conditions. The gap in access between urban and rural areas is largest for water and sanitation but is prevalent for all essential services (Figures 7.6 to 7.9).

Figure 7.6: Access to safe water (2012)
(% of total households)– see note below



Source: Susenas and World Bank calculations.
Note: No ECED or SMP within 6km. Deciles are for per capita household consumption.

Figure 7.7: Access to proper sanitation (2012)
(% of total households)– see note below



Source: Susenas and World Bank calculations.
Note: No easy access to hospital. No midwife in village. Deciles are for per capita household consumption.

Figure 7.8: Access to electricity (2012)
(% of total households) – see note below

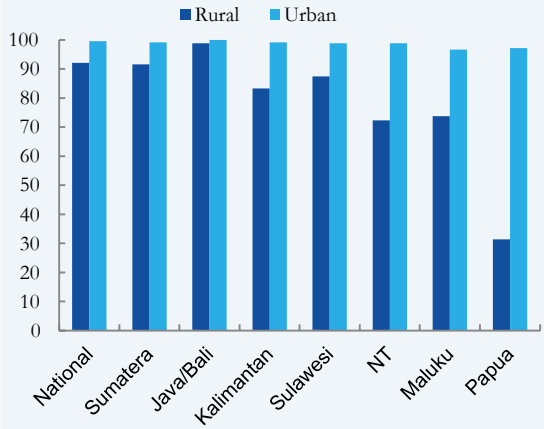
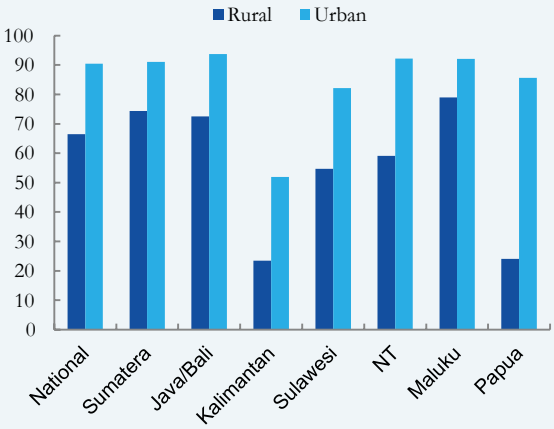


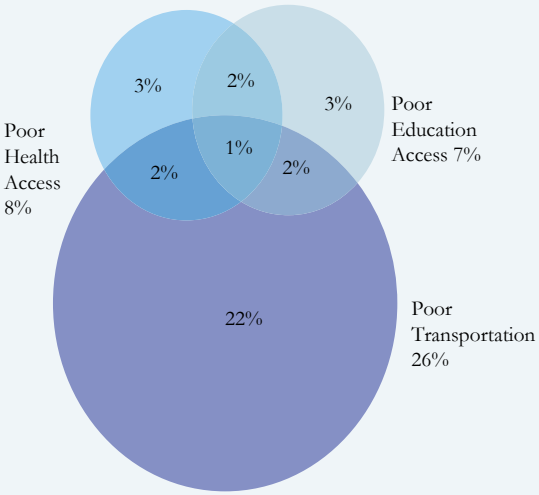
Figure 7.9: Access to quality housing (2012)
(% of total households) – see note below



Source: All data is generated from Susenas, 2012
Notes:
Safe water: All households that uses packaged water/refill water ("air isiulang")/tap water/pump/protected well at least 10 m away from a septic tank/protected spring at least 10 m away from a septic tank as drinking/washing source.
Sanitation: All households that own personal (not public or shared) sanitation facility.
Electricity: All Households that has electricity installed (both using the State Electricity Company, PLN or from other sources). These numbers reported directly by households differ from PLN's numbers that do not include illegal connections and other unreliable connections (e.g. connection for just a few hours a day).
Quality housing: All housing with the widest type of floor made of marble, granite, ceramic, tiles or concrete.

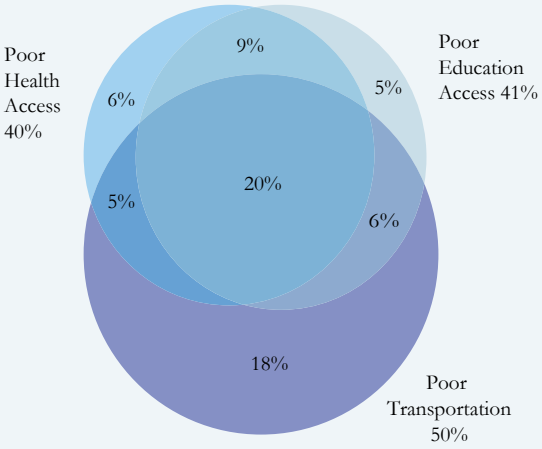
Furthermore, it is often the same households that lack everything at the same time. A key consideration for equality of opportunity is not just whether particular communities, such as rural ones, are lagging on any particular indicator, but in addition whether those households that are poor on these indicators are the same ones or not. Urban households that have poor access to health services, for example, generally have satisfactory access to education and transportation services (Figure 7.10). However, in rural Indonesia it is often the same households that are deprived of all of these opportunities (Figure 7.11). Greater investment in rural infrastructure is needed to provide the same opportunities to these households as in other parts of Indonesia.[114]

Figure 7.10: Urban access to services, 2011



Source: Susenas, Podes, World Bank calculations

Figure 7.11: Rural access to services, 2011



Source: Susenas, Podes, World Bank calculations.

4. Policy Options for Improving Access to Services for All

As income poverty declines, improving access to and quality of basic services will have a significant impact on living standards. This requires addressing some of the challenges in local service delivery (supply-side) by: (i) reallocating more resources to front-line service delivery, which requires improving the incentive structure of the fiscal transfer system; (ii) spending better, which implies enhancing the efficiency/quality of spending; and (iii) refocusing local and central bureaucracies to be accountable for results rather than for compliance to specific rules only. At the same time, decentralization has brought with it improved access to information, a vibrant civil society and media, and increased engagement in local political processes that offer an opportunity of improving accountability for results and service delivery from the demand side.

More resources to front-line services and less on personnel & administration

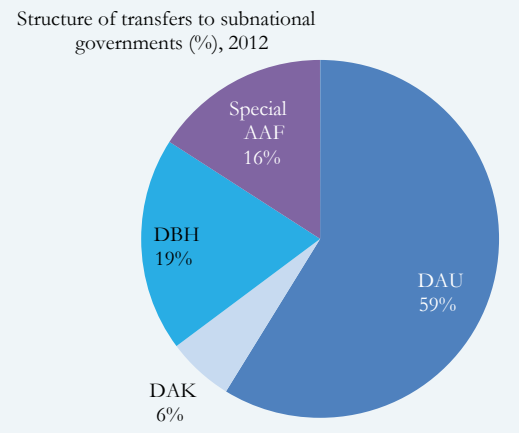
The incentive framework implicit in the central-to-local government fiscal transfer system has created a basic "Principal-Agent" problem. Essentially, local governments receive about 90 percent of their budgets from the central government (fiscal transfers). However, the central government has no effective mechanism to significantly influence the composition of local governments' spending. Subnational government spending is excessively dominated by

114 See Hadiwidjaja, Paladines and Wai-Poi (2013) "The Many Dimensions of Child Poverty in Indonesia".

spending on administration over productive sectors and on personnel over maintenance and capital spending. Improving the "allocative" efficiency of local government budgets by reallocating more resources to front-line service delivery is an important step in improving the rural population's access to basic services.[115]

Increasing the proportion of local governments' budgets tied to specific sectors and performance could help improve the alignment of spending with the population's needs. Subnational transfer revenues in Indonesia are dominated by a "block grant" component (DAU) relative to transfers tied to special purposes. Block grant transfers are untied, facilitating excessive subnational personnel expenditure, leaving little space for transfers that could be tied to front-line service provider levels. In 2012, the DAU made up almost 60 percent of central government transfers to subnational governments. The specific purpose grant (DAK), allocated to certain regions with the aim of funding special activities of the region in accordance with national priorities, only cover 6 percent of these transfers. Other transfers are revenue-sharing (DBH), the special autonomy fund (Dana Otsus) for Aceh, Papua and West Papua provinces and a number of adjustment funds (Dana Penyesuaian). Revenue-sharing aims at sharing tax and non-tax natural resource revenues with all districts with a larger proportion of revenues going to resource-rich districts where the revenues originated. Adjustment Funds include additional allowances for teachers, professional benefits for teachers, School Operational Assistance program (Bantuan Operasional Sekolah, or BOS), local incentive grants (Dana Insentif Daerah, or DID) and various infrastructure support funds.

