



INDONESIA PUBLIC EXPENDITURE REVIEW

# Spending *for* Better Results



2020

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## Spending for Better Results

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# Foreword by Country Director



Satu Kahkonen

**COUNTRY DIRECTOR,  
WORLD BANK INDONESIA  
AND TIMOR LESTE**

**T**he largest economy in Southeast Asia, Indonesia, has undergone remarkable development transformation over the past two decades. Indonesia recorded a robust and sustained economic growth despite external shocks, averaging 5.3 percent between 2000 and 2019. It has emerged as vibrant middle-income country, with its Gross National Income (GNI) per capita nearly reaching upper-middle income threshold in 2019. As a result, Indonesia made enormous gains in poverty reduction; cutting poverty levels by more than half in the same period reaching

9.4 percent in 2019. With higher incomes and better access to services on average, Indonesians have become healthier and more educated resulting in improved human development outcomes and life expectancy.

Indonesia has also continued making progress in improving fiscal policy making. Fiscal policy has become more effective in reducing inequality and poverty, though there is still room for improvement. In 2015, the government took bold policy decisions to reallocate resources from regressive energy subsidies toward development priorities. Further, the government has strengthened its budgetary institution and public financial management system through modernizing

budget management processes and financial management information system. The government also continued implementing prudent fiscal management with strict adherence to fiscal rules.

However, Indonesia still faces large human capital and infrastructure gaps that impede its competitiveness, and its ability to create jobs and reduce poverty in the medium term.

The ongoing COVID-19 pandemic will have profound adverse impact on Indonesia's economy, put pressures on the fiscal sector, and threaten achieved gains in development outcomes. GDP growth in 2020 is projected to be the lowest since the 1997 financial crisis which risks reversing the progress Indonesia made in poverty reduction in recent years. Revenue collection is projected to fall sharply on the back of lower growth and measures to support the economy, and will remain challenging in the medium term amidst projected weak commodity prices. Rising interest payments will crowd out priority spending within the reduced budget envelope. Thus, closing human capital and infrastructure gaps has become more difficult with lower fiscal space and emerging fiscal challenges. This underscores the importance of accelerating much-needed tax policy and expenditure reforms to create fiscal space for development spending.

This Public Expenditure Review (PER) aims to help the Government of Indonesia (GoI) identify key constraints to efficient and effective public spending and offer ways to improve the quality of spending to achieve Indonesia's development objectives. It is a result of a joint programmatic review and close collaboration between the World Bank and the Government of Indonesia's Ministry of Finance between 2016 and 2019 led by Directorate General of Budget, and comprised Fiscal Policy Agency (FPA), Directorate General Fiscal Balance of the Ministry of Finance, Ministry of Planning/BAPPENAS.

We hope this report will help the design and implementation of public policies as Indonesia prepares policy responses to the COVID-19 pandemic and gears towards recovery, through better allocation of public resources, enhanced budgetary institutions, and improved sectoral policies to achieve Indonesia ambitious development goals.

# Foreword *by the Minister of Finance*



H.E. Sri Mulyani  
Indrawati

MINISTER OF FINANCE  
OF INDONESIA

**I**t is my pleasure to welcome this publication of the Indonesia Public Expenditure Review (PER) report. This report is a result of close collaboration between the World Bank and the Ministry of Finance, the Ministry of National Development Planning/National Development Planning Agency, and the line ministries over the last few years. The preliminary findings of this report and technical workshops have already served to provide inputs for the preparation of the Government Budget since 2017. This is an important report that shows how we can improve the quality of spending across government institutions, improve the performance of the budget not only in the central government but also in the

subnational government. The subnational transfers are important as subnational governments are responsible for a large share of spending in key sectors, to close our human capital and infrastructure gaps, and meet our development targets.

The report makes many useful recommendations that are aligned with the Government's agenda for spending reforms in line ministries. The Government has implemented several key reforms, which are in line with this report, leading to important improvements in the pro-poor orientation of spending through targeted cash transfers after the energy subsidy reform, increased budget allocations for early childhood education, and the introduction of performance-based transfers in health and education, to name a few.

The Ministry of Finance is embarking on a multi-year program to improve the performance orientation of the budget and the subnational transfers. These include health reforms to improve the effectiveness of Jaminan Kesehatan Nasional and achieve an integrated health system at the central and regional level. We will also continue to strengthen the social protection system particularly by synergizing programs and preparing a social safety net that is adaptive to disasters and shocks. In the education program, we will reinforce our efforts to improve the digitization of education infrastructure and teachers' competency. Early childhood education and better coordination between the central and local levels will still become a core to this aspect too. Promoting more effective and result-based transfers to regions is also a key priority.

Indonesia's expenditure and fiscal reforms spirit are in line with the findings and recommendations in this report. Sustainability, efficiency, and effectiveness (result-based) are basic pillars in designing the budget. We will also improve coordination and data for better targeting especially in the implementation of the budget and programs. Last but not least, creating a bigger fiscal space has always been a central reform in our effort to escape the middle-income trap. We are committed to reforms in improving revenue mobilization capacity as well as promoting budget reallocation towards more productive and effective programs.

This report is also very timely. It highlights reform areas in responding to the unprecedented COVID-19 pandemic that has severely impacted Indonesia and the government efforts for the recovery. The Government has introduced measures to slow down the spread of the outbreak and support the economy through the revision of the 2020 Budget. This will have an impact on Indonesia's fiscal position for years to come including a higher level of public debt, higher interest payments, which could crowd out development spending within a more constrained resource envelope. But meeting Indonesia's development targets means that we have to spend more and better, by creating more, not less fiscal space. This means that post-COVID-19, we will continue our effort to increase revenue collection for development spending.

My appreciation to the team from the Government and the World Bank that contributed to this important report, and to the governments of Switzerland, Canada, EU, and Australia for their generosity that has supported the production of this high-quality report.

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## About the Report

This report is structured into three parts presenting different levels of analysis.

The Overview Chapter serves as a stand-alone chapter that consolidates the analysis and recommendations across the chapters in Parts 1, 2 and 3.

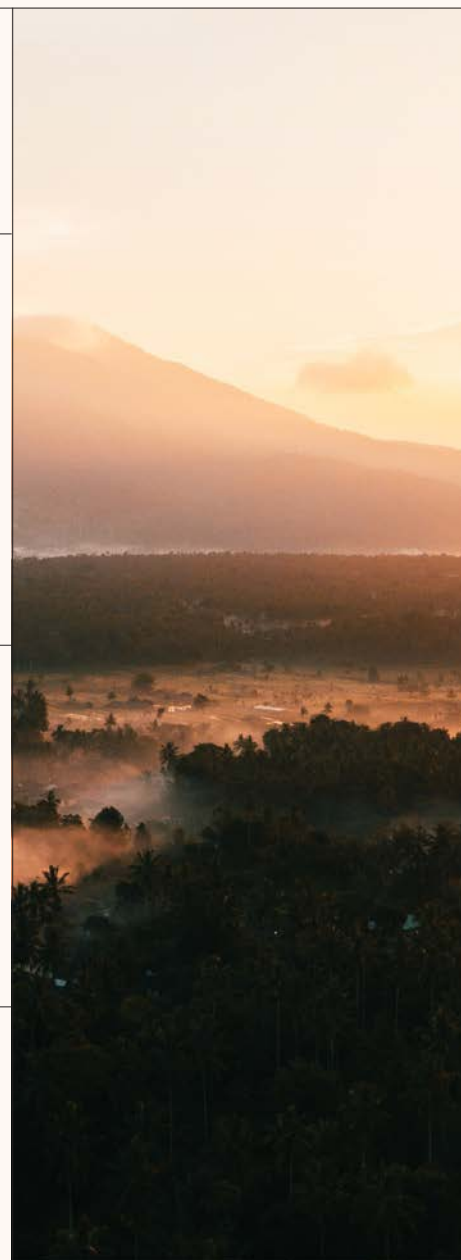
Part 1 focuses on the institutional environment that are key to effective expenditure management, comprising the following chapters: public financial management, intergovernmental fiscal systems, and data for better policy making.

Part 2 discusses the efficiency and effectiveness of sectoral expenditure focusing on human capital, comprising the following chapters: health, education, social assistance, and nutrition.

Part 3 discusses the efficiency and effectiveness of sectoral expenditure focusing on infrastructure, comprising the following chapters: national roads, housing, water resources management, and water supply and sanitation.

Each chapter starts with a summary of the key messages and recommendations.

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# Abbreviations

<b>AKSI</b>	A sample-based assessment with higher standards of implementation and PISA-like test items
<b>AKNOP</b>	( <i>Angka Kebutuhan Nyata Operasi dan Pemeliharaan</i> ) The Actual Needs for Operational and Maintenance
<b>APBN</b>	( <i>Anggaran Penerimaan dan Belanja Negara</i> ) State Budget
<b>APBN-P</b>	( <i>Anggaran Penerimaan dan Belanja Negara Perubahan</i> ) Mid-year budget revision
<b>ASLUT</b>	( <i>Asistensi Sosial Lanjut Usia Terlantar</i> ) Elderly Social Services
<b>ASN</b>	( <i>Aparatur Sipil Negara</i> ) Civil Service
<b>ASPIRE</b>	World Bank's Atlas of Social Protection Indicators of Resilience and Equity

<b>ATR</b>	( <i>Kementerian Agraria dan Tata Ruang</i> ) Ministry of Agrarian Affairs and Spatial Planning
<b>BAPPENAS</b>	( <i>Badan Perencanaan Pembangunan Nasional</i> ) National Development Planning Agency
<b>BAS</b>	( <i>Bagan Akun Standar</i> ) Chart of Accounts
<b>BBPJN</b>	( <i>Balai Besar Pelaksanaan Jalan Nasional</i> ) National Road Implementing Agency
<b>BDT</b>	( <i>Basis Data Terpadu</i> ) Unified Data Base; currently known as DTKS
<b>BIG</b>	( <i>Badan Informasi Geospasial</i> ) Geospatial Information Agency
<b>BJKT</b>	( <i>Balai Jembatan Khusus dan Terowongan</i> ) Bridges and Tunnels Agency
<b>BKPM</b>	( <i>Badan Koordinasi Penanaman Modal</i> ) Investment Coordinating Board

<b>BLSM</b>	<i>(Bantuan Langsung Sementara Masyarakat)</i> Unconditional Cash Transfer
<b>BLU</b>	<i>(Badan Layanan Umum)</i> Public Service Agency
<b>BLUD</b>	<i>(Badan Layanan Umum Daerah)</i> Public Service Agency at Subnationals
<b>BOK</b>	<i>(Bantuan Operasional Kesehatan)</i> Health Operational Assistance Funds
<b>BOP</b>	<i>(Bantuan Operasional Pendidikan)</i> Education Operational Assistance Funds
<b>BOS</b>	<i>(Bantuan Operasional Sekolah)</i> School Operational Assistance
<b>BP2BT</b>	<i>(Bantuan Pembiayaan Perumahan Berbasis Tabungan)</i> Down-payment Housing Assistance
<b>BPAM</b>	<i>(Badan Penyedia Air Minum)</i> Local Water Service Bodies
<b>BPHTB</b>	<i>(Bea Perolehan Hak atas Tanah dan Bangunan)</i> Property Transfer Tax
<b>BPJS</b>	<i>(Badan Penyelenggaraan Jaminan Sosial)</i> Social Security Administrative Bodies
<b>BPJS Healthcare</b>	<i>(Badan Penyelenggaraan Jaminan Sosial)</i> Social Security Administrative Bodies for Health Insurance
<b>BPJS Perumahan</b>	<i>(Badan Penyelenggaraan Jaminan Sosial)</i> Social Security Administrative Bodies for Housing
<b>BPJT</b>	<i>(Badan Pengelola Jalan Tol)</i> Toll Road Regulatory Authority
<b>BPK</b>	<i>(Badan Pemeriksa Keuangan)</i> The Government's Audit Board
<b>BPKP</b>	<i>(Badan Pengawasan Keuangan dan Pembangunan)</i> The Government's Internal Audit Agency
<b>BPNT</b>	<i>(Bantuan Pangan Non Tunai)</i> e-voucher, non-cash, component of Rastra; currently known as Sembako
<b>BPPSPAM</b>	<i>(Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum)</i> Development Board for Water Supply
<b>BPS</b>	<i>(Badan Pusat Statistik)</i> National Statistics Agency
<b>BSPS</b>	<i>(Bantuan Stimulan Perumahan Swadaya)</i> Home Repairment Assistance
<b>BULOG</b>	<i>(Badan Urusan Logistik)</i> An SOE engaged in food logistics
<b>BUMD</b>	<i>(Badan Usaha Milik Daerah)</i> Local Government-Owned Enterprise
<b>CCT</b>	Conditional Cash Transfers
<b>CED</b>	Chronic Energy Deficiency
<b>CEQ</b>	Commitment to Equity
<b>CG</b>	Central Government
<b>CMEA</b>	Coordinating Ministry of Economic Affairs
<b>COFIS</b>	Consolidated Fiscal Database of World Bank Indonesia Country Office
<b>COFOG</b>	Classification of the Functions of Government
<b>CoG</b>	Center of Government
<b>CRM</b>	Compliance Risk Management
<b>CSR</b>	Corporate Social Responsibility
<b>DAK</b>	<i>(Dana Alokasi Khusus)</i> Special Allocation Fund
<b>DAK Penugasan</b>	DAK to achieve national priorities
<b>DAU</b>	<i>(Dana Alokasi Umum)</i> General Allocation Fund
<b>DBH</b>	<i>(Dana Bagi Hasil)</i> Revenue Sharing Fund
<b>DG</b>	Directorate General
<b>DGH</b>	Directorate General of Highway
<b>DGIF</b>	Directorate General of Infrastructure Financing
<b>DGT</b>	Directorate General of Tax

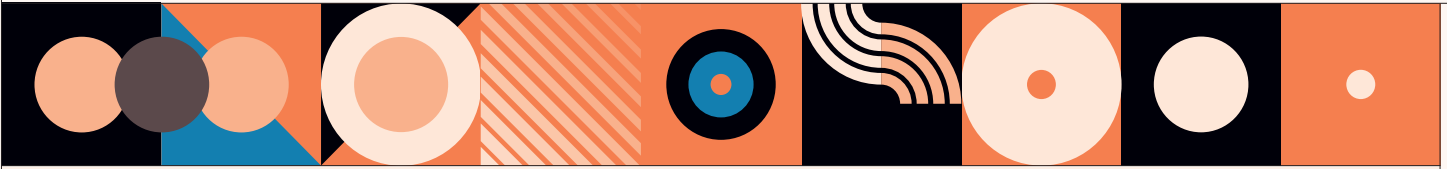
<b>DGWR</b>	Directorate General of Water Resources
<b>DJPK</b>	<i>(Direktorat Jenderal Perimbangan Keuangan)</i> Directorate General of Fiscal Balance
<b>DJSN</b>	<i>(Dewan Jaminan Sosial Nasional)</i> National Social Security Council
<b>DPK</b>	<i>(Dewan Perwakilan Rakyat)</i> Indonesia's House of Representatives
<b>DRG</b>	Diagnosis-Related Groups
<b>DTKS</b>	<i>(Data Terpadu Kesejahteraan Sosial)</i> Unified Database for Social Welfare; formerly known as BDT
<b>EAP</b>	East Asia Pacific
<b>ECED</b>	Early Childhood Education and Development
<b>EDP</b>	Expressway Development Program
<b>EMDE</b>	Emerging and Developing Market Economies
<b>e-RKAS</b>	<i>(electronic-Rencana Kegiatan &amp; Anggaran Sekolah)</i> Electronic Performance-based School Planning & Budgeting System
<b>ERM</b>	Enterprise Risk Management
<b>EUHC</b>	Essential Universal Health Coverage
<b>FIDIC</b>	International Federation of Consulting Engineers
<b>FLPP</b>	<i>(Fasilitas Likuiditas Pembiayaan Perumahan)</i> Housing Loan Liquidity Facility
<b>FMIS</b>	Financial Management Information System
<b>FWM</b>	Fecal Waste Management
<b>GCI</b>	Road Infrastructure Quality
<b>GDP</b>	Gross Domestic Product
<b>GER</b>	Gross enrolment rate
<b>GFS</b>	Government Financial Statistics
<b>GHG emissions</b>	Green House Gas emissions
<b>GIS</b>	Geographic Information System
<b>GNI</b>	Gross National Income
<b>GoI</b>	Government of Indonesia
<b>GRDP</b>	Gross Regional Domestic Product
<b>GWPP</b>	<i>(Gubernur sebagai Wakil Pemerintah Pusat)</i> Governor as the Representation of Central Government
<b>HCI</b>	Human Capital Index
<b>HIA</b>	Health Insurance Agency
<b>Himbara</b>	<i>(Himpunan Bank Milik Negara)</i> A collective of State-Owned Banks
<b>HIV</b>	Human Immunodeficiency Virus
<b>HMF</b>	Housing Micro-Finance subsidy program
<b>HREIS</b>	Housing and Real Estate Information System
<b>HRH</b>	Human Resources for Health
<b>IDR</b>	Indonesian Rupiah
<b>IIFD</b>	Indonesia's Infrastructure Finance Development
<b>IIGF</b>	Indonesia Infrastructure Guarantee Fund
<b>IMB</b>	<i>(Izin Mendirikan Bangunan)</i> Construction Permits
<b>IMF</b>	International Monetary Fund
<b>IndII</b>	Indonesia Infrastructure Initiative

<b>IPLT</b>	(Instalasi Pengolahan Limbah Terpadu) Sludge Treatment Plants
<b>IRI</b>	International Roughness Index
<b>IRMS</b>	Indonesian Road Management System
<b>JKN</b>	(Jaminan Kesehatan Nasional) National Health Insurance
<b>JSPACA</b>	(Jaminan Sosial Penyandang Cacat Berat) Disabled Social Services
<b>KBK</b>	(Kapitasi Berbasis Komitmen) Capitation payment linked to performance indicators
<b>KEM-PPKF</b>	(Kerangka Ekonomi Makro - Pokok-pokok Kebijakan Fiskal) Macroeconomic Framework and Fiscal Policy Principles
<b>KIAT Guru</b>	(Kinerja dan Akuntabilitas Guru) A project to improve teacher performance and accountability
<b>KKS</b>	(Kartu Keluarga Sejahtera) Family Welfare Card
<b>KL</b>	(Kementerian/Lembaga) Line ministries
<b>KPI</b>	Key Performance Indicator
<b>KPR</b>	(Kredit Perumahan Rakyat) Mortgage or housing loan
<b>KRISNA</b>	(Kolaborasi Integrasi Sistem Perencanaan, Penganggaran dan Informasi Kinerja) The integrated e-planning and budgeting system
<b>KUR</b>	(Kredit Usaha Rakyat) Business credit for the poor
<b>LAKIP</b>	(Laporan Akuntabilitas Kinerja Instansi Pemerintahan) Performance Accountability Report of Government Institutions
<b>LE</b>	Liability-to-Equity Ratio
<b>LGST</b>	Luxury Goods and Service Tax
<b>LHS</b>	Left Hand Side
<b>LKPP</b>	(Laporan Keuangan Pemerintah Pusat) Government Financial Audited Report
<b>LKPP</b>	(Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah) National Public Procurement Agency
<b>LMIC</b>	Lower Middle-Income Country
<b>LPG</b>	Liquefied Petroleum Gas
<b>LPI</b>	World Bank's Logistics Performance Index
<b>MBR</b>	(Masyarakat Berpenghasilan Rendah) Low-income Households
<b>MDA</b>	Ministries, departments, or agencies
<b>MEMR</b>	Ministry of Energy and Mineral Resources
<b>MMR</b>	Maternal Mortality Ratio
<b>MoEC</b>	Ministry of Education and Culture
<b>MoF</b>	Ministry of Finance
<b>MoH</b>	Ministry of Health
<b>MoHA</b>	Ministry of Home Affairs
<b>MoSA</b>	Ministry of Social Affairs
<b>MPWH</b>	Ministry of Public Works and Housing
<b>MSME</b>	Micro, small and medium enterprises
<b>MSOE</b>	Ministry of State-owned Enterprises
<b>MSS</b>	Minimum Service Standard
<b>MTEF</b>	Medium-Term Expenditure Framework
<b>Nawacita</b>	Nine Development Targets in RPJMN 2014-2019
<b>NBER</b>	National Bureau of Economic Research

<b>NCDs</b>	Non-communicable diseases
<b>NER</b>	Net Enrolment Rate
<b>NIM</b>	Net Interest Margin
<b>NRW</b>	Non-revenue Water
<b>O&amp;M</b>	Operations and Maintenance
<b>ODA</b>	On-Demand Application
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OM-SPAN</b>	Online Monitoring-SPAN
<b>OOP</b>	Out-of-pocket expenditure
<b>PAD</b>	(Pendapatan Asli Daerah) Subnational Government Own Source Revenue
<b>PAUD</b>	(Pendidikan Anak Usia Dini) Early Childhood Education and Development
<b>PBB P2</b>	(Pajak Bumi dan Bangunan Pedesaan dan Perkotaan) Property Tax
<b>PBCs</b>	Performance-Based Contracts
<b>PBI-JKN</b>	(Penerima Bantuan Iuran - Jaminan Kesehatan Nasional) Recipient of Government paid health insurance premium
<b>PBPU</b>	(Pekerja Bukan Penerima Upah) Non-wager workers
<b>PDAM</b>	(Perusahaan Daerah Air Minum) Local Water Supply SOE
<b>PDPAL</b>	(Perusahaan Daerah Pengolahan Air Limbah) Local Wastewater SOE
<b>PEFA</b>	Public Expenditure and Financial Accountability
<b>PER</b>	Public Expenditure Review
<b>PERPAMSI</b>	(Persatuan Perusahaan Air Minum Indonesia) The Association Of Water Utilities
<b>Pertamina</b>	Indonesia's State-owned Oil Company
<b>PERUMDA</b>	(Perusahaan Umum Daerah) Local company where Local Government is the sole shareholder
<b>PERUSDA</b>	(Perusahaan Daerah) Local company that allows multiple shareholders, including private sector and investment from capital market
<b>PFM</b>	Public Financial Management
<b>PIM</b>	Participatory Irrigation Management
<b>PIMA</b>	Public Investment Management
<b>PIMA</b>	Public Investment Management Assessment
<b>PIN</b>	Personal Identification Number
<b>PIP</b>	(Program Indonesia Pintar) Smart Indonesia Program
<b>PISA</b>	Program for International Student Assessment
<b>PKH</b>	(Program Keluarga Harapan) Conditional Cash Transfer Program
<b>PKSA</b>	(Program Kesejahteraan Sosial Anak) Child Social Services
<b>PKT</b>	(Padat Karya Tunai) Cash for Work
<b>PL</b>	Poverty Line
<b>PLN</b>	(Perusahaan Listrik Negara) State-owned Electricity Company
<b>PMK</b>	(Peraturan Menteri Keuangan) Finance Minister Regulation
<b>PMT</b>	Proxy Means Testing
<b>PP</b>	Purchase-Provider
<b>PPG</b>	(Pendidikan Profesi Guru) Teacher Professional Training
<b>PPK</b>	(Pejabat Pembuat Komitmen) Project Manager

<b>PPP</b>	Public-Private Partnership
<b>PPP</b>	Purchasing Power Parity
<b>PT</b>	( <i>Perseroan Terbatas</i> ) Limited Liability Company
<b>PT SMI</b>	( <i>PT Sarana Multi Infrastruktur</i> ) An infrastructure financing SOE
<b>PTKP</b>	( <i>Pendapatan Tidak Kena Pajak</i> ) Non-taxable income
<b>QSDS</b>	Quantitative Service Delivery Survey
<b>RAMS</b>	Road Asset Management System
<b>Rastra</b>	( <i>Beras Sejahtera</i> ) Subsidized Rice Program
<b>RBC/PJT</b>	River Basin Corporations/Perum Jasa Tirta
<b>RBO</b>	River-Basin Organizations
<b>Renstra</b>	( <i>Rencana Strategis</i> ) Five-year Strategic Plan for Line Ministries
<b>RHS</b>	Right Hand Side
<b>RIDF</b>	Regional Infrastructure Development Fund
<b>RISPAM</b>	( <i>Rencana Induk Sistem Penyediaan Air Minum</i> ) Water Supply Master Plan
<b>RKP</b>	( <i>Rencana Kerja Pemerintah</i> ) Government Annual Work Plan
<b>RON</b>	Research Octane Number
<b>RPJMN</b>	( <i>Rencana Pembangunan Jangka Menengah Nasional</i> ) Indonesia's Medium-Term Development Plan
<b>RPJPN</b>	( <i>Rencana Pembangunan Jangka Panjang Nasional</i> ) Indonesia's Long-Term Development Plan
<b>SA</b>	Social Assistance
<b>SAKTI</b>	The integrated planning, budgeting, execution, accounting and reporting system
<b>SBM</b>	School-based management
<b>SBUM</b>	( <i>Subsidi Bantuan Uang Muka</i> ) Subsidies for Down Payment Assistance
<b>SD</b>	( <i>Sekolah Dasar</i> ) Primary School
<b>SDGs</b>	Sustainable Development Goals
<b>Sembako</b>	Affordable Food Program, formerly known as BPNT
<b>SIKD</b>	<i>Sistem Informasi Keuangan Daerah</i> (Regional Financial Information System)
<b>SIKDA-Generik</b>	( <i>Sistem Informasi Kesehatan Daerah</i> ) Health Information System for Subnational Governments
<b>SIKGN</b>	Information System that supports DTKS or BDT
<b>SIMAN</b>	<i>Sistem Informasi Manajemen Aset Negara</i> (Management of State Asset Information System)
<b>SIPD</b>	e-planning and budgeting system for Subnational Governments
<b>SLF</b>	( <i>Sertifikat Lain Fungs</i> ) Occupancy Certificates
<b>SLRT</b>	( <i>Sistem Layanan Rujukan Terpadu</i> ) The Integrated Referral System
<b>SMA</b>	( <i>Sekolah Menengah Atas</i> ) Senior Secondary School
<b>SMP</b>	( <i>Sekolah Menengah Pertama</i> ) Junior Secondary School
<b>SNG</b>	Subnational Government
<b>SOE</b>	State-Owned Enterprise
<b>SOI</b>	Statement of Intent
<b>SOP</b>	Standard Operating Procedures
<b>SPAN</b>	<i>Sistem Perbendaharaan dan Anggaran Negara</i> (Government Financial Management Information System)

<b>SPM</b>	( <i>Standar Pelayanan Minimal</i> ) Minimum Service Standards
<b>SPP</b>	SOE-Public-Partnership
<b>SPSE</b>	Sistem Pengadaan Secara Elektronik (Electronic Procurement System)
<b>SSB</b>	( <i>Subsidi Selisih Bunga</i> ) Interest Rate Subsidy
<b>SUPAS</b>	( <i>Survey Penduduk antar Sensus</i> ) Intercensal Population Survey
<b>SUSENAS</b>	( <i>Survey Sosial Ekonomi Nasional</i> ) National Socioeconomic Survey
<b>TA</b>	Tax Amnesty
<b>TAP</b>	Tax Amnesty Program
<b>TB</b>	Tuberculosis
<b>THE</b>	Total Health Expenditure
<b>TNP2K</b>	( <i>Tim Nasional Percepatan Penanggulangan Kemiskinan</i> ) National Team for the Acceleration of Poverty Reduction
<b>TOD</b>	Transit-Oriented Development
<b>TPG</b>	( <i>Tunjangan Profesi Guru</i> ) Teacher Allowance
<b>TP-OP</b>	( <i>Tugas Pembantuan Operasi dan Pemeliharaan</i> ) Assistance Task Funding
<b>UHC</b>	Universal Health Coverage
<b>ULP</b>	( <i>Unit Layanan Pengadaan</i> ) The Procurement Unit
<b>UPTD</b>	( <i>Unit Pelayanan Teknis Daerah</i> ) Technical Departments of Local Government
<b>URK</b>	( <i>Usulan Rencana Kegiatan</i> ) Activity Plan Proposal
<b>USD/US\$</b>	United States Dollar
<b>VA</b>	Volt-ampere
<b>VAT</b>	( <i>Pajak Pertambahan Nilai</i> ) Value Added Tax
<b>VCR</b>	Volume-To-Capacity Ratio
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WDI</b>	World Development Indicators
<b>WINRIP</b>	Western Indonesian Road Improvement Project
<b>WISMP</b>	Water Resources and Irrigation Sector Management Program
<b>WRM</b>	Water Resources Management
<b>WSS</b>	Water Supply and Sanitation
<b>WUA</b>	Water Users' Associations

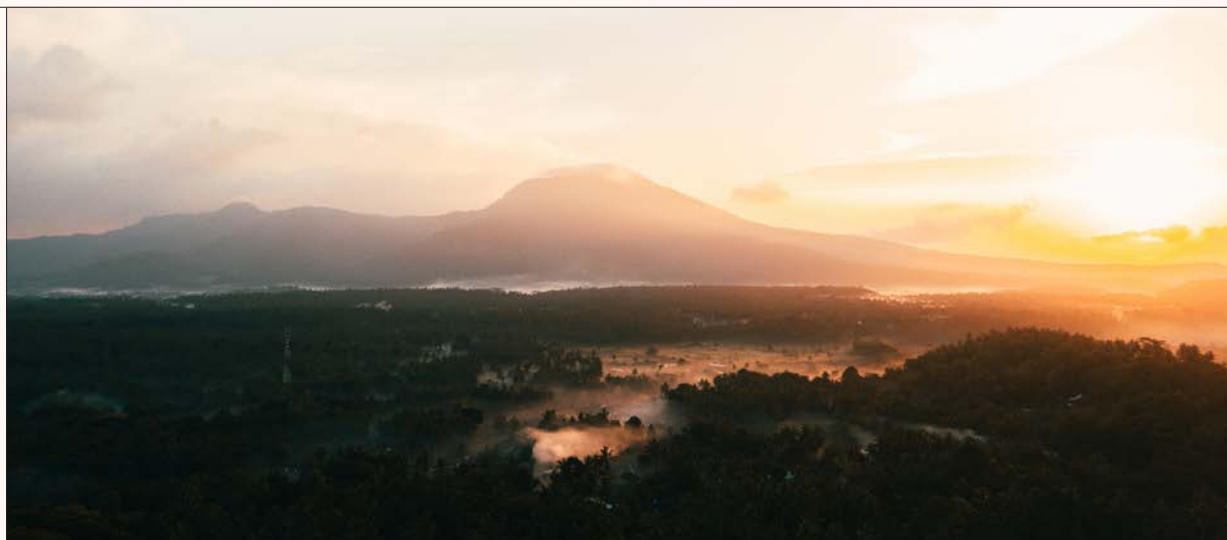


# Executive Summary

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**I**ndonesia's development trajectory has been remarkable over the past 20 years, supported by macroeconomic stability and prudent fiscal management. The economy grew on average by 5.3 percent annually between 2000 and 2018, while gross national income (GNI) per capita rose six-fold from US\$580 in 2000 to US\$3,840 in 2018.<sup>1</sup> As a result, Indonesia has made huge gains in poverty reduction, from 19.1 percent of the population in 2000 to 9.4 percent of the population by March 2019. Prudent fiscal management has played an important role in supporting macroeconomic stability and growth.

