ACCELERATING TOWARD GREATER AND MORE SUSTAINABLE PROSPERITY
TEN KEY PRIORITIES FOR THE NEW INDONESIAN GOVERNMENT
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ACCELERATING TOWARD GREATER AND MORE SUSTAINABLE PROSPERITY

TEN KEY PRIORITIES FOR THE NEW INDONESIAN GOVERNMENT

EDWIN UTAMA
HENRY HENDRAWAN
VINCENT CHIN
HANS-PAUL BÜRKNER
INTRODUCTION AND CONTEXT OF THIS STUDY

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- Enhance the Infrastructure Planning Process
- Provide Better Funding and Enforce Regulation and Accountability
- Improve Productivity of Existing Assets

CREATE CLEAN, LEAN, AND EFFICIENT GOVERNMENT
- Recruit, Retain, and Manage Talent in Government Institutions
- Increase Transparency and Access to Government Data

REFORM SUBSIDIES TO SPUR ECONOMIC GROWTH AND EQUALITY
- Protect the Poor and Reduce Income Inequality
- Ensure Sustainability of Government Spending on Subsidies

PROMOTE VALUE-ADDED INDUSTRIES
- Build the Ecosystem and Enable Infrastructure to Drive Competitiveness
- Build Better Relationships Between Labor and Industry to Improve Productivity
- Encourage Research and Development Initiatives to Generate Innovation

BUILD CONFIDENCE IN AND RESPONSIBILITY OF FINANCIAL MARKETS
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INTRODUCTION AND CONTEXT OF THIS STUDY

Since 2012, THE BOSTON Consulting Group (BCG) has regularly used the Sustainable Economic Development Assessment (SEDA) as a diagnostic tool aimed at helping countries sharpen their focus on the well-being (that is, the overall standard of living) of their citizens in shaping their national strategies. The driving force behind SEDA is the understanding that economic growth (usually measured by GDP per capita), while a necessary component of the goals of national leaders, should not be the sole driver of policymaking decisions. SEDA defines well-being through ten dimensions: income, economic stability, employment, income equality, civil society, governance, education, health, the environment, and infrastructure.

Through its use of SEDA, BCG has discovered that a nation’s gains in well-being are not solely dependent on its economic growth. In fact, countries delivering above-average gains in well-being can be found across the spectrum of economic growth—not just among nations with high growth rates, but also among some with moderate or low growth rates. Indonesia is one of those nations that is currently above average in terms of converting wealth into well-being.

The trajectory that Indonesia is currently on is one that bodes well for the future, but it is crucial to continue to aim for greater and more sustainable prosperity, both economically and socially. There are a number of metrics to define well-being in 2020; for example: earning a place in the top 20 worldwide in the Global Competitiveness Index and in terms of its GINI coefficient by 2030, increasing enrollment in tertiary education to reach a rate of 70 percent, and improving Indonesian life expectancy to reach 80 years by 2030.

This report identifies four key policy areas of focus to help Indonesia realize these ambitions: public sector investment and efficiency, productivity and entrepreneurship, human resource development, and natural resource management.

Within these four key policy areas, ten economic priorities have been identified as key action areas.

In order to promote greater public sector investment and efficiency, focus is needed on creating clean, lean, and efficient government; improving the flow of goods and information by investing in and upgrading infrastructure; and ensuring economic growth with social inclusion through effective subsidy.

Productivity and entrepreneurship can be encouraged by preparing
Indonesia’s small and medium-sized enterprises to compete in the ASEAN market; increasing the depth, responsibility, and confidence of financial markets; and promoting value-added manufacturing industries.

The most important factor in any nation’s growth is its people. Ensuring that Indonesians are healthy and have sufficient access to education and opportunities is necessary for Indonesia’s development. In order to do this, we have chosen to focus on improving education and closing the talent gap, and expanding access to basic and quality health care.

Indonesia’s abundance of natural resources means it is important to ensure that they are well-managed and well-utilized. As concerns around depleting energy sources increase, it becomes necessary to ensure access to renewable, cleaner sources of energy. It is crucial to strengthen the agriculture sector and enhance food security.

In recent years, Indonesia has made significant progress in terms of economic growth, and the government continues to play a crucial role in promoting and leading that development. As new challenges continue to arise, Indonesia’s success will depend on its commitment to embracing innovation and new solutions, and prioritizing national well-being.
As a sprawling archipelago that consists of 13,466 islands, and as the seventh largest country in the world in terms of combined land and sea area, Indonesia’s unique geography gives rise to an equally unique set of connectivity challenges. A strong, high-functioning, and efficient infrastructure is necessary in order for the government to be able to truly serve its people, and to keep the Indonesian economy growing. The easy and efficient flow of people, goods, and information among the numerous Indonesian islands will promote economic activity and growth, and can ultimately reduce inequality. According to the World Economic Forum’s 2010-2013 reports, the quality of Indonesia’s overall infrastructure has been steadily improving, moving from ninetieth to eighty-second position in three years. There have been numerous efforts to support and improve infrastructure, including the Master Plan for the Acceleration and Expansion of Economic De-
Development of Indonesia (MP3EI), which has introduced several economic corridors, and also built several new toll roads to connect different areas. A total of 367 infrastructure projects, worth $440 billion, will be launched between 2011 and 2025.

The World Economic Forum’s 2013 Global Competitiveness Index report shows a strong correlation between the quality of a nation’s infrastructure and the country’s economic competitiveness. Although gains have been made in recent years, Indonesia is still behind its peer ASEAN nations including Singapore, Malaysia, and Brunei both in terms of competitiveness and quality of infrastructure (see Exhibit 1). If there is a focus on increasing the quality of infrastructure, however, there is a strong likelihood that global competitiveness will also increase.

Enhance the Infrastructure Planning Process
Streamline and ensure consistency of bureaucratic processes. With stronger and more effective coordination among government agencies, planning processes could be streamlined. As Exhibit 2 indicates, there is room for improvement at the highest level of activity among key agencies. For example, there is the potential for greater formal synchronization among agencies while identifying and prioritizing projects. There could also be opportunities to develop and set criteria for Public Private Partnerships (PPP) projects.

Project prioritization and project implementation mechanisms would also benefit from increased inter-agency coordination. Central and regional governments need to coordinate efforts in terms of approving permits and determining priorities, and there could be greater clarification as to the roles of state-owned enterprises (SOEs) in infrastructure development, as in the case of Trans Sumatra. South Korea, for example, has a clear delineation of roles and responsibilities. All of these would increase the government’s project-planning capabilities.

The key to streamlining planning processes and reducing institutional inefficiency is to cut through the bureaucracy, and ensure consistency in policies. Certain projects should be made a national priority, with direct supervision
from the President or Vice-President. The new Peraturan Presiden (Perpres 75/2014) addresses the gap, although there is room for further enhancement in the areas of scope clarification across multiple agencies, and funding availability, especially for the planning process.

Strengthen the government’s capabilities in terms of infrastructure planning. Most of a project’s eventual value is created in its early stages (see Exhibit 3). The quality of planning at the appraisal and selection stages sets the entire project on an optimal or sub-optimal path. Therefore it is crucial that the early plans and foundations maximize the value-creation of the project. Based on our study, 20 percent of the preparation determines 80 percent of the value of the project.

In order to maximize value, it is crucial to strengthen the government’s capacity and capability in terms of the infrastructure planning process. Feasibility studies that are carried out cannot lead to correct implementation if the agency’s capacity cannot support the plan. Capability across agen-

**EXHIBIT 2 | Current infrastructure project planning still has some room for improvement**

<table>
<thead>
<tr>
<th>Key stakeholders</th>
<th>High-level activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Planning and coordinating agency&lt;br&gt;CMEA&lt;br&gt;Bappenas</td>
<td>Identify and prioritize critical projects from six economic corridors&lt;br&gt;Update project status in PPP book&lt;br&gt;Approve government support&lt;br&gt;Participate in tender</td>
</tr>
<tr>
<td><strong>2</strong> Contracting agency</td>
<td>Identify and prioritize projects&lt;br&gt;Conduct pre-FS and FS&lt;br&gt;Ask for government support&lt;br&gt;Proceed with tender</td>
</tr>
<tr>
<td><strong>3</strong> MOF</td>
<td>Challenges on funding and capacity to prepare high-quality pre-FS and FS documents for PPP projects</td>
</tr>
<tr>
<td><strong>4</strong> Infrastructure players</td>
<td>Challenges on effective resource allocation; more active role expected</td>
</tr>
</tbody>
</table>

**EXHIBIT 3 | Proper planning is crucial to maximize value creation of the project**

Source: BCG analysis.

1 Final Investment Decision

Source: BCG experience.
The South Korean government has clearly-defined roles and responsibilities for PPP projects. Responsibilities are spread out across the different agencies, and all agencies are involved at each stage of the process, from planning to execution.

**Action**
The organizational chart in Exhibit 4 very clearly outlines each agency’s role and responsibilities at each part of the planning process. If any conflicts or issues crop up, it is immediately apparent which agency is responsible for ensuring that such issues are resolved.

**Results**
South Korea is ranked third in the Asia-Pacific region for its institutional framework for public-private partnerships. It is also ranked twenty-third in the world in terms of quality of overall infrastructure.

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**SOUTH KOREA’S INSTITUTIONAL FRAMEWORK FOR PUBLIC-PRIVATE PARTNERSHIPS**

The South Korean government has clearly-defined roles and responsibilities for PPP projects. Responsibilities are spread out across the different agencies, and all agencies are involved at each stage of the process, from planning to execution.

**Action**
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---

**EXHIBIT 4 | Case study: South Korea**

*Each government agency has clear roles and responsibilities*

<table>
<thead>
<tr>
<th>Context</th>
<th>South Korean government has clearly defined roles and responsibilities for PPP projects. Responsibilities span multiple entities from planning to execution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>Ministry of Strategy and Finance</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Procuring ministries</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Public and Private Infrastructure Investment Management Centre</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Board of Audit and Inspection</td>
</tr>
</tbody>
</table>

---

**Results**

3rd Ranked third for institutional framework for public-private partnerships in Asia Pacific  
23rd Ranked twenty-third in quality of overall infrastructure worldwide

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¹RFP = Request for proposal.
Provide Better Funding and Enforce Regulation and Accountability

An optimistic projection of Indonesia’s infrastructure needs for the near future will require over IDR 3,000 trillion investment for the development of power, rail, ports, and roads. Therefore, there must be a greater level of financing, from both the public and private sectors, and participation in the development of Indonesia’s infrastructure.

Secure alternative financing for infrastructure. In comparison with other countries, Indonesia’s allotted investment budget for infrastructure is relatively low. Funding from banks is limited, due to maturity mismatch, as are foreign investments, due to potential currency risk. Existing efforts for developing PPPs have not yet proven fruitful.

In order to meet Indonesia’s infrastructure development needs, the government should reconsider its financing strategy and include alternative sources of funding. An increase in the budget for infrastructure by at least 6 percent of GDP would bring Indonesia’s level of government spending up to that of China and India. Alternative payment schemes for infrastructure could be implemented, such as Malaysia’s Sukuk practices, pension funds, or government’s investment agencies. PPPs should continue, but selectively, and by weighing the benefits and losses beyond simply costs.

There are many sizeable investment opportunities available to the private sector. The Indonesian government’s idea to rebuild an “infrastructure bank” will focus on accelerating infrastructure, building professional organizations, and helping it obtain financial leverage. However, the government must consider lessons from the past and make sure the plans are properly executed (see Exhibit 5).

Strengthen and clarify authority functions by implementing effective project management. Currently, there are fewer strong supervisory and controlling functions in project imple-

EXHIBIT 5 | Huge investment opportunities for private sector to support optimistic scenario realization

Roads, rail and power require major infrastructure investment

<table>
<thead>
<tr>
<th>Infrastructure Type</th>
<th>Investment Required per Infrastructure Type</th>
<th>Total Infrastructure IDR Tn$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toll roads</td>
<td>371,66</td>
<td>3,189</td>
</tr>
<tr>
<td>Bridges</td>
<td>389</td>
<td>1,000</td>
</tr>
<tr>
<td>Public roads</td>
<td>503,15</td>
<td>2,500</td>
</tr>
<tr>
<td>Rail</td>
<td>93,40</td>
<td>1,500</td>
</tr>
<tr>
<td>MRT</td>
<td>11</td>
<td>500</td>
</tr>
<tr>
<td>Oil and gas</td>
<td>127,17</td>
<td>3,000</td>
</tr>
<tr>
<td>Ports</td>
<td>103,67</td>
<td>6,000</td>
</tr>
<tr>
<td>Fixed tel.</td>
<td>67,67</td>
<td>4,000</td>
</tr>
<tr>
<td>Internet</td>
<td>103</td>
<td>6,000</td>
</tr>
<tr>
<td>Mobile tel.</td>
<td>853,67</td>
<td>15,000</td>
</tr>
<tr>
<td>Waste water</td>
<td>25</td>
<td>1,500</td>
</tr>
<tr>
<td>Solid waste</td>
<td>583,67</td>
<td>10,000</td>
</tr>
<tr>
<td>Power</td>
<td>67,67</td>
<td>4,000</td>
</tr>
<tr>
<td>Irrigation</td>
<td>106,106</td>
<td>5,200</td>
</tr>
<tr>
<td>Total</td>
<td>3,189</td>
<td></td>
</tr>
</tbody>
</table>

Investment 2011–16 (IDR Tn$)

Source: BCG top down analysis of infrastructure requirements based on GDP forecasts, comparisons with similar countries and typical infrastructure project costs.

Note: Public finance infrastructure includes non-toll roads and irrigation.

$Real value at 2011 prices

GDP estimates based on MP3EI GDP targets.
mentation, and as a result, many projects are neglected and end up running late. Strengthening and clarifying authority functions, as well as creating public accountability for the completion of infrastructure, will help ensure project completion, reduce inefficiency in the process, and promote greater public accountability.

Improve law enforcement for land acquisition. Land acquisition remains a major constraint in terms of project implementation, as seen in most infrastructure projects. The government should provide greater support of the enforcement of existing land regulations. Greater supervision and constant evaluation of relevant agencies, such as the National Land Agency and law enforcement, would ensure that there is greater accountability on the part of government agencies.

**IMPROVING POWER-SECTOR INFRASTRUCTURE IN GHANA**

In 2009, Ghana’s biggest infrastructure challenge was generating power. Unreliable hydroelectric power generation meant that the nation was largely dependent on oil for its power. Ghana’s infrastructure funding gap was about $400 million per year, and would therefore benefit greatly from increased private investment.

**Action**
First, the government conducted an analysis of existing capabilities for infrastructure PPPs, and then tailored their systems to be in line with international best practices. It also bolstered public sector management training in order to improve performance and productivity by supporting employees in getting Masters’ degrees in public services. The Australian High Commission has been supporting Ghana’s public sector through international scholarships and workshops.

**Results**
Ghana’s performance in the Africa Capacity Index has improved by 13 percent in just 12 months, and it is currently the only country ranked “high” according to that index. It is also now the most highly ranked African country according to the index, which evaluates the enabling environment, organizational-level capacities, and individual-level capacities.

**OFFICE OF GOVERNMENT COMMERCE IN THE UK**

The UK government was using a significant amount of its total government expenditure on procurement of projects. In order to improve efficiency, the government decided to focus on effective management and project control.

**Action**
The government created a dedicated body, the Office of Government Commerce (OGC), in order to oversee project management in a more holistic manner. At each step, the project must pass certain “gates” as directed by the OGC. The OGC can then ensure that the project is cost-efficient and effective at every stage. Gate 5, for example, evaluates the benefits and returns on investment against the project’s initial spending. The feedback loop is also formative in that the OGC office reflects on lessons learned from each project.

**Results**
The OGC was endorsed in the 2007 report on “Transforming Government Procurement,” and has also been adopted by the Australian government, with 131 reviews conducted by July 2010. Ninety-seven percent of government officials feel that the OGC has been beneficial, and would positively affect the outcome of their other projects.
Improve Productivity of Existing Assets

Aside from investment in new infrastructure, it is crucial to improve the utilization, efficiency, and longevity of existing infrastructure by optimizing operations and maintenance (O&M). A stronger infrastructure, such as a greater percentage of roads in good condition, will positively affect logistic performance (see Exhibit 6). A failure to maximize infrastructure utilization, or to meet adequate user-quality standards, will incur needlessly high costs, as well as environmental and social side effects.

O&M solutions do not have to be expensive and, thanks to technological innovation, traditional infrastructure can now be operated far more efficiently than when it was first built. O&M improvements can provide not only significant financial impact, but also social and environmental gains.

In a similar vein, there are other ways to promote a more self-sustaining approach to funding of infrastructure maintenance. Capturing and encouraging ancillary business opportunities around existing infrastructure, such as commercial enterprises at airports, will provide important support for operating and maintenance funding. Only 22 percent of Indonesian airports’ average total revenue comes from non-aviation sources, as opposed to the world average of 44 percent.