Figure 7.12: The structure of fiscal transfers to local governments



Source: Ministry of Finance

Going forward, increasing the share of the DAK in the total allocation and refocusing the DAK's targeted sectors to a few critical ones (e.g., water supply, sanitation, education and health) could greatly support service delivery. While claiming a small share of the total transfer, the DAK is overly fragmented, scattered across too many sectors and districts, and thus unable to significantly increase the capacity to delivery services. In addition, allowing local governments more space for own-source revenue collection would also help. International experience shows that limited own-source revenues and over-reliance on transfersinduce fiscal relaxation and can reduce local spending efficiency and accountability.

Provide alternative financing options to local governments

Rather than relying only on local government budgets, Public-Private Partnerships (PPPs), municipal bonds, and intermediary financing can be promoted as alternative means of financing for infrastructure at municipalities. Subnational governments in Indonesia rely heavily on intergovernmental transfers as many have limited fiscal capacity and revenue

115 See for instance, World Bank (2012). Indonesia Subnational Public Expenditure Review: Optimizing Subnational Performance for Better Services and Faster Growth.

collection. As a result, most infrastructure investments are financed from local government budgets (APBD), which are insufficient to satisfy Indonesian cities' huge infrastructure needs. Since 2013, property taxes that were previously managed by the central government have been transferred to district and city governments, bringing more revenue to local governments. Table 7.1 shows alternative means of financing for different types of infrastructures. They include Public-Private Partnerships (PPPs), municipal bonds, and intermediary financing.

Table 7.1: Alternatives for financing different types of urban infrastructure

PPPs for commercial infrastructure	Toll roads, airports, ports, markets. Bankable investments are limited, unlikely to be more than 10-15 percent in most mature PPP environments.
Direct market borrowing from commercial banks or bond markets for large cities and provinces with strong finances.	Entity rather than project finance. Undeveloped market to date in Indonesia.
Larger, multi-year structural investments through financial intermediaries **(e.g. water, sanitation, solid waste management, drainage, urban transport) in large, medium and small cities.**	Economically rather than financially viable, i.e. no direct revenue stream. No existing source of reliable financing, 'missing middle'. National budget finite and retail multi-lateral financing unpredictable and inadequate, retail Subsidiary Loan Agreements (SLAs) unsustainable model. Financial intermediary can wholesale entity-based financing (on-lending to SNGs), and in the medium-term access private sources of finance through pooled bonds and related instruments.

Enhancing the quality of spending

A necessary complement to allocating more resources to the right areas is to improve the quality of spending. Quality of spending is measured by whether spending is efficient and effective—i.e., how well inputs (spending) is translated into outputs and desirable outcomes—in a sustainable manner. Over the past decade, the increased spending by local governments was only weakly (or not) associated with an improvement in outcomes (Figures 8.12 and 8.13).[116]

Improving the quality of spending requires enhancing intra-sectoral allocative inefficiencies in terms of the allocation of spending across different programs and areas within a sector. For instance, the significant increase in education spending over the past decade has mostly gone on teacher salaries due to acceleration in teacher hiring (now Indonesia has one of the lowest student-teacher ratios in the world) and certification (salaries doubled for certified teachers). However, there is evidence that teacher numbers and certification are not linked to better educational outcomes, as measured by student performance; Indonesia's student learning outcomes in reading, math and science remain low compared with other countries and have not improved in this period.[117] In the road sector, subnational road spending has increased but new

116 This evidence is also found when one focuses on resource-rich districts, that have experienced the highest increases in spending. Consistent with the revenue sharing mechanism (DBH), resource-rich subnational governments have seen a sharp rise in their budgets. That increased resource revenues are associated with increased spending on infrastructure, education and health. This association is further supported by ongoing World Bank on extractive industry and development in Sulawesi, which suggests that increases in resource revenues were largely directed towards capital (infrastructure) spending. However, increased share of natural resource revenues is only weakly associated with improved social outcomes.

117 World Bank (2013): *Spending More or Spending Better: Improving Education Financing in Indonesia.*

development has taken priority over road maintenance leaving 40 percent of district roads in poor or damaged conditions. However, the evidence is that investing in maintenance of village infrastructure brings a higher return than upgrades, which local governments tend to focus on.[118] Reallocation of district governments' road budgets towards maintenance instead of upgrades can clearly enhance the quality of roads and the satisfaction of the population.

Clarifying missions, refocusing the bureaucracy to be accountable for results

Service delivery is constrained by a lack of clarity in the assignment of service responsibilities across levels of government. Internationally, the dearth of clarity regarding functional assignments is well known for reducing the efficiency and accountability of local spending. In the case of Indonesia, the main issue lies in the functional assignments across the different levels of governments concerning health, education, and infrastructure. Central government line agencies spend their own budgets on local functions through de-concentration (Dekon) and co-administration (TP) fiscal transfer mechanisms. Recent research suggests that central TP expenditure crowds out capital spending by local governments. Funds that were allocated to be spent on capital were either saved or spent on less important activities. Furthermore, unclear assignment of responsibilities limits the empowerment of local authorities and the potential involvement of civil society.

Refocusing the bureaucracy to be accountability for results would also support high quality service delivery. The bureaucracy (both central and local) is highly geared towards input controls, which focus on compliance. An accountability framework focused on compliance undermines the focus on results and service delivery performance. The central government does monitor service delivery and regional growth performance, but provides limited incentives to encourage or require subnational spending performance against those outcomes. A culture of rewarding subnational governments for achieving good results can enhance competition between local governments and encourage improved service delivery. The paradigm shift in resource management towards greater focus on results should also happen at the central government level, which also heavily focuses on input controls and compliance.

In turn, focusing on results will force the central government to take into account (e.g., in the intergovernmental finance system) local differences in size and other characteristics, shifting away from the current one-size-fits-all approach. For instance, some districts have significant gaps in access whereas others have simply a quality of service problem as access is not a problem. Ideally budget allocations and program focus should be tailored to each different situation. In the education sector for instance, some districts need no more teachers but do need allocations to enhance curriculum programs. The plan to centralize the hiring and distribution of teachers runs counter the need to tailor budget allocations to local needs. Also, from a fiscal point of view, there are strong arguments in favor of treating large municipalities differently from smaller ones and rural districts.

Strengthening Community-driven programs and demand-side accountability

Decentralization has brought with it opportunities in increased engagement by civil society, community leaders and private sector leaders in shaping their future. Improved access to information, increased public-private sector dialogue and engagement in local politi-

118 Government of Indonesia (PNPM): 2010: *Village Capacity in Maintaining Infrastructure: Evidence from Rural Indonesia.*

cal processes are improving local economic governance and development. Although there is no clear-cut solution to organizing the demand-side pressure for better service delivery, there exist some local success stories where mobilizing the demand-side has helped to improve the service delivery of public goods and service delivery. This has taken for instance the form of pressuring local leaders into passing new local policies or implementing already existing policies.