**With higher incomes and better access to services on average, Indonesians have become healthier and more educated.** Access to basic services has improved: between 2000 and 2016, the electrification rate increased from 86.3 to 97.6 percent. Households' access to improved drinking water and improved sanitation services also increased from 49 and 34 percent, respectively, in 2001, to 73 and 69 percent, respectively, in 2018. As a result, human development outcomes have also improved. Between 2000 and 2017, life expectancy increased from 66 to 69 years. Over the same period, under-five mortality declined from 52 to 25 per 1,000 live births. The Government of Indonesia (GoI) has successfully ramped up access to education, increasing net enrollment rates at primary and secondary levels.

**However, Indonesia still faces large human capital and infrastructure gaps that impede its competitiveness, and its ability to create jobs and reduce poverty in the medium term.** Indonesia's level of human capital is far below its aspirations and below those of its peers. According to the World Bank Human Capital Index (HCI)<sup>2</sup> for Indonesia, a child born in Indonesia today

will only be 53 percent as productive when she grows up as she could be if she enjoyed complete education and full health.<sup>3</sup> Years of underinvestment have led to a large infrastructure deficit. Indonesia's per capita public capital stock is only a third of other emerging economies, implying an estimated gap in infrastructure assets of around US\$1.6 trillion.<sup>4</sup> There are also large geographic and income-related disparities in service delivery and outcomes. Only 49 percent of Indonesians in the lowest-expenditure quintile have access to improved sanitation facilities, compared with 87 percent in the top quintile.<sup>5</sup> Poor households still have infant and child mortality rates that are double those of richer households, while there are large disparities in stunting prevalence among children under five.

**The ongoing COVID-19 Pandemic in 2020 puts these gains in development outcomes at risk and will make closing the human capital and infrastructure gaps more difficult with lower fiscal space.** GDP growth in 2020 is projected to be the lowest since the 1997 financial crisis and risks undoing all the progress Indonesia made in poverty reduction in the past seven years. Cuts to public infrastructure spending to accommodate the response to the COVID Pandemic will lead to delays in infrastructure development. The wide fiscal deficit and additional below-the-line spending is expected to lead to a significant jump in the debt-to-GDP ratio from 2020 onwards, while revenue is projected to remain well below its 2018 level in the absence of significant revenue reforms. Rising interest payments will compete for the reduced budget envelope with priority spending on health, social assistance and infrastructure. Given the wide-ranging powers given the Government to reallocate funds across programs and line ministries, it is important to ensure efficiency, effective-

ness and proper monitoring and evaluation of COVID-19 related expenditure.

**Recovering from the COVID-19 shock and closing Indonesia's development gaps will require significant resources.** The overall level of public spending is low relative to the country's needs. Indonesia therefore needs to urgently increase fiscal space and the overall resource envelope by:

- 1 Enhancing domestic revenue mobilization, particularly tax collections; and mobilizing infrastructure financing from the private sector
- 2 Improving the efficiency and effectiveness of public expenditure to maximize its impact on development outcomes--which is the focus of this report; and
- 3 Allowing prudent borrowing by central and subnational governments (SNGs).

**This Public Expenditure Review (PER) aims to help the GoI identify key constraints to efficient and effective public spending and offer ways to improve the quality of spending to achieve Indonesia's development objectives.** Public expenditure is a key contributor to closing Indonesia's development gaps, both through direct spending and through creating the right environment to attract private investment to help close the gaps. This PER covers the following topics: public financial management, the intergovernmental fiscal transfer system, and data for better policy making (institutional environment), and sectors: health, education and social assistance (human capital); national roads, housing, water resource management, and water supply and sanitation (infrastructure). The analysis evaluates the quality of Indonesia's public spending using the following framework:

<sup>1</sup> Using the Atlas method.

<sup>2</sup> See <http://www.worldbank.org/en/publication/human-capital>

<sup>3</sup> The Human Capital Index quantifies the contribution of health and education to the productivity of the next generation of workers. Countries can use it to assess how much income they are foregoing because of human capital gaps, and how much faster they can turn these losses into gains if they act now. <http://www.worldbank.org/en/publication/human-capital>

<sup>4</sup> Using IMF PIMA database at <https://www.imf.org/external/np/fad/publicinvestment/>. It is defined as the difference in per capita public capital stock between average of emerging markets and Indonesia multiplied by Indonesia's population.

<sup>5</sup> The World Bank staff calculations based on National Socio-Economic Survey (Susenas), (BPS, 2017).

1

## Sustainability & Adequacy

Is the level of Indonesia's public spending sustainable and adequate to address Indonesia's development challenges, both on aggregate and within sectors?

2

## Efficiency

Have public resources been used efficiently in delivering public services, i.e., allocated to the 'right' interventions, with the 'right' mix of inputs and at an optimal per unit cost?

3

## Effectiveness

Have public resources been used effectively to achieve Indonesia's development objectives?

The report is divided into three parts: Part 1 covers the aggregate level of Indonesia's public finances and the institutional environment, providing the instruments to improve the quality of spending; Part 2 covers spending on human capital and Part 3 covers spending on infrastructure (Figure ES.1). It starts with an analysis of the adequacy and sustainability, efficiency, and effectiveness of aggregate fiscal spending, then it analyzes the key institutional instruments for the GoI to improve the quality of spending: public financial management and fiscal transfers

to SNGs, and data management to better manage the quality of public spending. The analysis and summary in Part 1 draw on the analysis of efficiency and effectiveness of spending in seven sectors: health, education, social assistance with a spotlight on nutrition and stunting (human capital), national roads, housing, water resources management and water supply and sanitation (infrastructure).

**Low revenue-raising capacity constrains the overall spending envelope.** Indonesia's prudent fiscal management has contributed to improved fiscal policy credibility, as recognized by several sovereign credit rating upgrades to investment grade. The fiscal deficit averaged 1.5 percent of GDP between 2000 and 2019, and the public debt-to-GDP ratio declined from 83 percent of GDP in 2000 to 30.2 percent of GDP in 2019. These averages are well below the legal thresholds for the fiscal deficit (3 percent of GDP) and public debt (60 percent of GDP). However, at 16.6 percent of GDP (2018), Indonesia's general government spending is about half of the average of other emerging markets. This is because Indonesia's tax-to-GDP ratio is low, at 9.8 percent of GDP in 2019, leading to overall low revenue collections. Furthermore, the central government's budget flexibility is limited by rigid expenditure rules on non-discretionary spending, which account for two-thirds of the central government's budget. In addition, a sizeable share of revenues (14 percent) and expenditures (8 percent) are still exposed to the volatility of oil and gas prices.

**Overall, fiscal policy has had a positive impact on the reduction of poverty and inequality.** After accounting for various instruments of fiscal policy—transfers, indirect taxes and subsidies, and in-kind transfers, such as health and education—the Gini coefficient declined by 3.4 points in 2017 (from 40.3 to 36.9). This was an

improvement from 2012, when these fiscal policy instruments reduced the Gini coefficient by 2.9 points. Several policy changes contributed to these improvements: (i) the reduction of budgetary expenditures on poorly-targeted and regressive energy subsidies; (ii) the expansion of coverage and increase in the benefit level of *Program Keluarga Harapan* (PKH) or the Family Hope Program conditional cash transfer; (iii) the ongoing transformation of Rastra, the poorly-targeted rice subsidy program, and its subsequent conversion to Sembako (Affordable Food Program), formerly known as BPNT, a direct voucher-based transfer system for food assistance; and (iv) maintaining the relative progressivity of education and health in-kind benefits that are received by individuals who access publicly-provided education and health services.

**Energy subsidy reform, and the consequent reallocation of spending toward infrastructure and social assistance, has improved the allocative efficiency of spending across sectors, but spending remains inadequate in many areas.** The energy subsidy reforms of 2014-15 enabled a critical shift in expenditure away from regressive energy subsidies toward higher investment in human and physical capital. Spending in priority areas increased from 8.5 percent of the general government budget (2012-14) to 9.8 percent (2018) for infrastructure, from 2.8 to 4.8 percent for health, and from 1.9 to 2.3 percent for social assistance. Despite these increases, spending remains inadequate and low relative to Indonesia's targets and development needs and compared with Indonesia's peers. In health, for example, Indonesia spends just 1.4 percent of GDP, half of what the average lower middle-income country spends. In social assistance, Indonesia spends 0.7 percent of GDP,<sup>7</sup> similarly much less than the average lower middle-income country.

<sup>6</sup> Using an alternative, wider definition of tax revenue adopted by the Ministry of Finance, which includes non-tax revenue from the oil and gas sector, the ratio would be 11.4 percent, which is still low.

<sup>7</sup> The definition of social assistance does not include subsidies and the Village Fund transfer.

FIGURE ES.1. Structure of the report

PART 1  Overview & Institutional environment	1 Overview: aggregate spending, sustainability, efficiency and effectiveness						
	2 PFM: Improving expenditure management for better quality of spending						
	3 Reforming the intergovernmental fiscal transfer system for better services						
	4 Data for better policy making						
PART 2  Human Capital	HUMAN CAPITAL			INFRASTRUCTURE			
	5 Health	6 Education	7 Social assistance	9 National roads	10 Housing	11 Water resources	12 Water supply & sanitation
	8 Nutrition						
	PART 3  Infrastructure						

Source: authors

**Spending on social assistance programs has become more efficient, but efficiency of spending remains a challenge in other priority areas.** Better-targeted, more effective programs such as the PKH (conditional cash transfer) have received increased spending, while less effective programs such as the Rastra (subsidized rice for the poor) are being phased out. However, resources are not always allocated to the most effective interventions in other sectors. In education and health, interventions with the highest impact have not received high priority. For example, despite the proven

benefits of investments in early childhood education and development (ECED), resources spent for ECED within the education sector remain low. In the health sector, at both the central and district levels, spending and service delivery are geared toward curative episodic care instead of cost-effective preventive interventions. In infrastructure subsectors, spending on new construction and administration takes priority over operation and maintenance (O&M), particularly in irrigation and water and sanitation. Furthermore, less efficient sectoral policies and system delivery limit

the progress in development outcomes, as shown by the lack of performance orientation in education, weak spending coordination in the water supply sector, poor housing planning decisions, and contingent liabilities in the infrastructure sector, especially in the roads sector. However, efforts are underway to improve sectoral policies, in education (with more performance-oriented programs) and water supply, and there have been improvements in budget execution and system delivery in social assistance, and the roads sectors thanks to performance-based contracts.

## SYSTEMIC CONSTRAINTS

*Furthermore, the impact of public spending for achieving better results are limited by systemic constraints across sectors. While each sector has unique programs and challenges, there are several cross-cutting issues that generally impede the efforts to improve the quality of spending in Indonesia. These are:*

- 1 Public financial management (PFM) challenges.**

While there has been commendable progress in many aspects of PFM, for example, a strong five-year planning process and concerted efforts to improve accuracy in budget revenue estimation, there are still systemic constraints observed in all sectors. The systemic constraints start with inconsistency between planning architecture, budget architecture, performance management framework, and organization structure of the government. The concept of money follow program cannot be fully implemented because programs in planning structure are based on national plan priorities and those under budget are based on the organizational structure. The constraint continues with the implementation of the logic framework that remains suboptimal, despite the existence of intervention logic framework in the regulation. The definition of outputs and outcomes are often not clearly stated. The MTEF practice is also still not complemented with a top-down medium-term budget ceilings from MoF to line ministries, which can be used as a guidance for them to prepare the spending plans. Clear visibility of fiscal constraints could have led to competition for resources, challenges to proposals and strategic allocation of resources. Finally, although monitoring takes place, it is fragmented, often duplicative and predominantly focused on budget absorption rates, rather than on measuring the impact of spending.
- 2 Coordination challenges across agencies and between levels of government**

Coordination challenges and fragmentation among central agencies limit the effectiveness of major government programs such as JKN (national health insurance) and social assistance programs in achieving their objectives. Decentralization poses additional challenges for central line agencies' accountability and monitoring. Coordination problems are exacerbated for programs that are the joint responsibility of local and central governments.
- 3 Fiscal transfers to SNGs do not incentivize performance**

Despite incremental improvements, fiscal transfers are still not allocated in a manner that reduces inequality between provinces and districts, or drives improvements in service delivery. The GoI has laid the foundations to strengthen the "fiscal social contract" between citizens and SNGs, but needs to further increase SNGs' autonomy in raising own-source revenues while holding them accountable to spending efficiently and effectively
- 4 Inadequate data and information systems**

Fiscal data and sector-specific output and outcome data are key to measuring and driving effective government performance. However, consistent and credible SNG spending data by functions are lacking, making it difficult to evaluate subnational spending efficiency within sectors. Data on outputs and outcomes are available in some sectors, but not consistently used and of poor quality. Even at the central government level, there are limitations in tracking the quality of spending in priority sectors such as health and education, as data are not necessarily shared across key agencies and ministries, nor sufficiently disaggregated for meaningful analysis.

5

**Constraints to private sector participation**

Despite the establishment of a public-private partnership (PPP) regulatory and organizational framework, the private sector faces challenges when looking to invest in infrastructure. In the water supply sector, most local water companies (*Perusahaan Daerah Air Minum* or *PDAM*) face regulatory constraints in applying cost-recovery tariffs and do not have adequate capacity to invest in new infrastructure. Central-local coordination challenges also affect local governments' efforts to mobilize private sector investment into PDAM. In the housing sector, current subsidy programs crowd out the private sector by offering significantly lower interest rates. In the national roads sector, the GoI has mostly relied on state-owned enterprises (SOEs) to expedite the delivery of the Expressway Development Program. While this strategy has helped the toll road authority (BPJT) to exceed its target for toll roads, it is not the most financially sustainable nor efficient option for developing the remaining tranches of expressways, which are not as financially viable.

*The*  
**WAY**  
**FORWARD**

*To further improve the outcomes Indonesia seeks from Government spending, the GoI can consider the following broad policy options: (i) increase fiscal space to enable higher spending on priority sectors; (ii) address systemic constraints to the efficiency and effectiveness of spending, and (iii) address sector-specific constraints to the efficiency and effectiveness of spending.*

1

**Increase fiscal space to enable increased public expenditure on priority sectors**

*To achieve development targets in priority areas, as stated in the National Medium-Term Development Plan (RPJMN), Indonesia needs to increase fiscal space for additional spending of more than 4 percent of GDP by 2024 (pre-COVID scenario). It is important to create fiscal space for priority spending within the fiscal rule through tax and expenditure reforms. Measures to widen fiscal space are even more critical, since revenue-to-GDP ratio risks remaining stagnant well below its 2018 level in the medium term, due to an expected sluggish recovery of commodity prices post-COVID-19 and the permanent impact of the corporate income tax rate cuts from 25 percent to 22 percent in 2020 and a further cut to 20 percent in 2022. These reforms, which require sustained efforts in the medium term, will lead to additional fiscal space for spending on priority sectors, would make the budget less exposed to commodity price fluctuations and less rigid.*

**Collect better and more tax revenues.** To collect more revenue, the GoI should prioritize reforms that broaden the tax base for the main consumption and income taxes, and increase tax rates to improve tax progressivity and achieve health goals. The GoI should also improve tax administration to ease the burden of paying taxes, which will encourage higher voluntary compliance. Boosting own-source revenues of local governments will provide them with additional financing for their spending. Reforms of the non-tax revenue system can mobilize additional revenues.

**Further reallocate spending away from inefficient energy and fertilizer subsidy programs to free up fiscal space.** It is estimated that the poor and vulnerable only receive about 21 percent of the kerosene and LPG subsidies, 3 percent of the diesel subsidy and 15 percent of the electricity subsidy. Eliminating these energy subsidies could save 0.7 percent of GDP (using 2017 data). Eliminating fertilizer subsidies could create space for more efficient, effective and balanced spending in the agriculture sector, as the subsidies have a high opportunity cost.

**Compensate the bottom 40 percent of the population to offset the impact of these reforms.** An illustrative simulation of energy subsidy reforms (cutting spending by 0.7 percent of GDP per year), eliminating VAT exemptions and raising tobacco excises (raising revenue by 1.1 percent per year), while offsetting the impact of VAT exemptions and energy subsidy reform on the bottom 40 percent of the population with targeted cash transfers (costing 0.5 percent of GDP), would leave a net positive fiscal impact of 1.3 percent of GDP per year.

2

## Address systemic constraints to the efficiency and effectiveness of spending across sectors

*To increase efficiency and effectiveness of spending, the GoI could consider the following measures to address systemic constraints:*

**Emphasize quality of outputs and outcomes rather than only the quantity in designing development targets in national and sector planning** and monitor along the results chain so that underperformance can be identified and addressed, which would make it more likely that sector outcomes are achieved.

**Prioritize more effective programs and interventions within each sector by reallocating spending away from less productive interventions.** In the health and education sectors: shift resources toward preventive care and ECED, respectively; water resources management, and water and sanitation: focus more on maintenance to avoid costly rehabilitation and safety concerns later; and the housing sector: shift resources to more efficient and better targeted programs. Strengthening monitoring and evaluation (M&E) systems is critical in supporting the evidence-based evaluation of which programs are performing and which are not.

**Strengthen PFM to raise the quality and effectiveness of government spending** by improving coordination between the MoF and Bappenas to align planning and budgeting, strengthening implementation of the ‘money follows program’ approach, strengthening the medium-term perspective in planning and budgeting, improving the “intervention logic” concepts in program/performance design, continuing to move to smaller and fewer in-year budget revisions, both for the mid-year budget revision (APBN-P) and self-blocking budget cuts, strengthening a ‘performance management environment’ that will encourage and support higher-quality spending by the public sector, and enabling a performance-based budgeting system that is adapted to the requirements of a significantly decentralized fiscal process. Since a large part of FY 2020 Budget has been reallocated to combating COVID-19, there is a need to track allocation, expenditure and results of expenditure related to COVID-19. The Ministry of Finance should introduce a new sub-economic classification and a program code for COVID-19 expenditure to enable such tracking. A digital dashboard can be established to provide real-time information on the expenditure and outputs related to the COVID-19 response.

**Improve coordination among central agencies, and between central and subnational governments to deliver better services,** by improving program integration and convergence, and data sharing among key national priority programs such as social assistance and national health insurance (JKN), and by strengthening central-local coordination in policymaking, investment decision-making, and program implementation.

**Reform the fiscal transfer system so that it drives improvements in service delivery,** using the following guiding principles: vertical balance (aligning districts’ revenue autonomy with their spending responsibility, and incentivizing districts to exert more tax effort), horizontal balance (e.g., moving the fiscal equalization formula toward a per-client basis with a transition strategy to limit the impact of losing districts, make the DAK conditional transfers more integrated in the local budget process and predictable) and efficiency (experimenting with performance-oriented transfers).

**Collect better data and improve the management of information systems.** This will require improving the collection of data and the management of information systems, together with implementing the new subnational budget Charts of Accounts, which will lay a fundamental foundation for better evaluation of subnational spending in the future. However, implementing these reforms is a huge task. At the central level, line ministries should collect and report data on pre-defined outputs and outcomes across sectors and integrate these data into common platforms that can be used to improve delivery of services and the targeting of programs by all levels of government. Finally, data should be used to drive better performance, enabling improved top-down and bottom-up accountability.

**Improve the environment to attract more private sector financing for infrastructure.** This will require implementing the recommendations from the InfraSAP<sup>8</sup> to strengthen the PPP regulatory framework, changing SOE incentives, improving pricing mechanisms and deepening capital markets. In addition, sector-specific reforms are needed: in roads, leveraging private sector investment for expressway development; in the housing sector, supporting the development of a PPP framework for affordable housing to support access to affordable and well-located land for affordable housing development in urban centers, and integrating affordable housing as a part of the GoI’s current infrastructure strategic planning and land development by crowding in affordable housing in Transit-Oriented Development (TOD); in the water supply and sanitation sector, supporting adequate revenue for PDAM through full cost-recovery tariffs and different financing sources for capital investment. In the water resources sector, introducing SOE-Public-Partnership (SPP) to identify revenue mechanisms to provide alternative long-term financing mechanisms to maintain irrigation systems.