Coordinate and integrate more closely with related parties for the provision of infrastructure services. The best practices for infrastructure operators can be put into three categories: (i) increasing the utility of infrastructure by maximizing asset utilization and enhancing quality for users; (ii) decreasing the total cost of infrastructure by reducing O&M costs and mitigating environmental and social impacts; and (iii) increasing the value of infrastructure by extending its lifetime and reinvesting in infrastructure with a whole life-cycle view.

One way to enhance asset utilization is by dynamically ramping up resources during peak times. Frankfurt Airport, for example, introduced an integrated system of real-time passenger flow forecasting and resource planning. The system simulates passenger flow, identifies upcoming bottlenecks, provides continuous updates to the Terminal Operations Centre, and dynamically adjusts the re-

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**EXHIBIT 6 | Continued improvement in infrastructure required to ensure higher productivity**

![Graph showing the relationship between the quality of roads and logistic performance index](image)

Lack of road maintenance leads to lower logistic performance

Quality of roads vs. logistic performance index

- **Senegal**
- **Panama**
- **Hungary**
- **Oman**
- **Guatemala**
- **Azerbaijan**
- **Indonesia**
- **China**
- **Cyprus**
- **New Zealand**
- **Malaysia**
- **United Kingdom**
- **France**
- **Singapore**
- **El Salvador**
- **Pakistan**
- **Myanmar**


Note: Some other ASEAN, G–7, and BRIC countries not shown due to insufficient data.
quired staff. This approach increased capacity during peak times, reduced passenger waiting time by 20 percent, and reduced planning time required from days to hours.

Real-time and mobile applications enable new ways of informing and interacting with users at a relatively low cost. Puerto Valparaiso in Chile, for example, introduced an in-house information port system to monitor cargo and enhance communications among all stakeholders in its new logistics extension zone. The result was a 70 percent reduction in the average time that trucks spend inside the port.

Technology can also be used to reduce O&M costs; Dutch municipalities, for example, apply smart street-lighting, which automatically switches off or dims lights when no one is walking in the street.

There is often a strong political bias toward new infrastructure projects, and this can result in a tendency to neglect the maintenance of existing assets. Existing infrastructure then deteriorates faster than necessary, shortening its useful life and incurring extra spending. The focus should instead be on decreasing the total cost of infrastructure by reducing O&M costs and mitigating environmental and social impacts; and increasing the value of infrastructure by extending its lifetime and re-investing in it with a whole life-cycle view. Preventive maintenance is important: it can add five to ten years to the service life of a road surface. Conversely, postponing maintenance can lead to almost 30 percent higher total life-cycle costs.

Ensure O&M funding through effective budgeting, financing, and ancillary business opportunities. Indonesia currently ranks ninetieth out of 142 countries for quality of roads, and 103rd in terms of seaport quality. There is room for improvement, mostly due to a lack of funding allocated toward the O&M of infrastructure, and with 40 percent of roads still not in good condition, increasing funding to these areas will be crucial to improving overall productivity and competitiveness.

The government should consider allocating a more balanced budget portion to O&M funding for current infrastructure. Alternative financing schemes such as an O&M fund could also prove fruitful, as with the Swiss National Road Fund.

The development of ancillary business opportunities should be encouraged in order to support O&M funding. Ancillary businesses generate additional funding, and have significant potential in some sectors. For example, in airports, they can generate between 20 and 50 percent of total revenue; in ports, between 10 and 20 percent; in railways, between 10 and 40 percent; and for highways, around 10 percent. The Japanese High-Speed Rail, for example, captures more than 30 percent of its revenue from ancillary businesses.

Nevertheless, infrastructure agencies need to build strategy and capabilities specifically for

### ANCILLARY BUSINESSES IN EU AIRPORTS

In the EU, government-allocated funds for airport O&M tended to fluctuate. This is why the major airports in the EU have developed an alternate source of funding for O&M costs by developing and encouraging ancillary businesses within the airports themselves.

**Action**

These EU airports have developed ancillary services that target consumers and businesses alike. Services include parking, retail, banking, advertising, and storage, all of which are relevant to customers’ interests and can generate significant income.

**Results**

The ancillary businesses generate 42 percent of total average airport revenue. The airports are able to secure O&M funding from more alternate sources, instead of relying on government funding.
ancillary businesses, given that the required skills are different. High capabilities will result in innovative business opportunities. In China, the Shanghai Metro introduced virtual supermarkets in 70 stations, with large LED screens to advertise goods. Each item has a barcode, which shoppers can scan with their mobile phones to purchase. Purchases are delivered to customers’ homes within two days.

In addition to improving revenue, infrastructure operators also must make moves to reduce overhead costs. Organization structures often remain unchanged, despite larger and more complex demands. Adopting shared services to centralize, standardize, and automate support, if done properly, can reduce costs by up to 40 percent.

Strengthen asset-management practices for existing assets. Before funding projects, there should be more integrated asset-management planning. The government can do a cost-benefit analysis of funding greenfield or brownfield projects. To determine the best path, the government could adopt an asset management framework based on international standards (such as BSI or ISO). An example is the enterprise asset management practice as applied by MARTA in the U.S.

**HIGH-SPEED RAIL OPERATOR IN JAPAN**

JR East, one of seven Japanese railway companies, operates one of the busiest Shinkansen lines. It has developed a large array of ancillary businesses to ensure consistent revenue growth.

**Action**

Aside from ticket sales, revenue is generated from retail and restaurant services at railway stations, as well as on the trains themselves. JR East has also developed shopping centers and office buildings on property it owns, and generates revenue by renting space to retailers and tenants, as well as an array of other businesses.

**Results**

These ancillary businesses generate 32 percent of total revenue. Since 2011, ancillary businesses have generated additional revenue of ¥60 billion (equal to $590 million).

**ENTERPRISE ASSET MANAGEMENT IN MARTA, U.S.**

The Metropolitan Atlanta Rapid Transit Authority (MARTA) needed to improve the management of its operations. This required improved labor, project, and warranty tracking; better identification of high-cost parts; improved rail and track inspection capabilities; and effective deployment of analytics to better manage the business.

**Action**

MARTA launched its Enterprise Asset Management system, a comprehensive, browser-based system that would be able to track an unlimited number of assets in order to detect problems early. MARTA employees were quickly trained to use the software, and have consistently reported that it is easy to learn and use.

**Results**

Track inspectors now walk the tracks with mobile handheld devices. They either batch-process data back into the system or report problems in real time so that they are dealt with immediately.
INDONESIA BOASTS THE LARGEST economy in Southeast Asia, and its global competitiveness has been improving, as is reflected in its moving from forty-fourth to thirty-eighth position in four years, according to the World Economic Forum. However, Indonesian government institutions currently rank at 67 on the World Bank’s Global Competitiveness Index, well behind its ASEAN peers and other G-7 countries. The World Bank report highlighted two main areas that currently hamper Indonesia’s competitiveness: inefficient bureaucracy and high corruption rates.

Therefore, there are two areas that can have significant gains in terms of improving government bureaucracy; performance management and an open and digital government.

Recruit, Retain, and Manage Talent in Government Institutions
The key to creating an effective and high-performing civil service is attracting a highly talented workforce. This has been a challenge for the government in recent years, with many recent graduates choosing instead to work at multinational corporations, and only 4 percent choosing to work in the government sector. Job stability, traditionally the most attractive feature of a government career, has become the lowest-ranked criterion

KEY PRIORITIES

Recruit, retain, and manage talent in government institutions
1. Recruit the best talent to work in the government
2. Create comprehensive training programs to develop talent
3. Measure and reward performance based on results
4. Strengthen coordination among institutions

Increase transparency and access to government data
1. Improve participation of government institutions and citizens in open government via online channels
2. Build capabilities and adopt an end-to-end customer-centric service delivery design to improve the quality of the user experience
in choosing a place of employment. Instead, most members of Gen-Y cite potential career development and salary as their top priorities (see Exhibit 7).

**Recruit the best talent to work in the government.** Several Indonesian government institutions have tried to increase their value propositions by offering scholarships to attract high-quality employees. One example is the State Accountability Revitalization (STAR) scholarship offered by Badan Pengawasan Keuangan dan Pembangunan (BPKP). However, the career development and compensation available still cannot compete with the packages offered by the private sector. In order to appeal to the best of the Gen-Y talent pool, the government must become a working environment that values and rewards strong performance, and provides a clear and fast advancement track for high performers.

Singapore has successfully attracted top talent into its civil service. For example, the Management Associates Programme (MAP) offers promising entry-level officers a management career track in the civil service. It provides a high entry point, frequent rotations within the civil service, and a significant compensation premium of up to 50 percent over other services. Through the MAP, there are 50 to 60 new highly qualified officers inducted into the program every year.

**Create comprehensive training programs to develop talent.** Current government talent must adapt and grow to meet the ever-changing demands of an increasingly digital world. There are currently various training programs for government officers, ranging from technical capability training to behavioral training, which aim to help employees understand the importance of combating corruption and promoting a cleaner government. However, there is room for improvement in terms of the scope and reach of such training. The government can collaborate with private and educational institutions to provide up-to-date, best-in-class training and professional development for government employees. A good example

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**EXHIBIT 7 | Attracting talent is challenging for the government in Indonesia**

<table>
<thead>
<tr>
<th>Type of companies preferred by employment in Indonesia</th>
<th>Government sector is only preferred by a fraction of recent graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi National</td>
<td>64</td>
</tr>
<tr>
<td>Private</td>
<td>17</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>6</td>
</tr>
<tr>
<td>SOE</td>
<td>4</td>
</tr>
<tr>
<td>Government</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>


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**Gen Y’s top criteria for choosing place of employment**

- Career development: 106 votes
- Salary: 90 votes
- Global career: 46 votes
- Work life balance: 38 votes
- Working environment: 27 votes
- Fair treatment: 26 votes
- Company’s brand: 21 votes
- Company values: 20 votes
- Challenge: 17 votes
- Job recognition: 16 votes
- Training & development: 11 votes
- Industry leadership: 10 votes
- Company’s financial: 9 votes
- Locations: 9 votes
- Care for environment: 9 votes
- Benefits: 8 votes
- Innovativeness: 15 votes
- Job stability: 14 votes

---

**# votes**

---
of this is the UK government’s continuous and easy-to-access online training.

**Measure and reward performance based on results.** Currently, there is a lack of simple and measurable KPIs for evaluating employee performance. As such, there is a comparatively weak link between performance and career outlook and reward, with no current measurement for potential or joint performance. Career advancement tends to be tenure-based, instead of performance-based. Until recently, employee compensation was fully fixed, meaning that there was no link between employee performance and salary paid. New regulations in 2013 added a variable component based on performance and were a step in the right direction, but the share of compensation driven by performance still pales in comparison to other countries in the region (see Exhibit 8).

The Singapore government identifies and values talent at an early stage, and then creates a strong link between performance and reward. By implementing simple, measurable, and actionable KPIs at all levels, the government can accurately measure performance, and then reward high performers through variable pay. Singapore has done this by implementing a pay scale that is based on an individual’s grade and potential, as well as the country’s overall performance.

**Strengthen coordination between institutions.** A lack of clear coordination among government institutions, with potential duplication of efforts and additional bureaucracy, will impede the efficiency and effectiveness of those institutions. For example, there tends to be a lack of coordination and alignment of policies between the central and regional governments, as well as within the central government itself.

Government processes can be streamlined by clarifying roles and responsibilities among government institutions. A dedicated monitoring role to mitigate overlap in government would minimize inefficiency and avoid the duplication of roles. A working example of this would be the U.S. Government Accountability Office.

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**EXHIBIT 8 | Relatively small linkage between compensation and performance for government employees in Indonesia**

<table>
<thead>
<tr>
<th></th>
<th>Indonesia before 2013</th>
<th>Indonesia after 2013</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Performance</td>
<td>100</td>
<td>86</td>
<td>40</td>
</tr>
<tr>
<td>Grade-based individual Performance (Grade, potential)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Potential-based individual Performance</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Country Performance (GDP growth)</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Source:** In-depth interview; BCG analysis.

**Note:** Indonesia: Echelon 1 Ministry of Industry; 2013 is when allowance applied in each ministry.
Increase Transparency and Access to Government Data

According to the World Economic Forum, Indonesia is currently behind many of its peer nations in terms of government transparency and corruption rates. The index shows a correlation between low levels of government transparency and higher levels of corruption. Government transparency therefore becomes a key area of improvement for Indonesia (see Exhibit 9).

The advent of the digital age, however, has a tremendous impact on a nation’s ability to efficiently disseminate information and increase public access to government services, therefore increasing government transparency. According to a recent BCG survey covering 12 countries including Indonesia, and sampling 1,600 Indonesians who already use the Internet regularly, 55 percent of those surveyed used online government services at least once a month, while 93 percent have used at least one online government service over the past two years. However, 52 percent felt that public services were “much worse” or “somewhat worse” than those offered by the private sector.

Indonesia’s government institutions have already taken the first few, vital steps toward a greater digital presence, with at least 70 central government institutions having already launched accessible websites, and additional websites being provided by local governments. There are numerous services already available online, such as passport renewal, tax services, and talent recruitment portals.

Despite ongoing digital government initiatives, there is considerable room for improvement. The Indonesian government needs to improve the breadth of online services and expand the number of users, and to add more depth by designing services that can work across different platforms and devices, such as smartphones and tablets.

Improve participation of government institutions and citizens in open government via online channels. Indonesia has made good progress toward digital government. It was...
one of the eight founding countries to launch the Open Government Initiative (OGI), and Indonesia hosted the Asia Pacific Regional Meeting Open Government Partnership in Bali in May of 2014. Indonesia’s key initiatives include One Service, Open Budget, One Map Indonesia, Indonesia Data Portal, and the Open Government Indonesia Public Service Competition in 2012. One Service (Satu Layanan), serves as a portal to provide general information about public services from approximately 50 government agencies. Such examples are having an impact on Indonesian users’ perceptions: 85 percent of those surveyed said that online government services had improved over the past two years.

However, out of the 63 percent of survey respondents who were interested in accessing online government services, only 25 percent had actually done so in the last two years. There seems to be an overall lack of public awareness of the data and government services currently available online, and a general feeling that those currently available are not relevant to public interests. There are also inconsistencies across different government institutions’ online presence, with a rather ad hoc approach to engaging digitally with the public.

Promote crowdsourcing in government.
Crowdsourcing—reaching out to a larger population in order to access and harness its knowledge—is a fairly new approach to government, but one that can be very powerful in terms of increasing public engagement and leveraging citizens’ knowledge and energy. A government that effectively answers this call to include more voices and encourage public participation will be a government that can truly say that it heeds the voices and the needs of its people.

Indonesia has already initiated a crowdsourcing platform with LAPOR! (Layanan Aspirasi Pengaduan Online Rakyat), run by the Presidential Working Unit for Supervision and Management of Development (UKP4). It promotes civic engagement with efforts toward maintaining a cleaner and more open govern-
The U.S. government, realizing that a purely internal approach to existing problems was providing insufficient answers, decided to seek out external perspectives and solutions. The U.S. General Services Administration (GSA) established a platform to promote innovation by offering prizes for creative solutions to challenging problems.

**Action**
In July 2010, the GSA partnered with ChallengePost to develop Challenge.gov, a platform where citizens could locate and tackle tough problems. The U.S. government would post challenges on the site, and members of the public could submit potential solutions. Prizes for solutions range from nothing to $15 million.

**Results**
Roughly 60 federal agencies have used this website to find solutions to existing problems, and more than 42,000 solutions have been submitted by citizens. In 2014, Challenge.gov was named the winner of the Harvard Innovation Award.

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**CROWDSOURCING ACT OF 2012 IN THE PHILIPPINES**

The Filipino people protested and criticized the lack of citizen involvement in the lawmaking processes of the Philippine government. In response to this, the government enacted the Crowdsourcing Act of 2012 that would allow citizens to be a part of the lawmaking process.

**Action**
The Crowdsourcing Act of 2012 allows citizens to send in their feedback on bills currently being considered via an online form. Their comments are published on the website.

**Results**
The platform has 9,000 “Likes” on Facebook, and 27,000 followers on Twitter, indicating highly positive support from the citizens of the Philippines.
greater simplicity on public-service websites and stronger reassurance that the information they provided would be secure.

The government should build its capacities and skills in order to be able to strengthen service execution. The skills needed to develop and deliver digital services are more common in the private sector, as digital talent is not naturally attracted to the public sector. One solution, adopted in the UK with its Government Digital Service team, is to set up a strong central team to drive the strategy, with the option of contracting outside service providers where necessary to fill any skills gaps in the civil service.

The government could also work with the private sector to increase and improve digital engagement with the public, and to continue to build digital talent within the government itself. There should also be a move toward adopting a more customer-centric delivery design in order to improve the quality of the user experience. A single point of access (such as Australia’s myGov) would streamline the user experience. In the early stages of implementing such a portal, there should be a focus on critical services (as is seen in Australia’s focus on health care and human services).

With commitment at the most senior levels of government to take concrete steps toward a more open and digital government, public engagement via online channels could improve dramatically. The UK government’s Digital Service team has even been recognized as the country’s most innovative startup. All government institutions should improve their online presence and focus on increasing online public engagement. With key government data and information readily available to stakeholders, access to government services and the services themselves will improve. This increasing transparency will also promote government accountability and stakeholder and public engagement in future national development.