A number of policies are in place to encourage or support community and civil society involvement in development initiatives, including local service delivery. The largest of these is PNPM-Mandiri Rural, which provides small-scale public infrastructure in local communities utilizing a community-based approach in which communities: plan, prioritize and decide their own needs; implement the projects; manage and account for funds; and maintain the assets built.[119] Since a pilot in 1998, the program has grown under the PNPM-Mandiri umbrella to nationwide coverage of over 6,000 kecamatan (districts) across Indonesia. The program has financed the construction of more than 100,000 km of rural roads; 17,000 small bridges; 40,000 clean water systems; and the rehabilitation or construction of 43,000 schools and health facilities. It has also supported more than 301,000 business activities conducted by women since its inception with a total commitment of US$3.6 billion (Rp 33 trillion) over the period 1998-2015.

Presidential Instruction No. 3/2010 mandates that the participatory, community-driven planning process used in PNPM Mandiri, the Government's flagship community empowerment program, be used as the basis through which to develop integrated medium-term village development plans. Presidential Instruction No. 15/2010 identifies the role of national and local government agencies in coordinating and overseeing community empowerment and poverty reduction program implementation.

Box 7.1: The new Village Law and basic service delivery

After several years of deliberations, a Village Law was approved by the House of Representatives (DRP) in December 2013. The law was initiated by the Government as a means to address existing weak governance arrangements in villages and empower communities to meet their own development needs, including provision of basic infrastructure and oversee public spending. One of the main notions behind the law is to institutionalize PNPM Mandiri (the Bank-supported National Program for Community Empowerment) by enshrining community-driven development principles into the legal framework. As part of that, and once the law is fully implemented in 2015, villages will receive significant increased financial transfers. These will support the execution of village medium-term development plans that have been developed in a participatory manner by community members. This can include territory infrastructure and village-scale facilities for job creation. The law also provides for greater accountability of the village government to villagers, through a democratically elected Village Council and through annual Village Assemblies that might improve the quality of village spending. However, the law does not include provisions that would strengthen the accountability of district governments or front line facilities to village governments and communities. This needs to be addressed in the on-going revision of Law No. 32/2004 on Regional Governance.

119 PNPM-Mandiri Rural includes a sub-component called PNPM Mandiri 'Healthy and Bright Generation' (PNPM Generasi) which incentivizes communities to utilize basic health and education services, provides resources to facilitate community action in delivering certain basic services and monitoring service delivery. PNPM Generasi is now being scaled up to reach at least 500 poor, rural districts by 2014. Government is also planning a second phase of the innovative PNPM Peduli program, which provides resources and capacity support to Indonesian civil society organizations that work to empower marginalized groups.

Going forward, greater empowerment of potential "agents of change" can further help service delivery at the village level. First, civil society organizations (CSOs)or non-government institutions may use different strategies to mobilize demand, including constructive engagement, confrontational and adversarial approach, and technical/research assistance. However, CSOs also have their weaknesses. Many CSOs operate in an uncoordinated manner with a generally low level of capacity, are concentrated in Java, and may be elitist in their attitude and detached from everyday citizens' concerns. Buehrer (2011, 2013) also argues that the influence of some CSOs is confined to agenda-setting and the adoption stage of the policy cycle, but rarely extends to the implementation stage of the policy cycle because CSO members are not represented in government positions.[120] Another issue with CSOs is the institutional issue of 'scaling-up'. Very few community agents have the scale and ability to work effectively at the national level, i.e., covering a critical mass of communities. The PNPM program and school committees in the case of education are notable exceptions.

The business community. The business community is often an effective advocate for public good supply and has at times been an "agent of change", especially in the area of infrastructure provision and a friendly business climate. For example, the business community initiated the discussion on logistical issues starting in 2008, which has snowballed into the Government formulating a national plan to improve domestic logistics. There is, however, no strong and widespread evidence of the business community being a strong agent of change at the local level. This may relate to some of the constraints faced by the private sector in its relations with the state, including dependence on the Government for contracts, compliance with the tax code and the extent to which business associations represent the variety of businesses that they intend to represent.

Women. Women play an important social role in Indonesia, including on peace and conflict resolution. Women mass organizations have been very active in mainstreaming gender issues the development process, including advocating for gender-sensitive fiscal management. In part thanks to Law No.2/2008 on Political Parties and Law No.10/2008 on General Elections, which mandate a 30 percent women's participation in parliaments, the rate of women's political participation increased from 11 percent in 2004 to 18 percent in 2009. The past decade has also seen key achievements in regulatory framework on gender equality in development planning and budgeting. For instance, a gender analysis pathway has been made compulsory in the development of the national and subnational annual development and its budget. Although the implementation of these frameworks remains unclear, the potential for women to play an important role as agents of change remains large.[121]

120 Buehler, Michael. 2011. Indonesia's Law on Public Services No. 25/2009: Changing State-Society Relations or Continuing Politics as Usual? *Bulletin of Indonesian Economic Studies*, Vol. 47, No. 1, 65-86; Buehrer, Michael, *Elite Competition and Changing State-Society Relations: Shari'a Policymaking in Indonesia*, forthcoming.

121 Puskapol, "Women's Political Representation in Provincial Parliament (Provincial DPRP): Study in DPRP of Banten, DPRD of West Java, and DPRD of DKI Jakarta," Research result presentation, Centre for Political Studies, Faculty of Social and Political Sciences, University Indonesia, Jakarta, May 8, 2013.

Chapter VIII. Strengthening Social Protection

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All Indonesians face a variety of risks over their lifetimes. Suffering a shock can drive people into poverty, significantly reduce their incomes, or lead them to underinvest in their children's health and education. Greater social protection is needed to enable all Indonesians to weather these shocks. This entails making the ongoing social security reforms effective and sustainable and, to complement that, strengthening social assistance programs. Indeed, despite Indonesia's success in reducing poverty, the slowing pace of progress in recent years and high vulnerability remain a concern. Stronger social assistance programs can address this challenge by protecting the vulnerable from shocks that push them into poverty, while helping those beneath the poverty line to climb above it.

This chapter argues that access to comprehensive social insurance for those who can afford it, and access to comprehensive social assistance, or safety nets, for those who cannot are needed. It discusses the challenges in strengthening Indonesia's social protection system and the critical factors that will determine success in reforming it.

1. Building an Effective and Sustainable Social Security Framework

Greater social protection means the upcoming expansion of social insurance needs to be designed and implemented effectively and sustainably. Universal social insurance is legally mandated for health (by 2014) and employment (by 2015) under the 2004 National Social Security Law (Law No. 40/2004, the SJSN Law, (Sistem Jaminan Sosial Nasional) and the 2011 Social Security Administrators Law (Law No. 24/2011, BPJS Law, Badan Penyelenggara Jaminan Sosial). To be effective and sustainable, the system will require appropriate benefit levels, sound fiscal risk management, sound institutional development and management, and non-contributory coverage of the poor and vulnerable, while at the same time collecting contributions from those who can afford to pay.

Strong leadership is required for implementation due to the large number of stakeholders with diverging interests, the significant impact of these programs to the social structure of the country, and the significant potential impact on the state budget, the labor market and the macro economy. It is crucial to develop a roadmap outlining activities, roles and responsibilities to ensure smooth, effective transformation, and to monitor the progress of the implementation.

The nationwide SJSN programs will differ in both design and coverage from the existing programs and will include a new defined benefit pension program. The complexity of defining new benefit designs and setting contribution rates for the SJSN programs will need to take into account different characteristics, needs, and ability and willingness to pay contributions between formal and informal sector workers.

Transforming PT Jamsostek and PT Askes into BPJS Employment and BPJS Health is a major task. Significant changes in legal, governance, organizational structure, job descriptions, business processes and IT systems will be needed as these institutions are transformed from for-profit state-owned insurance companies managing programs for a particular labor market segment to not-for-profit public legal entities administering nationwide programs covering thousands of employers and millions of informal sector workers. Moreover, implementation of a new pension program will require a new set of skills—both technical and operational. Jamsostek currently does not offer and manage any defined benefit pension program.