<sup>8</sup> “Indonesia Sector Infrastructure Assessment Program”, World Bank, June 2018. Forthcoming

3

### Address sector-specific constraints to the efficiency and effectiveness of spending

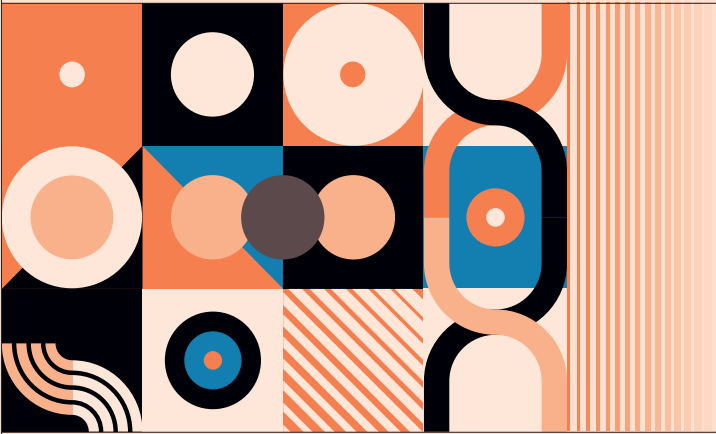
*Addressing sectoral constraints is also necessary to improve the effectiveness and efficiency of spending by improving the design and implementation of major sectoral programs (Table ES.1.)*

TABLE ES.1.		Summary of sector-specific recommendations			
	Emphasize quality over quantity / prioritize more effective programs	Improve coordination across/ between levels of government	Collect better data and improve information systems	Address shortcomings in financing	
<b>Health</b>	<p>Introduce explicit benefit package for JKN commensurate with available resources</p> <p>Target resources (human resources for health or HRH) to populations that would benefit most such as low public density area where private sector does not seem to be operating</p> <p>Transform the health-care system to deal with the long-term care needs of older and chronic condition patients</p>	<p>Address fragmentation of financing across central and SNGs</p> <p>Improve governance and accountability by introducing a health annual sector review</p> <p>Reinforce performance-based financing to drive improvements in health service delivery</p>	<p>Invest in health information systems to improve M&amp;E of health spending performance</p> <p>Monitor and track legally mandated health spending</p> <p>Use JKN claims data to inform and improve service delivery and increase efficiency</p>	<p>Increase health sector spending by implementing financing reforms on revenues &amp; expenditure, e.g.:</p> <ul style="list-style-type: none"> <li>- Raising revenues for health through tobacco tax reforms</li> <li>- Extending premium subsidy for informal workers to bring additional resources to BPJS Healthcare</li> <li>- Update JKN premiums based on sound actuarial analysis.</li> <li>- Address open-ended hospital payments</li> <li>- Introduce cost-sharing for non-essential services</li> </ul>	
<b>Education</b>	<p>Launch a National Education Quality Initiative, backed at the highest political levels to improve the accountability of the education sector</p> <p>Ensure that all teachers have the right pedagogical and technical competencies (MoEC for hiring civil servant teachers, and SNGs and schools for hiring contract and honorarium teachers)</p>	<p>Ensure that districts have sufficient financial and institutional capacity to implement education policy</p> <p>Strengthen coordination on early childhood education and development (ECED), including villages</p> <p>Strengthening the role of SNGs in helping BOS to reach its full potential.</p> <p>Clarify the responsible party for teacher training &amp; development</p>	<p>Improve collection/availability of fiscal data related to education, including to better monitor the use of TPG funds</p> <p>Improve SNG civil servants' capacity to utilize data for evidence-based policymaking</p>	<p>Ensure that more resources flow toward ECED as resources to the workers increase (in absolute terms)</p>	
<b>Social assistance</b>	<p>Consolidate overlapping social assistance programs (e.g., PIP and PKH) and re-design the combined program, and in the long term foster integration of SA programs</p> <p>Strengthen key delivery systems for core social assistance programs</p> <p>Adapt core SA programs for rapid response to natural disasters and epidemic shocks</p> <p>Mitigate several neglected risks along the lifecycle through additional budget, particularly for the elderly and young children</p>	<p>Enhance institutional coordination between central and subnational governments (e.g., coordinating demand and supply side, co-finance to support implementation, integrated social welfare database (DTKS)<sup>9</sup> updating via MoSA's updating exercise via a social registry information system (SIKS NG) and among central agencies to improve implementation performance</p>	<p>Invest in the capacity of the DTKS to expand in coverage and to minimize exclusion and inclusion errors through a reliable dynamic updating mechanism with the local government and related external institutions</p>	<p>Increase spending on targeted social assistance spending by reducing remaining spending on untargeted subsidies</p> <p>Mitigate several neglected risks along the lifecycle through additional budget particularly the elderly and young children</p>	

	<b>Emphasize quality over quantity / prioritize more effective programs</b>	<b>Improve coordination across/ between levels of government</b>	<b>Collect better data and improve information systems</b>	<b>Address shortcomings in financing</b>
<b>National roads</b>	<p>Redefine strategic transport indicators to include efficiency and road safety indicators</p> <p>Establish new, internationally aligned roughness thresholds</p> <p>Focus on longer-term objectives (e.g., higher geometric standards, safer infrastructure)</p>	<p>Revisit the structure of DGH to improve the concentration of technical skills and better focus the responsibilities of staff on asset management</p>	<p>Monitor expenses more closely to ensure the higher costs of road treatments and lifecycle costs are justified</p>	<p>Increase the pool of funding for national roads and expressways, including by leveraging private sector investment; however, when insufficient fiscal resources are available, it is recommended that the Gol prioritizes asset preservation over new investment.</p> <p>Develop a robust long-term (about 50-year) funding and phased strategy for Expressway Development Program (EDP)</p>
<b>Housing</b>	<p>Ensure subsidized homes are of good construction quality and built in well-located areas and with access to basic services</p> <p>Develop alternative housing typologies that are cost-effective and meet the heterogeneous needs of the low-income underserved consumer segment</p>	<p>Review and revise the regulatory framework to clearly assign a role for local governments in providing affordable housing, while building their capacity to do so</p>	<p>Develop a Housing and Real Estate Information System to improve the planning processes for managing affordable housing development</p>	<p>Shift funding toward more efficient, progressive, and better-targeted subsidies</p> <p>Develop a housing micro-finance subsidy program to finance home improvements and incremental home extensions</p> <p>Support the development of a Public-Private Partnership (PPP) framework for affordable housing</p>
<b>Water resources management</b>	<p>Realign the sector objective to focus on outcomes, such as improved irrigation efficiency and agricultural productivity ("more crop per drop").</p> <p>Infrastructure development target needs to consider institutional capacity and the implementation of asset management to ensure effectiveness and sustainability of services</p> <p>Dedicate more attention to O&amp;M rather than new construction</p>	<p>Scale up and institutionalize participatory irrigation at the subnational level including by strengthening the role of irrigation commission and water resource boards as local/multi-stakeholder platforms</p> <p>Build capacity of technical staff in River-Basin Organizations (RBOs) and in subnational governments for O&amp;M</p>		<p>Create incentives for subnational governments (SNGs) to increase budget for O&amp;M.</p> <p>To cope with increased O&amp;M needs, convert River-Basin Organizations into revenue-receiving entities, such as General Service Bodies (BLUs)</p>
<b>Water and sanitation</b>	<p>Change incentives to discourage the use of groundwater (and encourage the use of piped water) and enforce regulations to limit groundwater exploitation</p> <p>Central government should undertake stronger measures to discourage proliferation of PDAM, as well as to encourage the merger of PDAM that are below an economically viable size</p>	<p>Improve coordination and channeling of funds between different layers of government to improve service delivery such as a binding agreement that CG investment will be complemented by adequate funding for downstream infrastructure investment</p> <p>Enhance community-based development for rural water supply and sanitation, especially for rural areas</p>		<p>Reform the regulatory environment of PDAM to enhance their financial sustainability and ability to cover O&amp;M and to invest in improved and expanded services</p> <p>Incentivize LGs/PDAM to play their part in developing network facilities through performance based grants such as through expanding the Water Hibah model.</p>

# Part 01

## Overview & Institutional environment



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① Overview

*Institutional Environment:*

- 
- ② PFM: Improving expenditure management for better quality of spending
- 
- ③ Reforming the intergovernmental fiscal transfer system for better services
- 
- ④ Data for better policy making







# 12-68



# Overview

1.1

Why does Indonesia need a public expenditure review?

1.2

How sustainable is public finance in Indonesia?

1.3

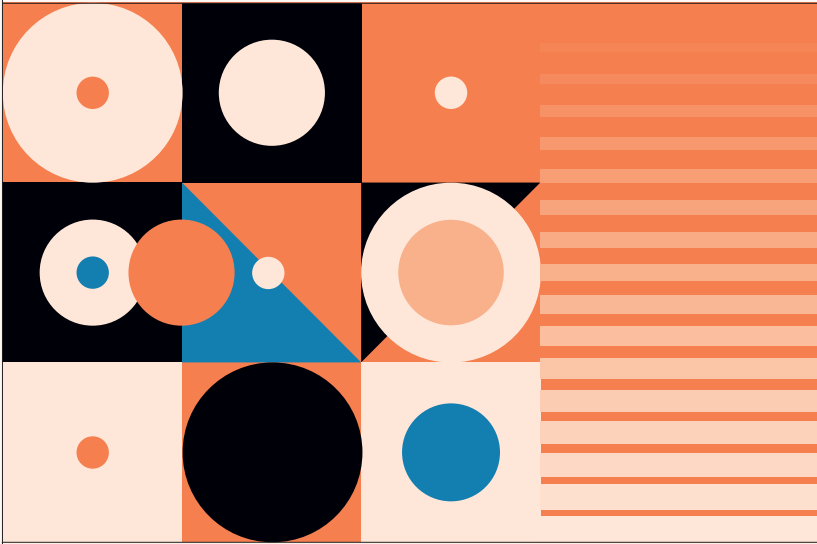
Is public spending in Indonesia adequate, efficient and effective?

1.4

What are the systemic constraints to improving the quality of spending?

1.5

How can the government improve the quality of spending?



# Why does Indonesia need a public expenditure review?

- A** *Indonesia's development trajectory has been remarkable*
- B** *But there are large human capital and infrastructure gaps*
- C** *Making spending more efficient and effective can help close the gaps*

## *A Indonesia's development trajectory has been remarkable...*

**O**ver the past 20 years, Indonesia has displayed a solid record of macroeconomic stability, growth and poverty reduction. The Indonesian economy grew by an average 5.3 percent annually between 2000 and 2018, faster than the average lower-middle income country.<sup>10</sup> The volatility of growth also declined.<sup>11</sup> At the same time, the economy created over 30 million service and industrial jobs over this period, replacing lower-productivity agricultural jobs and raising household incomes. As a result, In-

donesia made huge gains in poverty reduction: the poverty rate fell from 19.1 percent of the population in 2000 to 9.4 percent of the population by March 2019. Gross national income (GNI) per capita<sup>12</sup> rose more than six-fold from US\$580 to US\$3,840 over the same period, ushering millions of Indonesians into the middle class.

**Prudent fiscal management has played a crucial role in supporting macroeconomic stability and growth.** Since the enactment of State Finance Law in 2003, Indonesia has adhered to legal limits on the

fiscal deficit at 3 percent of GDP and the general government public debt ratio at 60 percent of GDP. Between 2000 and 2018, fiscal deficits averaged 1.5 percent of GDP. The public debt-to-GDP ratio declined sharply from 83 percent in 2000 to 30 percent of GDP in 2018. Four major credit ratings agencies<sup>13</sup> consider Indonesia's sovereign credit investment grade, corroborating the country's improved economic environment, fiscal management, and overall creditworthiness.

**Fiscal policy also played a role in reducing poverty and inequality in recent years.** Fiscal policy, and the spending side in particular, can be an important lever in reducing poverty and inequality, and in driving faster growth. In Indonesia fiscal policy reduced the poverty rate and the Gini coefficient by 1.6 percent and 3.4 Gini points, respectively, in 2017.<sup>14</sup> However, the magnitude of this impact is limited compared with other emerging country peers. In Brazil and South Africa, for example, highly progressive direct taxes, social spending and in-kind transfers in health and education reduced the Gini coefficient by 12 and 17 points, respectively.

**This has translated into improvements in access to basic services and infrastructure.** While only under half of the population (48.8 percent)<sup>15</sup> had access to basic services such as clean drinking water, sanitation, health and education in 2001, this share rose to 75.1 percent in 2018. More recently, the GoI is close to meeting several of its targets under the 2015-2019 National Medium-Term Development Plan. About 82 percent of Indonesians now have access to health insurance, an increase from 52 percent in 2014. Net enrolment rates in lower and upper secondary school have increased to 78 and 60 percent, respectively. In infrastructure, the GoI has exceeded its target for road construction, delivering about 3,387 km of

<sup>10</sup> The average lower middle-income country grew by 4.9 percent per year on average during this period.

<sup>11</sup> The standard deviation of GDP growth declined from 2.0 percent over 1979-1996 to 0.7 percent over 2000-18.

<sup>12</sup> Gross national income (GNI) converted to U.S. dollars using the World Bank Atlas method divided by the mid-year population. Source: World Bank World Development Indicators, updated July 2019.

national roads and 380 km of expressways between 2014 and 2018. The housing occupancy backlog declined from 7.6 million households in 2014 to 5.9 million households in 2017, in part through the *Satu Juta Rumah* initiative.

**With higher incomes and better access to services, Indonesians have on average become healthier and better educated.** Between 2000 and 2017, life expectancy increased from 66 to 69 years. Over the same period, under-five mortality declined from 52 to 25 per 1,000 live births. The quality of education, as measured by student performance on the OECD Program for International Student Assessment (PISA), has also improved. Between 2003 and 2015, Indonesian students' PISA scores improved along all dimensions, by 15 points in reading and mathematics, and by about 8 points in science.

**The ongoing COVID-19 Pandemic in 2020 puts these gains in development outcomes at risk and will make closing the human capital and infrastructure gaps more difficult with lower fiscal space.** The projected growth slowdown in 2020 could lead to sharp increase in the poverty rate reversing many years of poverty reduction compared to the pre-COVID projection, even after taking into account the impact of additional social assistance measures (Box 1.1). Cuts to infrastructure spending will lead to delays in infrastructure development. The widening fiscal deficit and additional below-the-line spending is expected to lead to a significant jump in the debt-to-GDP ratio from 2021 onwards, while revenue is projected to remain well below its 2018 level in the absence of significant revenue reforms. Rising interest payments will compete for the reduced budget envelope with priority spending on health, social assistance and infrastructure.

**BOX 1.1.**

**The government's response to the COVID-19 Pandemic**



**T**he Government has declared COVID-19 a national emergency, and is implementing measures to cushion the expected adverse economic effects, including interventions to enhance healthcare, expand social protection and prevent mass bankruptcies in the private sector. The Government has announced three packages of policy responses to the crisis amounting to a total of IDR 434 trillion (2.7 percent of GDP) (Table 4). The first package revealed in late February valued at IDR 8 trillion and focused on protecting the tourism sector and affected households. The second package valued at IDR 21 trillion announced in mid-March focused on protecting supply chains by giving tax relief and facilitating imports and exports through non-fiscal measures. The third package, announced on March 31, valued at IDR 405 trillion, focused on implementing a response to the COVID crisis expanding health, social protection and industry support. These measures will be implemented through a revised budget for 2020.

In response to expected welfare losses for poor and vulnerable households, the government has adjusted several of its social protection programs. Given the reduction in labor income through lower consumption, poor and vulnerable households will likely face shocks to their welfare over 2020. In anticipation and to mitigate those shocks, the government announced in March that 15.2 million food assistance e-voucher program (Sembako) beneficiary households would receive a 33 percent higher benefit for the coming nine months. The adjustment brings the value of this social assistance program to comprise 10 percent of the national poverty line and will cost an estimated IDR 4.5 trillion. In addition, the government announced the program would be expanded to reach 20 million households approximately 30 percent of the population. Furthermore, for the flagship conditional cash transfer program (PKH), the government has decided to increase benefits by 25 percent for nine months for 10 million households, approximately 15 percent of the population, and bring forward payment schedule forward from April to March. Besides PKH and Sembako, all households in Indonesia's

Social Registry (DTKS) that do not yet receive either of these programs; approximately 8 million households, will receive a temporary cash transfer worth approximately 30 percent of the national poverty line. In addition, full electricity subsidies have been announced for households using 450 Volt-Ampere (VA) connections and a 50 percent subsidy for those on 900VA connections between April and June.

Several of the social protection measures announced by the government protect both people and firms. Key amongst them is the announcement of the full financing of employer and employee contributions to the national health insurance scheme for 30 million salaried workers. In addition, Indonesia's *Kartu Pra-Kerja*, a program that provides subsidized vouchers for unemployed workers for skilling and re-skilling, has doubled in its allocated budget and will be launched in April. The program will be accessible to an estimated 5.6 million informal workers and small and micro enterprises, who have been affected by COVID-19.

While the fiscal costs in terms of budget reallocations and an increased debt burden are becoming clearer, it is too early to tell if the measures are adequate. To create space for the health, social assistance and industry support response, nearly all ministries and subnational transfers will see reduced budgets compared to the original 2020 budget. In particular, public spending on infrastructure will fall sharply by around 23 percent at all levels – central government (mainly the Ministries of Public Works and Housing and of Transport), subnational transfers (DAK infrastructure) and below-the-line financing of infrastructure. Moreover, subnational government have been allowed to use the mandate to spend 25 percent of revenue sharing and the General Allocation Transfer on infrastructure for COVID-19 mitigation. The debt-to-GDP ratio is projected increase to 37 percent of GDP in 2020, and increased interest payments will compete with non-interest spending going forward. It is too early to tell if the measures are adequate to strengthen the health care system in response to the COVID-19 Pandemic and mitigate its impact of the poor, vulnerable and informal sectors workers and on firms.

**13** Standard and Poor's (BBB), Fitch (BBB), Moody's (Baa2), and the Japan Credit Rating Agency (BBB).

**14** Estimates from Commitment to Equity Update, World Bank Poverty Global Practice. The estimates for inequality reduction account for direct transfers, indirect subsidy, indirect taxes, and, in-kind education and health transfers. While the estimates for poverty reduction are only accounting for direct transfers, indirect subsidy, and, indirect taxes.

**15** Simple average of five indicators, measured from Susenas household survey data: (i) net enrolment rate for junior high school, (ii) net enrolment rate for senior high school, (iii) access to protected water, (iv) access to protected sanitation, and (v) proportion of births attended by a skilled health worker. See World Bank (2017).

Note: status as of April 15, 2020.  
Source: authors\*



*B*

## *...but there are large human capital & infrastructure gaps*

**D**espite this progress, Indonesia's level of human capital is far below its aspirations and below its peers. According to the World Bank Human Capital Index (HCI),<sup>16</sup> a child born in Indonesia today will only be 53 percent as productive when she grows up as she could be if she enjoyed complete education and full health. Indonesia's HCI is 9 points lower than the average for the East Asia and Pacific region, and below what would be predicted for its income level. Human capital gaps are evident both in health and education. Although Indonesians can expect to live until 69 years old, this is six years less than their Chinese, Malaysians, Thais and Vietnamese peers, and the maternal mortality ratio (MMR) remains high relative to its peers. One-third of Indonesian children under five years of age suffered from stunting in 2018—the fifth-highest prevalence in the world. In education, Indonesia's PISA scores are much lower than peers such as Vietnam's, despite having a

similar level of education spending per student.

**Stark differences in access to basic services persist across income and geographic divides.** Only half of Indonesians in the lowest-expenditure quintile have access to improved sanitation facilities, compared with 87 percent in the top quintile.<sup>17</sup> Significant differences between urban and rural areas remain: 44 percent of households residing in non-metro rural areas do not have adequate sanitation, compared with just 8 percent in urban metropolitan areas.<sup>18</sup> Less than one-third of households in some districts in Papua and Kalimantan have access to clean drinking water, compared with over 70 percent in about half of all districts. Health facilities' supply-side readiness also varies across the country; only 8 out of nearly 500 districts have at least one doctor per 1,000 population.

**Infrastructure stock has failed to keep up with growing demand and is also unevenly distributed across the country.** Road transport demand has outstripped net-

work capacity, creating a backlog that has led to Indonesia falling behind on indices of competitiveness against peers. Progress in new dams and new and rehabilitated irrigation systems is not sufficient to achieve food security. In the housing sector, 22 million households, or close to one-third of the population, live in housing with at least one substandard feature. Housing affordability is also a key constraint.

**These disparities in access to basic services and infrastructure exacerbate inequalities of opportunity.** Despite improvements in health, poor households have infant and child mortality rates that are double those of richer households. Eastern Indonesian provinces tend to have higher shares of stunted children (Figure 1.1) and of low-performing students (orange and red colors, Figure 1.2). These uneven outcomes influence the trajectory of Indonesians at birth, exacerbating inequalities of opportunity and contributing to the still-high Gini coefficient of 39 points in the country

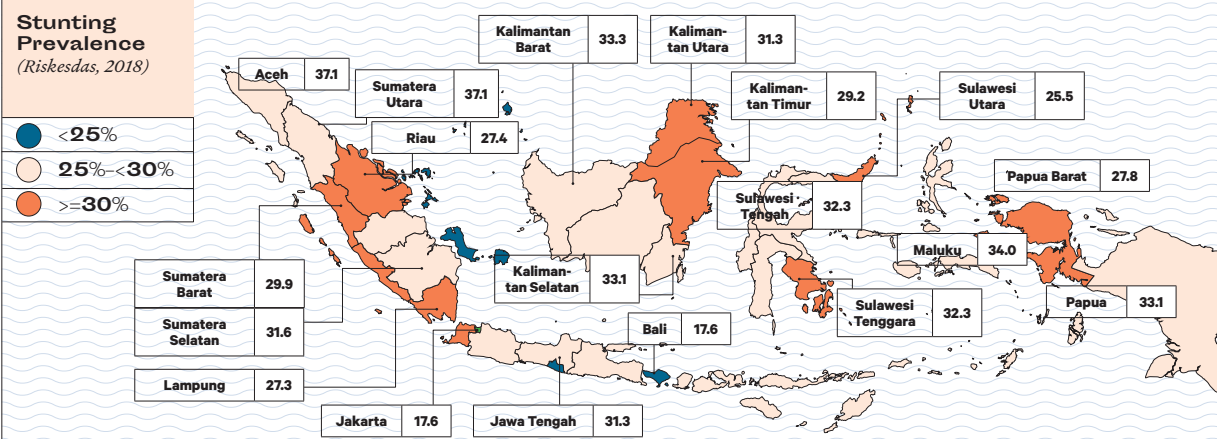
<sup>16</sup> The Human Capital Index, inaugurated in October 2018, measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of countries. The HCI is calculated from data on probability of survival to age five, expected years of school, harmonized test scores, learning-adjusted years of school, the adult survival rate and the fraction of children under-five who are not stunted. For more, see <http://www.worldbank.org/en/publication/human-capital>.

<sup>17</sup> World Bank staff calculations based on National Socio-Economic Survey (Susenas), (BPS, 2017).

<sup>18</sup> See Chapter 2 of "Time to ACT: Leveraging Indonesia's Urban Potential" (World Bank, 2019, forthcoming).

FIGURE 1.1

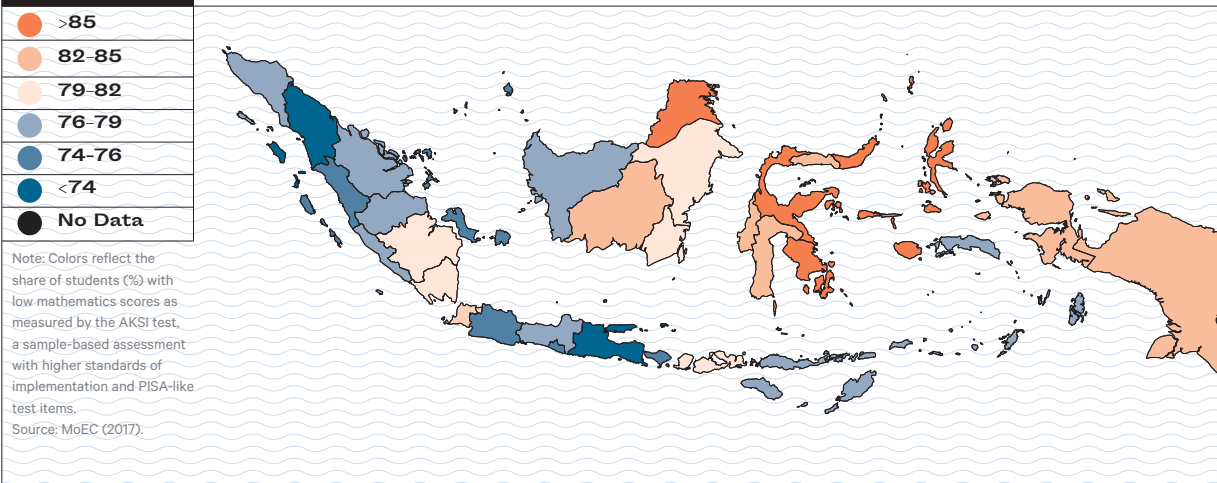
There are large geographic disparities in stunting prevalence among children under five



Source: Risikesdas (Riset Kesehatan Dasar/Basic Health Research) 2018, Ministry of Health.

FIGURE 1.2

Eastern Indonesian provinces have a higher share of low-performing students



Note: Colors reflect the share of students (%) with low mathematics scores as measured by the AKSI test, a sample-based assessment with higher standards of implementation and PISA-like test items.  
Source: MoEC (2017).

<sup>19</sup> Had the stock of 'core' infrastructure capital grown by 5 percent annually between 2001 and 2012, rather than the actual average of 1.8 percent, average annual GDP growth over the period would have been 6.0 percent in real terms, rather than 5.4 percent. This would subsequently have increased growth in the consumption of the poor by an additional 0.5 percent a year, which would have meant an additional 0.2 of a percentage point decline in poverty per year. See World Bank (2015), "Estimating Infrastructure Investment and Capital Stock in Indonesia" for more details.

<sup>20</sup> Using IMF PIMA database at <https://www.imf.org/external/np/fad/publicinvestment>. It is defined as the difference in per capita public capital stock between average of emerging markets and Indonesia multiplied by Indonesia's population. World Bank, "Indonesia Economic Quarterly October 2017: Closing the gap". <https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-quarterly-october-2017>

<sup>21</sup> Jakarta Post quoting the Minister of Bappenas, <https://www.thejakartapost.com/news/2019/05/16/indonesia-has-a-412-billion-plan-to-rebuild-the-country.html>.

C

*Making spending more efficient & effective can help close the gaps*

**C**losing these human capital and infrastructure gaps across the archipelago is critical if Indonesia wants to sustain growth, continue to create jobs and reduce poverty.

While Indonesia has come a long way, it needs to tackle these structural constraints to growth if it aspires to become a high-income nation. These infrastructure constraints have already held Indonesia back from achieving its full potential, shaving off half a percentage point of annual GDP growth and slowing the rate of poverty reduction.<sup>19</sup> The human capital gap means that Indonesians live shorter, more disease-ridden and less productive lives, which leads to negative impacts on economic growth, putting pressure on urban infrastructure such as public transport, water and sanitation, and housing.

**Significant financial resources are needed to close these gaps.**The World Bank estimates that Indonesia needs US\$1.6 trillion to close the infrastructure gap<sup>20</sup>—more resources than the entire size of the Indonesian economy. This is consistent with targets for investment in the National Medium-Term Development Plan (RPJMN) 2015-19, at US\$415 billion, and for 2020-24, at US\$412 billion,<sup>21</sup> compared with a GDP of around US\$1 trillion in 2018. This volume exceeds the capacity

of public finance to fund. For example, if the GoI maintains its current level of spending on housing and does not involve the private sector, it will take 26 years to close the housing backlog. The human capital gap is also substantial: if Indonesia did not have the current high rates of stunting, low adult survival and a large learning gap, its GDP would be 36 percent higher.<sup>22</sup> These estimates do not take into account longer-term structural shifts such as the aging population, ongoing urbanization and climate change.<sup>23</sup>

**Hence, Indonesia needs to urgently increase fiscal space for spending and improve the efficiency and effectiveness of spending to address these gaps, which made more difficult by the impact of the COVID-19 crisis.** To increase fiscal space a number of measures are critical: (i) sustained effort to enhance domestic revenue mobilization, particularly tax revenue collection; (ii) improving the quality of public spending to identify potential gains by improving the adequacy, efficiency, and effectiveness of public expenditure to maximize the impact of public spending on development outcomes, in particular, replacing badly targeted energy and fertilizer subsidies by more efficient spending - which is the focus of this report; (iii) borrowing prudently by central and subnational governments.

**Increasing the efficiency and effectiveness of spending can help Indonesia to achieve its development goals and reduce poverty and inequality.** Although spending more on productive areas such as health and education can help to increase these impacts, increasing the efficiency and effectiveness of spending is more critical in Indonesia, where low revenue-to-GDP ratio and strict adherence to the fiscal deficit and debt limits constrain the amount of resources available. Indonesia's general government revenues only amounted to 14.6 percent of GDP in 2018, half that of the average emerging economy, and hence public expenditure has remained below 20 percent of GDP. Making public spending more efficient and effective is therefore even more essential in this context, as it can help to leverage private sector investment in areas that are important for human and physical capital.

**This report<sup>24</sup> identifies areas where the GoI can improve the efficiency and effectiveness of spending and provides concrete recommendations on how public resources can be better leveraged to meet Indonesia's development goals.** A Public Expenditure Review (PER) is a key diagnostic tool that can evaluate the effectiveness of public finance in achieving three objectives: stabilization, distribution and strategic allocation. As the next sections show, Indonesia's

level of aggregate spending is sustainable, but public spending can be more effectively used to reduce poverty and inequality, and to meet Indonesia's development aspirations. This PER therefore focuses on identifying efficiency gains to maximize the impact of public spending on development outcomes.

**This report builds upon past and existing analyses carried out in Indonesia, including the 2009 PER and the subsequent sectoral analysis.**<sup>25</sup> As discussed in the subsequent sections and sectoral chapters, there has been significant progress in key areas identified in the previous analysis, most notably significant reductions in energy subsidy outlays and increased allocations for development priority such as infrastructure, health and social assistance. However, some challenges remain, especially in improving the efficiency and effectiveness of sectoral spending. In addition, weak revenue performance due to low commodity prices, and sub-optimal tax policy and administration have emerged as fiscal challenges since 2015, further constraining resources for development priorities (Box 1.1). To this end, this report draws on past and existing analyses, and aims to contribute to informing policymaking by tracking progress that has been made linked to past recommendations, deepening sectoral analysis, and highlighting new challenges and policy recommendations.

<sup>22</sup> The learning gap is estimated at 15.4 percent of GDP (3.4 years multiplied by the returns per year of education, 8.7 percent, multiplied by the 52 percent labor share of GDP). The gap between Indonesia and the best performer on the HCI in adult survival rates is equivalent to 13.2 percent of GDP. High stunting rates are estimated to cost the Indonesian economy 7.4 percent of GDP (based on Galasso and Wagstaff, 2018).