**MYGOV IN AUSTRALIA**

Nearly half of the Australian population was dissatisfied with the various online channels offered by the government, compared with only a quarter dissatisfied with the services offered by the private sector. Only 40 percent of the public was using the government’s online services.

**Action**

MyGov was introduced to improve access to online services from Australian government agencies (from medical records to taxation). It gives people access to websites and government smartphone and tablet apps via a single entry point.

**Results**

There are currently more than 5 million registered myGov users, with more than 70 percent of these having made online transactions. The platform provides access to seven member services that account for the majority of federal government transactions with individuals.

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INDONESIA HAS 28.5 MILLION citizens currently living below the poverty line. One of the government’s approaches toward alleviating the financial pressure placed upon the poor has been through fuel subsidy programs. However, this approach tends to benefit the middle- to upper-income segment of the population instead, as they are more likely to own and use cars and motorcycles.

Current subsidy programs have become unsustainable in terms of budget. According to APBN-P 2014, the Indonesian government currently spends around IDR 403 trillion a year on subsidies, which is a main contributing factor to the current account deficit. The current budget deficit is more than 2 percent of GNP in the first quarter, and this year’s budget deficit is expected to be as high as 2.4 percent of GDP.

Reducing fuel subsidies has been a matter of debate for some time, and last year the Indonesian government cut fuel subsidies for the first time since 2008, effectively raising gas prices by 44 percent and diesel prices by 22 percent. However, the remaining amount of fuel subsidy is still unsustainable. Although there have been subsequent efforts to reduce subsidies, enforcement has become an issue. Ultimately, as the world’s fuel prices fluctuate, market forces will require that the government take a much heavier hand with fuel subsidies.

Reevaluating the government’s approach to subsidies—and potentially diversifying the types of subsidies offered—is one step toward ensuring that Indonesia’s neediest populations receive the help they require. What is equally important, though, is ensuring that

KEY PRIORITIES

**Protect the Poor and Reduce Income Inequality**

1. Focus subsidies on commodities and services that are most relevant to the poor

2. Ensure subsidies reach target populations with minimal leakage

**Ensure Sustainability of Government Spending on Subsidies**

1. Promote sustainable spending on subsidies

2. Promote responsible consumer behavior and subsidy consumption
there is adequate money and support for long-term economic sustainability and growth, both at the governmental and consumer levels. Encouraging positive and responsible consumer habits will ensure that the subsidies are worthwhile.

Protect the Poor and Reduce Income Inequality

A majority of Indonesia’s fuel subsidies end up being enjoyed by the more affluent segments of society, as they are more likely to own cars and motorcycles, and therefore purchase more fuel. Similarly, regions of Indonesia such as Sumatra, Java, and Bali, that already have a higher GDP per capita, also enjoy higher levels of fuel subsidy (see Exhibit 10). Therefore, the poorer segments of the population do not actually end up benefitting from these subsidies.

Focus subsidies on commodities and services that are most relevant to the poor. A way to ensure that adequate support reaches the neediest segments of the population would be to divert subsidies toward more relevant commodities and services. This could be done by reducing fuel subsidies and increasing subsidies in the form of basic needs such as rice. The money for subsidies could also be diverted toward supporting services for the poor, such as health care and education, to ensure that the poor directly benefit from this aid.

Ensure subsidies reach target populations with minimal leakage. As most of the government’s subsidies are direct subsidies, there are junctures along the disbursement process that are vulnerable to leakage and abuse, including the smuggling of fuel in order to take advantage of the price differential. This is true for the current disbursement method, Bantuan Tunai Langsung (BTL), as it is almost impossible to identify who the most deserving recipients are.

Greater integration of current technology into the disbursement system could dramatically increase its effectiveness. Cash disbursements could be provided via electronic channels, such as a smart card, which could also be used to identify individuals who would qualify to buy products at a subsidized price. An example of this would be Malaysia’s use of an integrated ID card that identifies citizens who qualify for subsidies.

Another way to integrate technology into methods of disbursement would be through implementing an electronic money system, which would increase efficiency and reduce leakage. In Mexico, the prevailing subsidy

EXHIBIT 10 | Fuel subsidies benefit wealthier segment of population more

Fuel subsidies will directly benefit the wealthier people who own motorcycle and cars

Higher subsidized fuel received by wealthier region

![Graph showing the relationship between vehicle penetration and subsidized fuel](https://example.com/graph.png)

Source: BCG Indonesian consumer survey, October 2012, BPH Migas, BPS.

Note: Survey question: Do you or your family member own the following asset? N = 3250.
payment method is via prepaid card. Payment using prepaid card has been quite popular since it is quick and easy to implement.

Ensure Sustainability of Government Spending on Subsidies
In general, Indonesia’s government spending is in line what that of its regional peers. Up to 85 percent of total spending goes toward short-term expenditures, with the largest portion of its non-development expenses going toward subsidies. The government’s current spending on subsidies then comes at a significant opportunity cost in terms of future development in several key sectors. The amount of money spent on subsidies in 2014 is equivalent to three years’ worth of education spending, nine years’ worth of road development, or 26 years’ worth of health care spending (see Exhibit 11).

Promote sustainable spending on subsidies. As Indonesia’s oil production levels decline, and Indonesia becomes a net oil importer,

SNAP FOOD STAMP PROGRAM IN THE U.S.
Paper-based food “stamps” were initially used as a way to distribute subsidized food to poor families. Recipients would use the food stamps to buy food at lower than market prices.

Action
In the 1980s, the government replaced the physical stamps with cards that would be credited with the appropriate amount of funds each month and then used like a debit card. The card could be used to purchase any kind of grocery product except for hot foods, pet foods, tobacco products, and alcoholic beverages. The switch from paper-based stamps to electronic ones took place slowly, but by 2013 there were 48 million participants in the electronic program.

Results
The food stamp system improved dramatically in terms of both effectiveness and efficiency. Administrative costs fell considerably, and instances of fraud have decreased.

MALAYSIA’S FUEL SUBSIDY REFORM
In 2012, Malaysia faced a fiscal deficit of 4.5 percent of GDP, the second highest among Asia’s emerging markets. In 2013, Malaysia spent $7.9 billion on fuel subsidies.

Action
From 2010 to 2013, the Malaysian government took steps to decrease the level of fuel subsidy given, and gradually increased fuel prices. The money saved from the cut in fuel subsidies was then reallocated to increase the amount of social assistance offered. This resulted in Malaysia providing $1.5 billion to 7.9 million recipients through the Malaysia People’s Aid program, as well as directing $320 million toward building 80,000 low- and medium-cost houses.

Results
Malaysia was able to reduce its fiscal deficit from 4.5 percent to 4 percent. The additional cash handouts, along with more available affordable housing, increased the welfare of lower-income Malaysians. Although reducing fuel subsidies initially caused the inflation rate to increase (it reached 3.5 percent in April 2014, the highest it has been since October 2011), rates started to ease in May 2014. The Malaysian government recently announced a move to a managed float for petrol.
fuel subsidies become increasingly costly, placing Indonesia in a fiscal position that is highly vulnerable to global prices. A majority of current subsidies, such as fuel, electricity, and cash, cater to short-term needs and are consumption-based, which makes them vulnerable to abuse. There is a current lack of long-term, objective-based subsidies, such as new energy sources and tax relief.

In order to combat this trend, it would be prudent to divert these fairly volatile subsidies toward more sustainable avenues. Government spending should be rethought in order to ensure that there is equal spending on subsidies and development efforts to encourage national growth. Diversifying subsidies and moving toward long-term, objective-based subsidies such as geothermal energy and tax relief would promote future growth and development. Successful implementation of subsidy reform—either in stages, or in one go—would require political willingness and careful planning.

Promote responsible consumer behavior and subsidy consumption. Within the current structure, it is almost impossible to ensure that the subsidies given are used entirely to fulfill primary needs. The recipients tend to spend in non-sustainable ways.

By reconsidering the subsidy structure, more responsible consumer behavior can be encouraged. Implementing a conditional cash disbursement program, for example, with a series of criteria to be fulfilled by recipients as prerequisites, would ensure that subsidy recipients are deserving. The prerequisites for cash disbursement can also be used to ensure that the poor are using the money to build a solid foundation for their futures. The ultimate goal is for them to minimize their dependence on government subsidies.

For example, the Bolsa Familia Program in Brazil provides cash disbursement with the requirement that the children of the recipients maintain good school attendance.
This ensures that children are getting a proper education—a crucial factor in building a better future and breaking the cycle of poverty. Introducing a cash disbursement system that utilizes financial channels, such as bank accounts, would also promote financial inclusion for the poor and build a culture of saving. This method was implemented in Brazil in 2003, where the recipients of Bolsa Familia have opened more than 2 million bank accounts.

**IRAN’S FUEL SUBSIDY REFORM PLAN**

Iran was the largest provider of fuel subsidies in the world, spending around $50 billion on fuel subsidies in 2010. This high level of fuel subsidy was the primary factor in a 500 percent rise in Iran’s energy consumption over the past three decades, when the population only doubled in size.

**Action**
Recognizing the unsustainable nature of such extensive fuel subsidies, the government moved to fully reallocate the fuel and energy subsidies to social assistance and industry reform within five years. This reform happened in several phases, with the subsidy budget being divided equally between industry reform and social assistance in 2013. Starting in 2010, the government was able to distribute $40 a month per person to 90 percent of the population.

**Results**
These efforts managed to restore economic efficiency with increased oil exports and government revenue. With the budget reallocated toward targeted social assistance, there was an actual decline in income inequality.

**BOLSA FAMILIA PROGRAM IN BRAZIL**

Prior to 2004, despite spending 22 percent of GDP on the social sector, Brazil still faced tremendously high levels of poverty and inequality. For example, 60 percent of the population had only 4 percent of total wealth.

**Action**
Bolsa Familia (originally Bolsa Escola) is a conditional cash transfer program with a budget of only 0.6 percent of GDP. In order to be eligible for a cash transfer, a family must fulfill two conditions: children from the ages of six to 15 must maintain a school attendance record of 85 percent, and pregnant women and children up to six years old must have regular medical checkups. In this way, the program provides incentives for more responsible personal and social behavior at the consumer level.

To further promote the program, in 2003, Caixa Economica, a government-owned bank, introduced free simplified accounts that families could use to receive their subsidy disbursements. The accounts include a VISA-branded debit card that can be used at more than 20,000 ATMs, stores, and retail establishments.

**Results**
Because of this program, there has been an approximately 50 percent decrease in the population suffering from extreme poverty, and a 15 percent decrease in income inequality. There was also an increase in school attendance and grade progression (for example, the chances that a 15-year-old girl would be in school increased by 21 percent). Also, more than 2 million families have opened bank accounts. The program has become a successful way to break the intergenerational poverty cycle.
Indonesia is a strong exporter of raw commodities, but has yet to extract the full potential of the entire value chain. In comparison with its regional peers, Indonesia’s focus tends to be on commodity sectors and basic industries. In order to remedy this, Indonesia should focus on becoming more competitive, and can do so by concentrating on increasing productivity and efficiency for tasks that are already well-suited to the country. Improving the general business climate and implementing more market-friendly regulations could encourage greater investment from multinational corporations.

**Build the Ecosystem and Enable Infrastructure to Drive Competitiveness**

With a strong correlation between industrial competitiveness and manufacturing value

**KEY PRIORITIES**

1. **Invest in required infrastructure and support services**
2. **Attract multinational companies (MNCs) to Indonesia by setting up special economic zones.**
3. **Build a local supplier base across industrial clusters through tax incentives, and with local content.**

**Build better relationships between labor and industry to improve productivity**
1. **Develop labor skills through better education and training**
2. **Adjust regulation to balance between social welfare and competitiveness**
3. **Implement a clear and smooth dispute mechanism**

**Encourage R&D initiatives to generate innovation**
1. **Collaborate with universities to set up R&D centers**
2. **Provide incentives to encourage R&D**
per capita, it is crucial for Indonesia to increase industrial competitiveness in order to facilitate market and industry growth. Currently, the competitiveness of Indonesia’s manufacturing industries is fairly low in comparison with its regional peers such as Thailand and Malaysia (see Exhibit 12). Indonesia’s low competitiveness means that multinational corporations are less interested in investing in manufacturing in Indonesia, and the nation’s manufacturing value will not grow.

Invest in required infrastructure and support services. Currently, a lack of infrastructure is causing tremendous losses, both in terms of productivity and cost. Indonesian seaports have limited capacity, and are therefore less efficient. Longer dwelling time spent at the seaport, poor road conditions, and low connectivity in remote areas, particularly outside of Java, mean greater overall costs. Electricity supply is also generally low quality.

In order for Indonesia’s manufacturing sector to fully recover and continue to grow, it is vital to invest in improving Indonesia’s infrastructure and support services. For Indonesia’s manufacturing sector to be competitive and attract MNC investment, the cost of doing business in Indonesia has to come down, which can be done by increasing efficiency and productivity. Developing the necessary infrastructure and connectivity will promote efficient production and distribution. Similarly, policies and regulations must be fully supportive in order to nurture industrial hubs. For example, administrative processes should be streamlined.

Attract multinational corporations to Indonesia by setting up special economic zones. Since the Asian financial crisis, there has been a decline in the performance of Indonesia’s manufacturing sector. Although it has been recovering, it is doing so at a slower rate than its regional peers. Other markets in the region have proven more attractive to global players. Thailand, for example, has now positioned itself as an automotive manufacturing hub in the region, as well as a world leader in manufacturing printed circuit boards and other electronic components.

More MNCs interested in establishing operations in Indonesia would be a boost to the manufacturing sector. The government could encourage this by promoting special economic zones that offer tax incentives, like Shenzhen in China, and Johor Bahru in Malaysia. These tax incentives could be tailored to in-

EXHIBIT 12 | Indonesia’s manufacturing value is low compared with regional peers

Lack of competitiveness hinders manufacturing growth

2012 Manufacturing value per capita

Source: Unido, World Bank.
Note: Manufacturing value for China is 2011 data
Build a local supplier base across industrial clusters through tax incentives, and with local content. A large portion of the local manufacturing industry still relies on imported raw materials. The highest local content of any product of the Indonesian electronic industry is only 40 percent, mostly because local suppliers lack the capacity and ability to fulfill the industry’s requirements for raw materials. Creating a local supplier base that can fulfill these raw materials requirements could have a significant impact on creating an ecosystem for a manufacturing hub. Providing tax incentives for the use of local raw materials will encourage manufacturers to source locally, and will create a demand for locally produced raw material. These new suppliers should be regulated to ensure adequate quality, and the standards regime for local suppliers could be improved through corporate partnerships.

SHENZEN, CHINA’S FIRST SPECIAL ECONOMIC ZONE

Shenzhen was a small fishing village before it became a Special Economic Zone (SEZ) in May 1980, along with three other cities: Guangdong, Fujian, and Hainan. In the 30 years after that, Shenzhen would become the most successful SEZ city in China.

**Action**
Shenzhen’s success comes as a result of a three-pronged approach. First, the government provided numerous tax incentives, reducing the tax rate to 15 percent for foreign investment enterprises in the SEZ. Second, the government created three funds to support high-tech industries, and the municipal government established the Hi-Tech Industries Investment Service. Third, the local government created a favorable legal environment with regulations that would further promote high-tech industries.

**Results**
The output value of high-tech products from Shenzhen rose from RMB 2.29 billion in 1991 to RMB 65.5 billion in 1998. Shenzhen achieved a 39 percent RGDP growth between 1980 and 2001. By the end of 1998, there were 125 enterprises in Shenzhen, including big players in the high-tech industry such as IBM, Compaq, Fuji, Seagate, and Foxcom.

A WORLD-CLASS HARD DISK DRIVE PRODUCTION BASE IN THAILAND

Thailand’s adoption of a value-chain concept puts end-to-end manufacturing in a concentrated area, which boosts efficiency, and has made Thailand a leader in hard disk drive (HDD) production. Investors are given maximum tax and non-tax incentives, which is a point of attraction for MNCs.

**Action**
The majority of the HDD is produced by a local supplier in central Thailand. The value-chain consists of private players that supply the electronic parts, value added activities such as automation engineering and calibration services, and government agencies and universities that do research and conduct training.

**Results**
Thailand now accounts for 30 percent of global HDD production, and exports more than $17 billion worth of products annually.
Build Better Relationships Between Labor and Industry to Improve Productivity

Labor-market efficiency is a key driver of industrial competitiveness. A more efficient labor market means greater industrial competitiveness. Currently, Indonesia’s labor market efficiency is lower than that of Thailand and Malaysia, and this is part of the reason Indonesia’s industries are less competitive (See Exhibit 13).

Develop labor skills through better education and training. Currently, roughly 60 percent of Indonesian workers in the manufacturing sector can be considered low-skilled. A key issue driving this problem is the gaps in quality and relevance between traditional education and the requirements of the labor market, especially in vocational education. The curriculum for vocational education has been deemed not specific enough to cater to the needs of the manufacturing sector. Compared with its Asian peers, Indonesia has the lowest share of firms offering formal training, which translates to very few opportunities for workers to upgrade their skills.