The BPJS Law improves the legal and financial structure of the social insurance system by legally separating the assets of the administrators from the assets of the social security funds that they manage. The separation of assets into different legal entities and the use of a custodian to hold fund assets are important safeguards for fund members and are consistent with international best practice. However, it will be a significant challenge to ensure that the legal structure is properly implemented and the system operates as intended. To ensure assets are managed correctly, the Government will need to issue investment and risk management regulations defining the financial framework and governance structure of the new system. It should be noted that different investment policies and fee structures are appropriate for different funds, and it will be necessary to ensure the integration of reserves, investment policy and asset-liability management for each fund.

It is important for the Government to formulate and implement policies and procedures to ensure the fiscal sustainability of the SJSN social insurance funds and assure that the financial risks of the social insurance programs are properly managed. If the contribution rates are set too low relative to promised benefits, or if the contributions and/or benefits are not periodically adjusted, or if program funds are mismanaged, the social security funds could become insolvent. This SJSN implementation creates a potentially large contingent liability for the state budget, which is the ultimate guarantor of fund solvency. Consequently, the Government has a strong incentive to ensure that the programs are properly managed. This will require the creation of risk management capability within the Government and strong supervision and control of BPJS operations to protect the rights of participants, prevent fraud and corruption, ensure proper financial management, and control operational expenses.

Good governance and oversight of the system is critical given the huge amounts of money that will flow into the five funds and the critical role that these programs will play in the country's social protection system. These programs are one of the keys to inclusive growth and reduced inequality. The law states that the new Financial Services Authority, Otoritas Jasa Keuangan, or OJK, along with DJSN and the State Audit Agency (BPK) are responsible for external supervision, but this fails to clarify their respective roles and functions.

Clearer supervisory roles and responsibilities for OJK and DJSN are needed in the implementing regulations and/or decrees. Their respective roles and responsibilities must be clearly defined.

The collection of contributions raises another set of concerns. While contribution collection mechanisms for formal workers are already available, there is no such mechanism available for informal sector workers. Effective collection from informal sector workers is needed to ensure high levels of participation from the informal sector, and to avoid the significant anti-selection that will occur if only those with high risk choose to join the SJSN programs. The Government will need to study a wide range of possible collection mechanisms, examine other countries' experience and pilot test possible options for collecting contributions from informal sector workers.

Above all, integrated systems and operations for the two BPJS are a must. It does not make sense for each BPJS to separately issue ID numbers and collect contributions from the same participants. Instead, they must work together to ensure that the ID numbers are issued and that one system is used for collecting contributions from participants, employers and the Government for all five SJSN programs. The collected contribution monies should then be automatically split and transferred to the correct social security fund.

The SJSN programs could be usefully supplemented at the sub-national level by increasing tobacco tax and earmarking the additional revenues to health program funding. The case for using tobacco tax to reduce death incidence driven by tobacco use and poverty is indeed strong for Indonesia as illustrated in box 8.1.

Box 8.1: The case for using tobacco tax to enhance health and poverty status

The benefits of lower tobacco product use for Indonesian society and consumers are several and significant: better health outcomes; fewer premature deaths; lower health care spending; and more money to spend on other goods for the household. Tobacco use is one of the most significant public health threats, and main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases.[122] At 29 percent, adult daily smoking prevalence is high in Indonesia. Consistently, fourteen percent of all deaths in Indonesia are estimated to relate to tobacco consumption according to the World Health Organization (WHO).[123] Tobacco smoking as a risk factor for daily adjusted life years (DALY) lost accounts for 7.3 percent of all DALYs lost, with second hand smoke adding 0.99 percent, totaling 8.24 percent.[124]

Since poor families spend a larger proportion of their income on tobacco, smoking also increases the poverty of individuals and families by diverting household income away from essential human needs such as food, shelter, education, and health care. Indeed, tobacco's addictive nature crowds out other more productive household spending.[125] Indonesia's household tobacco expenditures are large and have serious welfare implications.[126] In 2005, households with smokers spent an average 11.5 percent of household income on tobacco products (7.3 percent for all households and 11.9 percent for the lowest income quintile), compared with 11 percent for fish, meat, eggs and milk combined; 2.3 percent for health; and 3.2 percent for education. A 2006 World Bank study found that among poor Indonesians, cigarettes ranked second only behind rice as the largest commodity item consumed.[127] Shifting household expenditures from tobacco to basic human needs would reduce poverty.

The evidence suggests that cigarette tax in Asian countries is good for public health and public finance and is pro-poor in its health benefits. An Asian Development Bank study (ADB 2012) covering China, India, the Philippines, Thailand, and Vietnam finds that increasing taxes is likely to result in direct and indirect health benefits that outweigh impact on household income of the poor in these countries. The poorest in each country would bear only a small proportion of the extra tax burden but would reap most of the health benefits. The ratio of health benefits accrued to the poor to the extra taxes borne by the poor ranges from 1.4 to 9.5.

For Indonesia, tobacco tax is the most cost-effective way of reducing the incidence of death from tobacco use while reducing poverty. A tax that increases tobacco prices by 10 percent is associated with decreasing tobacco consumption by up to 8 percent in low and middle-income countries.[128] In Indonesia, implementing the maximum legally allowable tobacco tax rates could prevent between 1.7 and 4.0 million tobacco-related deaths among smokers, and increase fiscal space by generating additional revenues of US$3.2 to US$6.5 billion. While a doubling of the tobacco tax may negatively impact six economic sectors, one research simulation suggests that growth in 60 other sectors would be stimulated.[129] The Government of Indonesia's 2004 and 2005 MDG reports discussed the poverty effects of tobacco use, and emphasized the high levels of spending for tobacco products among poor households — resources that could have been spent on health, education, food, or other necessities. Both reports recommend tobacco taxes to increase prices as a means of reducing the negative health and welfare effects of tobacco consumption.

122 World Health Organization (2013). Tobacco Fact Sheet No. 339. July 2013.
123 World Health Organization (2013). Report on the Global Tobacco Epidemic. 2013.
124 Institute for Health Metrics and Evaluation (2013). Global Burden of Disease Tool. 2010 data
125 Asian Development Bank (2012). Tobacco Taxes: A Win-Win Measure for Fiscal Space and Health. November 2012.
126 Barber S, Adioetomo SM, Ahsan A, Setyonaluri D. (2008). Tobacco Economics in Indonesia. Paris: International Union Against Tuberculosis and Lung Disease.
127 World Bank (2006). Making Services Work for the Poor in Indonesia: Focusing on Achieving Results on the Ground. Washington, DC.
128 World Health Organization (2013). Report on the Global Tobacco Epidemic. 2013.
129 Barber S, Adioetomo SM, Ahsan A, Setyonaluri D. (2008). Tobacco Economics in Indonesia. Paris: International Union Against Tuberculosis and Lung Disease.

2. Strengthening Indonesia's Emerging Safety Net for the Poor

For those unable to cope with shocks themselves or access social insurance, enhanced social assistance is also needed. Social assistance, in the form of non-contributory government programs that help to protect the poor from shocks, invest in their human capital, and promote them out of poverty is, alongside social insurance, the other essential component of a comprehensive social protection framework. Indonesia needs to reform current programs, fill in existing gaps, and integrate the programs into a system.

Safety nets have an immediate impact on reducing extreme poverty

Despite Indonesia's success in reducing poverty, the slowing pace of progress and high vulnerability remain a concern (see Chapter 2). Social assistance programs can address this challenge by protecting the vulnerable from shocks that push them into poverty, while helping those beneath the poverty line to climb above it.