<sup>23</sup> The share of the population aged 65 years and above is expected to increase from 5 percent to 12.5 percent by 2045, while the share of the urban population is expected to rise from 55 percent to 70 percent. Source: United Nations' World Urbanization Prospects, 2018.

<sup>24</sup> This PER report represents the final phase of a programmatic Public Expenditure Review (PER) engagement, which was implemented in three phases: i) Phase I (July-December 2016): analysis on medium term fiscal framework and efficiency and effectiveness of aggregate spending as inputs into 2017 & 2018 Budget; ii) Phase II (January 2017 – March 2018): analysis on efficiency and effectiveness of sectoral spending covering 7 sectors (health, education, credit for small and medium enterprise (KUR) program, housing, national roads, water resource, Subnational transfers and expenditure) as inputs into 2018 and 2019 Budget; iii) Phase III (April 2018 – June 2019): consolidating phase 1 and 2 analysis into a PER report and analysis on new priority topics including budget management and stunting reduction, as inputs into the 2020 Budget and medium-term development plan (RPJMN) 2020-2024.

<sup>25</sup> Public Expenditure Review 2009: Towards 2015 – Spending for Indonesia's Development: Shaping the prospects of a Middle-Income Country; 2012 Indonesia Road Sector PER - Investing in Indonesia's Road; 2013 Indonesia Education PER - Spending More or Spending Better; 2016 Indonesia Health Financing System Assessment; 2017 Indonesia Social Protection PER Update.

### BOX 1.2.

#### The 2009 Indonesia Public Expenditure Review

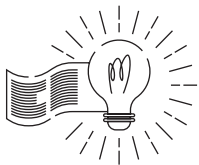
**A**t the request of the GoI, the World Bank conducted a PER in 2009 to contribute to the preparation of Indonesia's Medium-Term Development Plan (RPJMN) 2010-2014. The analysis was structured into three parts: the trends and composition of public spending in the past 10 years, public spending during the 2008 global financial crisis and its aftermath, and Indonesia's fiscal choices and spending priorities for the years ahead.

The report identified key challenges in improving quality of Indonesia's public spending, including high spending on energy subsidies (25 percent of the budget) and government administration (14 percent of the budget), low spending in critical areas especially in infrastructure and health, intra-sectoral inefficiencies within agriculture sector and education; and SNGs' low capacity in managing increasing resources.

The report argued for a big push strategy to address Indonesia's development needs

through RPJMN 2010-2014, building on Indonesia's sound fiscal position and projected growing resource envelope, which would require bold policy choices in two areas: (i) reallocating resources from lower-priority areas, which means moving away from high allocation for energy subsidies and government administration, toward increasing the development focus of the budget; and (ii) expanding the resource envelope through enhancing revenue mobilization and increasing fiscal deficit by 1 percent, while keeping total public debt stable. The expanded fiscal resources can be used to finance development priorities including: (i) gradually doubling public expenditure on infrastructure from 2 to 4 percent of GDP by 2014; (ii) gradually increasing public expenditure on health and social protection from 1.2 to 3.0 percent of GDP by 2014; (iii) maintaining spending on education as a share of the budget; (iv) maintaining spending on agriculture as a share of the budget; and (v) implementing bureaucracy reform.

Source: World Bank (2009), "Towards 2015 – Spending for Indonesia's Development: Shaping the Prospects of a Middle-Income Country", <https://openknowledge.worldbank.org/handle/10986/12988>



# 36%

If Indonesia closed its human capital gap, its GDP would be 36 percent higher



In evaluating the efficiency and effectiveness of public spending in Indonesia, this report follows the framework presented by Pradhan (1996) (Box 1.2) and asks the following questions:

<p><b>1</b></p> <h2>Sustainability &amp; adequacy</h2> <p>Is the level of Indonesia’s public spending sustainable and adequate to address Indonesia’s development challenges, both on aggregate and within sectors?</p>	<p><b>2</b></p> <h2>Efficiency</h2> <p>Have public resources been used efficiently in delivering public services, i.e., allocated to the ‘right’ interventions and with the optimal cost per unit? Two types of efficiency are addressed: (i) allocative efficiency, which refers to the optimal allocation of inputs within or across sectors to produce outputs, and (ii) technical efficiency, which analyzes whether more outputs can be produced with the same amount of resources.</p>	<p><b>3</b></p> <h2>Effectiveness</h2> <p>Have public resources been used effectively to achieve Indonesia’s development objectives, including who benefits (or not) from public spending?</p>
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Efficiency and effectiveness are common terms used in assessing the impact of public expenditure by evaluating the linkages between inputs, outputs and outcomes (Figure 1.3). In this report, *efficiency* refers to the use of inputs (e.g., monetary and non-monetary) to produce outputs (goods and services) at the lowest cost possible, or commonly referred to as “doing things right”. Efficiency generally has two dimensions: allocative efficiency and technical efficiency. *Allocative efficiency* refers to whether resources are being spent on the ‘right interventions’ (i.e., optimal mix of inputs to produce outputs) across or within the sectors. *Technical efficiency* refers to the capacity to produce the outputs and to do so at the lowest cost (minimizing cost per unit of output). In practice, this often relates to implementation and financial management capacity such as wages, standard costs, or procurement policies. Effectiveness refers to whether program objectives are being achieved or “doing the right things”. *Effectiveness* is also influenced by enabling environment factors, such as institutional and regulatory framework, which is not always within the control of the policymakers, at least in the short run.

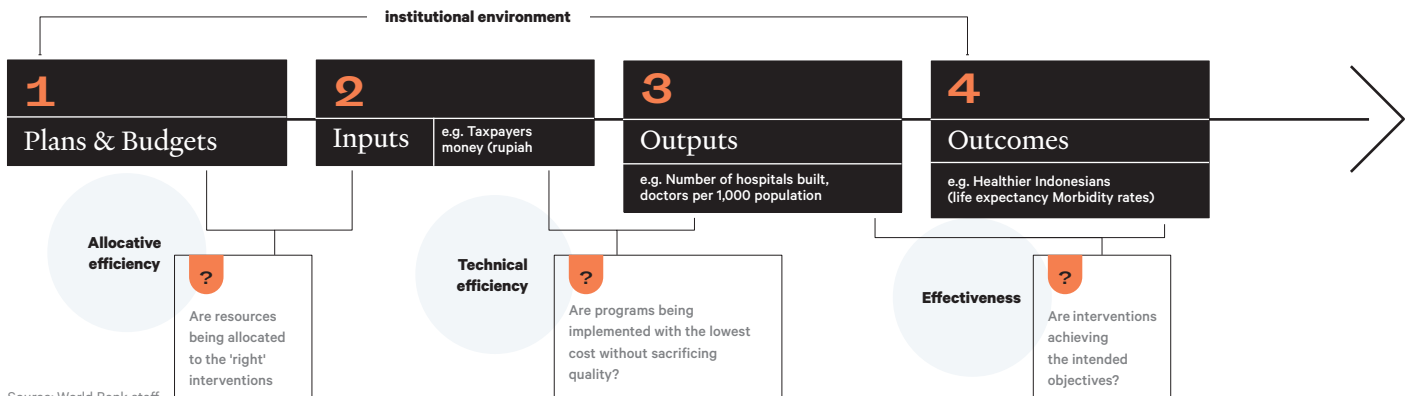
**BOX 1.3. Key elements of a Public Expenditure Review**

To evaluate the effectiveness and efficiency of public spending, this PER follows the framework presented by Pradhan (1996), which emphasizes six elements:

- 1** The aggregate level of public spending and deficit must be consistent with the medium-term macroeconomic framework, yielding a sustainable deficit and public debt.
- 2** Aggregate spending should be allocated within and across sectors to maximize social welfare, including the impact on the poor.
- 3** The role of the government versus the private sector should be a principal criterion governing the choice of programs for public financing and provision.
- 4** The impact of key programs targeting the poor should be analyzed, including their incidence and total costs, to identify those which help achieve poverty alleviation objectives cost-effectively.
- 5** The allocations for capital and recurrent expenditures should be analyzed in an integrated manner within programs and sectors to address the shortcomings of traditional capital-led budgeting with unsustainable recurrent cost requirements, and the crowding-out of non-wage operations and maintenance (O&M) spending by wage expenditure.
- 6** The PER exercise should seek to build government capacity and ownership so that the exercise can be undertaken by policymakers themselves as an integral part of their planning, budgeting and evaluation system.

Source: Sanjay Pradhan, “Evaluation of Public Spending”, World Bank Discussion Papers Series No. 32, World Bank, 1996, <http://documents.worldbank.org/curated/en/509221468740209997/Evaluating-public-spending-a-framework-for-public-expenditure-reviews>.

**FIGURE 1.3. Conceptual framework of efficiency & effectiveness**



Source: World Bank staff

**Evaluating the quality of public spending requires data on inputs, outputs and outcomes.** Inputs refer to resources to be spent, whereas outputs and outcomes reflect measurable development targets or objectives and can be sector-specific. In education, for example, outputs include the number of schools and number of teachers being trained, whereas one outcome variable might include the quality of student learning as measured by test scores. In health, the number of health facilities and the availability of medicine are outputs, while examples of outcome variables include infant or maternal mortality rates, or life expectancy. These output and outcome indicators are reflected in the National Medium-Term Development Plan<sup>26</sup> (RPJMN 2015-2019) and the line ministries' strategic plans (Renstra). It is important to note that analysis in this report is based on available data on spending and sectors, which may not always be consistent or reliable, especially at the subnational level. The chapter on data challenges highlights some of these challenges and the GoI's efforts to address the gap.

**The report is structured as follows.**

Part 1 starts with an analysis of the adequacy and sustainability, efficiency, and effectiveness of aggregate fiscal spending. Further part 1 analyzes the key institutional instruments for the GoI to improve the quality of spending: public financial management and fiscal transfers to SNGs, and data management to better manage the quality of public spending. The analysis and summary in Part 1 draw on the analysis of efficiency and effectiveness of spending in seven sectors: health, education, social assistance with a spotlight on nutrition and stunting (Part 2 on human capital), national roads, housing, water resources management and water supply and sanitation (Part 3 on infrastructure). While these sectors account for 38 percent of the general government<sup>27</sup> budget, analysis in Part 1 examines efficiency and effectiveness of overall general government budget.

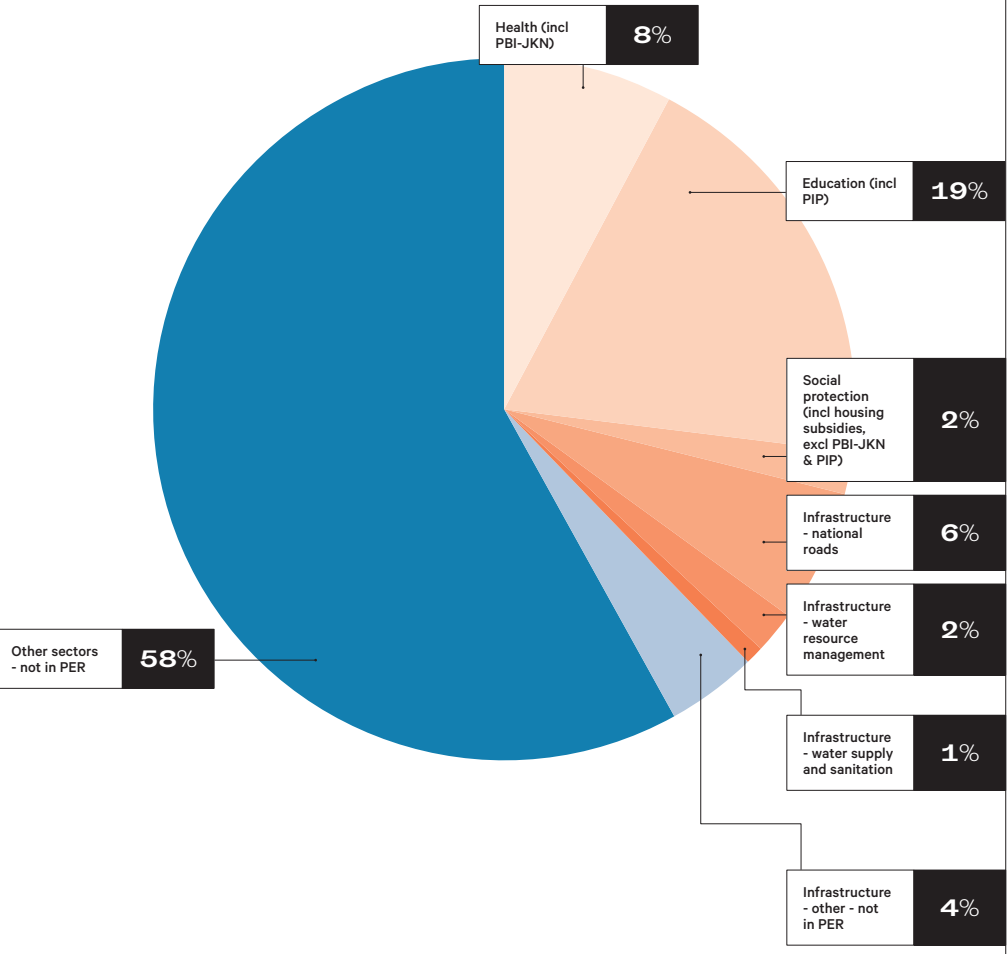
<sup>26</sup> The RPJMN is a static development plan, which is not updated on a rolling basis and does not reflect changes to the fiscal envelope.

<sup>27</sup> Central and subnational governments. Data from 2016. Source: World Bank Consolidated Fiscal Database, 2017.

**FIGURE 1.4.**

**The sectoral analysis in this PER (parts 2 and 3) covers about 38 percent of the general government budget**

General government expenditure (central and subnational) by function, 2016



Note: 'Other' includes other functions that are not specified: general public services (such as interest payments and tax subsidy), defense, public law and order, economy (including subsidies but excluding infrastructure), environment, housing and public facilities, tourism and culture. Central government: actual 2016 expenditure; subnational government data: 2016 budget. Source: Ministry of Finance, COFIS, staff estimations.



# 1.2

## How sustainable is public finance in Indonesia?

- A *The aggregate fiscal position is sustainable*
- B *Public expenditure is low because Indonesia does not collect enough revenues*
- C *The central government's discretion over its budget is limited*
- D *Indonesia can create more fiscal space through enhancements to revenue and expenditure*



A

# The aggregate fiscal position is sustainable

**I**ndonesia has run a persistent fiscal deficit, but both the deficit and public sector debt can be sustainably financed, providing a sound basis for efficient and effective public spending. For the past 20 years, Indonesia has run a fiscal deficit, varying in magnitude but always below the legal limit of 3.0 percent. Fiscal policy has become increasingly more conservative: the deficit came in at 2.7 percent of GDP in 1998 during the Asian financial crisis, but only at 0.1 percent of GDP in 2008 during the global financial crisis. In more recent years, the fiscal deficit has remained well below the legal limit, averaging 2.3 percent of GDP over 2014-19. The fiscal deficit has been financed typically by borrowing in securities in domestic currency, supplemented by the issuance of forex-denominated global bonds and loans. However, a large share of domestic currency bonds (around 40 percent) are held by non-residents, which suggests that the domestic financial market is shallow.

Similarly, the debt-to-GDP ratio has declined since the late 1990s. At 30.2 per-

cent of GDP by end-2019, Indonesia's central government debt-to-GDP ratio is one-third lower than its level after the Asian financial crisis (83 percent of GDP at end-2000) and well below the legal debt limit of 60 percent of GDP. This achievement is largely thanks to a resilient recovery in growth, helped by the commodity boom, low or negative real interest rates (including through concessional financing), a relatively stable exchange rate and primary fiscal surpluses up until 2012. However, the debt-to-GDP ratio rose gradually between 2012 and 2019 due to rising real interest rates, the shift to commercial borrowing in the composition of debt, and currency depreciation, as the commodity cycle ended (Figure 1.5).

**The fiscal impact and response to COVID-19 will lead to a large jump in the debt-to-DGP ratio and will continue to rise if not compensated by additional revenue measures.** The widening fiscal deficit in 2020 and additional below-the-line spending is expected to lead to a significant jump in the debt-to-GDP ratio from 2021 onwards. Meanwhile revenue is projected to

remain well below its 2018 level due to an expected sluggish recovery of commodity prices and the cuts to the corporate income tax rate from 25 percent to 22 percent in 2020 and the further cut to 20 percent in 2023. Rising interest payments will compete for the reduced budget envelope with priority spending on health, social assistance and infrastructure.

**To allow for higher fiscal deficit, the Government lifted the fiscal deficit rule, which has anchored its responsible fiscal management since 2003, temporarily for 3 years from 2020 to 2022.** To accommodate the shock mainly to revenue and the increase in the on-budget spending component of IDR 260 trillion out of the total IDR 434 trillion fiscal packages, the Ministry of Finance temporarily suspended the 3 percent of GDP general government fiscal deficit limit for three consecutive years, through Government Regulation in Lieu of Law (*Perppu*) 1 of 2020. This rule, originally instituted through State Finance Law 17 of 2003, is an anchor for Indonesia's fiscal credibility.

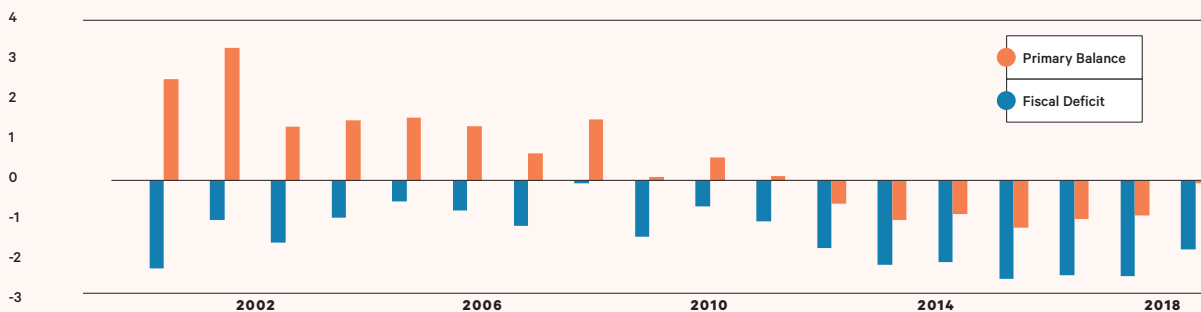
# 30.2%

At 30.2 percent of GDP by end-2019, Indonesia's central government debt-to-GDP ratio is one-third lower than its level after the Asian financial crisis

FIGURE 1.5

Indonesia has kept fiscal deficits low, and the level of debt has declined significantly since 2001

Percent of GDP



Source: Annual Ministry of Finance Financial Note and Audited Actual Report (LKPP).

“Good preparation for natural disasters and climate change will reduce contingent liabilities & improve budget execution.”



**Fiscal risks and contingent liabilities are manageable, but state-owned enterprise (SOE) debt has recently started to trend up and warrants closer monitoring, especially since the COVID-19 response packages may include an expansion of guarantees.** In part because the GoI has increasingly relied on SOEs to deliver large infrastructure projects and tasked them with other national mandates (such as implicitly subsidizing fuel), total non-financial SOE debt amounted to 6.5 percent of GDP at end-2019, increasing by 1.8 percentage points since 2017.<sup>28</sup> Exposure to explicit contingent liabilities in the form of loan guarantees to SOEs amounted to 1.4 percent of GDP at end-2019, well below the guarantee ceiling of 6.0 percent of GDP, and guarantees to public-private partnership (PPP) projects amounted to 1 percent of GDP in 2018, which is mitigated by the Indonesia Infrastructure Guarantee Fund (IGGF) for guarantee risks. Indonesia is also exposed to fiscal risks from natural disasters as Indonesia is one of the most disaster-prone countries in the world (see Box 1.3). It is also important to monitor other contingent liabilities, such as those from companies owned by SNGs, such as the local water supply companies (Perusahaan Daerah Air Minum, or PDAM), many of which are loss-making.

<sup>28</sup> Bank Indonesia does not use SOEs' financial statements to produce the debt data for non-financial SOEs and considers the data not yet complete.

#### BOX 1.4

#### Climate change and natural disasters in Indonesia

Indonesia is one of the most disaster-prone countries in the world and exposed to a range of natural hazards that can hinder its development outcomes. Located in the Pacific 'Ring of Fire' with 127 active volcanoes across the archipelago, Indonesia experiences frequent geophysical and hydro-meteorological hazards, including earthquakes, tsunamis, volcanic eruptions, floods, landslides, and forest fires. With the second-longest coastline in the world, Indonesia also faces a high risk of sea-level increase and coastal inundation that may affect up to 42 million people living in low lying coastal zones.

Natural disasters often lead to budget reallocations, as the budget contingency for natural disasters of typically IDR 40 trillion (US\$269 million) is not sufficient. The GoI typically spends US\$300 to US\$500 million per year on post-disaster reconstruction and the annual economic impact is estimated at US\$1.4 to US\$1.6 billion. The GoI is pursuing a com-

prehensive approach to better manage fiscal and financial risks due to frequent and major climate shocks and natural disasters through a Disaster Risk Financing and Insurance Strategy, launched in October 2018. This strategy includes several complementary financial mechanisms and instruments, including insurance of key public assets, including administrative buildings, hospitals, schools and bridges.

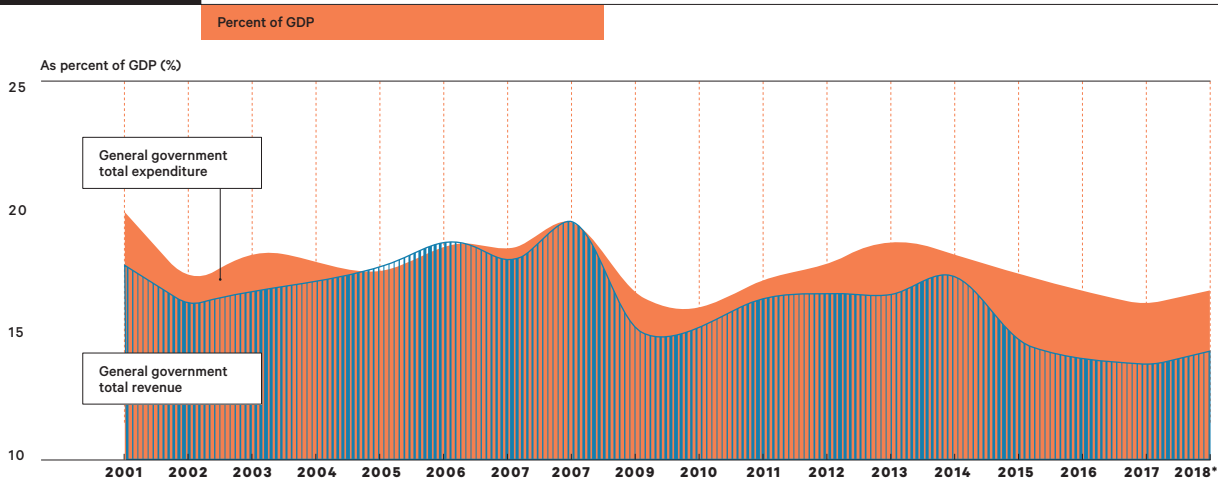
Good preparation for natural disasters and climate change will reduce contingent liabilities and improve budget execution. A recent Public Investment Management Assessment found that there is scope for further integrating the impact of climate change and natural disasters in the public investment management cycle to create more resilient public assets (see 67, Box 1.8). The Social Assistance chapter further recommends making existing programs more adaptive to provide immediate relief in the aftermath of disasters.

Source: World Bank (2009), "Towards 2015 – Spending for Indonesia's Development: Shaping the Prospects of a Middle-Income Country", <https://openknowledge.worldbank.org/handle/10986/12988>

B

# Public expenditure is low because Indonesia does not collect enough revenues

**FIGURE 1.6** Indonesia's general government spending has stayed below 20 percent of GDP

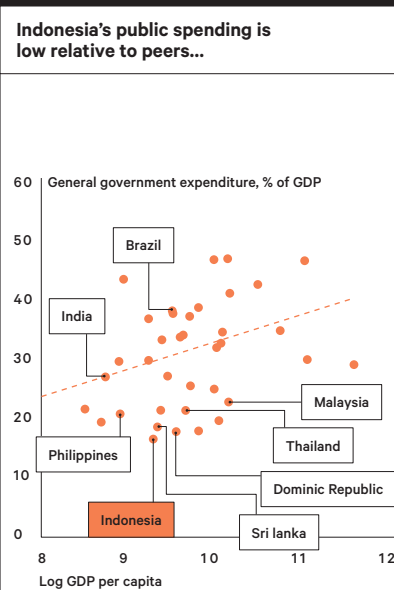


Source: COFIS, World Bank staff calculations.

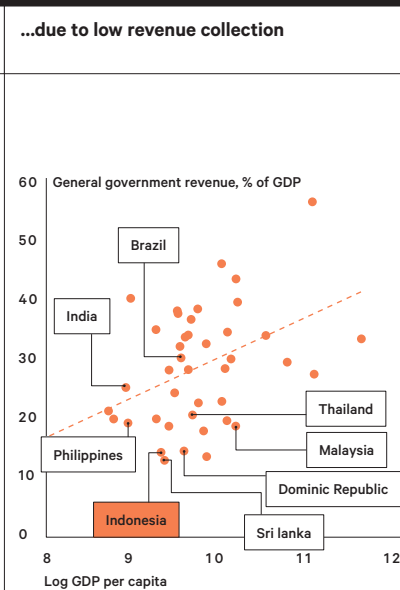
Indonesia's overall level of public spending is low relative to other emerging and developing market economies (EMDEs). At 16.6 percent of GDP in 2018, Indonesia's general government expenditure is about half that of other EMDEs, which spend 32 percent of GDP on average.<sup>29</sup> Spending generally rose during the commodity boom periods of 2003-08 and 2010-13, but even then, only reached 20 percent of GDP. While there is a long-standing debate about the size of government and growth, especially if it is financed from borrowing, under-collection of revenues relative to its potential represents opportunity losses that could have been used to influence better fiscal and development outcomes.

The main reason for the low level of spending is the structurally low level of revenue collections. Indonesia's revenue-to-GDP ratio is low at 14.6 percent in 2018, compared with the emerging economy average of 27.8 percent. Its tax-to-GDP ratio of 10.2 percent of GDP in 2018 is still one of the lowest among its regional and emerging market peers. In addition, the country has one of the largest gaps between actual and potential revenue, with collection rates esti-

**FIGURE 1.7** Indonesia's public spending is low relative to peers...



**FIGURE 1.8** ...due to low revenue collection



Note: General government consists of central, state (province) and local (district) government; The sample of chosen countries are 38 emerging markets and middle-income economies, based on groupings by IMF Fiscal Monitor (October 2018); Horizontal axis: GDP per capita in constant 2010 US\$, then converted into logarithmic (log) form.  
Source: IMF Fiscal Monitor (October 2018).