Vocational schools functioning on their own will not be able to provide all the skills necessary. Hence, increasing cooperation between firms and educational institutions will be crucial to ensure that graduates are market-ready. This could have a tremendous impact on the overall skill levels in the industry. Private firms and vocational schools could collaborate to create curricula that would meet labor market requirements. They could also collaborate to provide on-the-job training for vocational students and institution-based training for employees. With these initiatives, new graduates should be able to quickly adapt to market demands, and would also be able to help current employees increase their skills.

Adjust regulation to balance between social welfare and competitiveness. Increases in labor wages must be at a rate that will ensure that businesses are still profitable, and keep Indonesia growing. One way to ensure this would be to strengthen regulations and mechanisms around how often wages can be readjusted, and determine the considerations for increases in labor wages.

Ideally, in order to maintain business competitiveness, increases in the minimum wage must be followed by productivity improvement. Allowing more variable-based pay might be one of the options to create a better balance between labor welfare and business competitiveness. Hence, it is very important...
to develop a mechanism to control the link between increases in labor minimum wage and levels of productivity.

**Implement a clear and smooth dispute mechanism.** Many employers find labor laws in Indonesia rather difficult to manage, due to unpredictable changes in labor minimum wage, as well as sudden curbs on outsourcing arrangements. Employers also have little control over termination of employment, and are subject to high severance and termination benefits payable to terminated employees. Some situations therefore become difficult, such as dealing with a low-productivity employee.

The recent labor disputes have caused uncertainty among players and foreign investors. Frequent demonstrations and work stoppages calling for better pay and conditions must be appropriately addressed, and the current law, UU Ketenagakerjaan No.13 Tahun 2003, is considered slightly unreliable in solving disputes between employers and the labor force.

A well-defined and well-executed legal process to ensure productive communication among the labor force, companies, and government, while disputes are being solved could make Indonesia more attractive as a manufacturing hub.

**Encourage Research and Development Initiatives to Generate Innovation**

There is also a fairly strong correlation between the amount of research and development (R&D) done, and the innovation output of a nation. Indonesia is actually currently sitting slightly above the trend line, which means that encouraging greater R&D could very easily lead to innovation output that is on par with Thailand and Malaysia (Exhibit 14).

**Collaborate with universities to set up R&D centers.** In Indonesia, there is more of a focus on basic production than innovation. According to an OECD report, medium- and high-tech industries in countries like Brazil, China, and India have each, on average, grown a total of 25 percent over the past decade, whereas Indonesia has only grown 15 percent. This is because Indonesia has been too dependent on low labor costs and a large domestic market, which hinders its competitiveness in comparison with its peers.

The government could encourage greater business/university collaborations by establishing science parks and business incubators that can be R&D hubs for the nation. China also used to be more dependent on low-cost labor, but now has more than 100 science

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**EXHIBIT 14** | Improving R&D can potentially drive overall innovation and value-added industries in Indonesia

Encouraging more R&D could push innovation further to be on par with Thailand and Malaysia

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**Source:** Global Innovation Index 2014 (Cornell University, INSEAD and World Intellectual Property Organization).

1Consists of knowledge, technology, and creative outputs.
parks nationwide that support its manufacturing sector’s move up the value chain.

**Provide incentives to encourage R&D.** Currently, there is a lack of support for R&D activities. The university/industry research collaboration index in Indonesia is much lower than in Malaysia and Singapore. There are limited incentives from the government for institutions that conduct in-depth research and development. Tax incentives for R&D activities would encourage innovation and boost productivity. For example, the Thai government provides one extra tax exemption in return for establishing a R&D center within three years of operation.

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### THE FRAUNHOFER SOCIETY IN GERMANY

The Fraunhofer Society started with one institute in 1954, and has now expanded to 67 institutes across Germany, becoming a large network of government-backed research institutes. The Fraunhofer institutes have played a critical role in translating the latest research into innovation, and keeping Germany an exporting juggernaut.

**Action**
The Fraunhofer institutes conduct research and develop innovation and also provide outstanding experts and world-class skills. The research bodies also become partners with industries, and tailor those partnerships to the particular industry in order to promote innovation.

**Results**
As of 2012, there were more than 6,000 industrial property rights and pending patent applications from the Fraunhofer Society. The institutes have a total of 23,000 employees, 30 percent of whom are engineering professors and PhD students. They have a research budget of €2 billion, of which 85 percent comes from research contracts.

### R&D INCENTIVES IN CHINA

The normal corporate tax rate in China is 25 percent. However, in order to promote R&D, the government offers several incentives. R&D incentives are offered in the form of income tax deductions and reductions in enterprise income tax rates.

**Action**
In order to be eligible for the incentives, a company must be approved by the Science and Technology Bureau and tax authorities, and more than 60 percent of the company’s activities should be in China. These incentives are only applicable to companies in the high and new technology fields. In order for the company to qualify for high and new technology enterprise (HNTE) status, their IP must be located in China. The benefits offered include a 150 percent super deduction rate for R&D expenses, tax exemptions for the transfer of technology, a 15 percent corporate tax rate for HNTEs, and a tax holiday for new technology and software companies.

**Results**
There has been a more than 60 percent improvement in business R&D expenditure as a percentage of GDP. In addition, more than 690 research facilities have been created in China by MNCs, including companies such as Microsoft, IBM, Siemens, and Dell.
Although financial markets in Indonesia are currently moderately healthy, there is significant room for growth. Savings accounts, insurance, loans, payments, and similar offerings—where they do exist—penetrate unevenly and often reach only higher-income populations. As a result, the enormous potential of mass-market consumers to drive economic growth in emerging countries has barely been tapped. Increasing penetration to middle- and low-income households will help ensure that all levels of society will have equal access to services that will increase their well-being.

Indonesia’s shallow capital market is another area with room for improvement. Deepening financial markets is a medium-term priority that can be fulfilled by creating a more sound and more liquid capital market alongside a variety of financial instruments. But it cannot happen overnight. As economies evolve, local

### Key Priorities

**Increase penetration of financial services to the lower income customer**

1. Introduce financial services products in phases

2. Promote cross-sector collaboration and digital channels

3. Develop transactional payment platforms

4. Improve effectiveness of financial literacy programs

**Enact positive reforms to encourage growth of Indonesian financial markets**

1. Implement reforms to encourage local institutional investment

2. Ensure supportive regulation to encourage IPO and bond issuance

3. Increase capital inflow and reduce capital outflow

**Strengthen consumer protection through regulation and process enhancement**

1. Improve collaboration among financial institutions

2. Increase financial transaction transparency and consumer data privacy
companies grow larger and develop more complex funding needs. These include handling larger investments and managing liquidity, interest-rate, and foreign currency risks. Bank credit alone cannot meet these requirements. Developing a corporate debt market is a complex task that will require a systematic approach. Initiatives to improve liquidity are needed in order to attract a wide range of investors. In order for this to happen, there must be sustained investor demand and bond issuance supply, strong business and legal environments, and a fast and efficient issuance process.

**Increase Penetration of Financial Services to the lower income customer**

Currently, the banking penetration in Indonesia is concentrated in the upper and middle classes. For the low-income segment, however, most of the banking services available are focused on micro-financing. The availability of this service does not promote the empowerment of the poorer population. The low-income segment is already a captive market for micro-financing which means that it is only attractive to incumbent players and not very open to new players.

Unlike micro-loans, other banking products (especially savings accounts and transactions) for the low-income segment are less attractive and face more challenges, from both the supply and demand sides. From the demand side, the products currently offered are not suitable for the needs of the low-income segment. For example, the minimum balance needed to open a savings account at a traditional bank is intimidating to the low-income segment of the population. Another issue is the limited number of bank branches, especially in rural areas, which limits access to financial products.

On the supply side, there are also several challenges. First, at this time, serving the low-income segment is not economical for banking players. The business models created to serve more affluent clients are not easily adapted to create profitable services for low-income customers. Secondly, low-income customers tend to be less able to comply with banking stipulations. For example, insurance products require customers to submit health-check results, a cost burden for poor people.

**Introduce financial services products in phases.** The key to successfully developing financial services for the low-income segment is to do it in phases. The first phase will focus on introducing transactional and savings products. The introduction of these products will also provide a platform for low-income people to learn how to manage their finances.

Bank of Indonesia (BI) and Otoritas Jasa Keuangan (OJK) have launched several financial inclusion initiatives to address this issue, such as branchless banking, to improve banking access to populations in remote areas, and TabunganKu to reduce balance requirements. However, further improvement is still necessary. For example, branchless banking is currently still quite restrictive, and must become more user-friendly. The government-to-person (G2P) payment platform can also be leveraged as a way to enforce transactional and savings products for the low-income population.

This first phase will focus on ensuring that low-income people are able to manage their finances wisely. Once that happens, loan and insurance products that will complement their needs can be introduced.

**Promote cross-sector collaboration and digital channels.** The phased development of financial services must be supported with cross-sector collaboration.

Collaboration with core sectors, such as transportation, retail, and telecommunication, to create more integrated systems could result in an environment where the lower-income segment is more aware of, and encouraged to utilize, more transactional and savings products. The Octopus card system in Hong Kong is an example of how a single integrated smart card could be used across multiple platforms. The key success factor of the Octopus card system was choosing to partner with Mass Rapid Transportation to drive initial scale before expanding to other platforms.

**Develop transactional payment platforms.** Developing transactional payment platforms
will be a key enabler to successfully promote transactional services. Enhancing open platforms would drive the development of a more efficient payment system. The main focus should be streamlining the number of existing platforms and enhancing them in order to be more integrated and more efficient.

Improve effectiveness of financial literacy programs. Customer education is critical, given the low financial literacy that hinders the wider adoption of formal financial services. BI has implemented several financial education programs, such as the “Ayo ke Bank” campaign, the 3P campaign, the financial education car, and financial education for migrant workers. One thing that can be done to accelerate financial literacy is to promote experienced-based learning. A successful example is the Compartamos program in Mexico. Compartamos partners with insurance providers to offer life insurance to its borrowers. In case of death, customers’ families receive funds they can use to cover funeral costs. Compartamos initially had to subsidize the insurance products to

OCTOPUS CARD IN HONG KONG

Hong Kong's subway and railway departments have used magnetic plastic tickets since the 1980s. A contactless technology-based smart card was adopted for use in the subway in 1993, and eventually renamed “Octopus.” The Octopus card has become popular on a large scale, and has now penetrated into various types of micro-payment.

**Action**
The Octopus card was initially designed to be used on the subway, but in 2003, the Hong Kong government decided to replace the parking meter system with the Octopus system. Since then, more than 2,000 service-providers have adopted the Octopus system. The services available include access to public swimming pools and transportation, supermarket shopping, and purchasing ready-made food.

**Results**
More than 16 million cards are in circulation, covering 95 percent of the Hong Kong population aged 16 to 65. The transaction volume is roughly $3.8 billion a year, with more than $10.5 million in transactions per day.

BANCO COMPARTAMOS IN MEXICO

Most available financial services focus primarily on lending (individual and group loans). Bundling certain financial products can be a way to build the financial literacy of the mass-market segment while allowing financial firms to obtain new sources of revenue.

**Action**
Crédito Mujer is a group loan system with joint guarantees and a 16-week term. Each group consists of 10 to 50 women. The loan includes a free life insurance component worth 10,000 pesos with an option to purchase additional components for 57 pesos each ($4.00).

**Results**
Recent figures show that more than 50 percent of Crédito Mujer clients have purchased the additional life insurance coverage, and that it accounts for about 10 percent of all insurance policies sold in Mexico.
drive adoption. Over time, customers saw the benefit of life insurance, and the company now earns significant revenue from it. Compartamos now has 2 million customers, 1 million of whom have chosen to increase life insurance coverage beyond the minimum required to apply for a loan.

Enact Positive Reforms to Encourage Growth of Indonesian Financial Markets

Financial markets are expected to deepen as the economy develops, as they are a key lever in supporting economic development. Bond markets can strengthen corporate and bank restructuring and thus accelerate resolution in case of a crisis. Well-functioning local corporate bond markets also provide institutional investors with an instrument that satisfies their demand for fixed-income assets, especially with long maturities that match their long-term liabilities, while providing higher yields than government bonds. The equity and bond markets in Indonesia have significant room for growth, particularly relative to its regional peers such as Thailand and Malaysia.

The reasons Indonesian markets are underdeveloped can be viewed from both supply and demand perspectives. On the demand side, there are a limited number of local institutional investors—a large portion of Indonesia’s high-net-worth individuals invest their money abroad. The 1998 unrest led to many high-income individuals feeling insecure about investing in Indonesia due to uncertainty about the tax and privacy regulations. They ultimately moved their savings offshore. This feeling of a lack of security, complemented by limited investment options, resulted in a high capital flow out of Indonesia. In Indonesia, pension funds as local institutional investments in the capital markets account for less than 1 percent of GDP. In comparison, in Chile, South Africa, and Malaysia, pension fund investments account for more than 60 percent of GDP.

On the supply side, there are a few key issues. First, pricing becomes an issue for initial issuance. There is currently no standardized benchmark for bond pricing, making it tricky for a company to price its bonds. Another reason is that issuing bonds is expensive, more so than taking out a loan. There are also complex IPO processes and procedures that end up being very costly and time-consuming. For example, it takes

PARTNERSHIP BETWEEN VISA AND THE RWANDAN GOVERNMENT

VISA and the government of Rwanda announced a Charter of Collaboration that encompasses 12 initiatives structured around three key pillars. The first pillar is laying the foundation for electronic payments, the second pillar is promoting innovation in electronic payments, and the third pillar is capacity building.

Action

The mVISA program was launched as a long-term collaborative effort with the Rwandan government to increase financial literacy in Rwanda and to boost the economy through the development of an open platform. mVISA is one of the world’s first networks of interoperable mobile branches providing banking solutions.

Results

More than half of all Rwandan banks currently support or have committed to joining the mVISA system. Seventy-seven percent of all Rwandan adults are targeted to be served by mVISA by 2017.

Account holders can access financial services from any mVisa agent or merchant, regardless of financial institution or mobile money provider. The mVISA program is specifically designed to provide underserved customers who have limited access to banks, with access to secure e-payment and financial services.
months to issue bonds in Indonesia, while it only takes 15 days in Malaysia. Because of the expense of the process, it is often cheaper to opt for debt-financing than it is to issue bonds.

Developing a corporate debt market is a complex task requiring a systematic approach. Several key conditions need to be achieved, including sustained investor demand through encouraging local investment and bond issuance supply, strong business and legal environments, and a fast and efficient issuance process.

**Implement reforms to encourage local institutional investment.** In order to deepen financial markets, there have to be comprehensive efforts to build a stronger local institutional investor base. In order to establish a primary domestic investor base that can support the demand for corporate bonds, it is necessary to further establish the pension fund and insurance industries.

This process may require several steps, as seen in the case of Chile. The Chilean government implemented regulations and incentives that have promoted pension fund and insurance industry development in several phases. It began in 1980, when a state-operated pay-as-you-go pension system was replaced with a fully funded capitalization program, based on individual accounts and operated by the private sector. In the 1990’s, the Chilean government relaxed some requirements and allowed banks to participate in non-traditional banking. In 2001, Chile relaxed rules on investment assets, further expanding the market for corporate bonds. The new policy allowed insurance companies to invest up to 25 percent of their portfolios in corporate bonds rated above BBB and up to 5 percent in riskier bonds, increasing the demand for more types of corporate bonds. The government also eliminated a 15 percent capital gains tax, giving investors additional incentive to invest and trade in corporate bonds.

**Ensure supportive regulation to encourage IPO and bond issuance.** To strengthen the supply side, the government of Indonesia could push SOEs to issue more bonds. Doing so would promote more frequent use of bonds, and would provide price benchmarks for private companies interested in issuing bonds.

Implementing regulations that would support the issuance of bonds and IPOs, such as eras-
ing the issuance tax, and lowering the requirements for issuing bonds, especially when investors are limited, would encourage market growth. Standard operating procedures for bond issuance and IPOs should be simplified, especially for smaller investors.

Increase capital inflow and reduce capital outflow. Measures must be taken in order to stem the outflow of funds from Indonesia, and to promote more investment onshore. Ways to encourage this include tax reforms and diversification of investment options. Some examples of this are the tax easing in Taiwan, and the modernization of financial services in Singapore and India.

Strengthen Consumer Protection through Regulation and Process Enhancement

Indonesia’s consumer protection and financial institution health are at relatively moderate levels (see Exhibit 15). There is still room for improvement, and stronger consumer protection will help banks become more sound. The levels of financial health achieved by nations such as Thailand and Malaysia are well within Indonesia’s reach. The key is to focus on finding the right balance between improving consumer protection and maintaining efficiency. Regulations must not be restrictive to the point of hindering potential growth.

Improve collaboration between different financial institutions. As Indonesian financial markets develop and grow, the processes involved becomes increasingly complex. There are numerous instances during financial decision-making that could potentially create inefficiencies that jeopardize financial stability. Since its establishment, some of BI’s responsibilities have been diverted to OJK. With two separate bodies managing related responsibilities, there must be strong collaboration and communication to ensure that processes run smoothly, and that markets can grow. In general, formalized collaboration between the Central Bank and other financial institutions will improve the overall effectiveness of financial decision-making, and give rise to favorable results.