Safety nets enable households to make better investments in their future to help the next generation escape from poverty. The existence of social assistance helps households make investments that they would likely otherwise not pursue. When a poor household has difficulty putting food on the table, they are usually also unable to devote resources to pay for school or fees at the local health clinic. Safety net programs like Financial Assistance for Poor Students (BSM) and Health Fee Waivers for the Poor (Jamkesmas) can help poor families address these costs, and still have money left over to purchase food. In this way, safety net programs help families make investments that can prevent negative outcomes like malnutrition and underinvestment in education, and can help enable investments in productive assets. Social assistance also reduces inequality by providing the poor and vulnerable with the access to services and resources that are needed to climb into the middle-class.

Safety nets protect people from falling into poverty, reducing their need to rely on bad coping behaviors. When poor families face shocks that lead to reductions in their income or assets, they are often forced to resort to last-minute strategies to help them cope. These last-minute efforts often come at a high cost. For example, when a household's breadwinner dies, the household is sometimes forced to sell their most productive assets, such as cattle or land, to help address short-term gaps in income. A good safety net can help poor families reduce the need for these types of negative coping strategies (such as pulling children from school into the workforce to boost family income) that, in the long run, can hurt more than help poor families.

Further reforms are needed to strengthen safety nets

Since the Asian financial crisis in 1997/98, Indonesia has launched a series of safety net programs that address a variety of risks that poor families face. These programs can form the foundation of a strong social safety net system that protects poorer households, while also helping them to help themselves.

Improved targeting underpins the effectiveness of social assistance for the poor. Indonesia already has already implemented a new targeting system in place to identify the poor and ensure that they receive these benefits.[130] This national targeting system is built on the founda-

130 See World Bank (2012a) *Targeting Poor and Vulnerable Households in Indonesia.*

tion of a Unified Data Base (UDB), which is a list of poorest 40 percent of households, which includes both poor households and those at the greatest risk of falling into poverty. All major programs are now using the UDB for targeting. However, continuous improvements in targeting are required. Household information needs to be appropriately updated and validated, and a grievance and complaints system is an important next step.

Ensure that programs provide benefits that are adequate. In order to adequately address the lifecycle risks and shocks that households face, program benefit levels need to adequately address the risks they are targeting. There is already evidence that benefit levels for some programs are not adequate. For BSM, for instance, benefits typically do not address many important ancillary costs (e.g., the cost of transport or books) that are incurred by a household choosing to send children to primary or secondary school.[131] The Government took positive steps by increasing benefits for BSM and PKH (Indonesia's conditional cash transfer program) in 2013 as part of the compensation package tied to the fuel subsidy reform. These benefit levels need to increase in the future in line with rising education and health costs.

Assistance also needs to be received by poor and vulnerable households at the right time. Again, consider the BSM program as an example. Although the program gives cash assistance to the poor to help them pay for supplemental fees and other costs associated with educating children, the cash is sometimes received after the school year has begun. This means that the poor still have to find ways to help cover school costs that are incurred before the benefits are received. A good way to reform BSM and other programs is to ensure that funds are provided to families at times that make sense.

Fill in coverage gaps by extending good programs to other vulnerable groups that are not currently covered, including the elderly and people with disabilities. Programs, such as BSM and PKH, cover many vulnerable households, but do not yet adequately cover especially vulnerable groups. The elderly population is also at risk, especially at a time when their ability to generate income is low. Similarly, people with disabilities often require special support to enable them to attend schools, seek appropriate health care, and become an active part of the workforce. Building a comprehensive social assistance system will require extending cash assistance and in-kind assistance programs to serve these vulnerable groups.

Proven programs should also be expanded. The PKH program, for instance, was introduced to 810,000 households in 2007 and has since been expanded to cover 2.4 million households across 33 provinces. Although plans are in place to roll the program out to 3.2 million households by 2014, government support will still be needed to ensure these plans are put into action. Moreover, even at the planned 2014 coverage level, the program will only cover 5 percent of Indonesian households. Conditional cash transfers like PKH have proven effective in reducing poverty and inequality in Mexico (Progresa/Oportunidades) and Brazil (Bolsa Familia), but these programs cover around a quarter of the population.

131 See World Bank (2012b) *Protecting Poor and Vulnerable Households in Indonesia* and World Bank (2012c) Raskin Subsidized Rice Delivery.

Pilot programs, such as early childhood and workfare programs, to monitor and address the risks that are not yet covered by current programs. Some risks facing Indonesia's poor are not yet covered, leaving families exposed and vulnerable. Indonesia does not provide adequate coverage for cognitive, nutrition and psychosocial support for early childhood. An early childhood education and development program should be piloted to address this critical gap in coverage at the earliest stage of the lifecycle. Also, the Government currently lacks a program to protect families from temporary or longer-term unemployment. Workfare programs could provide temporary employment opportunities to boost household incomes, especially during crises for urban workers and between agricultural seasons for rural workers.

Indonesia also lacks a formal crisis monitoring and response system with an automatic safety net that kicks in automatically to protect households when significant shocks arise. A national crisis management protocol is in place to monitor financial sector information between multiple government entities, and coordinate a response when needed. However, these systems only allow the Government to act in response to crises that confront financial systems and commodity markets. The Government can help households more ably respond to shocks in the same way it responds to shocks that affect the financial system. Such a system at the household level would greatly help the Government to ramp up its surveillance systems and coordinate responses more effectively.

Allocate more budget to build a comprehensive and integrated social assistance system that is appropriate for a middle-income country. Indonesia spends roughly 0.5 percent of GDP on social assistance. Other large middle-income countries spend, on average, three times as much on these programs. Improving the system will likely require far more resources than are currently spent by the Government.

3. Maintain National Oversight to Ensure that Social Assistance Is Well-Coordinated and Integrated

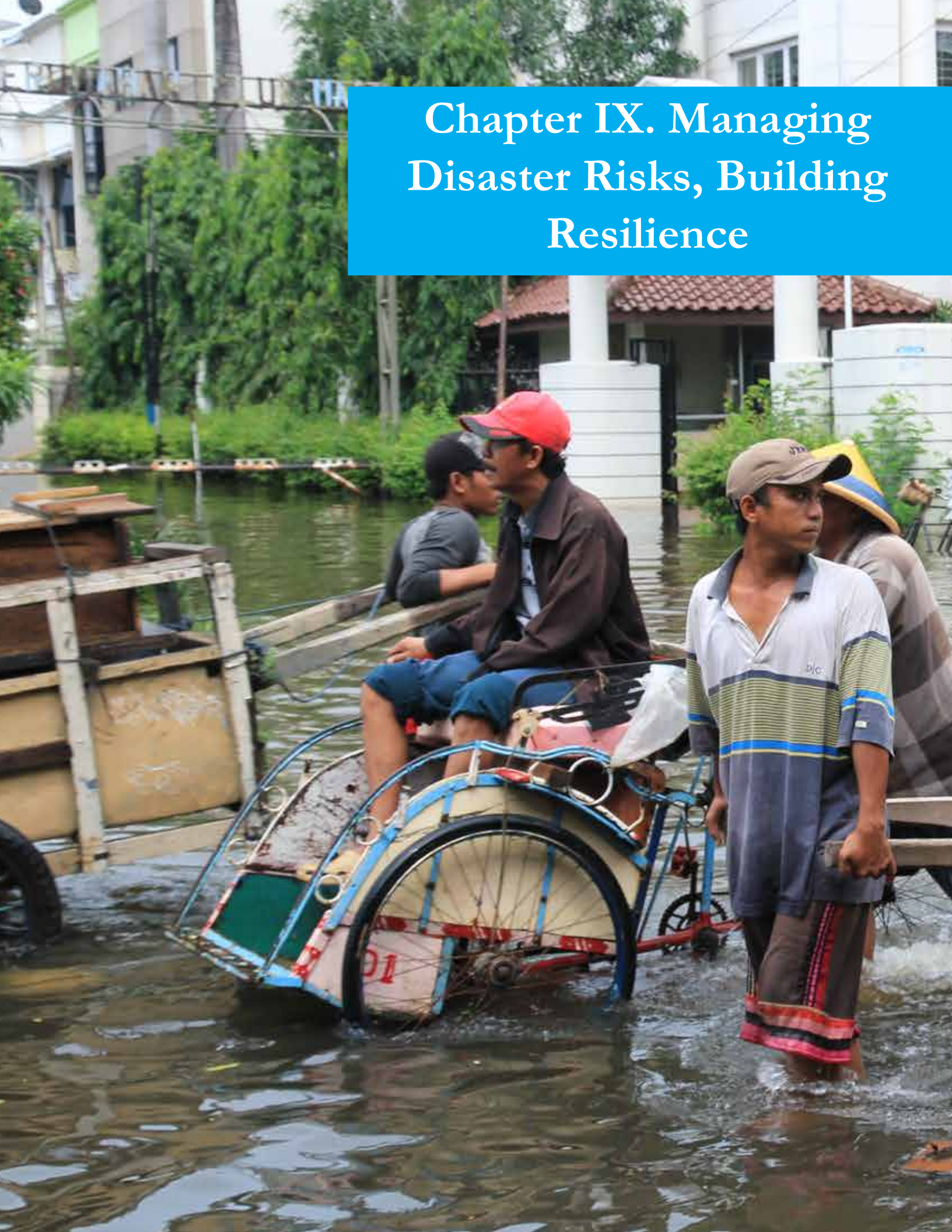
Central government spending is currently distributed among roughly 12 ministries, 22 programs, and 87 activities. In order to ensure services are delivered appropriately, the Government should continue its efforts to eliminate fragmentation and duplication across programs.