<sup>29</sup> Calculated from IMF Fiscal Monitor (April 2019) data.



mated to be less than 50 percent of potential tax revenues. Here are four challenges to collecting more revenue:<sup>30</sup>

1

## Cyclical

A significant share of Indonesia's revenues has traditionally been linked to commodity prices;

2

## Economic structure

Reliance on resource-extraction sectors and the size of the informal economy;

3

## Revenue administration capacity

In particular, low IT and staff capacity leading to a narrow tax base (limited taxpayer registration capacity) and low tax compliance (it is estimated that VAT compliance is only 56.6 percent<sup>31</sup>); and

4

## Suboptimal tax policy

These challenges include: (i) extensive VAT exemptions; (ii) a high VAT registration threshold level; (iii) distortive preferential regimes; (iv) a high non-taxable income threshold for personal income tax (less than 10 percent of the population have an obligation to file annual income tax returns or about 15 percent of employed workers); and (v) the underutilization of externality-correcting taxation such as tobacco taxation and green taxes. The MoF estimates that tax expenditure through VAT, income and import duty, and excise exemptions and concessionary tax rates only amounted to 1.2 percent of GDP in 2016 and 1.1 percent of GDP in 2017.<sup>32</sup>

**The 'quality' of tax collection is also low.** Indonesia currently ranks 112 on the Paying Taxes indicator compared with its peers on the World Bank's Doing Business ranking for 2019.<sup>33</sup> Moreover, current complexity and unequal treatment in the tax code increases the inefficiency of the tax system, with negative impacts on inclusive

**“The main reason for the low level of spending is the structurally low level of revenue collections. Indonesia's revenue-to-GDP ratio is low at 14.6 percent in 2018, compared with the emerging economy average of 27.8 percent.”**

growth. For example, extensive VAT exemptions generates a “cascading effect” whereby some sectors and/or taxpayers bear a higher burden of the tax than would otherwise have been the case if VAT was implemented broadly and free of exemptions. This undermines the equity of VAT and hurts growth of those sectors and taxpayers who bear a higher tax burden. Complexity of the tax system is seen in other areas too. For example, in addition to the standard corporate income tax rate, Indonesia has different discounts to the corporate rate for publicly listed companies and for companies with turnover of less than IDR 50 billion. It also offers different tax incentives and a presumptive tax regime for the construction sector and one for micro, small and medium enterprises (MSMEs), whereby companies are taxed on their gross turnover as opposed to their taxable income. As a result of these different provisions, the corporate income tax regime is complex and difficult for taxpayers to understand, and the effective tax rate for different corporate taxpayers varies.

**The GoI has implemented revenue reforms to increase the spending envelope.** The GoI has initiated a range of measures to improve revenue collection and the business climate in the short and medium term. The GoI is preparing major tax law changes, as well as preparing a medium- to long-term tax reform strategy to guide the reform process for the next few years. The GoI also launched a Tax Amnesty Program (TAP) in 2016 to increase revenue and ex-

pand the tax base in the medium term. The GoI has also improved the ease of paying taxes through several measures such as electronic VAT invoices, and electronic e-filing systems for corporate income taxes and withholding taxes from employees' payrolls. These efforts have started to bear fruit. It is estimated that the reforms on tax administration and tax policy that have been implemented since 2016 contributed to an increase in tax revenue of 0.6 percent of GDP in 2018.

**The direct impact of oil prices on expenditure has declined since 2015.** The average share of energy subsidies in total expenditure also fell from 20.5 percent (2012-14) to 8.2 percent (2015-18) on the back of energy subsidy reforms. Furthermore, the direct exposure of the fuel subsidies to oil and gas prices has been reduced, as the diesel subsidy has been transformed to a per liter subsidy, which essentially leaves the LPG subsidy, sold at a fixed retail price, as the only fuel subsidy with a direct exposure to commodity prices, accounting for 0.3 percent of GDP between 2015 and 2018. In addition, structural reforms such as the biodiesel mandate and a policy to move demand away from subsidized lower-grade to unsubsidized higher-grade petrol has reduced demand for subsidized fuels. On the other hand, before the 2019 election, due to government-mandated fixed retail prices, part of the fuel subsidy burden was passed to the state-owned oil enterprise, Pertamina, which will be compensated through the budget in the following years.

<sup>30</sup> Adapted from Part B on “Collecting more and spending better for inclusive growth” from “World Bank Indonesia Economic Quarterly March 2018: Towards inclusive growth”, World Bank, March 2018, <https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-quarterly-march-2018>.

<sup>31</sup> Rubino Sugana and Asrul Hidayat (2014). “Analisis Potensi dan Kesenjangan Penerimaan Pajak Pertambahan Nilai di Indonesia Tahun 2013”. <https://jepi.fe.ui.ac.id/index.php/JEPI/article/view/555>.

<sup>32</sup> MoF published its first tax expenditure report in 2018: <https://fiskal.kemenkeu.go.id/dw-taxexpenditure.asp>, based on an analysis of 34 tax expenditure provisions out of an inventory of 89.

<sup>33</sup> <http://www.doingbusiness.org/en/data/ExploreEconomies/indonesia>.

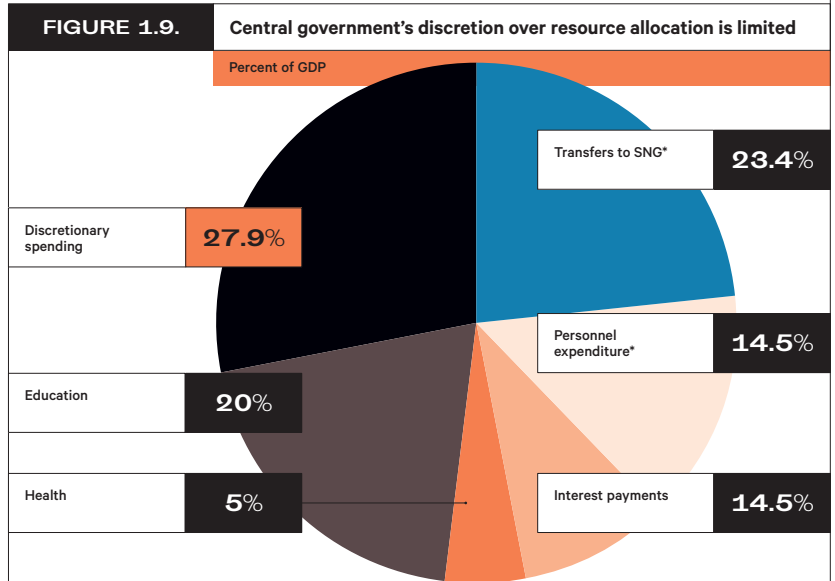


C

# The central government's discretion over its budget is limited

**T**he central government's discretion over resource allocation is also limited. A large proportion of central government baseline spending is non-discretionary and difficult to reallocate. Mandatory spending on education and health (20 and 5 percent of the budget, respectively), interest payments, personnel expenditure, and transfers to SNGs account for around two-thirds of total central government spending (see Box 1.4). Discretionary spending such as material, capital, subsidies, and social assistance accounted only 27.9 percent of central government budget, or 4.2 percent of GDP in 2016. Much of this is already taken up by ongoing programs and hence only partly available for new spending. Reallocation within the existing envelope alone may therefore not be enough to create the fiscal space for priority spending.

**Decentralization has devolved major service delivery responsibilities to SNGs and central government also has limited direct control over development outcomes, particularly for health, education and infrastructure.** Public spending is highly decentralized in Indonesia, where SNGs are responsible for 43 percent of public spending (average 2015-18) and play a critical role in service delivery. Districts manage primary and lower secondary school education, basic health care, and local water and sanitation and roads infrastructure, among others. The number of districts also expanded from 298 in 1999 to 514 (including six districts in DKI Jakarta) in 2018. Provincial and district governments manage their own budgets and are accountable to the provincial and local parliaments. SNGs therefore have a relatively high degree of expenditure decision-making (subject to mandatory spending), but they have limited revenue autonomy.



Notes: 1) estimation using 2016 revised Budget; 2) subsidies were 9.3 percent of central government spending in 2016 and are included in discretionary spending; 3) \* excluding education and health.  
Source: MoF and World Bank staff estimates.

**BOX 15. Expanding mandatory spending increased budget rigidity**

**E**armarking is a common Public Financial Management (PFM) practice and has been applied in many countries. Current examples of earmarking and mandatory spending practices in Indonesia include the rule that 20 percent of the central government budget is spent on education and that 5 percent is spent on health excluding salaries (although this has yet to be fulfilled), the allocation of the General Allocation Grant (DAU) to SNGs of 26 percent of domestic revenue, and other partial earmarking of non-tax revenues by line ministries.

Although there may be justifications for introducing earmarking in certain circumstances, and from a sectoral perspective it may make perfect sense, cross-country experience suggests that its implementation can be problematic and often has an adverse impact on budget flexibility and the efficiency of public resource use. Countries that have a high degree of ear-

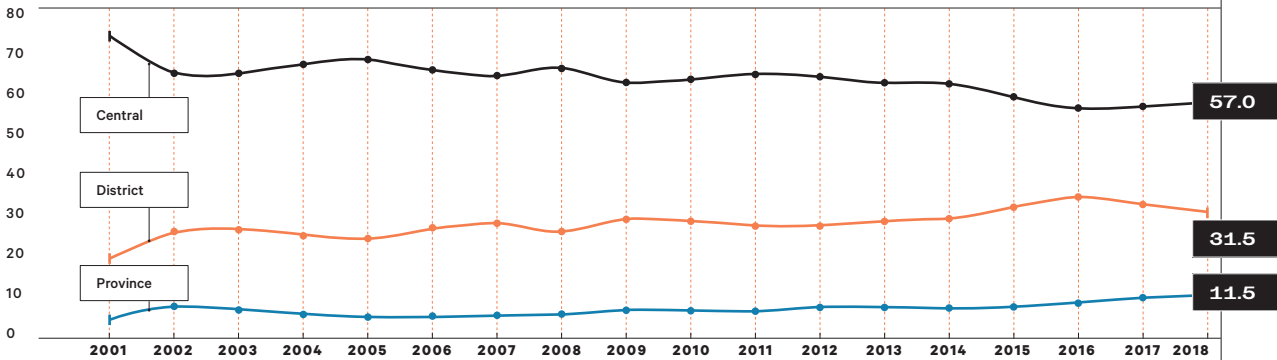
marking and budget rigidity, such as Brazil, have been struggling to reduce the level of earmarking in the budget. For countries introducing or expanding earmarking, there is also a very real risk of a significant proliferation of earmarking, as can be seen from the experience of many countries.

There are, however, measures that can be taken to address some of the concerns around earmarking. Strengthening the Medium-Term Expenditure Framework (MTEF) can provide greater certainty over program resource availability and be a more flexible tool than earmarks. For existing earmarked expenditure, the focus must be on creating incentives for improving efficiency with strong oversight, such as by strengthening implementation of performance-based budgeting. For revenue earmarks, other performance incentives are required, for example, performance-orientated design of 'formulae funding' and 'purchase-provider' (PP) schemes.

Source: World Bank (unpublished).

**FIGURE 1.10.** SNG spending accounts for nearly half of total spending...

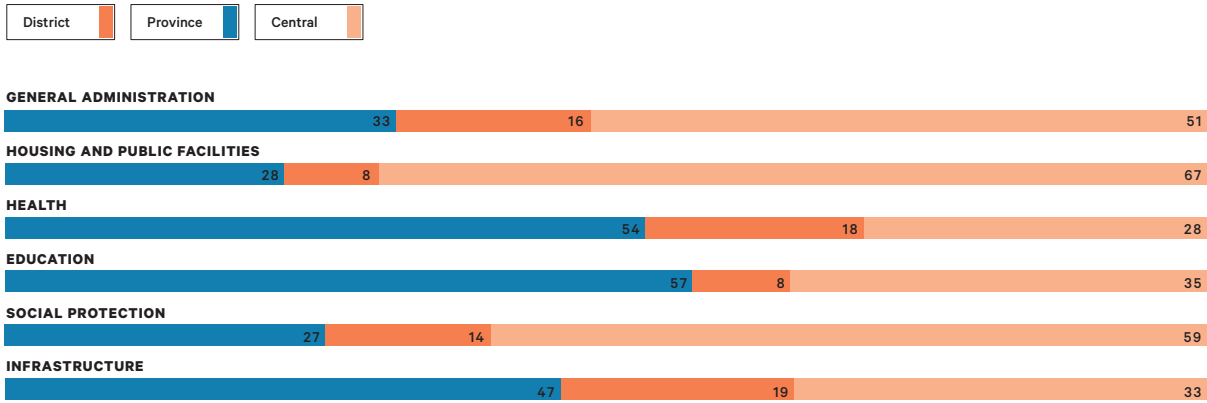
Percent of total spending



Note: 2018 is Budget. Source: MoF and World Bank staff calculations.

**FIGURE 1.11.** ...especially in health and education, and local infrastructure

Percent of total spending by function, 2014



Note: 2014 is the latest year for which actual general government expenditure data are available. Source: MoF and World Bank staff calculations.

*D*  
Indonesia should create more fiscal space through enhancements to revenue & expenditure

To achieve Indonesia’s development targets, as stated in the National Medium-Term Development Plan (RPJMN 2020-2024), indicative (pre-COVID) estimates suggest that additional spending of 4.6 percent of GDP is needed per year, which will be more difficult to meet with the impact of COVID-19 on the fiscal position. These are indicative estimates of the needed level of spending to reach the minimum level of services for middle-income countries in health, social assistance and infrastructure. This does not necessarily mean that more spending should be the priority in those sectors. In some sectors, improving the efficiency and effectiveness of spending is often equally if not more important in the short run than additional spending, as discussed further in this chapter and in the sector chapters.

Indonesia needs to create fiscal space through revenue enhancement and expenditure reallocations to deliver its ambitious development targets, while continuing prudent fiscal management. This section will look at two ways to increase its fiscal space: (i) enhancing domestic revenue mobilization; and (ii) reallocating expenditure from badly targeted subsidies.

**BOX 1.6.**

**Collect more and collect better**

Indonesia's tax ratio is averaging at the ratios of low-income countries. Significant tax policy and administration reforms are thus urgently needed to make a level-change in tax collection.

To collect more, the Gol could broaden the revenue base. Base-broadening measures will also reduce distortions in the tax system and improve equity. Measures to broaden the tax base include: (a) lowering the VAT registration threshold, and making registration optional for businesses below the threshold and who meet minimum book-keeping requirements; (b) lowering the MSME threshold in-line with the VAT threshold; (c) reducing VAT exemptions and removing the category of 'non-taxable' treatment from the VAT Law; (d) rationalizing tax incentives and preferential treatment in the corporate income tax regime, including removing the sector-specific final tax regimes on construction and real estate; and (e) introducing environmental taxation, including an adjustable fuel excise and an excise on single-use plastics.

Higher taxes on top-income and on wealth will raise revenues and improve tax progressivity. Here, reforms may include: (a) raising the top personal income tax (PIT) marginal rate to move closer to OECD average (e.g. 35 percent); (b) changes in PIT brackets and thresholds to ensure the middle class pay their share of PIT; (c) introducing taxes on wealth transfers (inheritance and lifetime gifts) that help address inter-generational equity issues. Moreover, measures to tackle base erosion and profit shifting (BEPS) risks will reduce aggressive tax planning by wealthy individuals and multinational enterprises, and ensure they pay a fairer burden of taxation.

By raising tobacco taxes and streamlining the multiple-tier structure, Indonesia can boost revenues and cut smoking rates, saving lives and reducing health spending on tobacco-related diseases. An important reform entails reviving and strengthening the tobacco simplification roadmap of 2018, so that Indonesia can gradually move to a single tax rate on tobacco.

Creating fiscal policy packages combining spending and tax reforms will increase support for higher domestic revenue mobilization. International evidence shows that support for tax reforms increase when governments motivate financing popular spending programs with the needed tax reforms. Different measures could address different objectives (including, for example, impact on investment and on equity), so that support for the reform could be broadened by appealing to different groups. Wide socialization of proposed reforms is another critical success factor: simple-to-understand and implement measures reduce confusion, improve trust, and thus increase voluntary-compliance from citizens and businesses.

Invest in technology and skills and reform business processes in tax administration. Indonesia needs to significantly improve tax compliance, in-part by reducing the administrative burden of paying taxes, and through improving trust in and efficiency of the revenue authority, the Directorate General of Taxes (DGT). Key reforms include: (a) significant investment in DGT's IT systems and reform of its business processes; (b) upgrading capacity, including by developing more specialists in core functions such as data analysis and audit; (c) reducing risks of clientelism and corruption, including through simplifying tax rules, strong enforcement of laws on those implicated in corruption, and a focus on integrity, transparency and accountability in DGT's staff training and performance management.

Strengthen property taxation to boost own-source revenues of local governments. Higher local own-source revenue can improve the "fiscal social contract" at the subnational level. This can be partly achieved by strengthening property taxation, including through raising rates and ensuring regular, systematic cadastral updates and simplified valuation approaches.

Reform non-tax revenues. Reforming non-tax revenue (NTR) tariffs will raise further funds and support sustainable management of natural assets. For example, current tariffs on fisheries are based on the type of boat used for fishing and the weight of fish, with no distinction made on fish variety and value. Reforms of the current system will require parallel investment in skills-training of staff across ministries responsible for NTR, to strengthen Government's capacity to design and implement a more robust NTR regime tailored to supporting sustainable management of natural assets.

Source: Based on World Bank: *Indonesia Systematic Country Diagnostic Eliminating Poverty, Bringing Economic Security to All* (forthcoming, 2020).

**1**

**Enhancing domestic revenue mobilization...<sup>34</sup>**

**In the short term, the government can implement revenue-enhancing reforms, among others, tobacco excise reform and the removal of some VAT exemptions.** It is estimated that the impact of these reforms could amount to annual net fiscal gains of 1.3 percent of GDP (Figure 1.12). Box 1.5 shows a more elaborate set of tax policy and administration reforms necessary to bring revenue up to the level of Indonesia's peers in the medium term.

**Removal of VAT exemptions could yield between 0.24 to 0.67 percent of GDP in additional revenue.** Indonesia's statutory rate is set at 10 percent on most goods and services, with many exemptions. In addition, small firms are exempted from paying VAT even for non-exempt goods and services, as the cost of administration required to enforce compliance is deemed to be higher relative to expected revenue. The Ministry of Finance estimated that the tax expenditure on food items amounts to around 0.24 percent of GDP.<sup>35</sup> Staff simulations estimate that the potential revenue losses of the current structure of VAT exemptions and payment thresholds amount to around 0.67 percent of GDP.<sup>36</sup>

**Many of these exemptions are enjoyed by wealthier households and their removal would reduce inequality, while the increase in revenue could be used in part to offset the impact on the bottom 40 percent through targeted cash transfers.** Exemptions on goods and services may be granted for a variety of reasons, but most commonly they are justified on equity grounds (e.g., food items). However, these exemptions can have a blunt and even regressive impact—just as price subsidies do. Currently, around half of all tax expenditures are in place with the objective to 'improve the welfare of the people'. However, similar to price subsidies, these exemptions are often enjoyed more by the wealthier classes than by the poor, rendering these tax expenditures regressive in their (absolute) incidence across the welfare distribution (Figure 0.13). In relative terms, as a share of household income, VAT exemptions are more

**+**  
**0.24**  
**TO**  
**0.67**

Removal of VAT exemptions could yield 0.24 to 0.67 percent of GDP in additional revenue

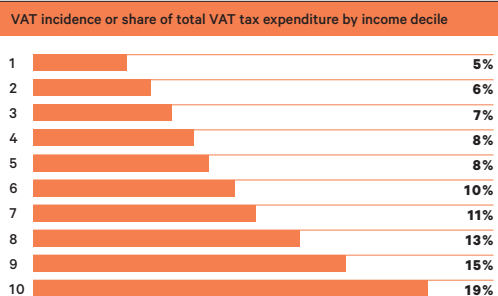
<sup>34</sup> "Indonesia Economic Quarterly March 2018: Towards inclusive growth", World Bank, March 2018. <https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-quarterly-march-2018>.

<sup>35</sup> Ministry of Finance (2018, 2020). Laporan Belanja Perpajakan 2016-2017 and 2018. <https://fiskal.kemenkeu.go.id/dw-taxexpenditure.asp>

<sup>36</sup> The potential revenue losses are estimated at IDR 90.6 trillion, based on the methodology included in Tom Harris, David Phillips, Ross Warwick, Maya Goldman, Jon Jellima, Karolina Goraus and Gabriela Inchauste. "Redistribution via VAT and cash transfers: an assessment in four low and middle income countries", IFS Working Paper W18/11. <https://www.ifs.org.uk/uploads/WP201811.pdf>

**FIGURE 1.12.**

**Government tax expenditures through VAT exemptions are enjoyed more by the middle and upper class**



Source: World Bank staff estimations.

2

### ...and reallocating expenditure from badly targeted energy and fertilizer subsidies...

important for the poor. The removal of VAT exemptions, however, would generate significant additional revenues. Staff estimates that the fiscal cost to offset the impact of removing the VAT exemptions on the bottom 40 percent of the population would be around 0.2 percent of GDP. Using a simple average of two estimates of the fiscal gain from the elimination of VAT exemptions of 0.4 percent of GDP, this means that the net fiscal gain would be 0.2 percent of GDP.

**Completing the tobacco excise reform agenda could raise an additional 0.7 percent of GDP in revenue.** For a country with one of the highest levels of prevalence of adult smoking in the world, the burden of taxes on tobacco is still lower than in many countries and is insufficient to have a meaningful influence on consumption behavior. While 2020 marks a notable increase in tobacco excise taxes, rates could still be raised further. Increasing such taxes can generate significant additional revenues even with lower consumption and also offer an additional public health benefit for the poor. Given their higher consumption elasticity, the burden of such a tax would fall more proportionally on the middle class. Increasing tobacco excise to maximum 57 percent of the minimum retail price, and completing the simplification of tariff lines could yield additional fiscal revenue of between 0.6 and 0.8 percent of GDP.<sup>37</sup>

**There is substantial scope for replacing energy and fertilizer subsidies, accounting for an estimated 8.5 percent of central government spending in 2019, by targeted cash transfers, especially while commodity prices, which are inputs to energy and fertilizer, are at record-lows.** Despite reforms, explicit (on-budget) and implicit (off-budget through SOEs) subsidies on diesel, kerosene, LPG, electricity and fertilizers still accounted for IDR 189 trillion or 1.3 percent of GDP in 2019. In the aggregate the poor and vulnerable only received 21 percent of the kerosene and LPG subsidies, 3 percent of the diesel subsidy and 15 percent of the electricity subsidy (see the chapter on Social Assistance), and 60 percent of the fertilizer subsidies benefit the largest 40 percent of farmers and over 30 percent of subsidized fertilizer leaks to non-targeted producers (Box 1.7).

**Targeted cash transfers to the bottom 40 percent of the population would compensate the impact of these energy subsidy reforms to those need it most.** Based on 2017 data, eliminating these badly targeted energy subsidies would save 0.7 percent of GDP, while providing compensation to offset the direct impact of rising energy prices and the indirect impact of rising prices of other items that use energy as an input on the bottom 40 percent would cost 0.3 percent of GDP, yielding a net fiscal benefit of 0.4 percent of GDP.

3

### ... will provide additional fiscal space for spending on priority sectors and will yield many economic, social and environmental benefits

**An illustrative reform simulation shows that these reforms would lead to additional average annual fiscal space of 1.3 percent of GDP for spending on priority sectors.** The combined impact is shown in Table 1.1. On the expenditure side, successful reform of the subsidies would reduce the exposure of expenditure to commodity price fluctuations, and could have further benefits, such as more fuel-efficient energy production and consumption, less local air pollution and fewer greenhouse gas emissions, a narrower current account deficit thanks to reduced imports of refined petrol products, and potentially more productive firms, as firms will be encouraged to replace aging capital stock with new, more efficient equipment.<sup>38</sup>

**Agricultural spending reform, including fertilizer subsidy reform, could create space for more efficient, effective and balanced spending in the sector, as the subsidies have a high opportunity cost.** With even a fraction of the money currently being spent on fertilizer subsidies, very significant programs could be rolled out by the Ministry of Agriculture to strengthen farm, community, and landscape level soil, water, and other natural resource management practices and capabilities and to invest further and better in agricultural R&D and agricultural education. Crop diversification and marketing would also enhance nutritional diversity of the food system. The returns on these types of programs and investments could be very high, not only in terms of improved agricultural productivity, incomes, and food security but also in considerably reducing the environmental footprint of Indonesian agriculture. The scaling down of fertilizer subsidies would thus be accompanied by the scaling of broad-based programs for sustainable agriculture.

<sup>37</sup> According to simulations by the Ministry of Finance. These results are consistent with staff simulations of tobacco excise increases with an elastic response to the price increase, presented in the forthcoming World Bank Indonesia Social Protection flagship report.

<sup>38</sup> See World Bank. "Indonesia Economic Quarterly December 2018: Strengthening Competitiveness" <https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-quarterly-december-2018>

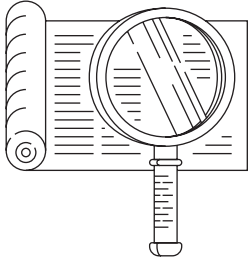
TABLE 1.1.

#### Projected annual impact of reforms

Percent of GDP

Reform	Projected annual impact of reforms		
	Gross fiscal gain	Compensation for bottom 40 percent	Net fiscal gain
Eliminating energy subsidies	0.7	0.3	0.4
Tobacco excise reform	0.7	-	0.7
Removal of VAT exemptions	0.4	0.2	0.2
<b>Total space for additional spending</b>	<b>1.8</b>	<b>0.5</b>	<b>1.3</b>

Source: World Bank staff estimations.