Increase financial transaction transparency and consumer data privacy. Currently, lack of transparency means a lack of consumer protection, which could potentially affect Indonesia’s financial stability. Having a single

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**TAX REFORMS IN TAIWAN**

A negative net inflow in 2007 triggered the Taiwanese government to take action through some changes in regulation. They then implemented some tax-easing initiatives in order to create and facilitate new investment opportunities.

**Action**

The first step the government took was to make regulatory changes that would impede offshore business development. Customer referrals to offshore banks were forbidden, and selling and advising activities for unauthorized offshore products in Taiwan became illegal. The selling and promotion activities of offshore bankers in Taiwan were restrained, while at the same time, other tax reforms encouraged asset flow back into Taiwan. The inheritance tax rate and gift tax rate changed from a variable rate of 2 to 50 percent to a single rate of 10 percent. The business tax rate was reduced from 25 percent to 17 percent, and there was an increase in the exemption allowance.

**Results**

The Taiwanese private sector net asset outflow went from -$300 million in 2007 to $21.4 billion in 2008 and $20.7 billion in 2009. Net inflow has slowed down slightly since. However, there has been additional creation of onshore private banking businesses, with big banks like Credit Suisse, Citibank, and UBS coming in to Taiwan.

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**A negative net inflow in 2007 triggered the Taiwanese government to take action through some changes in regulation. They then implemented some tax-easing initiatives in order to create and facilitate new investment opportunities.**
body, OJK, as the key regulating body could ensure smoother enforcement of consumer protection regulation within financial services. OJK should also be empowered to enhance regulations so that they further increase transparency and efficiency of financial services. Some examples of ways to increase transparency include standardizing products, services, and fee disclosures. Ultimately, however, it is crucial that OJK does not overregulate to the point of impeding the growth of Indonesian financial markets.

**CONSUMER FINANCIAL PROTECTION BUREAU IN THE U.S.**

The lack of supervision by the Federal Reserve in ensuring an appropriate balance in consumer protection regulation during a particularly expansive monetary period is believed to have been a trigger of the bursting of the housing bubble and subsequent destabilization of the U.S. economy.

**Action**

In July 2011, the U.S. Consumer Financial Protection Bureau (CFPB) was established by the Federal Reserve to educate the public, enforce regulation, and study trends. The CFPB is meant to provide timely information so that consumers can make responsible decisions, as well as protect consumers from unfair practices, simplify regulations, ensure consistency in the enforcement of Federal consumer financial law, and improve the transparency and efficiency of financial products.

**Results**

The CFPB was able to recover an average of $145 each for 9,300 civilian consumers and an average of $170 each for 345 military service members. The CFPB has been able to respond to 95 percent of complaints from the general public, and 98 percent of complaints from service members.
SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs) make up the backbone of Indonesia’s economy. Almost 50 percent of employment comes from SMEs, making them a key driver of economic activity and a vital component of economic growth.

In 2015, the ASEAN Economic Community (AEC) will come into effect for Indonesia and other ASEAN countries. This will enable the free flow of goods, services, investment, capital, and skilled labor among its member nations. The formation of the AEC will provide numerous business opportunities for Indonesia, but with some challenges, particularly to SMEs.

In order to address these challenges, the government has formed a national committee that will provide analysis, evaluations, and recommendations to prepare Indonesia for the start of the AEC. The government has also simplified local licensing requirements for SMEs and eliminated the fee for local licenses. However, these new requirements have not been fully implemented across Indonesia. There are still doubts as to whether Indonesian SMEs have the access to the resources (such as stable sources of funding, high-quality materials and facilities, qualified workers, and information) necessary to become competitive within the AEC.

### KEY PRIORITIES

**Provide alternative methods for, and ensure ease of, obtaining financing**

1. Enhance credit and risk assessment mechanisms beyond “traditional lending”
2. Develop specific financing business models and partnerships to serve various SME segments
3. Enhance government involvement to alleviate market frictions.

**Upgrade competitive skills through talent and innovation programs**

1. Align education and training systems with SME market demands
2. Support knowledge and greater access to information for SMEs
3. Improve recognition of innovation to further push development of SMEs
Provide Alternative Methods for, and Ensure Ease of, Obtaining Financing

Many small and medium enterprises (SMEs) tend to be privately funded, as there is limited access to external financing. In comparison, Malaysia shows a similar level of dependency on SMEs for employment, but has more than triple the number of externally financed investments (see Exhibit 16). Therefore, in order to maximize the economic potential of SMEs in Indonesia, there must be increased access to external funding.

Enhance credit and risk assessment mechanisms beyond “traditional lending.” It is generally relatively difficult for SMEs to obtain financing via traditional lending processes. SMEs tend to be less able to provide reliable financial information (due to a lack of proper records and bookkeeping), making it difficult for banks to assess the credit risk, particularly for new clients. This often results in higher interest rates, or even a total rejection of the lending proposal, making it difficult for many SMEs to get off the ground.

Alternative methods of assessing credit risk, such as through a POS analysis and assessment, could assess the capability and trustworthiness of a potential debtor and provide information to determine whether or not a loan should be given. Similarly, technology can be used to implement new channels to promote access to loans in more rural areas where banks are not present. Turkey’s Garanti Bank’s POS machines, in areas without bank branches, can approve loans to SMEs almost immediately.

Develop specific financing business models and partnerships to serve various SME segments. The nature of small businesses means that SMEs generally need loans to be quick and highly flexible, with simple documentation. However, most banks in Indonesia do not provide such services. Most banks’ business models are not optimized for, or aligned to serve, smaller businesses—and this means that SMEs are deprioritized and underserved.

Banks could tailor products to specifically suit the business needs and conditions of SMEs, for example by allowing high-tech SMEs to use intellectual property as collateral for loans. Banks could also partner with larger corporations within the same value chain.
as SMEs in order to provide an alternative financing model for the SMEs.

**Enhance government involvement to alleviate market frictions.** Currently, SMEs have very limited access to loans outside of banks, and may end up turning to informal and unregulated moneylenders. Naturally, a number of issues are then created, such as issues of security and money laundering. If the government were to build a dedicated risk-rating agency for SMEs, where credit risk can be accurately assessed, then loans could be given to deserving SMEs, reducing overall financial and security risks.

**Upgrade Competitive Skills through Talent and Innovation Programs**

Despite significant growth in the past ten years, overall labor productivity in Indonesia is still very low, particularly in comparison with other countries and its ASEAN peers. There is also a very low rate of innovation per capita rate in Indonesia, with less than one patent application per million inhabitants (see Exhibit 17). This could be partially due to weak intellectual property protection, which may discourage entrepreneurs from registering patents. The overall lack of both productivity and innovation limits and stifles the growth potential of SMEs in Indonesia.

**Align education and training systems with SME market demands.** Many SMEs face difficulty in finding and attracting the right kind of skilled labor, particularly in a tight labor environment. Graduates from local vocational schools might not want to join the workforce immediately, or might not have the right capabilities that the market demands. Members of the workforce, on the other hand, when they do join SMEs, find that they are not provided with enough formal training to continue to develop their skills. Currently, less than 3 percent of small companies offer any kind of training, mostly because there are limited incentives to do so. They often do not want to invest too much in training employees who might leave after a short time.

Partnerships between schools and local SMEs could ensure that the right kind of skilled labor is increasingly available. The effectiveness of vocational schools would increase by

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**SME RATING AGENCY IN INDIA**

In India, SMEs contribute to 50 percent of the country’s industrial output, yet only 13 percent of registered SMEs have access to financing from formal sources. This is mostly due to a large information gap between SMEs and lenders. By developing a robust credit information infrastructure, more information symmetry would be created between lenders and SMEs.

**Action**

The SME Rating Agency (SMERA) is an independent third party that conducts comprehensive assessments on the creditworthiness of SMEs, and is meant to facilitate greater and easier flow of credit from the banking sector to SMEs. It has leading banks as shareholders, which strengthens its credibility. Its ratings are based on both financial and non-financial inputs, and are benchmarked against similarly sized peers in the industry. These ratings are accepted by 34 banks and financial institutions. The rating agency itself uses a turnover-based fee structure. Subsidies are also available. Ratings are evaluated and disseminated within 15 working days after the date of the submission of complete information.

**Results**

SMERA has completed more than 10,000 ratings since its inception in 2005, with many of its SME clients progressing further during re-rating. In 2009 to 2010, SMERA clocked a 0.4 downgrade to upgrade ratio, which means that more SMEs have improved upon re-rating. From 2008 to 2009, the number of SMEs receiving an above average rating moved from 7 percent to 23 percent.
ensuring that the curriculum is tailored to the needs of SMEs. SMEs could also pair up with local schools and provide short courses on entrepreneurship, or scholarships for promising students. In Singapore, the SPRING Executive Development Scholarship is an internship program and scholarship for high-performing students to work at SMEs.

Support knowledge and greater access to information for SMEs. There are some SME owners who are unable to grow their businesses simply because they lack the necessary knowledge and access. There is currently very limited support for SME startups that help them gain the expertise they need to successfully build a business.

In order to create an easily accessible body of knowledge for SMEs, innovative solutions—such as the use of social media to build an online community of SMEs for networking opportunities. After graduation, the scholars have a two-year obligation to work with a participating SME.

Results
Ten local SMEs have participated in the program, and 18 scholarships have been awarded since 2011. The program is still expanding, and these numbers are expected to continue to grow.
and sharing best practices—are needed. Similarly, a learning center for SMEs—either via an online learning platform or an actual physical learning center—could provide much-needed access to information.

**Improve recognition of innovation to further push development of SMEs.** One of the reasons Indonesian SMEs are less competitive at the ASEAN level is that there is a lack of innovation. Low levels of intellectual-property protection discourage innovation, which is why there are fewer patents granted in Indonesia than in Brazil, China, and India.

Streamlining current procedures, as is done in the United Kingdom, would make patent litigation more accessible to SMEs and encourage patent applications. If the government were to intensify the reward for, and recognition of, innovation in the SME sector, that would also boost innovation.

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**SME CENTER IN HONG KONG**

Hong Kong built a one-stop SME Center in an easily accessible downtown district to provide resources and services to SMEs. The SME Center provides information resources and connectivity, along with support and training to help SMEs succeed.

**Action**
The SME Center is set up in a large space that has meeting facilities for business owners to meet with mentors and other entrepreneurs, as well as a complete range of production tools including printers and binding machines for their use. Entrepreneurs are provided free and unlimited Internet access, along with access to a large selection of self-education, reference and business materials, and online databases.

**Results**
The SME Center has garnered numerous positive reviews, and small-business owners have reported finding the resources useful, and the workshops very practical.

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**DUBAI SME100**

Dubai SME 100 is a premier ranking of the 100 top-performing SMEs in Dubai. The objective of the initiative is to inspire SMEs to grow and develop into world-class enterprises.

**Evaluation**
In order to be ranked, SMEs must submit their last three years’ audited financials and meet Dubai’s official SME definition. The evaluation is based on both financial and non-financial criteria. The financial criteria include growth performance (25 percent) and financial soundness (25 percent); while the non-financial criteria cover human-capital development (15 percent), international orientation (10 percent), corporate governance (10 percent), and innovation (15 percent). The benefits of being in the SME 100 include enhanced branding and equity, capability upgrading, and access to professional advisors and investors.

**Results**
The response from local SMEs has been very promising, with applications increasing by more than 50 percent in 2013.
The Indonesian government recognizes the importance of education, and has recently taken important steps toward increasing access to education. In 2011, the Indonesian Endowment Fund for Education (LPDP) was established to provide financial support for students pursuing higher education. Since then, IDR 15 trillion has been allocated toward the scholarship, and more than 20,000 students have applied. Similarly, Indonesia’s prestigious Presidential Scholarship is offered to all students who have received letters of acceptance from the top 50 universities in the world.

While these are important steps, it will be some time before their impact on the general population, as well as the Indonesian labor force, will be felt. In the meantime, there is a looming talent gap as the demand for skilled labor steadily increases. By 2020, there will be an estimated shortage of 17 million skilled professionals. If this gap remains, Indonesia risks not being able to fulfill its economic potential.

**KEY PRIORITIES**

**Strengthen higher education and increase access for the poor**
1. Create alternative funding mechanisms for economically disadvantaged students
2. Set up a dual education system, combining general and vocational tracks

**Focus on producing workplace-ready graduates able to compete internationally**
1. Improve quality and distribution of teachers and educational institutions
2. Expand quality tertiary programs with mega-universities and international providers to support an ecosystem of corporate universities
3. Leverage technology to improve teaching at schools

**Increase the short-term supply of labor in the market**
1. Encourage skilled Indonesians abroad to return from the diaspora
2. Ease controls on foreign skilled workers and attract global talent
3. Promote on-the-job training for unskilled workers
Strengthen Higher Education and Increase Access for the Poor

In spite of scholarships currently provided by the government, finances remain the largest barrier to students entering higher education. Even before the tertiary level, the student attrition rate is high. The enrollment ratio drops from 97 percent at primary school to 67 percent at secondary school. Enrollment at tertiary level is only 22 percent. Thirty-six percent of students discontinued their studies for economic reasons. Bantuan Operasional Sekolah (BOS) has played a significant role in providing access to education by providing infrastructure, training, textbooks, tuition, and stationery, among other things. However, this support is only at the primary and secondary school levels. Participation in tertiary education is low because Indonesia’s GDP per capita rate remains low (Exhibit 18), and can only be boosted by either a rise in GDP, or by finding other ways to help fund students’ education. As raising the GDP is a monumental task, with results that can only be felt in the long term, creating alternative sources of funding for education is the best way to address the current needs of Indonesia’s students.

Create alternative funding mechanisms for economically disadvantaged students. Currently, the government’s free education program only covers tuition in public schools until the secondary level. After that, aside from several scholarships, there is a lack of alternative funding mechanisms to allow more students access to tertiary education. Some ways to improve the numbers could be to provide high-school and tertiary-level students with loans that come with a job guarantee and low interest rates (like the Singaporean government’s student loans), or scholarships that range from primary to tertiary education, such as the U.S. Federal scholarships. In addition, the government could engage the private sector in order to strengthen the role of boarding schools, which could help more students continue their studies.

Set up a dual education system, combining general and vocational tracks. The current education system is also fairly rigid, catering

EXHIBIT 18 | Indonesia needs to find alternative funding mechanism to boost participation in higher-level education

Indonesia’s participation in education driven by its relatively low wealth level

Wealth of a country vs. participation rate in tertiary education in 2013
mostly to full-time students. Students therefore have to choose either full-time study or work. However, many students from economically disadvantaged backgrounds are forced to work in order to help support their families. This is largely why enrollment rates at the secondary and tertiary levels are so low.

An alternative education system that would allow students to work part-time while completing their studies would alleviate the financial pressure on students. Greater flexibility in terms of students transferring between general education and technical education would also allow students to make better choices as to what kind of education best suits them. Singapore, for example, shows a high degree of flexibility for movement between Technical Vocational Education and Training, and the general education track.

Focus on Producing Workplace-Ready Graduates Able to Compete Internationally

Currently, almost all of the top-tier universities in Indonesia have partnered with mega-universities and offer joint degrees. However, these are only a small fraction of Indonesian universities. The others should endeavor to establish similar partnerships. Some of these universities, such as the University of Indonesia, have also partnered with corporations to create internship programs that are integrated into their degrees. For some faculties and majors, the final internship report is akin to, and accepted as, a final thesis.

Similarly, some junior and high schools now run international programs that use international curricula, such as the Cambridge IGCSE, which indicates a move toward a more global perspective on education. However, only 60 percent of teachers in Indonesia are actually certified, and this has led to an overall lack of education quality. This is reflected in Indonesia’s Program for International Student Assessment (PISA) scores, which are low in comparison to its regional peers (see Exhibit 19).

Improve quality and distribution of teachers and educational institutions. There is generally significant room for improvement in terms of quality of teachers and learning institu-

DUAL EDUCATION SYSTEM IN GERMANY

In the European Union, there were 5.7 million people under the age of 25 who did not have jobs in 2013. Germany has a long tradition of addressing the issue through vocational training. Trainees apply for a two- to three-year training program at employers in their desired field. The training takes place on the job and is supported by vocational schools. The program increases job qualifications, and gives employers a good idea of the performance level of the trainee. Because of this program, unemployment of people under the age of 25 is reduced significantly. Young people end up gaining a better education and the number of skilled workers entering the labor force increases.

Results

The retention rate for employees has improved dramatically, with 73 percent of students from the program remaining with the same employers for more than 500 days after the internship ended.

Action

The German government joined with the private sector in order to establish this dual education system. The tuition costs of the vocational schools are borne by the government, and the costs related to the jobs themselves are borne by each private corporation. The program lasts either for two or three years, and students can participate whether or not they have graduated from high school. The students work for four days with industry professionals and then have one day of work-related classroom learning. For the duration of the program, students are entitled to an average allowance of €680 per month, paid by the employer.