Keep oversight and coordination in the executive branch to provide clear leadership and ensure the integration of programs across agencies. Keeping oversight within the executive branch can help curb inefficiencies. In 2010, the Government elevated oversight of poverty strategy to the National Team for the Acceleration of Poverty Reduction (TNP2K), chaired by the Vice-President. The National Team's work was supported by a Secretariat responsible for drafting policies (with a priority on social assistance reform), establishing the National Targeting System through the UDB, and integrating monitoring and evaluation activities across all programs. This was an important first step in helping to put in place the types of institutional arrangements that will help facilitate further integration. Further consolidation and synergy across programs are still needed. In other countries, a simplified and consolidated model for delivering social assistance has had positive impacts on efficiency and accountability across all programs. In Chile, the Bridge Program provided families with a variety of services under one umbrella.

Develop common safeguard mechanisms for socialization, grievances, and M&E across all programs. How assistance is implemented and delivered matters. A good safety net program will have a system that registers clients, provides benefits, and eventually takes them off the rolls. There should be a strong outreach campaign, strong screening mechanisms, mechanisms to handle grievances, and periodic monitoring of targeting outcomes. An integrated social assistance system should ensure these safeguard mechanisms are uniform across programs. Public knowledge and understanding of how social assistance can be accessed and for whom it applies could be more ably disseminated if there were a common voice undertaking socialization. For example, 80 percent of Jamkesmas health card holders do not know what benefits they are eligible for. In the same way, grievance systems should also be uniform, so that people have one easy way to connect with the system and ensure their grievances are taken into account. Distribution of an integrated social assistance card (KPS) to beneficiaries of the Raskin, Jamkesmas, BSM, and PKH programs has been an important step forward in the integration process but distribution and registration remain a challenge.

Strengthen the capacity of agencies to deliver services efficiently and accountably. Effective selection and intake of applicants into a safety net program requires adequate administrative capacity. This includes: clear and well-defined program rules and regulations and business processes; sufficient numbers of adequately trained and skilled staff; material conditions (premises and equipment), and adequate information and communication systems for data processing and record keeping. Indonesia could devote more resources to increase the capacity of agencies implementing social programs. Some programs are expanded without increasing the administrative cost, thus leaving many weaknesses in implementation when agencies are asked to do more with the same level of resources.

Chapter IX. Managing Disaster Risks, Building Resilience



Chapter IX. Managing Disaster Risks, Building Resilience

Safeguarding hard-fought poverty reduction in Indonesia calls for continuously enhancing the management of disaster risks and further building resilience. Indonesia is indeed situated in one of the world's most active disaster hot spots, where several types of disaster, such as earthquakes, tsunamis, volcanic eruptions, floods, landslides, droughts and forest fires, frequently occur. According to a global risk analysis by the World Bank[132], Indonesia is among the top 35 countries that have high mortality risks from multiple hazards. About 40 percent of the population is at risk, that is, more than 90 million lives. Going forward, the increase in population and assets exposed to natural disasters, combined with the rise in the number and intensity of hydro-meteorological events resulting from climate change, may further increase the economic and human impact of natural disasters.

Indonesia's capital, Jakarta, is particularly exposed, with urbanization-induced land subsidence posing a bigger threat to the metropolitan area than climate change associated with rising sea levels. In particular, the rapid growth of buildings (for offices and shops) and houses in recent years, non-compliance with building codes and zoning regulations, and the occupation of dedicated drainage "open" spaces, have not only made Indonesian cities more vulnerable to natural disasters but also created new hazards such as sea water inundation in low-lying coastal areas and flooding. The rapid expansion in the physical assets of cities requires both a credible regulatory framework and a healthy market to accompany the economic dynamism with preventive and risk-management investments.

This chapter describes how rapid urbanization is changing Indonesia's disaster risk profile and identifies preventive investments in risk reduction and emergency preparedness that can indeed be cost-effective and can greatly reduce the impact of natural hazards.

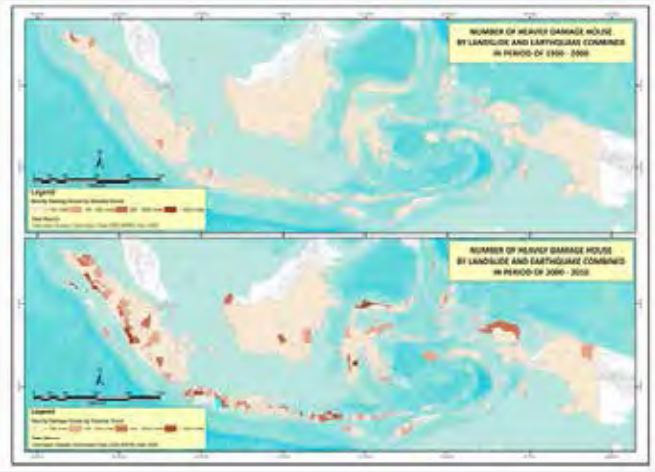
1. Urbanization and disaster risk profile and cost

Indonesia's cities' resilience to natural disasters has weakened due to the rapid construction of physical assets in urban areas and weak enforcement of building codes and zoning regulations. Indonesia's rapid and not always well-planned build-up of physical assets (buildings, houses, etc.) in urban areas poses specific challenges to sustainability. Indonesian cities have seen a rapid demand for urban housing and commercial space over the past decade. The private sector (real estate and construction) has responded rapidly but rapid physical construction has often meant that many new buildings have been built with less than ideal consideration to building codes. In addition, in densely populated neighborhoods, site plans are typically constrained by a lack of available space to maintain the proper functioning of urban ecosystems, such as drainage and open public spaces.

132 See World Bank, *Natural Disaster Hotspots, A Global Risk Analysis* (Washington, DC: Disaster Risk Management Series, 2005), table 1.2. For a comprehensive review of disaster risks in the EAP region and policy options, see Abhas K. Jha and Zuzana Stanton-Geddes, Editors (2012): Strong, Safe, and Resilient A Strategic Policy Guide *for Disaster Risk Management in East Asia and the Pacific*. World Bank.