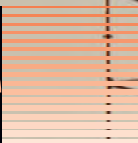
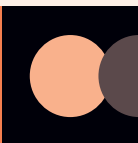
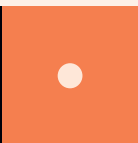
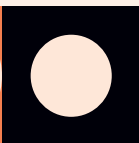
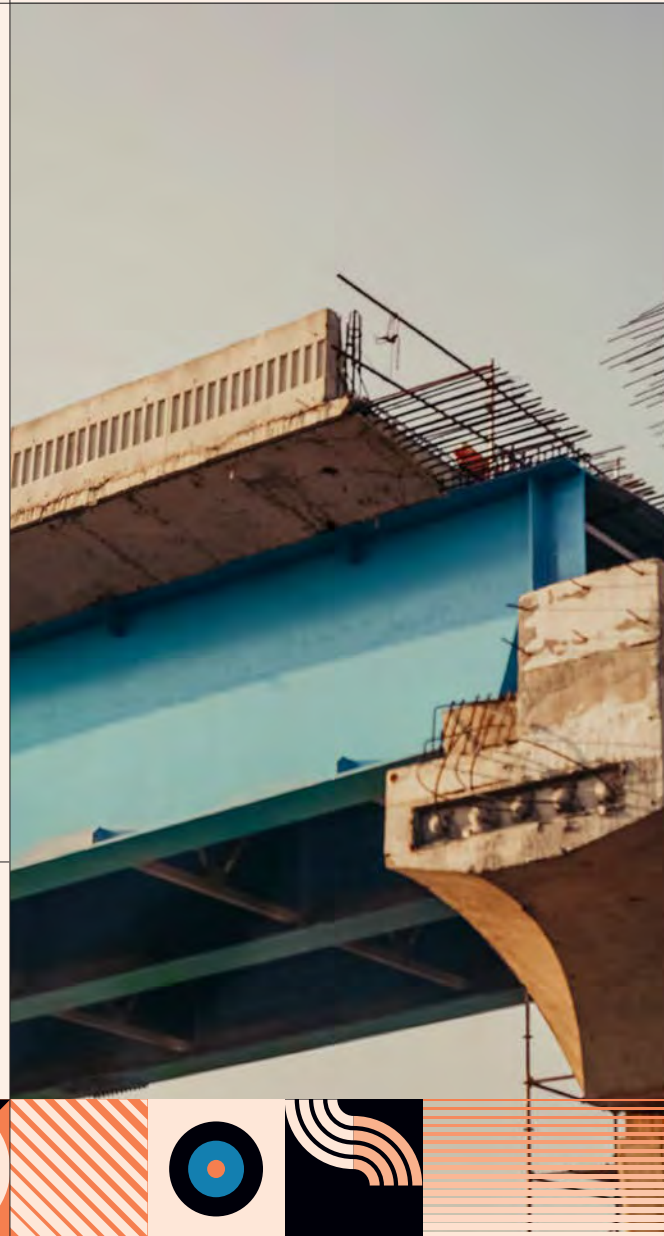
*“Many of these exemptions are enjoyed by wealthier households & their removal would reduce inequality, while the increase in revenue could be used for additional pro-poor spending”*



# 1.3

## Is public spending *in* Indonesia adequate, efficient & effective?

- A** *Spending on priority areas has increased, but remains inadequate*
- B** *Resources are not always spent on the right interventions*
- C** *Even when resources are directed to the right interventions, spending is technically inefficient*

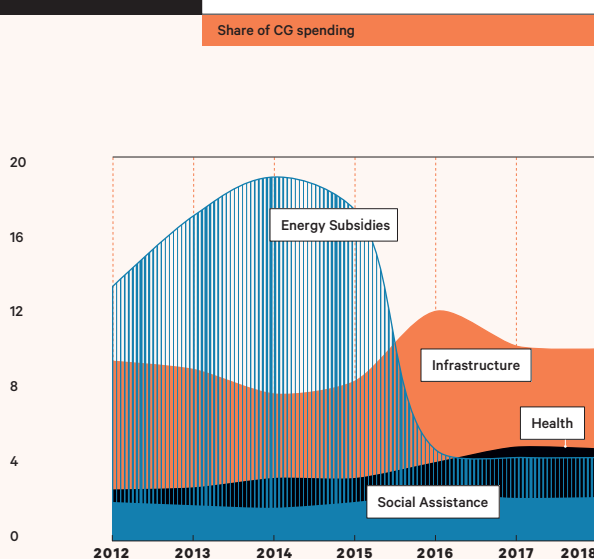


*A*  
*Spending on priority areas has increased, but remains inadequate*

**T**he quality of public expenditure in Indonesia has improved in recent years as the GoI partially redirected spending away from energy subsidies toward more critical areas for development. The GoI undertook ambitious energy subsidy reforms in 2014-15 (see Box 1.4), leading to a large decline in the amount of budgetary resources spent on this purpose. While the GoI spent an average of IDR 319.4 trillion, or 3.3 percent of Indonesia's GDP, on fuel and electricity subsidies over 2012-14, it only spent one-third of this amount, or an average of 0.9 percent of GDP, over 2015-18. The GoI reallocated resources freed up by the reforms toward more productive areas for Indonesia's development. The central government budget allocation for infrastructure increased from 8.5 percent in 2012-14 to 9.8 percent of total expenditure in 2018,<sup>39</sup> while the amount allocated for health increased from 2.8 to 4.8 percent over the same period. Planned spending on social assistance similarly rose from 1.9 to 2.3 percent. The GoI also maintained high levels of spending in education, where it is obligated to spend 20 percent of its budget.

**Despite these improvements, spending on health, social assistance and infrastructure remains inadequate relative to Indonesia's peers and to its needs.** Public spending on health amounts to 1.4 percent of GDP, half of what the average lower middle-income country (LMIC) spends. This amounts to just US\$49 per capita, well below regional and lower middle-income averages and the recommended US\$110 per capita needed to deliver an essential UHC package. Fully implementing the universal health-care program would require public health spending (excluding spending on the National Social Security System) to increase to around 2.3 percent of GDP a year. In social assistance, Indonesia spends 0.7 percent of GDP—higher than some of its regional peers, but also much lower than the average LMIC. Investment in infrastructure is similarly inadequate: between 2000 and 2013, Indonesia spent an average of 3.6 percent of GDP on infrastructure per year,<sup>40</sup> compared with 17.7 percent in China, 11.3 percent in Malaysia and 6.3 percent in Thailand.<sup>41</sup> Although Indonesia has dedicated more resources toward infrastructure in recent years, it is still inadequate given the large deficit of US\$1.6 trillion versus other emerging and developing economies. In water and sanitation, for example, Indonesia is among the countries with the lowest public sector spending (0.2 percent of GDP).

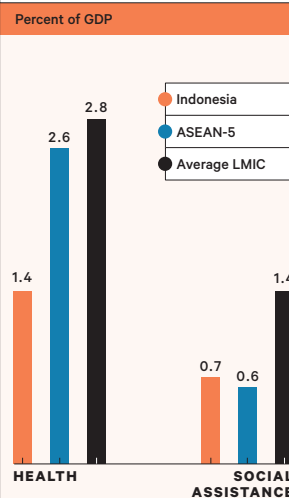
**FIGURE 1.13.** Spending on infrastructure, health and social assistance has increased...



Note: These are budgeted allocations, not actual spending. Source: DG Budget, World Bank staff calculations.

**FIGURE 1.14.**

...but remains inadequate compared with other peer countries



Source: World Bank WDI and ASPIRE.

**\$49**

Public spending on health amounts to 1.4 percent of GDP, half of what the average lower middle-income country (LMIC) spends. This amounts to just US\$49 per capita

<sup>39</sup> Including mandated infrastructure spending by subnational governments from central government transfers.

<sup>40</sup> The period 2000-13 was chosen to compare with other countries. When extended to more recent years, between 2000 and 2016 Indonesia spent an average of 3.5 percent of GDP in infrastructure per year.

<sup>41</sup> World Bank staff calculations using the IMF Investment and Capital Stock Dataset (2017).

**Resuming energy subsidy and fertilizer subsidy reforms would enable more public investment in these areas (see Box 1.6 and Box 1.7).** In 2018, the GoI spent IDR 154 trillion on fuel and electricity subsidies, and IDR 34 trillion on fertilizer subsidies. This was equivalent to 6.3 percent of the to-

tal budget, double the share spent on social assistance. Continuing to phase out these energy subsidies, as well as poorly-targeted non-energy subsidies, could yield more fiscal space for spending on health, social assistance and infrastructure, not to mention create more room for much-needed

investments in energy infrastructure and spur gains in firm productivity.<sup>42</sup> The GoI should ensure that domestic retail prices are adjusted regularly in line with global price movements to avoid overburdening Pertamina and PLN, and implement planned reforms to the 3kg LPG subsidy.

**BOX 1.7. Resuming energy subsidy reforms would enable higher spending on productive areas**

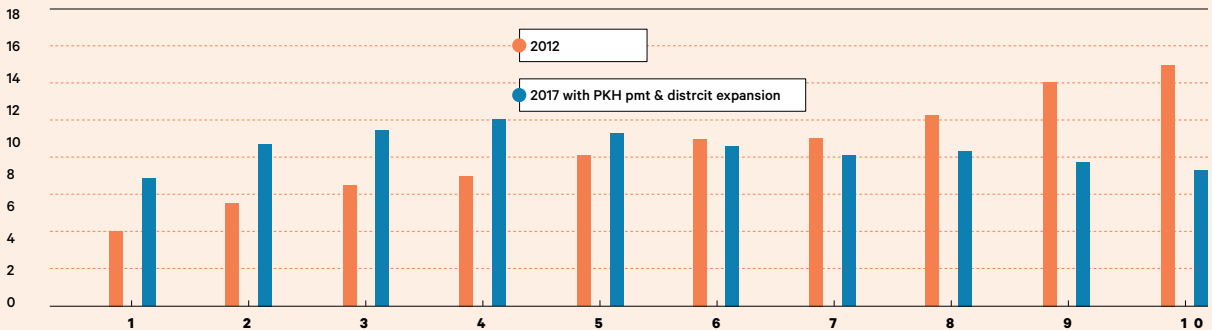
**A**fter decades of heavily subsidizing fossil fuel energy, the GoI implemented ambitious reforms in 2014-15. Supported by low crude oil prices at the time (US\$51/bbl), the GoI removed budgetary subsidies for low octane gasoline (RON 88/Premium) and applied a fixed subsidy of IDR 500 per liter for diesel. It also announced that domestic retail fuel prices would be adjusted periodically according to global oil prices. Electricity tariffs were also adjusted for 12 categories of non-subsidized customers and later excluded for non-poor households with

900volt-ampere (VA) connections.<sup>43</sup> **These reforms generated direct fiscal gains.** Energy subsidy outlays significantly declined from an average of 3.3 percent of GDP over 2012-14 to 0.9 percent of GDP over 2015-18, freeing up space for spending more on infrastructure, health, and social assistance. The targeting of electricity subsidies also improved, as the share of subsidies received by poor and vulnerable households increased from 25 percent in 2012 to 34 percent in 2017 (Figure 1.15) **However, the GoI has not fully pursued the reform agenda.** Although global crude oil

prices increased by 60 percent over 2016-18, domestic retail prices of RON 88 and diesel have barely changed since April 2016.<sup>44</sup> Electricity tariffs have similarly not been adjusted since early 2017. The burden of higher energy prices and exchange rate depreciation has been borne by Pertamina and PLN rather than passed on to consumers. Although the GoI pays these SOEs in arrears, such implicit subsidies have increased to an estimated IDR 59 trillion for fuel and IDR 71.3 trillion for electricity in 2018 (Figure 1.16 and Figure 1.17). These implicit subsidies strain SOEs' balance sheets and ability to invest.

**FIGURE 1.15. The targeting of electricity subsidies has improved**

Percent of total benefits according to market income decile, poorest to richest

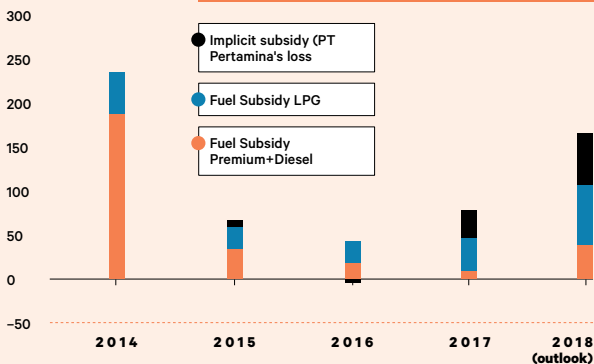


Note: This graph uses market income decile generated based on Commitment to Equity Framework. Susenas 2017 did not allow for the direct identification of household with 900VA connections. Hence, a PMT based model together with administrative information on actual number of subsidies receiving households in every district was used to simulate the household receiving electricity subsidy.

Source: World Bank staff estimations using Susenas.

**FIGURE 1.16. While explicit subsidies for fuel have decreased, Pertamina has borne an increasing amount of implicit subsidies...**

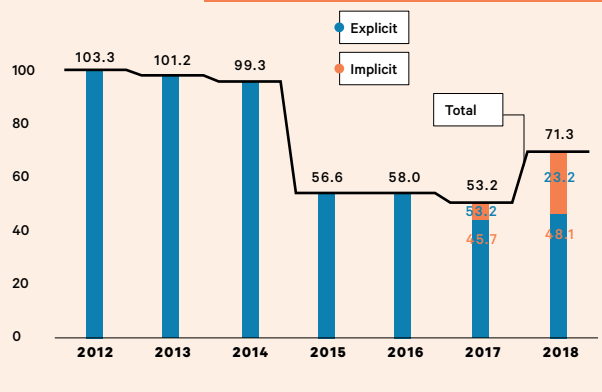
IDR trillion



Source: MoF and PT Pertamina; World Bank staff estimates.

**FIGURE 1.17. ...as has PLN, given that electricity tariffs have not been adjusted since early 2017**

IDR trillion



Source: PLN statistics and Audited Accounts of the Government, World Bank staff estimates.

<sup>42</sup> Cali et al (2019). "Too much energy: the perverse effect of low fuel prices on firms". World Bank Policy Research Paper #9039. <http://documents.worldbank.org/curated/en/670351570710975641/pdf/Too-Much-Energy-The-Perverse-Effect-of-Low-Fuel-Prices-on-Firms.pdf>

<sup>43</sup> The mutual characteristics of 12 (excluded) customers are all household, business, and government with electricity consumption higher than national average, except for household customers with 900 VA power. For the latter type of customer, the targeting was done by utilizing Unified Poverty Database (UTD). This resulted in the exclusion of 19.4 million non-poor from subsidy recipients (out of 25.2 million in total of 900 VA customers).

<sup>44</sup> In March 2018, the GoI explicitly announced it would keep the prices of fuel and electricity constant until the end of 2019. <https://jakartaglobe.id/context/govt-will-keep-fuel-electricity-prices-stable-end-2019>



B

## *Resources are not always spent on the right interventions*

### BOX 1.8.

#### Fertilizer subsidies are inefficient and ineffective in Indonesia, and are in need of reform

Indonesia's fertilizer subsidies, are poorly targeted, regressive, abused, and cost-ineffective at increasing production. They were originally introduced in 1971 and partly intended to encourage farmers to take advantage of the new seeds technology that brought about the green revolution in Asia and increased rice yields and total production. The question is whether subsidizing the production of fertilizer remains a cost-effective way to achieve intended objectives, especially given that its fiscal cost grew from IDR 18 trillion in 2009 to IDR 29 trillion in 2018, accounting for 36 percent of agriculture spending in 2016. Meanwhile, aside from irrigation, the share of spending on other public goods (i.e., for agricultural innovation or risk management) has been less than 5 percent. Studies found that: (i) fertilizer subsidies in Indonesia are poorly targeted to reach disadvantaged farmers. 60 percent of the subsidies benefit the largest 40 percent of farmers and over 30 percent of subsidized fertilizer leaks to non-targeted producers, like oil palm plantations; (ii) Many farmers paid above-the-government-ceiling prices, at times due to collusion among distributors; and (iii) the value of incremental production attributable to the use of the subsidized fertilizer use is lower than the subsidy costs.

With fertilizer technology adoption having been achieved to a larger extent, the focus should be on improving efficiency of its use, which requires complementary technologies and farming practices to be applied. It may be possible to achieve the objective of increasing yields and farm-level profitability at a lower fiscal cost, with a more equitable distributional impact and with a reduced negative impact on the environment by transitioning to a 'Smart' Fertilizer Subsidy Program, which will have a greater impact on farmer productivity and profitability. This would involve: (i) phasing down and better targeting fertilizer subsidies through reducing the subsidy rate and quantity of urea subsidized, while maintaining a small subsidy program that would target areas where fertilizer use has remained low, targeting poorer households; and (ii) scaling up more cost-effective programs to improve smallholder productivity through phasing in and scaling up a comprehensive soil fertility management program (subsidizing soil testing services, improved agronomic practices that improve soil health) and promoting climate smart agriculture, strengthening technology and innovation systems, supporting farmers to diversify into higher-value farm products, incentivizing improved water use, rehabilitating or upgrading irrigation infrastructure (see Water Resources management chapter), among others.

Source: Indonesia: Agriculture Public Expenditure Review 2010\*, World Bank, <https://openknowledge.worldbank.org/handle/10986/13069>, with updated data.

Spending more without spending better, however, would not help Indonesia achieve its development goals. In the context of the overall PER framework (see Section 3), 'spending better' can be construed as spending efficiently and effectively. Inefficient spending can occur in two ways: (i) the GoI does not direct resources to the most effective or productive interventions within sectors (allocative efficiency); or (ii) the GoI uses more resources (inputs) than technically required to obtain a given level of output (technical efficiency). On both counts, this PER finds both positive and negative examples of efficiency in Indonesia's public expenditures.

**The social assistance sector is an example where allocative efficiency has improved in recent years.** Since the 2016-17 period, the GoI has redirected spending away from the poorly-targeted programs such as the Rastra rice subsidy toward better-targeted ones such as the PKH conditional cash transfer. While 60 percent of the total SA budget in 2012 used to go toward Rastra, now only 12 percent does.<sup>45</sup> Meanwhile, spending on PKH increased from 5 to 14 percent of the SA budget over the same period. Recognizing the positive impact of PKH on overall welfare, nutrition and the utilization of health and education services, the GoI continuously expanded coverage from 1.5 million households in 2012 to 10 million households in 2018. Benefit levels also doubled to IDR 4 million per family per year in 2019.

**However, resources are not always allocated to the most effective interventions in other sectors.** In health, spending is more geared toward curative,<sup>46</sup> rather than preventive, care due to inappropriate financial incentives that drive primary care providers to refer patients to hospitals. Two-thirds of total health expenditure go toward curative care, and 84 percent of JKN expenditures were for hospital-based inpatient and outpatient care.<sup>47</sup> More cost-effective preventive interventions only receive one-third of total health expenditure. Similarly, in education, the GoI does not allocate much toward early childhood education and development (ECED) despite the proven, long-term benefits of such investments. The Directorate General of Early Childhood Education only receives 4.5 percent of the MoEC's budget, or about IDR 1.8 trillion, and although the GoI provides grants to ECED centers (*Bantuan Operasional Penyelenggaraan Pendidikan Usia Dini*/BOP PAUD) since 2016, only IDR 4.4 trillion was allocated for this purpose in 2019—a mere 9 percent of the total budget for BOS transfers.

**In infrastructure, spending on new construction and administration takes priority over operations and maintenance (O&M).** In the water and sanitation sector, only 15 to 20 percent of the total central government budget is allocated toward O&M, and the central government does not take O&M capacity at the SNG and PDAM level into account when prioritizing investment in new assets. District governments spend nearly half their budgets on supporting administrative and apparatus facilities, which are not directly linked to connecting households to improved water supply. Such inadequate attention to O&M can contribute to deteriorating infrastructure assets and disrupt service delivery, not to mention result in higher capital expenditures in the long term. Although there are 150 sludge treatment plants, 90 percent of them are not fully operational. Similarly, in the water resources and irrigation sector, construction of new irrigation systems and dams takes precedence over the maintenance of existing ones. This leads to an increase in the share of irrigation systems in poor condition at the district level and an increase in the number of dams identified for costly rehabilitation.

<sup>45</sup> The GoI has started to phase out Rastra and replace it with an electronic food voucher program, Bantuan Pangan Non-Tunai (Sembako), with promising early results, which is discussed in the subsection on service delivery.

<sup>46</sup> Curative care involves treatment intended to alleviate symptoms or cure of a current medical condition; instead health care aims at reducing the level of one or more identified risk factors to reduce the probability of a disease or condition occurring in the first place

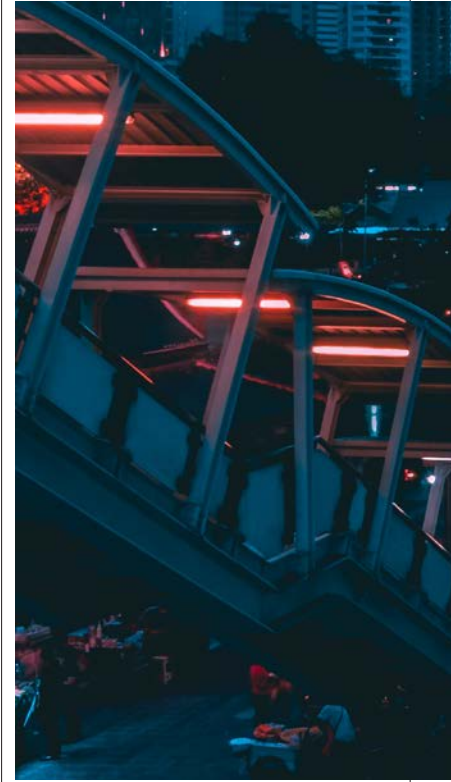
<sup>47</sup> In theory, the GoI's regional referral system provides a pathway for patients to be referred from primary care facilities to district public hospitals, to provincial referral hospitals and finally to national referral (vertical) hospitals providing tertiary care only when necessary. In practice however, the tiered referral system (Sistem Rujukan Berjenjang) that relies on primary care providers as the system's gatekeepers does not function well.

C

*Even when resources are directed to the right interventions, spending is technically inefficient*

**C**ontrary to the above, most of the recent increase in spending on national roads has gone to preservation<sup>48</sup> rather than the construction of new assets, but without a visible improvement in the quality of outputs, and the network has been unevenly distributed throughout the country's main islands. Spending on road preservation increased from 37 percent in 2015 to 49 percent of total expenditure on national roads (IDR 44.8 trillion) in 2017. This is partly due to more expensive treatments due to the use of higher design standards<sup>49</sup> and concrete pavement in trunk corridors.

However, actual road life and the quality of roads have not increased significantly (see chapter on National Roads), suggesting that further examination is needed to justify the increase in preservation costs. This may be due to ineffective supervision and poor-quality control, inadequate pavement design and weak enforcement of vehicle load capacity restrictions. Nonetheless, some recent gains in spending efficiency have taken place, with an increase in the share of work with large contract sizes and legislation (G.R. 16/2018) that could encourage the implementation of performance-based contracts. The latter can be seen in the fact that they have the lowest national road-to-population and road-to-



gross regional domestic product (GRDP) ratios: 0.005 km per 10,000 habitants and 0.001 km per billion of rupiah, respectively. On the other hand, Eastern Indonesia (the islands of Papua, Maluku, East and West Nusa Tenggara) is less accessible, with only 0.017 km of roads per km sq of land, but density is high relative to demand and population (0.023 km per billion of rupiah and 0.058 km per 10,000 people, respectively).

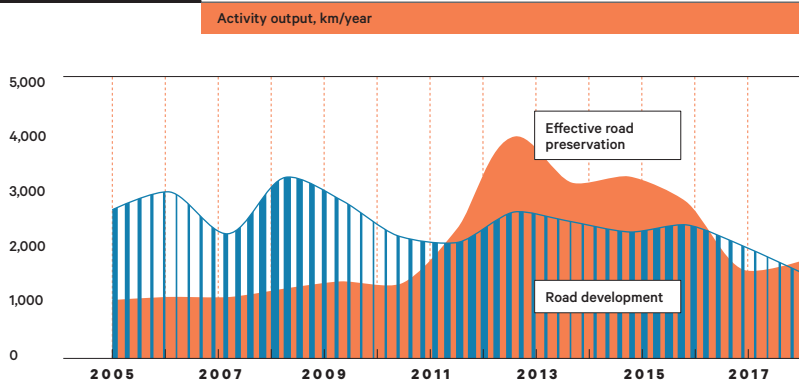
**Poorly designed pricing mechanisms risk incurring large liabilities in the future, especially in the infrastructure subsectors.** In the roads sector, the assignment of expressway projects directly to SOEs may have been the fastest way to deliver toll

<sup>48</sup> Road preservation refers to routine and periodic maintenance, minor and major rehabilitation and reconstruction works.

<sup>49</sup> In 2012, DGH upgraded the design standard, doubling the rehabilitation life from 5 to 10 years and pavement life to 20 years. This implies a rehabilitation and reconstruction coverage of 10 percent annually to keep pace with deterioration.

FIGURE 1.18.

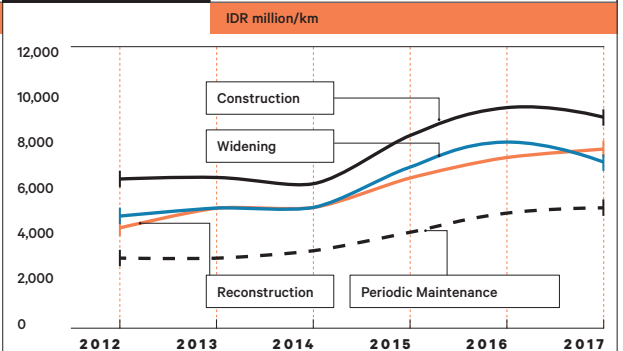
Real increases in spending have not financed increases in physical road output...



Source: DGH, World Bank staff calculations.

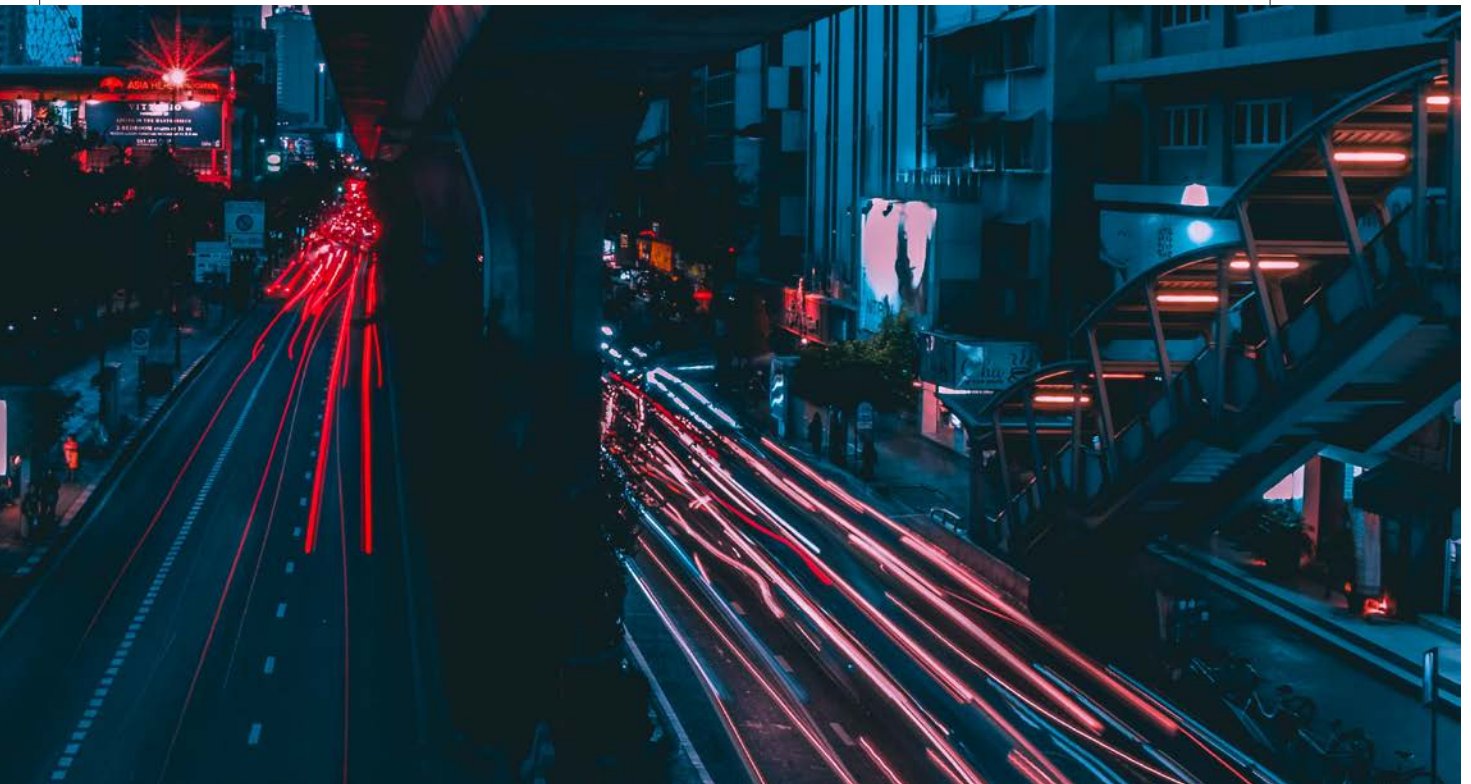
FIGURE 1.19.