Improve quality and distribution of teachers and educational institutions.
tions in Indonesia. Indonesia has a relatively low amount of funding allocated to education, which means there is not enough money invested in its schools and teachers. And funding for public schools is allocated according to the number of students, without taking the quality of schools into account.

Tying public school funding to school quality metrics will provide incentives to primary and secondary schools to keep improving and working toward becoming high-quality learning centers. Like universities in the U.S. that receive significant alumni donations, Indonesian schools could look toward establishing endowments funded by alumni donations. Giving incentives to top-tier universities intending to open campuses or foundation classes in Indonesia would also help improve the quality of education.

Expand quality tertiary programs with mega-universities and international providers to support ecosystem of corporate universities. The private sector has indicated that a majority of current graduates of Indonesia’s tertiary education system are less ready for the labor market. Private corporations have indicated that they are looking to hire only graduates from the top three institutions, who represent only 2 percent of total graduates. This is to mismatch in the labor market, which is due to a lack of industry involvement in establishing education standards.

Greater engagement with the private sector could result in developing high school and university curricula that would be more in line with current industry needs. Increasing industry involvement by establishing corporate universities with top SOEs would help cater to the needs of the private sector. This could also lead to greater alignment between output quality and industry needs (such as in NOC3 Canada). Helping top-tier Indonesian universities grow into mega universities (such as in Nigeria) will help improve overall quality.
Leverage technology to improve teaching at schools. Currently, the average computer to student ratio in Indonesian schools is 0.16, which is far behind that of neighboring countries. The Internet access per student ratio is similarly low, at 0.5. Increasing access to technology can have a tremendous impact on education quality. Promoting the use of the Internet in classrooms from primary to tertiary levels can dramatically improve the education provided (such as through the ConnectED initiative in the U.S.).

Increase the Short-term Supply of Labor in the Market

In Indonesia, there is a growing gap between available and needed talent. Predictions for 2020 show that while the quantity gap for senior management will only be around 6 percent, the quality gap at this level is greater, mostly due a lack of global exposure and leadership development. On the current trajectory, the gap for middle management will be a huge 56 percent by 2020, which is alarming both in terms of quality and quantity. At entry level, the quality gap will remain a big challenge in 2020, while the quantity gap continues to widen (see Exhibit 20).

Encourage skilled Indonesians abroad to return from the diaspora. There are at least 8 to 10 million skilled Indonesians who chose to remain abroad after graduating from foreign universities. There are currently no incentives to attract members of the Indonesian diaspora back to Indonesia. A government-led initiative, such as Malaysia’s Returning Expert Program, or China’s Thousand Talents program, that provides an attractive, incentives-based package to members of the diaspora interested in bringing their skills back to Indonesia, could make a tremendous difference to the current skilled-labor market.

Ease controls on foreign skilled workers and attract global talent. The number of foreign workers in Indonesia has declined by 11 percent since 2011, and is low compared to that of neighboring countries. Attractive incentives for foreign workers such as tax incentives, cash allowances, and easy access to acquiring permanent resident status would encourage them to come to Indonesia. Similarly, improving living conditions in Indonesia (installing a better public transportation system, improving safety standards) would make working and living in Indonesia much more attractive.

Oil and gas is a thriving sector in Malaysia, and with ever-changing technological demands, employers were facing difficulty securing a labor force that could meet demand. The government engaged the private sector in order to be able to produce graduates who would have the skills and experience to meet private sector requirements.

Action
The government negotiated a partnership with Petronas in order to offer best-in-class engineering and technology education to its students. Petronas is considered the leading oil and gas company in terms of engineering and technology, with nine research and development enterprises. UTP’s long, 28-week industrial internship program is meant to develop and leverage industry-specific skills and experience that will match the industry’s needs. The length of the program is meant to allow students to engage in more significant and relevant assignments.

Results
In 17 short years, UTP has become the only private university to make it to the top 200 in the QS World University Rankings, six years ahead of target. It has become a destination university, attracting students from over 50 nations. More than 10,000 students graduate from UTP each year.

UNIVERSITI TEKNOLOGI PETRONAS (UTP) IN MALAYSIA

Oil and gas is a thriving sector in Malaysia, and with ever-changing technological demands, employers were facing difficulty securing a labor force that could meet demand. The government engaged the private sector in order to be able to produce graduates who would have the skills and experience to meet private sector requirements.
Promote on-the-job training for unskilled workers. There is currently a surplus of unskilled labor, as workers with only a senior high school education dominate the total number of registered job-seekers. Promoting on-the-job training for unskilled workers is thus crucial in order to upskill the labor force. The government could offer incentives to the private sector for developing on-the-job training programs, such as the partnership between the UAE and Alshaya to upgrade on-the-job training.

**RETURNING EXPERT PROGRAM (REP) IN MALAYSIA**

The key enabler for the Malaysian government’s Economic Transformation Plan (ETP) is the availability of the right quantity and quality of human capital. The government’s first priority is to ensure a sustainable pipeline of talent through investments in Malaysian education and training. Its second priority is to supplement Malaysian talent, and to that end, the government is liberalizing the entry and retention of skilled foreign talent. Third, given the sizeable skilled Malaysian diaspora, the government is taking measures to encourage Malaysians living abroad to return home.

**Action**

The government introduced the REP to facilitate the return of eligible skilled and experienced Malaysian professionals who can contribute to the ETP. To assist returning Malaysians in their transition home, the REP includes a transitional income tax rate of 15 percent of their employment income for five years (compared with Malaysia’s top income tax rate of 26 percent), the ability to purchase one car tax-free, and eligibility for fast-track permanent residency for their foreign spouse and children. To qualify for the REP, Malaysian professionals abroad would have to meet the eligibility criteria which take into consideration number of years of overseas work experience, income level, and qualifications. In addition, the government engages Malaysians abroad through career fairs overseas, and virtual connections to employers, such as through a job portal (mystarjob.com/Global Malaysians).

**Results**

The REP as administered through Talent Corporation Malaysia Berhad continues to show positive progress, with the numbers of approved applications rising by 30 percent from 2011 to 2013.
ANY EMERGING COUNTRIES VIEW health care as a cost center with few returns. However, health care should be viewed as an investment in a nation’s future and productivity—greater spending on health care means a healthier, more productive population, which can then contribute more effectively to national growth and development.

Indonesia has made large strides in terms of improving national health care, showing steady and continuous improvement. Life expectancy for Indonesians has increased from 40 in 1960 to 70 in 2012, and infant mortality has dropped from 68 deaths per 1,000 live births in 1990 to 26 deaths per 1,000 live births in 2012. More Indonesians than ever are getting vaccinated, with the DPT3+ measles vaccination rate exceeding 82 percent in 2008. National health expenditure has risen from 2 percent of GDP to 3 percent of GDP in 2012.

Even with these successes, there is room for improvement. With an increasingly wealthy and urbanizing population, there has been an increase in non-communicable diseases which are mostly related to lifestyle choices. A lack of preventive care has led to a relatively high mortality rate from preventable diseases. There is generally a shortage in avail-

KEY PRIORITIES

**Improve health care infrastructure to address growing demand**
1. Increase health care accessibility via unconventional, innovative means
2. Improve quality of hospitals and empower health care workers by giving them the right tools and training

**Improve health care coverage for the low-income population**
1. Improve depth of coverage, lower health care costs, and facilitate secondary insurance.
2. Secure breadth of coverage via cooperation with the private sector

**Promote disease prevention and increase awareness of healthy lifestyles**
1. Educate about the consequences of an unhealthy lifestyle
2. Increase awareness of the importance of preventive care
able health care resources, and Indonesia suffers from a lack of hospitals, health care professionals, medical equipment, specialists, medical schools, and medical students.

While the government’s health care spending has increased, it is still at a fairly low level: 6.2 percent of the annual government budget, compared with India’s 8.2 percent and the Philippines’ 10.2 percent. Low funding means a greater out-of-pocket expense for the consumer, and this in turn discourages many people from using health services. Health care services are also decentralized, mostly being the responsibility of local governments, which makes it hard to implement uniform health care policies and control their budgets and quality. Plans for achieving Universal Health Care in 2019, which will fully fund the costs of basic care for all Indonesians are currently underway, although they may face several challenges.

Improve Health Care Infrastructure to Address Growing Demand

Indonesia, with its large and scattered population, faces significant challenges in ensuring that all sectors of the population have adequate access to quality health care. Indonesia is among the lowest performers in the world in terms of the number of physicians and medical students for every 10,000 people. The current lack of medical students means that this shortage of physicians will not be remedied in the near future. Some countries, including the United Kingdom, have moved to address this issue by recruiting physicians from other countries such as India, but this has not been the case for Indonesia. Indonesia also lacks adequate facilities. For example, there are only two available hospital beds per 10,000 people, which is far below Indonesia’s peers, especially given its current economic status. Other nations with a lower GDP per capita, such as India and Vietnam, have significantly higher numbers of hospital beds per 10,000 people (see Exhibit 21).

Increase health care accessibility via unconventional, innovative means. While the shortage of health care facilities and physicians is an issue throughout Indonesia, it particularly affects people in the more rural areas.

EXHIBIT 21 | Indonesia lacks both hospitals and health care professionals


1PPP adjusted 2013 IMF data in USD.
areas. Private hospitals are still built mostly in the cities where the population and wealth are more concentrated. In the more remote areas of Indonesia, which are generally sparsely populated, the challenge is ensuring adequate coverage. One way to address this challenge is to mobilize health care delivery (see Exhibit 22).

Launching a fleet of mobile clinics to provide basic health care to remote areas would increase coverage dramatically. These clinics could be staffed by health care extension workers who can attend to basic health care needs (as seen in China). Providing incentives to the private sector to build medical schools and telemedicine facilities, and simplifying the hospital licensing process for channels such as mobile clinic vans, could introduce more players into the industry.

Improve quality of health care workers and hospitals by empowering them with tools and training. Currently, the quality of facilities and talent available at existing hospitals also needs to be improved. Many primary-care centers lack necessary medical equipment such as ultrasound and x-ray machines. The shortage of world-class health care centers also results in wealthy patients going abroad to get the treatment they need. Many nurses and midwives are lacking in skills and training, and medical schools in Indonesia are not globally, or even regionally, competitive. It is also difficult to attract doctors back to work in Indonesia, in part due to low compensation for physicians.

The quality of facilities and talent must improve in order to adequately serve all Indonesians, and for Indonesia to become more globally competitive. Equipping key primary care centers with low-cost medical equipment, as has been done with ultrasound machines in Uganda, could dramatically improve the level of health care offered in remote areas. On the other end of the spectrum, building tertiary medical care centers with state-of-the-art equipment for advanced treatments, and staffing these centers with highly qualified Indonesian and foreign doctors would ensure that Indonesian patients are able to

| Exhibit 22 | Availability of physicians generally worse outside Java |

More physicians per capita


Mobilize health care delivery via unconventional channels: IT, mobile phone, mobile van clinic, etc.
get world-class advanced care, and prevent the wealthy patients from going elsewhere. The increased hospital quality might generate higher patient throughput and in turn raise standards and the experience-curve of hospitals, creating a virtuous cycle. University hospitals could change their roles from primarily serving the poor to becoming centers for complex surgery and research. Working as a physician in Indonesia must become more attractive. Scholarships, study abroad programs, and better compensation would make it a more prestigious career choice. Generous and targeted financial aid could also attract bright low-income students.

Improve Health Care Coverage for the Low-Income Population

The Indonesian government’s annual spending on health care is among the lowest in the world, falling behind India and the Philippines. This results in high out-of-pocket expenses for many Indonesians for using local healthcare services. The government aims to improve health care for the low-income population by increasing access to health services and reducing costs.

HEALTH EXTENSION WORKERS IN ETHIOPIA

Sixty to eighty percent of the diseases suffered in Ethiopia were preventable. However, they were not prevented due to Ethiopia’s severe shortage of physicians, particularly in the rural areas.

Action

In order to spread health awareness to the rural regions, even with a shortage of qualified physicians, the government started a program to train Health Extension Workers. They recruited high school graduates from rural areas to train at a central training center for a year, and then sent the trained graduates back to their home areas to serve as Health Extension Workers. A team of two could serve 500 to 1,000 households by providing preventive and curative care. They also focused more on health education, family planning, and sanitation improvement.

Results

38,000 Health Extension Workers were deployed between 2004 and 2013. Since then, there has been a 32 percent drop in child mortality, and a 38 percent drop in maternal mortality.

LOW-COST ULTRASOUND DEVICES IN UGANDA

Ugandan women have a 1 in 49 lifetime risk of dying during childbirth. This is partially because most health care centers in Uganda cannot afford ultrasound equipment for basic maternal care, nor are there enough personnel trained to use the equipment (only 35 trained radiologists live in Uganda).

Action

Several multinational companies and NGOs joined to develop a low-cost ultrasound device for underdeveloped markets. Ultrasound images are taken and then transmitted to health centers for diagnosis by specialists. Many clinics in Uganda were equipped with, and trained to use, the device, which dramatically increased their maternal-care capacity.

Results

Overall awareness of maternal and preventive care improved. Sixteen percent of the women who were screened were identified as requiring a change in maternal care. Charging the nominal fee of $2.00 per ultrasound exam allowed the clinic to break even in only three years.
health care services (see Exhibit 23). These expenses keep low-income individuals from using the health care services available.

**Improve depth of coverage for the low-income population.** The high out-of-pocket expense of visiting a hospital makes health care too costly for most low-income consumers. With the current system, there is also evidence of considerable mis-targeting of government aid, which results in leakage to non-poor families. The funding needed in order to implement universal health care (UHC) that can provide basic care to 100 percent of Indonesians would be significant.

Therefore, it becomes important to launch initiatives that can lower health care costs. One way to do this would be to streamline the current health care structure and process by creating a hub-and-spoke model for primary and secondary care managed by provincial governments under direct supervision of the Ministry of Health. This model alleviates

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**MOBILE MEDICAL CLINICS IN THE U.S.**

The number of physicians in rural areas of the United States is considerably lower than in urban areas. The rural population also has a considerably lower income level and often cannot afford adequate health care coverage.

**Action**

The Mobile Medical Clinic is a van that visits and provides health-care services to hard-to-reach populations. The services provided range from preventive screenings to primary and dental care, as well as maternal and infant care. These services are free of charge, and eliminate the need for long commutes, waiting in line, and extensive administrative processes.

**Results**

Seven million people are served by 2,000 mobile clinics every year. These mobile clinics save the U.S. health care system $30 for every dollar spent. Thanks to the mobile clinics, there was a 32.2 percent reduction in heart attack risk, and a 44.6 percent reduction in stroke risk of the patients seen.

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**EXHIBIT 23 | Spending on health care per capita is among the lowest, resulting in shallow coverage**

- **Spending on health care is among the lowest ...**
  - Percent of health care in annual government budget
  - Gov’t health care expenditure per capita

- **... resulting in high out-of-pocket expenses and little health care usage**
  - Use of health care
  - Health care expenditure per capita
  - % Out-of-pocket expenditure

**Source:** WHO World Health Statistics 2014, World Economic Forum.

12011 data, in $USD, PPP adjusted.
pressure and overcrowding via referral and triage. Potential ways to raise funds include selling temporary insurance to foreign visitors as they purchase their visas on arrival, or facilitating micro-insurance initiatives by the private sector as a secondary means for providing health care.

Secure breadth of coverage via cooperation with the private sector. Currently, Baden Penyelenggara Jaminan Sosial (BPJS), Indonesia’s public health department, plans to launch UHC in an effort to increase the health care coverage of all Indonesians. However, there are several challenges that must be considered. The first is resistance from private hospitals. Private hospitals account for about half of all hospitals in Indonesia, and cooperation with the private sector is crucial to implementing UHC. The current plan of a fixed-revenue-per-head model may lead to a deterioration of overall quality, because the reimbursement of the cost of treatments will generally be insufficient without major funding. Private hospitals will be inclined to reduce costs in order to ensure adequate returns.

To implement UHC, the private sector must be invested in collaborating productively with the public sector. One way to promote this would be for the government to allow private hospitals to autonomously set premiums over the current UHC ceiling. That would allow them to provide premium services while receiving an appropriate rate of return. In order to prevent abuse, however, the government should award or penalize hospitals that exceed or fall below standards with tiered reimbursement terms.

To increase the efficiency of UHC, as most current processes are paper-based, investing in electronic data systems would be a significant improvement. These would help streamline processes and increase speed of reimbursements, the lack of which has caused the private sector to lose trust in government health care programs. Furthermore, the electronic patient information could help Indonesian health care authorities analyze trends and patterns to deliver proper preventive care, particularly in preventing epidemics. For example, UK’s National Health Service (NHS) is now collecting and analyzing patient data on flu diagnostics to inform the health care community, and prevent and prepare for the next outbreak.

**Promote Disease Prevention and Increase Awareness of Healthy Lifestyles**

As Indonesia becomes wealthier, with improving awareness around communicable diseases, it is non-communicable diseases that

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**MICRO-INSURANCE IN THE PHILIPPINES**

Only a limited portion of the Filipino population had health care insurance, and coverage was particularly small among the poor. The government was not able to increase the health care budget due to the fiscal deficit.