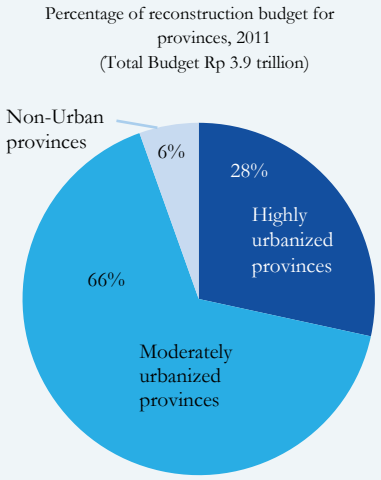
Data on disaster occurrence and impact on housing show that in the past decade the more urbanized provinces of Indonesia have become more vulnerable to natural disasters such as earthquakes and landslides.[133] As the comparison of the upper and lower panes of Figure 9.1 shows, the number of heavily disaster-impacted incidence of damage to buildings and houses in Java's cities has increased considerably over the past decade.

Figure 9.1: Changes of spatial distribution of disaster impacts on housing



Source: National Agency for Disaster Management (BNPB)

Figure 9.2: Proportion of reconstruction budget spent on urban provinces



Disaster impact on housing is a useful proxy for the degree of vulnerability.[134] In the past five years, the Government has spent between 20 and 50 percent of its reconstruction budget on housing. This indicates not only the rise in the proportion of disaster impacts on urban assets, but also the actual public investment for repairing assets, ideally with more stringent standards. Looking at the proportion of the Government's post-disaster spending between more urbanized and non-urban provinces,[135] there is also a tendency to spend more on more urbanized provinces, as shown in Figure 9.2. This is also an indication of the disproportionate impact of disasters on urban versus non-urban assets (i.e., between permanent and non-permanent structures).

133 *Data danInformasiBencana Indonesia* (DiBI), Data and Information on Disasters in Indonesia, the National Agency for Disaster Management (BNPB).

134 A house is a private piece of property whose construction quality reflects the combined influence of the citizen's compliance with building codes, the effectiveness of the regulatory regime, and market willingness to invest in resilience. In many disasters, the Government's response to the disaster impact on housing indicates the contingent liability of the public funds in the housing sector. In other words, the proportion of public spending in this sector compared with others also indicates the recognition of the level of responsibility that the Government assumes on the quality of the existing private housing stock.

135 The classification of urbanized versus non-urban provinces is based on percentage of urban population from BPS data.

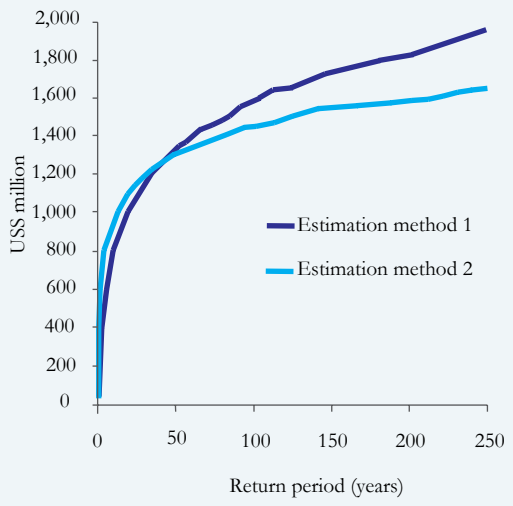
While relatively low compared with the size of the national economy, the average annual cost of natural disasters is significant at the subnational level. Over the past 10 years, the annual average cost of natural disasters in Indonesia is estimated at 0.3 percent of national GDP or US$1.5 billion. The economic impact of the 2004 earthquake in the province of Aceh was estimated at US$4.5 billion i.e., 1 percent of national GDP, but that represented 54 percent of the Provincial GDP. Likewise, the 2006 earthquake in the province of Yogyakarta caused losses estimated at 30 percent of provincial GDP. As Table 9.1 shows, the economic impact of recent disasters has been substantial at the provincial level.

Table 9.1: Impact of selected natural disasters on regional GDP

Event	Province	Estimated losses (US$ billion)	Estimated Losses (% regional GDP)
Tsunami (2004)	Aceh	4.5	54%
Earthquake (2006)	Yogyakarta	3.1	41%
Earthquake (2009)	West Sumatra	2.3	30%

Source: EMDAT CRED and World Bank.

Figure 9.3: Fiscal Disaster risk profile for Government - Exceedance probability curve[137]



Preliminary fiscal disaster risk analysis suggests that the annual fiscal disaster losses are in the range of US$420-500 million and that once every 100 years these losses are close to US$1.5-1.6 billion. Using public spending data of past events, as estimated from the number of buildings destroyed and damaged, to simulate possible future spending needs (or fiscal losses) related to natural disasters, it can be estimated that in an average year the fiscal losses are estimated in the range of US$420-US$550. In every 10 years they could exceed US$800-950 million, while every 100 years losses could be in excess of US$1.5-1.6 billion. Figure 9.3 below shows the indicative fiscal loss exceedance curve, the indicative annual expected loss (AEL), and the selected probable maximum loss (PML) using actuarial techniques.[136] These estimates provide indicative sizes of financial liability that the Government may have to face should such events occur.

136 Actuarial techniques are typically employed by the insurance industry to determine financial liability and insurance premium pricing in this case using annual average loss (AEL) and probable maximum loss. The AEL is an estimate of the long-term annual average loss, after accounting for historic trends in the historic data. The PML is defined as an estimate of the maximum loss that is likely to arise on the occurrence of an event or series of events considered to be within the realms of probability, ignoring remote coincidences and possible but unlikely catastrophes.

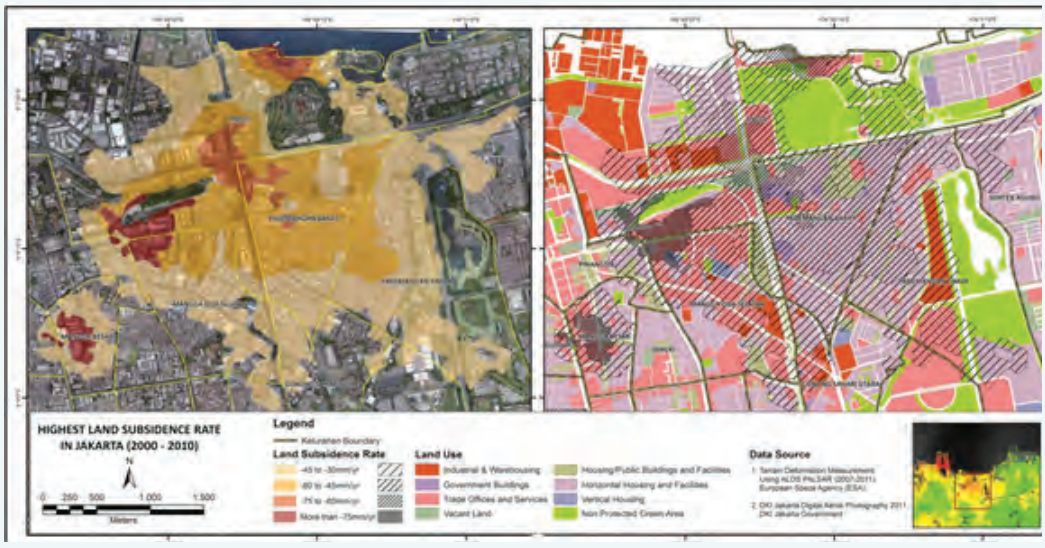
137 Two actuarial methods are shown in the Figure, first, historic fiscal loss data over the period 2004-2009 are used to fit a parametric distribution (Actuarial Method 1); second, historic fiscal loss data, adjusted over the period 2000-2009 using a linear trend, are used to fit a parametric distribution (Actuarial Method 2).