...but instead financed more expensive treatments



Source: DGH, World Bank staff calculations.

Note: Road development refers to road construction and widening, while road preservation refers to periodic maintenance and road reconstruction.



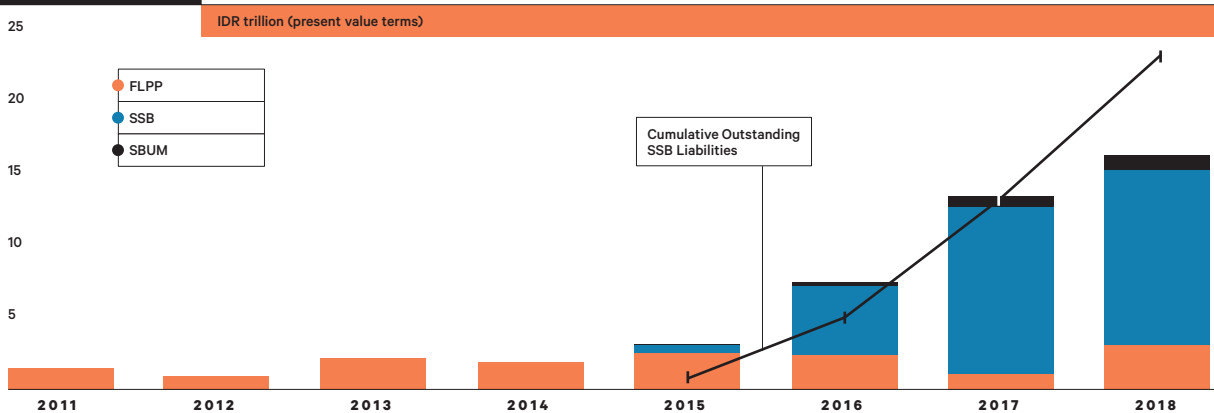
roads, but this model may not be sustainable for the second tranche of less-profitable roads, potentially increasing fiscal risks and crowding out the private sector. In the water supply sector, non-revenue water and tariffs below full cost-recovery levels have caused losses at more than half of the local water companies, or PDAM (263 out of 378) in 2017. Accumulated losses remain persistent even among profit-making PDAM, leading to contingent liabilities at subnational and the central government. In the housing sector, both the FLPP and SSB subsidy schemes have high per unit costs to the tune of IDR 53 to IDR 63 million (in net present value terms) per subsidized unit in 2018, incur-

ring present value liabilities of around IDR 17 trillion in that year—double the upfront fiscal cost and 10 times higher than in 2011.<sup>50</sup>

**Spending related to education and health also presents various examples of increases in inputs that are not accompanied by improvements in outputs.** In the education sector, where the GoI has increased resources up to 20 percent of the budget, many schools still do not have adequate equipment and books to create a conducive learning environment. Since the 20 percent spending mandate for education includes salaries, it is always possible to meet the mandate by increasing salaries instead of improving the availability of books and

equipment. In the health sector, *Badan Penyelenggara Jaminan Sosial-Kesehatan* (BPJS Healthcare)—the JKN fund administrator—has incurred large deficits since its inception, including a deficit of IDR 8.6 trillion in 2017. While the rollout of JKN has resulted in the expansion of health insurance to over 80 percent of the Indonesian population, this persistent and large deficit is the result of low premiums that are not based on actuarial estimates, as well as other design and implementation flaws (e.g., overly generous benefits and lack of incentives to providers to manage resources more efficiently).

**FIGURE 1.20.** The main housing subsidy programs, FLPP and SSB create a high net present value of future liabilities



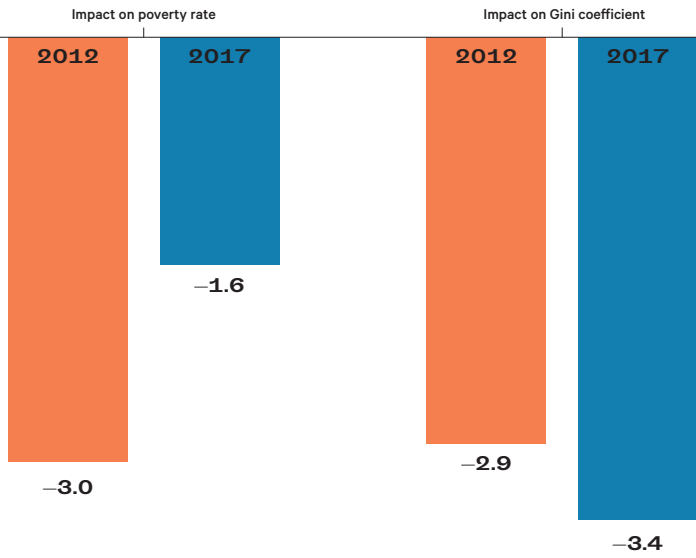
Source: MoPWH, World Bank staff calculations.

<sup>50</sup> See Annex 10-1 in housing chapter for more explanation on how these estimates were derived.

FIGURE 1.21.

Fiscal policy reduces poverty and inequality in Indonesia

Percentage points / Gini points

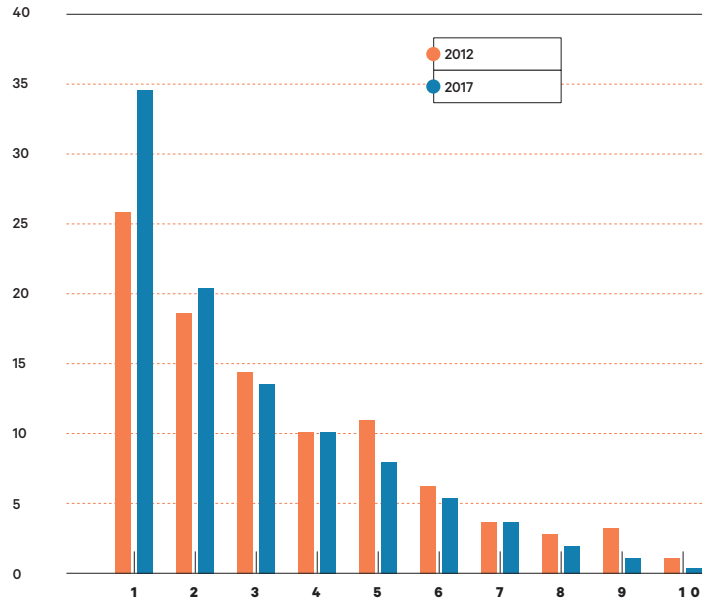


Note: These results are based on an analysis using Commitment to Equity Framework (CEQ). The overall impact of poverty is the difference between poverty rates with and without the main instruments of fiscal policy. For example, the 2017 poverty rate would have been 1.6 percentage points higher had there been no social assistance programs, indirect subsidies and indirect taxes.  
Source: World Bank staff estimates from Susenas, March round.

FIGURE 1.22.

...in part due to improvements in the targeting of PKH

Percent of benefits accrued by consumption decile



Note: Susenas 2017 only records 3.5 million households that received PKH, when in fact the recipients of the program had been expanded to 6 million households by the end of the year. So, the PMT based model together with district level administrative data on actual number of program recipients by the end of the year was used to simulate the additional beneficiaries.  
Source: World Bank staff estimates from Susenas, March round.

*D*  
*Public spending reduces inequality, but is not always effective in achieving the desired outcomes*

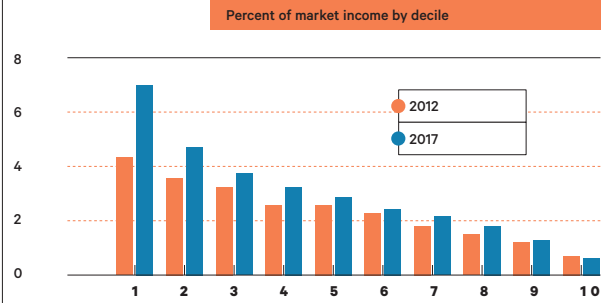
**O**verall, spending and other elements of fiscal policy reduce poverty and inequality in Indonesia. After accounting for various instruments of fiscal policy—taxes, transfers, indirect taxes and subsidies, and in-kind transfers such as health and education—the Gini coefficient declined by 3.4 points (from 40.3 to 36.9) in 2017, an improvement from the impact in 2012 where the Gini coefficient fell by 2.9 points. Similarly, the head count poverty rate declined by 1.6 percentage points in 2017,<sup>51</sup> although less than in 2012 due to fact that the poor paid slightly more VAT and did not benefit from fuel subsidies to the same extent.

**Spending on health, education and social assistance is by and large pro-poor.** The bulk of social assistance benefits to households through PKH and PIP, the scholarship program for poor students, goes to their intended beneficiaries. The targeting of PKH has improved, with nearly 70 percent of benefits of PKH benefited households in the bottom three deciles of the consumption distribution. Similarly, education and health in-kind benefits received by individuals that access publicly-provided education and health services are pro-poor, i.e., they mean more to the poor as a share of their market

<sup>51</sup> This number is estimated using Commitment to Equity Framework, which is the difference between poverty rate with and without government fiscal program consisting of direct transfers, indirect taxes, and indirect subsidies.

FIGURE 1.23.

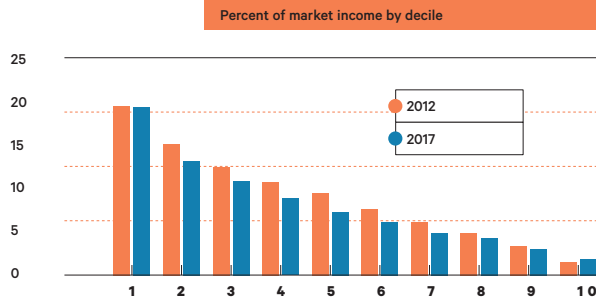
The poor receive more in-kind health benefits as a share of their income than the rich



Source: World Bank staff estimates from Susenas, March round

FIGURE 1.24.

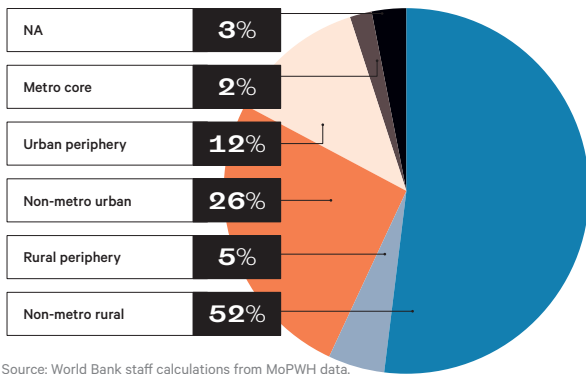
...as well as more in in-kind education benefits compared with the rich



Source: World Bank staff estimates from Susenas, March round

FIGURE 1.25.

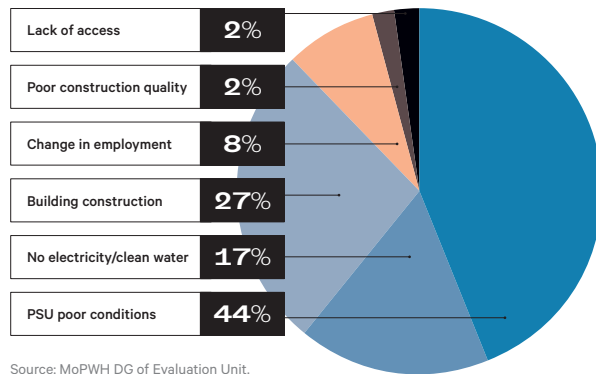
Half of all subsidized housing is located in rural areas...



Source: World Bank staff calculations from MoPWH data.

FIGURE 1.26.

... and 92 percent of reasons for vacancy is poor quality



Source: MoPWH DG of Evaluation Unit.

income. For instance, in 2017 the in-kind health benefits for the poorest decile of the consumption distribution represented about 7 percent of their market income, which is more than seven times that of the richest decile (Figure 1.23).

However, the impact of spending on inequality is limited, and even negative, in some sectors due to flaws in program design and implementation. In housing, for example, the main subsidy schemes are regressive and favor wealthier households over lower-income ones because those who purchase more highly-valued properties receive more subsidies.<sup>52</sup> The schemes also have high potential for leakage to higher-income beneficiaries, since lenders underwrite beneficiaries' capacity to pay based on household gross income rather than individual basic income. Even where subsidized housing units go to deserving recipients, they tend to be located far from urban cores and are of poor quality. This results in higher long-term expenses (e.g., increases in commute time and lack of home price appreciation), lower inter-generational economic mobility (due to poor access to services and jobs), and high vacancy rates, perpetuating the already high number of homes that are considered substandard (Figure 1.25 and Figure 1.26).

More generally, increases in spending often do not lead to commensurate improvements in the quality of public services provided, or in other words program objectives have not been achieved. For example, in water supply sector, despite a sevenfold increase in real terms in central government spending in the period 2005-13, usage of piped water for drinking purposes fell by almost one-third and usage for cleaning purposes remained broadly flat. Similarly, despite a fourfold real increase in spending on sanitation, household access to improved sanitation remains low at 8 percent.

The GoI has taken steps to enhance sectoral policies to improve the effectiveness of spending. In education, to improve the linkages between teacher professional allowances and student results the GoI introduced and rolled out a new teacher certification process in 2018, namely Teacher Professional Training (*Pendidikan Profesi Guru*, PPG) that requires a more comprehensive and longer training program for new (1 year) and existing teachers (6 months), compared with 90 hours previously. However, implementation of this new teacher certification process faces challenges due to limited authorized institution to

deliver the training. In addition, to improve the effectiveness of school operational assistance (BOS) program the GoI is piloting electronic school planning and budgeting (ERKAS) and introduced performance component in the allocation of BOS (BOS Kinerja) in 2019. In infrastructure subsectors, such as water resources management, the GoI has taken steps to modernize the management of irrigation to improve the irrigation systems performance. The modernization includes the establishment of asset management systems, evaluation of irrigation systems performance, and the development of irrigation management cooperation, as well as the installation of advanced information systems.

In summary, although partial energy subsidy reform has enabled Indonesia to shift more resources toward key development priorities, inefficient and ineffective spending remain across sectors that are critical for improving human capital and infrastructure. As shown in Table 1.2, even if Indonesia can only expect gradual progress in raising its revenue collections, much can be done to ensure that each rupiah of taxpayers' money goes toward its intended outcome of a more prosperous Indonesian society.

<sup>52</sup> The per unit subsidy cost for a landed house peaks at around IDR 50 million, while multistory units with higher property value peak around IDR 100 million.

<b>TABLE 1.2.</b>			
<b>Key challenges to quality of spending across sectors</b>			
<b>Sector</b>	<b>Adequacy: Is the government spending enough on the sector as a whole?</b>	<b>Efficiency: Are resources being allocated to the right interventions at the lowest cost without sacrificing quality?</b>	<b>Effectiveness: Are the intended objectives achieved?</b>
<b>Health</b>	<b>No.</b> The GoI spends 1.4 percent of GDP on health – about half of what the average lower middle-income country spends.	<b>No.</b> Significant differences between planned and actual spending of the MoH reflect inefficiencies in budget planning and execution. The JKN claims ratio regularly exceeds 100 percent, indicating inefficiencies on both the revenue and expenditure sides. Health spending is mostly geared toward curative episodic care due to inappropriate financing mechanisms that (i) incentivize primary care providers to refer patients to hospitals and (ii) do not encourage hospitals to contain costs.	<b>Yes and no.</b> Life expectancy has increased, under-five mortality and infant mortality rates have declined, and the maternal mortality ratio has also dropped. However, Indonesia still has the highest MMR in the region, a third of under-five year olds suffer from stunting, and non-communicable diseases are on the rise. Geographic and income-related inequalities in health outcomes also persist.
<b>Education</b>	<b>Yes, but only relative to other sectors.</b> Indonesia spends 20 percent of its total budget on education, higher than Singapore and many other neighbors. But as a share of GDP, spending on education (3 percent of GDP) is lower than in many of these countries. ECED is also severely underfunded.	<b>No.</b> Despite the fact that spending tripled in real terms over 2001-18, many schools lack basic inputs (textbooks, supplies, infrastructure). Transfers from the central government are not distributed according to district and school needs. Less-populated districts, which tend to receive more resources, have low capacity to manage the education system.	<b>Yes and no.</b> The GoI has achieved its target of expanding student enrollment, especially for secondary school. However, there has only been a modest improvement in learning outcomes as measured by PISA scores due to the large learning gap (4.4 years). Despite increases in teacher certification, many teachers still lack basic competencies that negatively impact their ability to transmit knowledge to students.
<b>Social assistance</b>	<b>No.</b> Spending on social assistance more than doubled in real terms over 2009-18, but it remains low as a share of GDP (0.7 percent)—half of what the average lower middle-income country spends.	<b>Yes, to some extent.</b> The GoI has achieved efficiency gains by reallocating spending away from ineffective (e.g., Rastra) toward effective programs (i.e., PKH, Sembako), by unifying common processes across key programs to improve delivery, and by developing an integrated social welfare database (DTKS). However, DTKS has not been systematically updated since 2015, and ensuring program convergence has been challenging.	<b>Yes, to some extent.</b> The conditional cash transfer program (PKH) improves welfare, utilization of health and education services, and has a large impact on reducing the probability that a child is stunted. The rice subsidy (Rastra) has shown to be ineffective in ensuring food security, but early evidence indicates that its replacement (Sembako) <sup>53</sup> is more promising. There is limited evidence on the impact of PIP and PBI-JKN.
<b>National roads</b>	<b>Almost.</b> Central government spending on national roads and expressways has increased over time, reaching 1.6 percent of GDP in 2017. However, budgeted spending is still IDR 2-6 trillion below the needed investment level.	<b>No.</b> Increases in spending financed more expensive treatments rather than an increase in physical output. The road network also distributed unevenly across islands. On expressways, the GoI has exceeded its target but by mostly relying on SOEs, which create contingent liabilities and crowd out the private sector.	<b>No.</b> There is still significant backlog in main corridors, insufficient high-capacity expressways, as well as unmet demand of arterial networks. Meanwhile, field evidence indicates that rehabilitated roads deteriorate faster than expected, trip times remain high, and overall slow traffic conditions affect Indonesia's competitiveness.
<b>Housing</b>	<b>Yes.</b> Indonesia spends about 0.4 percent of GDP on housing. Expenditure has risen 12.4 percent annually on average in nominal terms since 2011 in large part due to the introduction/expansion of mortgage subsidies.	<b>No.</b> Higher public spending on housing has been accompanied by increases in the number of subsidized housing units and loan volumes, but existing housing subsidy programs (FLPP and SSB) crowd out the private sector by offering a lower interest rate. SSB creates long-term liabilities that are fiscally unsustainable while FLPP offers liquidity funding to banks, which constrains loan volumes.	<b>No.</b> Subsidized housing units tend to be quality deficient and poorly located and fail to meet the demand for housing in urban areas. One-size-fit-all housing subsidy products are not effective in meeting the heterogeneous housing needs and at targeting lower-income and under-served populations.



Sector	Adequacy: Is the government spending enough on the sector as a whole?	Efficiency: Are resources being allocated to the right interventions at the lowest cost without sacrificing quality?	Effectiveness: Are the intended objectives achieved?
<b>Water Resource Management</b>	<b>No.</b> Public spending on water resources only accounts for 0.3 percent of GDP (2016). The budget for the Directorate-General of Water Resources is only half of what is stipulated in the strategic plan.	<b>No.</b> There is insufficient allocation for operations and management, leading to a deterioration in district-managed irrigation systems. Location of new dams is not prioritized based on a robust benefit cost analysis, causing a disconnect with spatial planning. The budget execution rate for DGWR is low compared with other directorates within the MoPWH, indicating inefficiencies in planning and budgeting.	<b>No.</b> Indonesia's water storage capacity and agricultural productivity are low compared with other emerging markets. Current per capita water storage capacity in Indonesia is around 90 cubic meters, compared to 600 – 3,500 cubic meters per capita in China or Brazil.
<b>Water Supply &amp; Sanitation</b>	<b>No.</b> Despite a threefold increase in real terms over 2001-16, Indonesia is among countries with the lowest public sector spending (0.2 percent GDP) on water. However, the immediate priority should be to improve efficiency of spending.	<b>No.</b> The number of additional homes with access to piped water has been insignificant and unable to keep pace with urban population growth. On sanitation, more households have access to improved sanitation on paper, but there are major problems with urban water disposal.	<b>No.</b> Usage of piped water for drinking has fallen and usage for cleaning purposes has been broadly flat, likely due to low public trust in the reliability of piped water. Most septic tanks are of poor quality, and most sludge treatment plant facilities are not fully operational due to lack of local government ownership and maintenance.



“In summary, although partial energy subsidy reform has enabled Indonesia to shift more resources toward key development priorities, inefficient and ineffective spending remain across sectors that are critical for improving human capital and infrastructure”

# 1.4

What are *the* systemic constraints to improving *the* quality of spending?

- A *Public financial management challenges*
- B *Coordination challenges across central agencies and between levels of government*
- C *Intergovernmental transfers do not incentivize performance*
- D *Inadequate data and information systems*
- E *Constraints to private sector participation*





## *A* Public financial management challenges

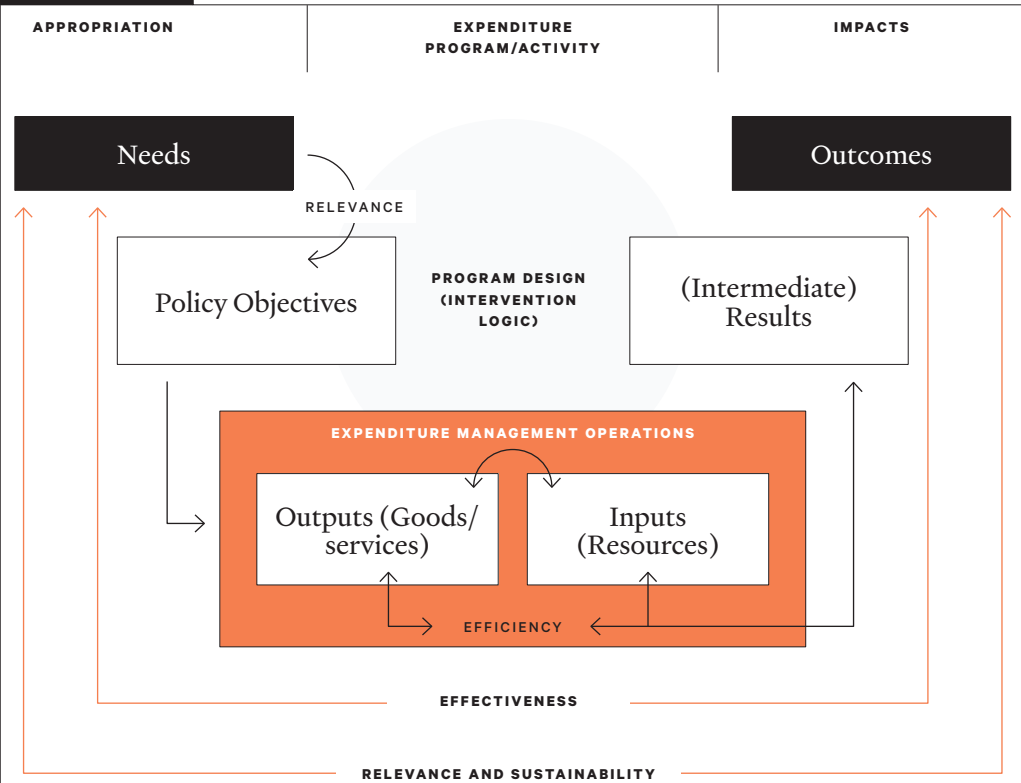


**I**ndonesia has made commendable progress in many aspects of public financial management (PFM) over the past 20 years, but a re-orientation to focus more on results is now needed. Indonesia already has a strong legal and regulatory framework aligned with most PFM standards. In the wake of the 1997/98 Asian financial crisis, modern budget management processes were introduced that emphasized the maintenance of aggregate fiscal discipline. The budget process is guided by a clear fiscal and debt management strategy, rigorous application of fiscal rules, and the budget is comprehensive with less than 1 percent of total budget revenue outside the budget process. Commitments and payments are strictly controlled to limit the accumulation of arrears. These reforms have served to reinforce aggregate fiscal discipline (see Box 2.1).

**Planning and budgetary frameworks are sound but linkages between policies, planning and budgeting can still be improved.** Budget formulation is both transparent and participatory, using both a top-down and bottom-up approach (Musrenbang). The budget calendar is strictly adhered to and scrutiny by Parliament is increasingly effective. Ministry plans (Renstra) are defined for all ministries, which translate five-year goals into annual targets and spending plans at the program, activity and project level. However, Renstra are often constructed around overly ambitious funding frameworks, which do not materialize during the annual budget process. The analysis in the Water Resources Management chapter indicates that central government spending on water resources remains well below the Strategic Plan target in the Renstra, where Renstra's budget is almost three times larger than the annual budget allocation in 2019, or at the end of the five-year planning period. A medium-term expenditure management process is in place, but it has not supported accurate prediction of the cost of ongoing programs, or the projection of fiscal space for new policies. Based on an ad hoc MoF analysis, the overall deviation of the Renstra from the MTEF was 33 percent, and from the MTEF to the annual budget 55 percent, in 2016.<sup>54</sup> Significant improvements in the MTEF were achieved in 2017 and 2018,

<sup>54</sup> Information collected during the PEFA Assessment.

FIGURE 1.27. Best practice performance budgeting architecture



David Webber, "Managing the Public's Money: From Outputs to Outcomes – and Beyond" originally published in OECD Journal on Budgeting, Vol. 4 No. 2, Jan. 2004. <https://www.oecd.org/gov/budgeting/43488736.pdf>

following the adoption of a new regulation that simplifies MTEF presentation, imposes restrictions on revisions, and requires line ministries to explain the deviation of planned budgets based on policy changes.<sup>55</sup> For the 2018 budget, the deviation between indicative line ministry ceilings and forward estimates in the earlier planned budget had reduced to 2.9 percent.<sup>56</sup>

**The GoI has taken steps to address the disconnect between the national planning agency and the MoF in the annual budget process.** The organizational nexus between the Ministry of National Development Planning (Bappenas)—responsible for programming and planning and the Ministry of Finance (MoF)—in charge of budget allocation is critical for efficient and effective delivery of all budget programs. Government Regulation No. 17/2017 established a clear mandate for Bappenas to have a role in the budget process, requiring the MoF and Bap-

penas to manage the budget process jointly at every stage. However, it did not specify how this joint process should be operationalized. Further operational definition of the respective roles is critical for these two agencies to work together more effectively.

**There is also scope to refine the institutional and structural performance architecture to better capture what the GoI wants to achieve, and better hold line ministries accountable for performance.** Under performance budgeting, good expenditure management can be achieved through the alignment of policy objectives, program design, program management (i.e., effective interventions) and outcomes. In Indonesia, budget programs map to outcomes and budget activities to outputs, but there is no clear sense of how they are connected in a results chain framework. The definition of outputs and outcomes are often not clearly stated. Outputs are currently determined at the dis-

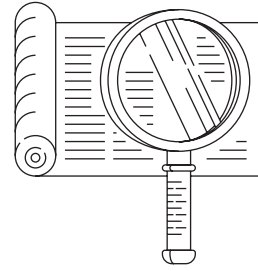
cretion of line ministries, may change for no good reason, and often look like inputs, processes or activities. This issue becomes even challenging with Indonesia's decentralized public service delivery environment where the inputs and outputs controlled by many line ministries cannot logically be assumed sufficient to deliver the outcomes for which they are currently accountable, because these outcomes depend on contributions from SNGs.