**Action**

The government took a new approach to improving access to health care by implementing regulation reforms that would allow the private sector to develop a micro-insurance ecosystem. First, they conducted a market survey in order to understand the needs of the low-income population. They then established governing policies and regulations to protect the insurers, simplified the wording of the policies, and educated the poor by launching a nationwide micro-insurance awareness campaign.

**Results**

In three years, insurance penetration has increased by 40 percent, moving from 1.02 percent of GDP to 1.42 percent. The number of people who are insured increased from 12.74 million to 22.4 million, an increase of 75 percent.
have become the greatest threat. Sixty-three percent of deaths are now caused by non-communicable diseases such as cancer and cardiovascular and respiratory diseases. Many of these are lifestyle-associated diseases, and could be avoided with awareness, diagnosis, and preventive care. For example, it is estimated that about 59 percent of Indonesians with diabetes never even know that they have the disease (see Exhibit 24), and over 90 percent of Indonesians have unhealthy diets.

**Educate on the dangers of an unhealthy lifestyle and its consequences.** Smoking is prevalent in Indonesian households, with tobacco being the fourth highest expense item. In a similar vein, 94 percent of Indonesians are said to consume insufficient vegetables and fruits, and 64 percent consume too much sugar. There is a general lack of knowledge and awareness of the importance of a healthy lifestyle.

In order to promote healthier lifestyles and diets, the government could run nationwide education campaigns. Guidelines that discourage unhealthy habits should be enforced. For example, taxes on tobacco and unhealthy products could be raised—the tobacco tax in Indonesia is currently at 46 percent, compared with Europe’s 70 to 84 percent. The revenue generated by this additional tobacco tax could be directed toward health care. Singapore and many parts of the U.S. have banned smoking indoors and in public places in order to reduce general exposure to secondhand smoke. South Korea and the U.S. have also banned the sale of unhealthy foods in school zones.

**Increase awareness of the importance of preventive care.** Most deaths by sickness are avoidable, given the right preventive care. A majority of Indonesians have never received a medical checkup. By increasing checkup and health care education at Puskesmas or via mobile clinics, awareness of these non-communicable diseases and general health care would increase. These clinics could offer free, regular medical checkups on high-mortality-causing diseases such as

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#### Exhibit 24 | Most of top mortality causes relate to lack of preventive care and unhealthy lifestyle

<table>
<thead>
<tr>
<th>% Respondents</th>
<th>Persons (Mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
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<tr>
<td>10</td>
<td>7</td>
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<tr>
<td>8</td>
<td>13</td>
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<tr>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>7.6mn</td>
<td>100%</td>
</tr>
<tr>
<td>58.8%</td>
<td>40.5%</td>
</tr>
<tr>
<td>0.6%</td>
<td></td>
</tr>
</tbody>
</table>


1 Asia region including Bangladesh, Bhutan, Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

2 19% of cancers in Indonesia are lung cancers.
diabetes and cardiovascular disease. The government could also provide free vaccinations on the road, or at public places such as schools and shopping malls, to promote greater child and infant health. Partnering with the private sector to launch nationwide campaigns on preventive care would increase awareness, and reduce mortality rates.

### MOBILE HEALTH INITIATIVES IN KENYA

In 2008, the maternal mortality rate in Kenya was 53 deaths per 10,000 live births, and the infant mortality rate was 5.6 deaths per 10,000 live births. Kenya has since launched initiatives to improve access to information by leveraging a mobile financial system.

**Action**
Kenya launched a mobile health initiative to provide health information to users, particularly with regard to maternity issues. The mobile platform sends SMSs and voice messages to users, giving them access to advisory hotlines, and providing timely health information scheduled in accordance with the national MNCH plan. A program called mFinancial provides pregnant women with vouchers that they can redeem at collaborating clinics. Primary care is also available via mSupport services.

**Results**
Kenya has dramatically increased access to crucial health care information through phone lines and free hotlines. The program, mSavings for mothers, was created through Linda Jamii, and offers affordable medical insurance coverage.

### PREVENTING LIFESTYLE-RELATED ILLNESS IN SINGAPORE

The Singapore population is aging while also becoming increasingly wealthy. This combination often brings with it the increased risk of lifestyle-related illnesses.

**Action**
The Singapore Health Promotion Board chose to focus on the early detection and prevention of lifestyle-related illnesses. They implemented several programs, such as a subsidized program for screening for cardiovascular diseases which is targeted at the elderly, a smoking control program which implemented smoke-free areas and graphics on cigarette packs, and an oral and dental health promotion program.

**Results**
Singapore now has the lowest incidence of cardiovascular disease in Southeast Asia, ranking 133rd globally, compared with Indonesia’s ranking of 51st.
Indonesia’s approach to energy has shown continuous improvement, with some notable achievements. According to various publications, Indonesia’s oil dependence has been on a downward trajectory in the past several years, and is forecast to be further reduced from 38 percent in 2010, to 19 to 35 percent by 2030. Indonesia has already explored and developed large coal reserves, making it the largest thermal coal producer in the world. There is also great potential for renewable energy. The government is already promoting the greater use of clean energy, particularly with regard to geothermal energy and natural gas, and targets having 17 percent of the nation’s energy coming from renewable sources by 2025. There have also been great strides in ensuring that more of Indonesia has access to electricity, with electrification increasing from 64.5 percent in 2008 to 73 percent in 2012.

However, there are still several challenges that might hinder Indonesia’s future success. The nation is far too dependent on fossil fuels, oil in particular. Indonesia’s oil reserves

**ENSURE ENERGY ACCESS AND SECURITY**

<table>
<thead>
<tr>
<th>KEY PRIORITIES1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure stable supply of energy in the long term</td>
</tr>
<tr>
<td>1. Increase use of natural gas and geothermal energy</td>
</tr>
<tr>
<td>2. Diversify energy sources to lower oil dependence and CO₂ generation</td>
</tr>
<tr>
<td>3. Develop ecosystem for more private-sector participation</td>
</tr>
<tr>
<td>4. Explore and develop new oil and gas reserves to secure future supply</td>
</tr>
<tr>
<td>5. Facilitate development of downstream industries</td>
</tr>
<tr>
<td>Increase access to energy throughout the country</td>
</tr>
<tr>
<td>1. Facilitate small-scale renewable energy generation in remote locations</td>
</tr>
<tr>
<td>Increase efficiency in energy consumption</td>
</tr>
<tr>
<td>1. Provide incentives or mandates to improve energy conservation</td>
</tr>
<tr>
<td>2. Introduce an elastic electricity-pricing mechanism</td>
</tr>
<tr>
<td>NOTE</td>
</tr>
<tr>
<td>1. Fuel subsidy issues are addressed in the chapter on subsidies.</td>
</tr>
</tbody>
</table>
are depleting, and current explorations efforts are limited and not on par with those of advanced markets. This is partially due to limited incentives available for exploration by domestic and foreign investors, and existing policies that are often considered complicated and inconsistent.

As Indonesia grows in wealth, individual energy consumption levels also increase. The high levels of fuel subsidies currently in place mean that consumers are less motivated to conserve energy. Similarly, because electricity prices are not elastic, consumers have no incentive to preserve energy when they can. Ultimately, these factors mean that Indonesia could face a tremendous power shortage in the near future.

Secure Stable Supply of Energy in the Long Term

95 percent of Indonesia’s current energy comes from fossil fuels—oil, coal, and natural gas. Out of those three, Indonesia is most reliant on oil. However, local oil reserves have proven far from sufficient, and Indonesia has become a net importer of oil and refined fuel products such as gasoline and diesel. At the current rates, Indonesia is predicted to be the largest petroleum fuel importer in the world by 2018. This reliance on petroleum and refined fuel imports has contributed to Indonesia’s current trade deficit, and in turn has led to the depreciation of the Indonesian Rupiah. In this way, the Indonesian economy and inflation are closely tied to oil price fluctuations.

Increase use of natural gas and geothermal energy. Oil and natural gas reserves are depleting, while demand for energy continues to increase. Additional exploration for oil reserves would improve the situation, but the private sector has not shown as much interest in exploring Indonesia’s hidden oil reserves as they have in other more lucrative markets (see Exhibit 25). As energy consumption outgrows supply, it becomes crucial to increase domestic oil and gas reserves and consider alternative energy sources.

The cost of oil-fired power is greater than that of coal, natural gas, or geothermal energy, and it also comes at a high environmental cost. Indonesia currently ranks fourteenth in the world for CO2 generation. Coal, while abundant and cheap to process, also comes at
a high environmental cost. Hydroelectricity, while having large reserves and low environmental impact, is expensive to generate. There is, however, a large supply of natural gas, although demand is growing faster than supply, and Indonesia has the world’s largest reserves of geothermal energy. Both of these sources of energy are relatively cheap ways to generate power and have a low impact on the environment (see Exhibit 26).

In order to reduce Indonesia’s fossil fuel dependence, the government should promote the use of geothermal energy for power generation and aggressively increase the use of natural gas. To do so, the government could build in incentives, and structure an ecosystem that supports a move toward using cleaner sources. Some ways to do this include building gas pipelines in order to lower transportation costs, and subsidizing gas-based vehicles (as in South Korea).

**Develop ecosystem for more private sector participation.** One of the reasons the private sector has not chosen to invest in exploring Indonesia’s oil reserves is the low probability and high cost of finding reserves compared with other areas. Indonesia has also not proven an ideal environment for private investments, due to high risks, high local content obligations, and relatively frequent regulation changes.

In order to facilitate more private sector investments in oil exploration, the government could implement tax refunds on exploration costs (such as in Norway), increase investor split in Production Sharing Contracts (such as in Colombia), and improve the simplicity, transparency, and consistency of regulations. The government could also enter into more exploration and production partnerships with the private sector. By co-investing in exploration, the risk to private investors is lowered, which subsequently increases the government’s upside stake when a reserve is found.

There is also an opportunity for the government to develop the local downstream industry which is currently underdeveloped. By revamping the country’s existing refineries, Indonesia can reduce its dependence on refined petroleum imports. Furthermore, by encouraging the private sector to participate in the development of petrochemical facilities, such as by providing subsidies or incentives to build petrochemical plants, the govern-

### Exhibit 26 | Heavy dependence on oil despite supply shortage

**Gas and geothermal make the most ideal energy sources based on supply, cost, and CO2 generation**

<table>
<thead>
<tr>
<th>Source</th>
<th>Supply shortage</th>
<th>Excess in supply/reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>–17mtoe</td>
<td>–8</td>
</tr>
<tr>
<td>Coal</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>–41</td>
<td>8</td>
</tr>
<tr>
<td>Geothermal</td>
<td>65</td>
<td>–8</td>
</tr>
<tr>
<td>Large/Small Hydro</td>
<td>50</td>
<td>–1</td>
</tr>
<tr>
<td>Others</td>
<td>–54</td>
<td>–1</td>
</tr>
</tbody>
</table>

**Net Supply**
- Oil: –17mtoe
- Coal: 48mtoe
- Natural Gas: 65mtoe
- Geothermal: 50mtoe
- Large/Small Hydro: 8mtoe
- Others: –54mtoe

**Cost per MWh**
- Oil: $105–393
- Coal: $29–120
- Natural Gas: $36–105
- Geothermal: $32–165
- Large/Small Hydro: $29–232
- Others: n/a

**Env. impact CO2 per kWh**
- Oil: 1.68–1.81
- Coal: 2.08–2.18
- Natural Gas: 1.22
- Geothermal: 0.2
- Large/Small Hydro: 0.3
- Others: n/a

**Sources:** US Energy Information Administration; ASEAN 3rd Energy Outlook, DEN (2010), MEMR, Coal production data from Wood Mackenzie and government announcements of production targets, Geothermal energy in Indonesia, 2006, World Geothermal Congress 2010 report, BCG analysis.
INCREASING USE OF RENEWABLE ENERGY IN NEW ZEALAND

New Zealand’s high dependence on oil-based energy meant that the economy was hit hard by the oil crisis in 1970. The government decided to explore alternative energy sources in order to become more self-sufficient.

Action
The government reduced its dependence on oil imports for power by switching to renewable energy. The government liberalized the energy market, opening it up to private companies in order to promote competition. They had a clear long-term strategy, aiming to achieve a target of using 90 percent renewable electricity by 2025.

Results
Today, 75 percent of New Zealand’s electricity supply comes from renewable energy sources, and this accounts for 33 percent of its total primary energy use.

ENCOURAGING OIL AND GAS EXPLORATION IN NORWAY

Norway’s oil and gas production and reserves were steadily declining at a rate of 4 percent a year. The high-cost and high-tax operating environment was not ideal for private sector investments.

Action
Norway took steps to create a more investor-friendly environment in order to attract and encourage oil and gas reserve exploration. They did this by refunding the tax value of exploration costs borne by upstream companies, and by co-investing in exploration efforts in order to mitigate risks borne by the exploration companies, and in order to encourage participation of smaller players.

Results
The oil and gas production decline went from 4 percent per year to 1 percent per year.

Increase Access to Energy Throughout the Country

Outside Java, and in remote areas of Indonesia, the transmission and distribution of electricity is still limited. Roughly 27 percent of Indonesia’s population does not have access to electricity. Most of the regions that are yet to be electrified are located in remote areas.

These areas have a low population density and tend to have a very low rate of return on investments made in infrastructure (see Exhibit 27). However, it is still crucial to provide electricity to these provinces, even at low returns, in order to improve quality of life in these areas.

Perusahaan Listrik Negara (PLN) is currently the only body that can distribute and sell electricity, and it has already increased the electrification rate in Indonesia from 64.5 percent in 2008 to 73 percent in 2012. It has plans to provide electricity to 29.5 million more people by 2020, with backing from the...
World Bank. However, electrifying the remote regions and islands of Indonesia (including the three smallest island provinces that have a population density of only 7.5 people per square kilometer) will likely be a slow process due to limited resources. Therefore, a new strategy is needed to electrify as much of Indonesia as efficiently as possible.

Facilitate small-scale renewable energy generation in remote locations. Building transmission lines to remote areas is expensive and cost-inefficient, with a low return on investment. One alternative is to construct micro-grid power plants to remote areas that use renewable energy. Power plants for renewable energy can be built at micro-grid size, big enough to power a small town, without losing out much on economies of scale, making them more cost-effective. The government could provide incentives to private companies with the savings from avoiding expensive transmission infrastructure projects to remote regions. The government could also provide licenses and subsidies so that the power in these remote regions could be distributed by the renewable power plant operator at the PLN-controlled price.

Increase Efficiency in Energy Consumption

Indonesia is at an important juncture in determining how it continues to manage its energy consumption. It is currently in trend with most nations in terms of energy consumption per capita, as compared to its GDP per capita. There are plans underway to build several much-needed power plants. However, as the economy grows, Indonesia’s energy consumption per capita is expected to grow as well.

Nations that have large oil reserves, such as Bahrain and Saudi Arabia, have extremely high primary energy consumption rates relative to their GDPs. Similarly, Indonesia suffers from consumption inefficiency, where oil subsidies have distorted true prices, and deemphasize the need for consumers to conserve energy. This has led to increasing energy consumption. Indonesia should attempt to follow in the footsteps of nations like Sweden and Germany, which have both a high GDP per capita, and low primary energy consumption (see Exhibit 28). Effective and strong steps toward conserving energy would be the best way to address growing energy needs, and
can have the same impact as building new power plants.

Provide incentives and mandates to improve energy consumption. There are many ways to create a social environment which encourages habits that conserve energy. Some of these include mandating standards for energy management in commercial and industrial buildings, subsidizing the use of energy-efficient products, mandating a target fuel-efficiency level for cars sold in Indonesia, and maintaining higher room temperatures in public buildings.

Introduce an elastic electricity pricing mechanism. Indonesia’s highly regulated and subsidized electricity supply actually creates inefficiencies throughout the value chain. The lack of a peak-hour premium also means there is no incentive to lower energy usage during peak hours.

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MICRO-GRID SOLAR POWER GENERATION IN MOROCCO

Akkan is an isolated town in rural Morocco with only 35 households. There is one school, and one mosque. The town has no access to electricity, and instead uses wood, candles, and kerosene. The Moroccan Public Utility had casual plans to electrify the town in ten years, with no known plans for interconnection.

**Action**
The state government partnered with the local Akkan community to electrify the town. They built a 5.6kWp micro-grid solar power plant for the community. Eighty percent of the funding for the project came from a non-profit organization, and the rest of the funding came from the community itself.

**Results**
Thirty households, a school, a mosque, a communal house, and public lighting are now powered by the solar power plant. The system is sustained by the state government, and tariffs are collected from community users.

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**EXHIBIT 28 | Indonesia’s energy consumption per capita will grow with its wealth**

Primary energy consumption per capita

The Boston Consulting Group | 65

INCREASING ENERGY EFFICIENCY IN GERMANY

Energy was a major cost for the German government and German households because the government was required to insulate 8 million houses after reunification, as well as to support high industrial investment. Up to 76 percent of household spending was on energy—prices were high as 60 percent of total energy was imported.