Indicative risk metrics	Actuarial Method 1 US$ million	Actuarial Method 2 US$ million
Annual Expected Loss	423	554
Probable Maximum Loss:		
10 year return period	796	945
50 year return period	1,320	1,299
100 year return period	1,570	1,448
150 year return period	1,725	1,550
250 year return period	1,947	1,647

2. Urbanization and Vulnerability to New Hazards

In addition to rendering cities more vulnerable, rapid urbanization has introduced new hazards threatening sustainability. The rapid and massive extraction of groundwater in Jakarta, for instance, has contributed significantly to land subsidence. A study employing precise geodetic positioning suggests that rates of land subsidence in Jakarta range from 1 to 15 cm per year, with a few locations reaching up to as much as 20 to 25 cm per year.[138] The study also identifies four major causes of subsidence, namely groundwater extraction, load of above-ground structures, natural consolidation of alluvial soil, and tectonic subsidence.A recent rapid spatial analysis carried out by the European Space Agency (ESA) and the World Bank using historical satellite data allows the spatial distribution of areas with high subsidence rates[139] to be easily differentiated. An overlay of the subsidence and land use on one of the areas with the highest subsidence rates as shown in the maps in Figure 7.4 shows these zones are occupied by office and commercial properties, as well as industry and warehouses (Figure 9.4).

Figure 9.4: Overlay of areas with high subsidence rates and land use in Jakarta



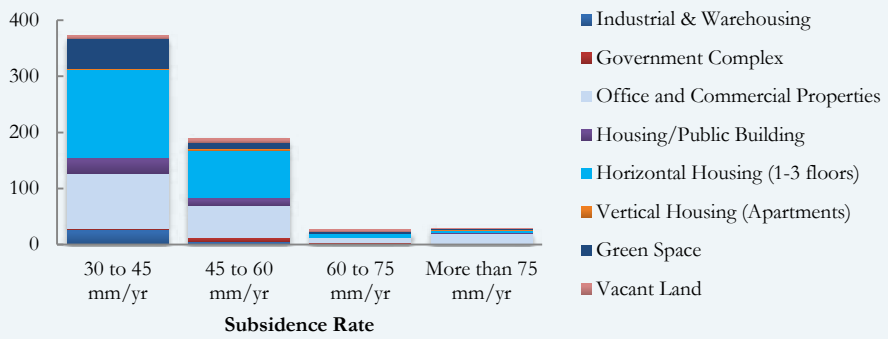
Source: the National Agency for Disaster Management (BNPB)

138 Abidin, et al., 2009. Land Subsidence and Urban Development in Jakarta (Indonesia). 7th FIG Conference, Hanoi, Vietnam, 19-22 October 2009.

139 *EO Information Services in Support of Analysis of Land Subsidence in the Agglomeration of Jakarta.* Presentation prepared by Altamira Information, for the European Space Agency and the World Bank, February 2012.

This seems to confirm that rapid urbanization not only increases vulnerability, but also introduces new hazards with potentially serious long-term consequences, such as sea-water inundation in low-lying coastal areas and flooding.[140] Assuming that the rate will not increase (i.e., no further land-use changes and that groundwater extraction stays at the current level), this specific area will be between 60 and 225 cm lower than its current elevation by 2030. Compared with around 15 to 18 cm of projected average rises in sea-level for the same period,[141] urbanization-induced land subsidence clearly poses a more serious threat to Jakarta than climate change induced by rising sea levels.

Figure 9.5: Land-use types and subsidence rates in central Jakarta



Source: the National Agency for Disaster Management (BNPB)

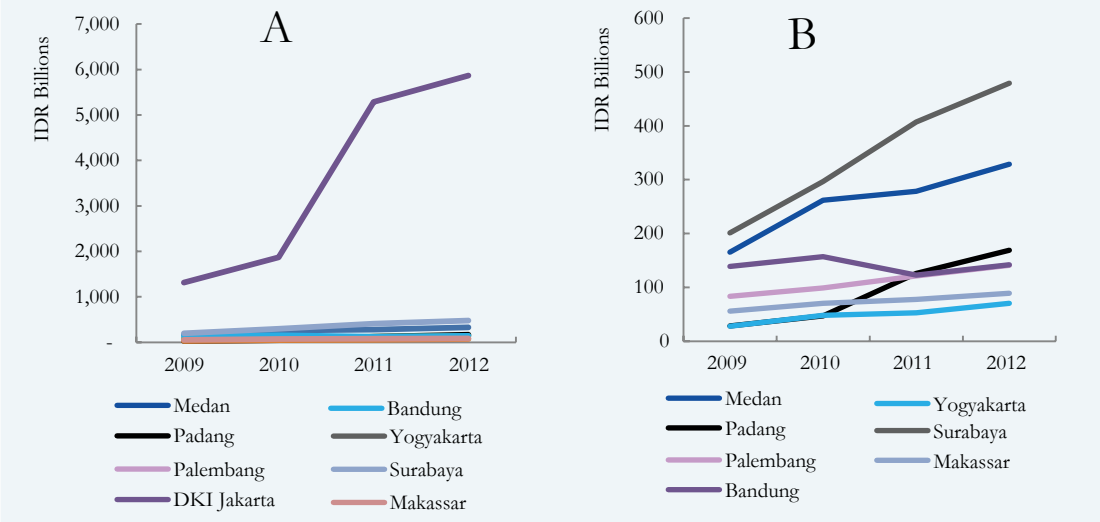
Indonesia's urbanization story is not just about the bad news for disaster risk management. As the population becomes richer and more aware of the risks from disasters, their willingness to spend on prevention has also increased. One useful indicator to measure a population's improved risk-management strategy is the penetration of disaster insurance. The insurance industry uses a globally uniform system for accumulation risk control of natural hazards using the Catastrophic Risk Evaluation Standardizing Target Accumulation (CRESTA) to determine risk zones for insurance premium pricing. Statistics on disaster insurance by CRESTA zoning provide a useful indication of insurance penetration in areas where insurance is needed most.

For Indonesia, the latest statistics for earthquake insurance as of December 2012 published by the national disaster insurance consortium, PT Maipark, indicated a significant increase in premium purchases in the major cities over the past four years.[142] Taking Jakarta into account the increase was fivefold over the past two years (Figure 9.6A). Such rapid growth reflects growing confidence in the insurance market and also signifies awareness on the part of the insured of the viability of managing disaster risks through financial means. It is also important to note that for seven other major cities, namely Surabaya, Medan, Bandung, Palembang, Makassar, Yogyakarta and Padang, the total premium increases were also significant (Figure

140 This threat is universal, as many cities in the world also face recurring problems with flooding that impose enormous economic and environmental costs. See "Cities and Flooding: A Guide to Integrated Urban Flood Risk Management in 21st Century", Jha, Abhas, et al. (2012).
141 Indonesia Climate Change Sectoral Roadmap (ICCSR), Scientific Basis: Analysis and Projection of Sea Level Rise and Extreme Weather Event, Republic of Indonesia, March 2010.
142 *LaporanStatistikAsuransiGempaBumi Indonesia* per 31 Desember 2012. Statistical Report of Earthquake in Indonesia as at 31 December 2012. PT Maipark.

9.6B). For Padang, in particular, a significant jump can be seen in 2010 following a damaging earthquake, which occurred in September of 2009. This shows that risk awareness combined with a responsive insurance industry can accelerate and deepen insurance penetration.

Figure 9.6: Insurance premiums by CRESTA zones in major cities of Indonesia



Source: the National Agency for Disaster Management (BNPB)

3. Policy Options

The rapid expansion in the physical assets of cities requires both a credible regulatory framework and a healthy market that can translate this growth potential into preventive and risk-management investments. Several concrete policy options can be considered to enable Indonesia to reap the full benefits from urbanization, while leveraging growth to build more resilience.

- A national program on hazardous micro-zoning providing detailed instruments for incorporating resilience into site design and construction standards;
- Financing framework for both urban, housing and property development that incentivizes investment with built-in resilience linked to disaster insurance; and
- A national program on urban upgrading and ecosystem rehabilitation to increase the resilience of existing settlement and urban infrastructure as part of the greening of Indonesia's future growth.

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