Action
The German government decided a strategic and organized long-term push to increase the nation’s energy efficiency was necessary. They set up 47 policies in 13 years and adopted a 40-year efficiency plan. They set targets for sectors and enforced sector-specific policies, including incentives for hybrid cars, eco-design requirements, and combined heat and power targets for industrial players. The government also cooperated with the private sector to create an innovative, energy-efficient product market which earned $3 billion in export revenue.

Results
Germany has seen a 1.4 percent CAGR in terms of energy efficiency over the last 20 years. Seventy-five percent of Germany’s electricity supply now comes in the form of renewable energy.

PROMOTING FUEL-EFFICIENT CARS IN THE U.S.

The U.S. is the world’s largest producer of CO₂ as well as the greatest consumer of energy per capita. The Obama administration recognized this and has taken steps to lower oil-based energy consumption and carbon emissions.

Action
The government chose to focus on the automotive industry by imposing mandates on automotive manufacturers and offering incentives for purchasing fuel-efficient cars. It required that the average fuel economy of cars sold in the U.S. be at least 35.5 miles per gallon (mpg) by 2016, and 54.5 mpg by 2025. Consumers also receive tax refunds as incentives to buy electric plug-in and zero-emission vehicles. Since 2014, eight individual states, including California and New York, have provided additional support toward these efforts by renewing tax credits and building necessary infrastructure, such as charging stations, in order to fuel sales of zero-emission of vehicles.

Results
Sales of electric vehicles increased 229 percent from 2012 to 2013. By 2025, the U.S. estimates it will have saved 12 billion barrels of oil, which translates to $1.7 trillion in fiscal value. They estimate a 6 billion ton reduction in CO₂ emissions by 2025.

One possible solution to this would be for the government to set different prices for electricity according to the time of day, thereby implementing an elastic pricing scheme. The government could test this by allowing a few private companies to trade and distribute electricity to selected industries. The government could set a retail price ceiling in order to control market prices. Ultimately, however, strong governance would be necessary in order to avoid collusion and to ensure that the companies remain competitive and innovative in terms of conserving energy.
Eighty percent of Japan’s primary energy came from oil, and it was therefore hit hard during the 1973 oil crisis. The building sector, in particular, accounted for 33 percent of Japan’s total energy use.

**Action**
In 1979, Japan introduced the Energy Conservation Law that mandated energy efficiency standards for buildings. The standards include guidelines for thermal insulation, air conditioning, ventilation, water heating, and other things. In 2002, the government made it mandatory for buildings to report their energy conservation status.

**Results**
The building sector reached a compliance level of 85 percent in 2005, a steep rise from 34 percent in 2000. The nation’s estimated energy savings between 1979 and 2010 is $5.3 billion, and 34 million tons of CO₂ emissions.

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In 2013, several nuclear power plants were shut down due to the use and replacement of non-approved, disqualified parts. South Korea suffered the worst electricity shortage in decades.

**Action**
The city of Seoul joined with private organizations in order to conserve energy. The room temperature in public buildings was maintained at 26 to 28 degrees Celsius, and civil servants were permitted to wear short-sleeved shirts and short pants. The city provided loans at a low 2 percent interest so buildings could replace their lightbulbs with LEDs. They also reduced public lighting by 26 percent via simple measure such as turning a third of a tunnel’s lights off during the day.

**Results**
These efforts saw participation from 6,201 households, 41 religious organizations, 17 universities, and others. The city used 4.9 percent less energy than it did the year before during the campaign in Seoul, saving 13,428MWh.
Indonesia has always been an agrarian country, and agriculture’s contribution to GDP has been increasing for the past five years. The government has consistently taken steps to support the agricultural sector, with an overall increase in total investment in agriculture since 2000. The Directorate General of Horticulture has developed a set of Good Agricultural Practice guidelines to advise farmers on better food production.

In recent years, however, Indonesia has become an importer of strategic food commodities, including rice. This influx of imported rice has reduced the competitiveness of domestically produced rice, and weakened Indonesia’s agriculture sector. However, there are also areas in Indonesia, such as the eastern part of the country, that suffer from low food security. In line with Goal 1 of the Millennium Development Goals (MDG) to halve the proportion of people who suffer from hunger by 2015, the government has instituted the Raskin (Beras untuk Rakyat Miskin) program, a subsidized rice program for the poor that has run since 1998. But the current agriculture subsidies do not seem to be improving food production in Indonesia, and different steps must be taken to increase productivity and value-chain efficiency.

**STRENGTHEN AGRICULTURE AND ENHANCE FOOD SECURITY**

**KEY PRIORITIES**

**Increase farmers’ welfare with better food production and prices**
1. Enhance farming capability and technology
2. Empower farmers with adequate infrastructure, tools, and financial protection
3. Promote farmland protection and cereal-crop management to ensure food sustainability

**Optimize supply chain to reduce waste and increase price realization for farmers**
1. Reduce unnecessary steps and middlemen in food value-chain
2. Build better food infrastructure including warehouses and storage
Increase farmers’ welfare with better food production and prices

The most basic infrastructure required in agriculture is irrigation systems, and there is a direct correlation between the percentage of irrigated area and the change in food production index. The greater the amount of irrigated area, the greater the improvement in food production. With recent efforts toward the rehabilitation and optimization of farming-level irrigation through Jaringan Irigasi Tingkat Usaha Tani (JITUT), Jaringan Irigasi Desa (JIDES), Tata Air Mikro (TAM), and Drip and Sprinkle Irrigation, Indonesia is currently above the trend line. Still, less than 5 percent of Indonesia’s landmass is irrigated (see Exhibit 29). Continued improvement in irrigation infrastructure could likely accelerate the growth of food production in Indonesia.

Enhance farming capability and technology.

The capability of Indonesian farmers still lags behind that of other agrarian countries, mostly because technology that is currently available is underleveraged. Similarly, very little mobile technology has reached Indonesian farmers. For instance, Indonesia is ranked at the very bottom in terms of number of people using the Mobile Agriculture and Rural Development App. Improving the available broadband infrastructure will ensure that farmers will have better access to information on market prices as well as the latest technology and agricultural practices.

Providing sufficient training programs to farmers would help to quickly ensure that farmers have access to the latest and most efficient farming techniques and strategies. For example, farmers should be educated and trained to adopt integrated pest-management practices, and in the proper and judicious use of agrochemicals for controlling pests, diseases, and weeds. Current technology such as soil fertility detectors and technology-based pesticides must be leveraged in order to improve productivity and effectiveness. China’s Ministry of Agriculture currently provides an integrated advisory service through its Farmer’s Mailbox which can be accessed via cellphone. In order to promote the use of modern and innovative farming techniques, the government could introduce scholarships for farmers to gain higher education in agriculture, such as in Canada’s Saskatchewan Agriculture Scholarship.

Investing in research and development is a key lever for improving agricultural productivity. For example, creating a dedicated fund

Exhibit 29 | Food production accelerated by adequate infrastructure

Irrigation system utilization has positive correlation with improvement in food production

Irrigated area vs. food production index 2009–2011

Source: FAO, World Bank.
to promote the research and development of hybrid seeds suitable for Indonesian agriculture conditions such as climate and soil could greatly improve crop productivity and yield. In the same vein, providing incentives for farmers to adopt sustainable agricultural practices such as the proper use of water, power, fertilizer, and pesticide technology will ensure that Indonesia’s agricultural sector can be productive for generations to come.

**Empower farmers with adequate infrastructure, tools, and financial protection.** The poor condition of irrigation networks means that there is a lot of inefficiency and wasted water. Indonesia is ranked twenty-first in terms of leveraging agriculture machinery, far behind other agrarian countries. Currently, there is also a lack of financial protection for farmers. Due to a lack of visibility in terms of the market price for rice, many farmers have little bargaining power to set prices, and often get taken advantage of by middlemen.

Increasing the quality and quantity of irrigation systems would increase farmers’ productivity. Providing easy loans to farmers could cut out the middleman and promote disintermediation. A working example of this is the USDA’s Farm Credit Administration.

**Promote farmland protection and cereal-crop management to ensure food sustainability.** Suboptimal farmland and cereal-crop management has resulted in a lower volume of food produced. High rates of farmland conversion have also led to the slow growth of fertile farmland. Also, there have been numerous cereal-crop failures due to climate change, disease, pests, and natural disasters.

Government policies, like the Farmland Protection Policy Act in the U.S., could promote farmland protection. Farmers should be encouraged to apply cereal-crop management strategies. For additional protection, insurance for cereal-crop failure can be introduced, as has been done by the USDA’s Federal Crop Insurance Corporation.

**Optimize Supply Chain to Reduce Waste and Increase Price Realization for Farmers**

Currently, the lack of adequate infrastructure is the key impediment to efficient food distribution. There is a direct correlation between the infrastructure quality index, and price spread. In terms of vertical spread, Indonesia still lags behind other rice-producing countries. Thailand, for example, has higher-quality farmland. The National Agricultural Land Study of 1980-81 found that each year, millions of acres of farmland were being converted to other uses. Studies showed that programs and policies were needed in order to protect farmland and combat urban sprawl, which leads to wasted energy and resources.

**U.S. FARMLAND PROTECTION POLICY ACT (FPPA)**

The National Agricultural Land Study of 1980-81 found that each year, millions of acres of farmland were being converted to other uses. Studies showed that programs and policies were needed in order to protect farmland and combat urban sprawl, which leads to wasted energy and resources.

**Action**

The act requires a Land Evaluation Site Assessment before any farmland is irreversibly converted to non-agriculture use. The likely impact of the project is assessed, and if the potential adverse impact on the farmland exceeds the permissible level, then the project will be advised to consider alternative sites. The FPPA also requires that federal agencies review their policies, and ensure that they comply with the law. They must submit proposals and annual reports to the National Resources Conservation Service (NRCS) until the NRCS determines that the agency has fully complied.

**Results**

The total area of agricultural land that has been converted to developed land was reduced from 4.9 million acres in the years from 1997 to 2002, to 3.5 million acres in the years from 2002 to 2007. The fines from the converted farmlands have been channeled to selected non-profit farmland conservation efforts.
ty roads and better infrastructure, which means that not as much money is spent on distribution to the end consumer (see Exhibit 30). Currently, Indonesia’s infrastructure cannot meet its food-supply needs.

Within Indonesia itself, there is also a significant horizontal spread. The price of rice in Jayapura, for example, is 87.49 percent more than the price of rice in Garontalo. Again, the reason the spread is so high is the lack of adequate infrastructure, and the cost of transporting the rice from the warehouses to various remote areas of Indonesia.

Reduce unnecessary steps and middlemen in food value-chain. The wide horizontal spread in the prices of food results in non-competitive food pricing. The retail price of rice is five times that of the producer price, with the greatest impact being felt in rural areas. The large role that the middleman plays often

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**BREADBASKET REGION IN GHANA**

Although a majority of Ghanaians depend on agriculture, food security is still a large issue. The Alliance for a Green Revolution in Africa (AGRA) collaborated with the government of Ghana to launch a “breadbasket” opportunity, which focuses on developing regions with agricultural potential.

**Action**
First, the government and AGRA identified the region with the greatest breadbasket potential: Northern Ghana. It was selected because of its high potential, but low yield at the time. This area had 70 million hectares of arable land, of which only 10 percent had been cultivated by 350,000 small-scale enterprises. Only 600 hectares were irrigated, less than half of the farmers used fertilizers, and only 5 to 10 percent used improved seeds.

**Results**
The three-year pilot program in Tamale is already showing promising results. Greater access to credit means that farmers can buy high-quality seeds and fertilizers that were previously unaffordable. The area’s yield has doubled due to composting, spacing, and correct use of fertilizers.

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**U.S. FEDERAL CROP INSURANCE CORPORATION (FCIC)**

As there are inherent risks and potential for widespread catastrophic losses associated with agricultural production, insuring farmers and ranchers has always posed a challenge. The FCIC was founded in order to provide yield security to farmers via partnerships with the private sector.

**Action**
The FCIC forms partnerships with private companies which actually sell and service crop-insurance policies for the farmers. They also reimburse the private companies’ delivery costs, while subsidizing premiums for the farmers. The FCIC offers farmers Multiple Peril Crop Insurance, which will cover the loss of crop yield due to all types of natural causes including drought, moisture, frost, and disease. Having crop insurance is required for farmers applying for loans.

**Results**
Two-hundred-ninety million acres of farmland are now protected through the FCIC program. The FCIC has partnered with 19 private insurance companies and issued 1.2 million policies in 2013.
increases the cost and complexity of food distribution. The lack of price transparency means that there is a high chance of prices being manipulated, to the detriment of farmers.

Some of these problems can be alleviated by shortening the food-supply chain. One way to do this would be to create food hubs in major cities in order to increase access to healthy foods and to reach underserved areas. A good example is the USDA’s regional food hub.

A technology-based mechanism to connect farmers and consumers more closely, such as India’s AGMARKNET initiative, would reduce the importance of the middleman. At the farmers’ level, strengthening the role of farmer cooperatives would make it easier for farmers to reach economies of scale, and allow greater resource sharing, as has been done by U.S. farmer cooperatives.
Build better food infrastructure including warehouses and storage. Throughout Indonesia, 20 to 50 percent of food is lost during distribution. This is mostly due to inadequate infrastructure, particularly en route to rural areas. Longer distribution and storage time lead to more spoilage.

In order to prevent food waste, it is crucial to invest in roads and proper storage facilities. Uganda, for example, uses the large storage facilities of its partner, Grain Traders. Improving the cold-chain management system would also help maintain food quality.

UGANDA GRAIN TRADERS LIMITED

USAID’s initiative to improve the quality and yield of Ugandan crops has been successful in reaching millions of farmers. Uganda has generated more maize than the country demands, which means that it can fulfill the food demands of neighboring countries. With assistance from USAID, investors created Uganda Grain Traders Limited.

Action
In an effort to reduce waste, Grain Traders Limited manages stock by investing in warehousing. It created 16 local grain and producer associations, and invested in giant warehouses the size of airplane hangars. These warehouses are all over Uganda, and store harvested grain as it waits to be exported.

Results
Uganda’s crop exports tripled within ten years, and 150 Ugandan workers have been hired to work in the warehouses. Through this program, Uganda also provided 80 percent of the food distributed through the UN World Food Program in the region.

AGRICULTURAL MARKETING NETWORK INITIATIVE IN INDIA

The monopoly of government-regulated wholesale markets had prevented the development of a competitive marketing system in India. Farmers need market information in order to plan production and marketing, as do other market participants, in order to make optimal trading decisions. This is why the Indian Ministry of Agriculture launched the ICT-based Agricultural Marketing Network.

Action
The Ministry of Agriculture joined with the National Informatics Center—part of the Ministry of Communications and Information Technology—to build a web-based portal for agricultural marketing. The AGMARKNET platform leverages mobile technology to disseminate real-time information.

Results
There are more than 5 million active AGMARKNET users, and more than 3,000 markets throughout India are connected to the network. There has also been a 5 to 25 percent increase in the incomes of users of the portal.
INDONESIA HAS WORKED TOWARD and enjoyed consistent economic growth in recent years. This report was created with the aim of identifying ten key areas for improvement that can then propel Indonesian wealth and well-being forward for years to come. We have looked at what Indonesia has done well, but we have also looked for new ways to approach challenges, both old and new.

The approaches and potential solutions that we have laid out in these ten chapters have the potential to invigorate the Indonesian economy, and to dramatically improve the well-being and livelihoods of people throughout Indonesia.

The biggest challenge that remains, however, is implementation. Strong political will means rigorous implementation and discipline, crucial for getting things running on the ground. This journey will be neither easy nor straightforward, but Indonesia can rise to the charge.
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Acknowledgments

To commemorate the twentieth anniversary of The Boston Consulting Group’s Indonesia office, many BCG employees have volunteered their time and energy to creating this report; among them are Alvin Kumarga, Aussie Haryono, Clio Dintilhac, Dyota Marsudi, Fanny Limassa, Gary Khong, Ghirish Pokardas, Haikal Siregar, Hando Choi, Shu Ling Heng, Karina Akib, Megha Lohia, Miranda Wirahadikusumah, Natalia Tampubolon, Pamela Hidajat, Rinaldi Juwono, Tonny Yuliantino, Verra Wijaya, Victor Lesmana, and Yoda Patta.

The authors are indebted to the following BCG colleagues for their expertise and valuable feedback:

Infrastructure: Juandy Chua

Open Government: Eddy Tamboto

Subsidy: Alexandre Gorito

Value-added Industries: Hal Sirkin, Marc Schmidt, Yulius

Financial Markets: Ernest Saudjana

Small Medium Enterprises: Thomas Bradtke

Education: Nor Azah Razali

Health Care: Emre Ozcan, Paul Cunliffe, Zarif Munir

Energy: Asheesh Sastry, Christoph Nettesheim, Ming Teck Kong, Yulius

Agriculture: Ashish Iyer, Kim Wagner, Zarif Munir

The authors would like to acknowledge Cristabel Tan for her help in writing this report, as well as Carla Forbes-Kelly, Kim Friedman, Sara Strassenreiter, Anne Sauer, and Poh Yi Wong for their assistance in its editing, design, and production.

This project would not have been possible without support and feedback from our friends, family, and clients.

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If you would like to discuss this report, please contact one of the authors.
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