**Managing expenditure to achieve greater efficiency and effectiveness relies on a robust program intervention logic and data to measure its implementation.** Figure 1.27 shows a more elaborate example of "intervention logic", aiming to align policy objectives, program design, program management (i.e., effective interventions) and outcomes. Many of the RPJMN outcome targets depend on inputs and outputs controlled by all levels of government, so information on

<sup>55</sup> Minister of Finance Regulation No. 163/2016.

<sup>56</sup> Government Financial Report (LKPP) for 2018 budget.

“Now that Indonesia has established a strong track record for maintaining fiscal discipline, attention should turn toward improving the quality of the performance architecture as the basis for improving spending quality”



inputs, outputs and outcomes is needed from all three levels of government (see chapter on Data). Furthermore, the resources associated with those targets originally set in the RPJMN are often reduced through the annual budgeting process. This is why many governments today use rolling planning processes, which allow for adjustment of targets in line with available resources and provide a more meaningful mechanism for monitoring performance of government agencies.

**Within the budget implementation process, budget reliability remains a concern as it may impact key service delivery areas.** Repeated deviations between budgeted and realized revenues have been an area of weakness in past years, with projections of non-oil and gas income tax and VAT being over-optimistic in every year from 2009 to 2016. Gaps between planned and actual revenue estimates were so significant in 2014, 2015 and 2016 that Indonesia’s score on

revenue outturn indicator in the 2017 PEFA assessment was a “D”.<sup>57</sup> The over-optimistic revenue forecasts that reflected the GoI’s effort to maintain fiscal discipline have also affected the budget execution. In the past, as discussed in the 2017 PEFA report, budget execution deviated significantly from the plan and the score for total and composition of expenditure outturn is “C” and “C+”. This trend was curbed in 2017 and 2018, so that by 2018 no in-year budget revision was needed, along with the improvement in budget execution. This suggests there is scope to better manage the implementation of in-year revisions.

**Now that Indonesia has established a strong track record for maintaining fiscal discipline, attention should turn toward improving the quality of the performance architecture as the basis for improving spending quality.** Good quality performance information is key to expenditure performance, but there is room for consid-

erable improvement. Significant monitoring is taking place, but it is fragmented, often duplicative and predominantly focused on monitoring absorption rates, rather than measuring the impact of spending. The scarcity of quality performance information has contributed to the mistargeting of beneficiaries for certain programs. As described in the housing sector, subsidized built housing units tend to be poorly located—situated in rural areas or far from urban centers, despite housing needs are concentrated in urban areas—and to be of inferior quality, which has led to high vacancy rates. This reduces the spending effectiveness of sector programs. Information on needs is also particularly important for more accurate targeting of subnational transfers. Information failures have contributed to problems such as the mismatch of DAK allocation amount to district need and low convergence of social assistance programs at the beneficiary level.

<sup>57</sup> The PEFA applies the scores on the following criteria: “A” - High level of performance that meets good international practices; “B” - Sound performance above the basic level; “C” - Basic level of performance broadly consistent with good international practices; and “D” - Either less than the basic level of performance or insufficient information to score.

## B

## *Coordination challenges across central agencies & between levels of government*

**E**ffective coordination between various central agencies and between levels of government is key for efficient service delivery. Several examples (see the sectoral chapters) have stressed the importance of coordination at all levels to ensure spending efficiency and effectiveness. Functional overlaps and coordination asymmetries affect effective spending of some national programs.

**Coordination challenges among central agencies also limit the effectiveness of major government programs such as social assistance program and JKN (national health insurance) in achieving their objectives.** For example, various social assistance programs such as PKH, PIP, Sembako/Sembako, PBI-JKN are implemented by multiple central government agencies. Combined all together, these social assistance programs would have provided an adequate benefit level for the bottom 40 percent. The value of PIP and PKH together accounts for 27 percent of consumption expenditure for families living below the poverty line. However, currently about 40 percent of the poorest 10 percent of households with at least one child receive either program, while only 13 percent receive both PIP and PKH, even though these households are technically eligible to receive both programs. The very low share of beneficiaries receiving all four programs reflects the need to improve integration and coordination among key programs. Addressing JKN implementation challenges requires stronger coordination across central agencies, in addition to clarity in the governance and accountability arrangements of JKN among agencies involved such as the MoH, BPJS Healthcare, and the MoF.

**The problems of coordination are exacerbated for programs that are the joint responsibility of local and central governments, leading to challenges of information fragmentation and poor planning.**

The sectoral chapters identified a range of coordination challenges across levels of government, including fragmentation of information flows, and poor planning to ensure that budget allocations toward the respective functions of local and central government are complementary. In the health sector, fragmented management and information systems, and poor coordination among key stakeholders, have made it difficult to assess the efficiency of public health spending. Within the MoH, each health program (e.g., HIV, TB, malaria, maternal health) collects its own data, distinct from regular primary care data (SIKDA-*generik*) and hospital data (SIRS) systems. The data are also housed in separate departments within the MoH. Reporting requirements at the facility level are burdensome (e.g., 16 different forms for TB), the format is predominantly paper-based, and data quality and reporting compliance is low. Gaps in the complementarity of central and subnational budgets were observed, including underinvestment in local distribution networks by district governments in supporting central government water and sanitation infrastructure, and incongruity between central government and district government planning in the selection of dam construction locations.

**Decentralization poses additional challenges for central line agencies' accountability and monitoring, which is key for successful implementation of result-oriented budgeting.** Line ministries

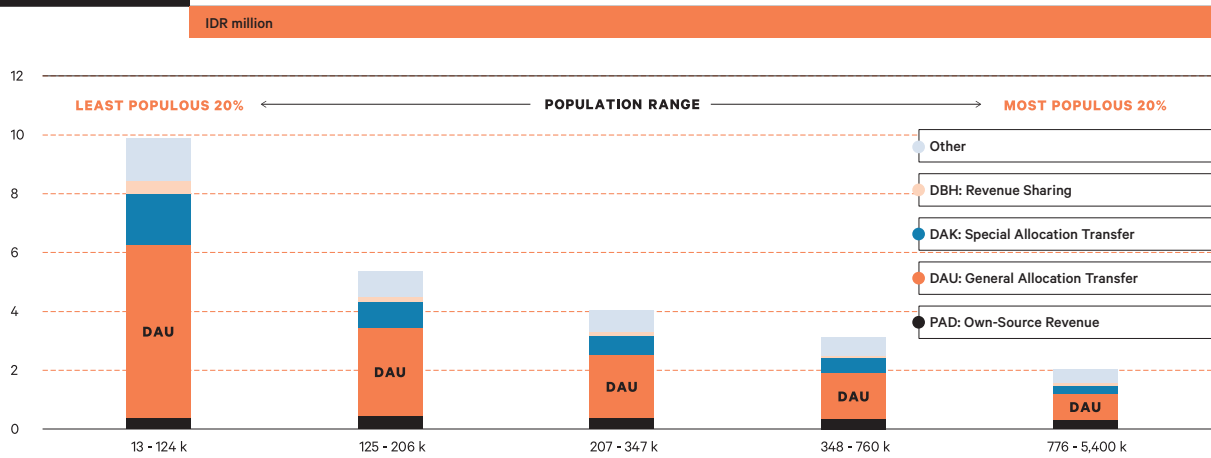
have expressed concern at their inability to control or even monitor program outputs and outcomes once the responsibility for service delivery is passed to SNGs. Weak central-local coordination and accountability appear to have disconnected line ministry from outcomes, including program information and performance. For example, despite being responsible for the overall quality of education, central line ministries only managed 37 percent of the 20 percent education spending mandate. A more complex intervention logic—one that clarifies the role that each level of government—is expected to play in contributing to better outcomes, and performance indicators that facilitate monitoring along the results chain, would help identify what changes need to be made to improve performance.

**There is limited use of institutional and fiscal levers to incentivize better performance.** There are promising signs of better coordination of ministries in the management of fiscal transfers, but instruments for managing across levels of government need more work. Examples of better coordination include the trilateral processes between the MoF, Bappenas and line ministries for managing sector DAKs. Improving the institutional arrangements for managing across levels of government is complex and challenging in any country, but more so in Indonesia where there are more than 500 district governments. Effective intergovernmental transfer instruments are highly context-specific and prone to perverse incentives (for example, gaming of data used to assess performance). There should be more investment in evaluating their effectiveness in stimulating performance improvements.

C

# Intergovernmental transfers require improvement to incentivize performance

**FIGURE 1.28.** Median total revenue per capita, by district population quintile, FY2018



Note: District revenue data uses 2018 realization data; population data uses 2015 data from SUPAS  
 Source: COFIS; World Bank staff estimates based on SIKD-MoF data.

**S**NGs in Indonesia play a critical role in delivering the services that underpin the quality of Indonesia’s human capital, as well as the public infrastructure that supports economic growth. Since the late 1990s, Indonesia has embarked on an ambitious agenda of administrative and fiscal decentralization to over 500 SNGs. Between 2015 and 2018, provinces and districts were responsible for 43 percent of total general government expenditures, compared with merely 23 percent pre-decentralization (1994-2000). Indonesia’s SNGs—provinces (*provinsi*), cities (*kota*), districts (*kabupaten*), and villages (*kelurahan/desa*)—now deliver most services that shape their citizens’ opportunities in life. Cities and districts manage primary and junior high school education, basic health care, and local water, road

and sanitation infrastructure, among others. **Despite improvements in access to basic services, flaws in the intergovernmental fiscal transfer system constrain the ability of SNGs to fully provide good quality services and infrastructure to citizens.** Despite continuous improvement, the allocation of fiscal transfers still results in interjurisdictional fiscal inequality. The distribution of major transfers, such as the unconditional General Allocation Grant (*Dana Alokasi Umum*, DAU) and the Village Fund (*Dana Desa*) remains only weakly associated with service delivery needs. One major reason is that the allocation formulae still emphasize “by place” rather than “by person” equity. As a result, in 2017, districts in the smallest population quintile received about five times more revenue per citizen than those in the largest population quin-

tile (Figure 1.28). In addition, the DAU and *Dana Desa formulae* unintentionally create incentives for districts to overspend on wages, because they comprise a “basic allocation”, which ties the transfer amount to the number of civil servants employed by the respective SNG. Furthermore, contrary to the GoI’s intentions, the proposal-based DAK has so far reduced its targeting to needy districts, as measured by district poverty rates and measures of access to services. One reason may be that low-capacity districts are less capable of preparing eligible proposals. (The proposal-based approach has also made allocations less predictable, making it difficult for SNGs to plan multi-year investments.) Due to the resulting inequity in per capita transfers, in particular in densely populated urban areas lack resources for infrastructure and other development needs.

The GoI has begun to revise the inter-governmental fiscal transfer system with a view to better allocate transfers based on development needs, gradually moving away from an equal distribution of funds across subnational units. Since 2015, it has sought to better target conditional transfers (DAK) to districts' needs, by tying DAK transfers to specific investment projects that districts seek funding for. This, in principle, could also enable the GoI to hold districts more tightly to account for delivering funded projects. For example, in the irrigation sector (water resources management) geographical targeting of the DAK has improved. Following the introduction of new criteria for DAK Irrigation transfers, the 15 largest rice producing provinces now receive the largest shares of DAK, an improvement of over the previous arrangement (Figure 1.29). At the village level, the allocation of *Dana Desa* has slightly improved.<sup>58</sup> In 2018, 20 percent of the funds were distributed according to a per capita formula that takes population size and village need into account, compared with 10 percent previously. Furthermore, the MoF is currently revising Law No. 33/2004 and, in particular, the design of the DAU to better target districts in need.

**Capacity constraints also contribute to the performance of SNGs in delivering high quality public services.** Institutional capacity is a key determinant of better spending, particularly at the subnational level. Institutional constraints reflect the capacity gaps on overall PFM, but also at the specific human resources capacity. At the subnational level, the ability of governments to plan and execute their budgets very much depends on the skill and capacity of the human resources to conduct proper planning and budgeting, including to make good quality estimations of project costing. Over-estimation on the costing—in addition to the lack of capacity in the implementation process such as on the procurement, evaluation, and monitoring—has resulted in the under-execution of capital expenditure, which relates pretty much to the quality of infrastructure services.<sup>59</sup>

The GoI has also laid a first foundation for strengthening the “fiscal social contract” between citizens and SNGs, by increasing SNGs’ autonomy in raising own-source revenues. Since the passing of Law No. 28/2009 on Local Government Taxes and Retributions a decade ago, which authorized districts to expand local tax and user fees and set their own tax rates, own-source revenues have grown significantly—to about one-third of SNG expenditures, by 2018, compared with only one-tenth in 2001. While districts remain dependent on

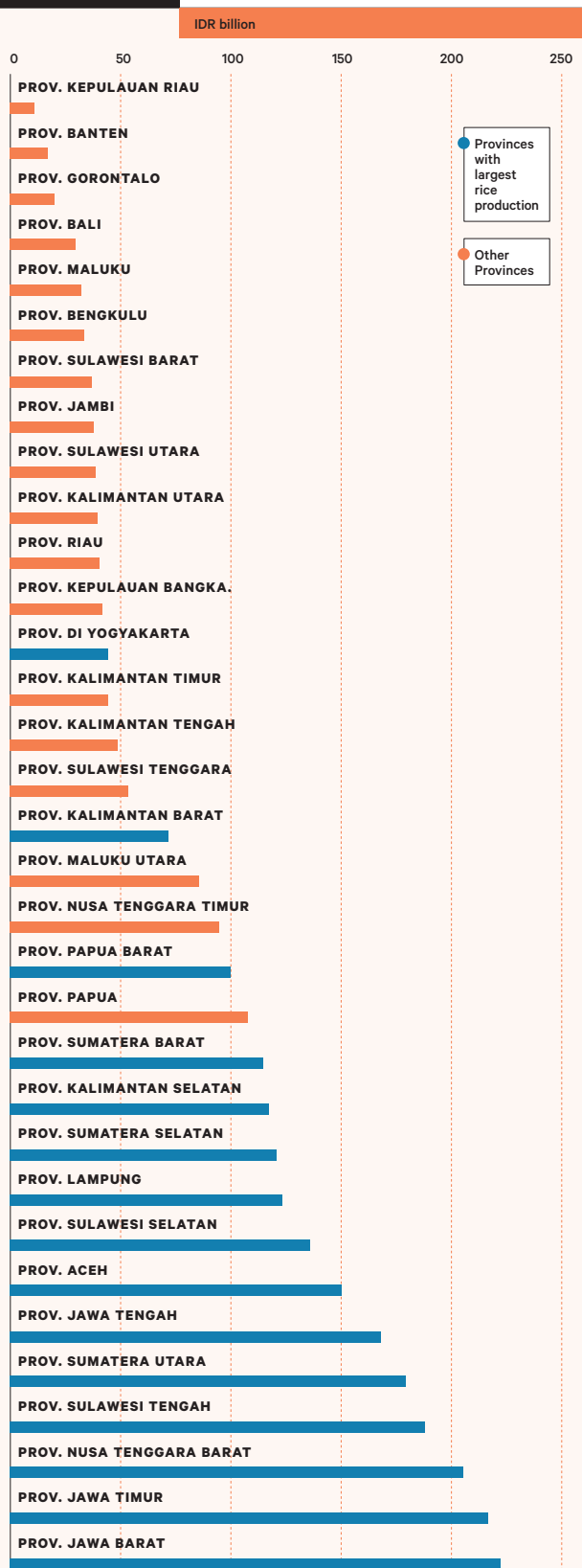
transfers for a large share of their revenues (78 percent in 2018), reducing Indonesia’s large vertical fiscal imbalances carries the promise of making SNGs more accountable to their citizens for how they spend their taxes.<sup>60</sup> In Brazil, for example, Gadenne (2016) finds that increasing the share of SNG tax revenues lead to a larger increase in local public health and education services than correspondingly large increases in transfers.

**Holding SNGs to account for spending effectively remains a central challenge for Indonesia.** SNGs are important players in delivering services in the priority areas discussed above. The inefficient use of public money by SNGs is likely driven by a combination of weak incentives to perform, lack of performance information, and capacity constraints. Indonesia’s choice to largely decentralize service delivery implies that it is ultimately citizens who need to hold their locally leaders to account for providing better services. Central government can, however, play a key role in empowering citizens to do so, by providing them with credible information about their SNGs’ performance, by making SNG fiscal and performance information public, and by benchmarking SNGs’ performance. In Brazil, for example, disclosure of municipality audit results prior to elections significantly reduced the likelihood of corrupt public officials being re-elected (Ferraz and Finan 2007). However, in Indonesia, currently very little reliable information on SNG spending and performance is easily accessible, in part due to weak data and information systems (see Data chapter). Furthermore, despite increases in local tax autonomy, a stark imbalance between SNGs’ large spending autonomy and limited revenue autonomy prevails. SNGs remain largely transfer-funded, and only weakly depend on collection own-source revenues, likely weakening the local “fiscal contract” between citizens and SNGs. Strengthening local own-source revenue autonomy and hence potentially the “fiscal contract” could be a promising avenue of reform.

Furthermore, existing top-down accountability mechanisms do not effectively incentivize SNGs to make efficient use of in particular of conditional transfers. The main conditional transfer—*Dana Alokasi Khusus*, or DAK—in part aims to support SNGs to achieve national priorities such as in health and education. As an earmarked grant, however, in many sectors, its allocation is poorly correlated with need or performance, resulting in wide variation of services. This is for example the case for the DAK in the health and education sectors. According to a 2018 report,<sup>61</sup> DAK health spending at the district level was not correlated with the

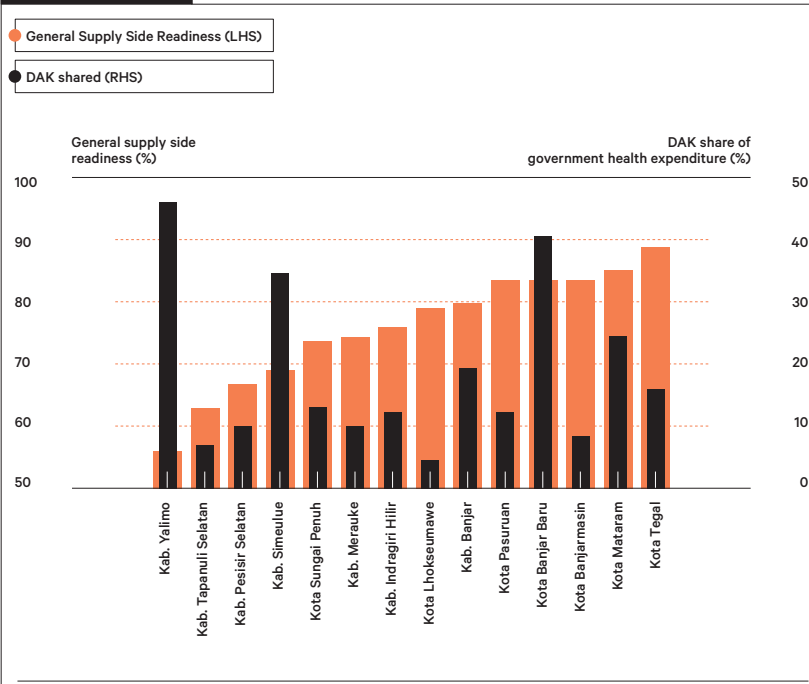
FIGURE 1.29.

DAK Irrigation allocation across provinces, 2019



Note: The 15 provinces with the largest rice production are defined by BPS 2015 data. Source: DG Fiscal Balance, Ministry of Finance. <http://www.djpk.kemenkeu.go.id/wp-content/uploads/2018/10/Rincian-Alokasi-DAK-Fisik-TA-2019-Upload-Final-Fix-31-Okt.pdf>

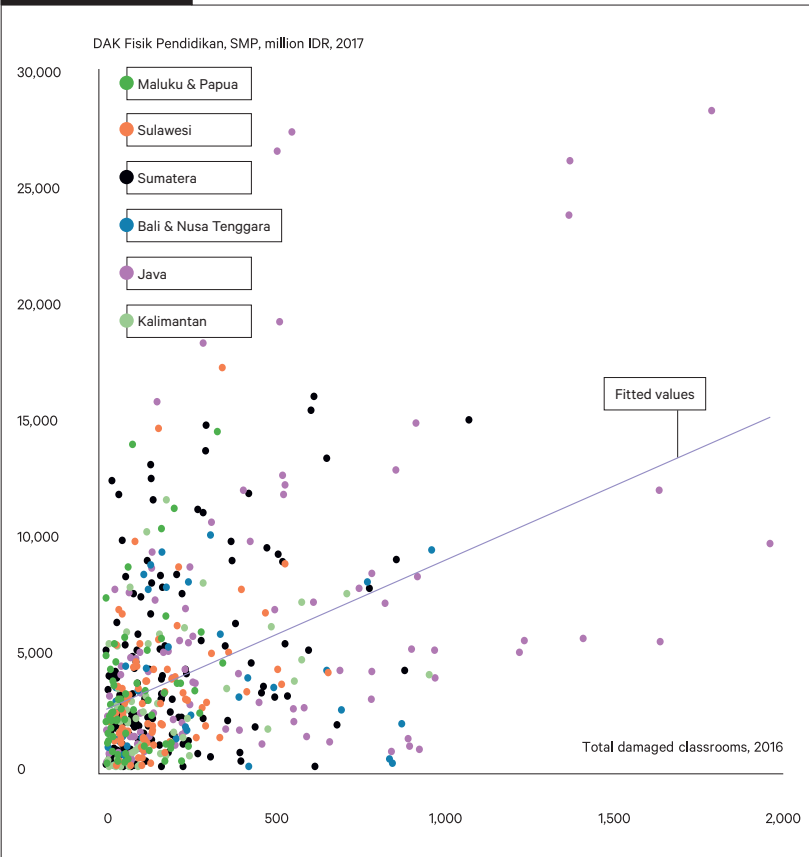
**FIGURE 1.30.** Health DAK transfers and supply side readiness appear to be uncorrelated



Source: QSDS 2016 and MoH DAK data 2013-15, World Bank staff calculations.

level of health infrastructure, medical equipment, drugs and supplies available—items that DAK is meant to finance (Figure 1.30). On the demand side, the *Kapitasi Berbasis Komitmen* (KKB), a capitation payment to primary health facilities that is linked to agreed performance indicators in 2016, has become less effective in incentivizing Puskesmas (community health facilities) performance where 95 percent of Puskesmas meet all targets and receive full capitation amount and the deduction amount for not meeting the criteria has been reduced to 2.5 percent to 10 percent compared with 25 percent previously. In education, DAK is supposed to be used for school rehabilitation and additional classroom construction. However, analysis of the resources allocated through DAK *Fisik* for school infrastructure in 2017 showed only a weakly positive relationship between resources allocated and the needs of districts (Figure 1.32). This is especially in the case of primary and lower secondary schools, while the relationship becomes stronger for upper secondary schools.

**FIGURE 1.31.** Weak correlation between DAK and construction needs in lower secondary education (DAK allocation 2017)



Source: MoF and MoEC, World Bank staff calculations.

C

## Inadequate data & information systems

**D**ata are key to measuring and driving effective government performance. Broadly speaking, two types of data are needed to evaluate the quality of spending:

1. Fiscal data on government spending (inputs) classified according to type (economic classification), function, and policy purpose (program/activity)
2. Sector-specific data on outputs (e.g., the number of schools built) and outcomes (e.g., student test scores).

Such data are necessary to measure the relationship between inputs and outputs (allocative and technical efficiency) and between outputs and outcomes (effectiveness). These data should be available at both the central and subnational levels, and sufficiently disaggregated to undertake meaningful analysis.

**58** To support rural infrastructure and services, the GoI began to distribute the Village Fund (Dana Desa) in 2015 to 75,000 villages, amounting to IDR 60 trillion or 0.4 percent of GDP in 2018.

**59** The World Bank 2018 report on Regulations, Capacity and Risk Avoidance: Debottlenecking to Resolve the Under-Execution of Subnational Capital Budget Spending, discusses in details the factors that constraining capital budget execution at the subnational level.

**60** As of 2018, districts depend on transfers for an average of 78 percent of their revenues, while for villages it is about 94 percent.

**61** <http://documents.worldbank.org/curated/en/484351538653658243/Is-Indonesia-Ready-to-Serve-An-Analysis-of-Indonesia-s-Primary-Health-Care-Supply-Side-Readiness>

1

## Inputs

The GoI has made notable progress on reporting central government spending data, but subnational spending data need urgent attention. At the central level, the GoI regularly reports data on spending (inputs) by standard functions and sub-functions mostly in line with international standards, with some room for improvement on the reporting of infrastructure<sup>62</sup> (see chapter on Data). It has also fully implemented the State Treasury and Budget System or SPAN (*Sistem Perbendaharaan dan Anggaran Negara*), an automated payment and budget preparation information system that provides timely information on the financial position. Unfortunately, the same cannot be said on SNG spending, where data are not consistently classified by function. As of June 2019, the latest available year of data on realized spending by function on the MoF Directorate General of Fiscal Balance (*Direktorat Jenderal Perimbangan Keuangan*, DJPK) website is for 2016.<sup>63</sup> These data are not comparable to previous years because DJPK no longer reports spending by sub-*urusan*, and the 2016 data do not use a consistent classification system. Spending data by function are not available for 2015, so the last year of credible data on functional classification of subnational spending is for 2014—in other words, a lag of five years. Moreover, data are available by economic classification and by function, but not the intersection of both, limiting analysis of the quality of spending.

**The poor quality of subnational spending data stems from the lack of standard classifications for programs and activities, as well as limited SNG capacity.** The production of meaningful data depends on the use of more standard classification by program and activity.<sup>64</sup> However, the regulations on budget and reporting formats for SNGs do not require them to use the standard classifications for programs and activities, which are important for analyzing the efficiency and effectiveness of spending. Moreover, although the MoF has attempted to improve the quality of data through a central automated reporting system, *Sistem Informasi Keuangan Daerah* or SIKD, it continues to extract spending data manually from paper reports.

2

## Outputs

**Data on outputs are available in some sectors but are not consistently used and lacking in quality.** At the central government level, outputs are usually collected through administrative systems maintained by each line ministry. The MoEC has developed a ministry-wide system, Dapodik—an effort that other ministries could emulate. In other sectors such as health, data are highly fragmented across multiple departments of the same ministry and/or prone to different definitions, and a lack of quality assurance in the collection process (see Box 5.1 in chapter on Health and the 2013 report on maternal mortality.<sup>65</sup>)

**At the district level, using data on outputs to measure performance may be problematic.** Accuracy in measuring outputs at subnational level is not just important for comparing the performance of districts with each other; it is also important to guide district managers where they need to focus their attention. Unfortunately, the quality of such data is often problematic in Indonesia. In the health sector, for example, it is not uncommon for district immunization rates to be well over 100 percent, likely due to the inaccurate calculation of the denominator.<sup>66</sup> In addition, there are competing sources of population data (Census/Intercensal data from BPS and administrative data from the MoHA), which may result in inaccurate information on beneficiary target groups. In 2015, the difference in population estimates exceeded 10 percent for over one-third of districts and exceeded 20 percent for about 11 percent of districts.

3

## Efficiency

**Household survey data may not accurately measure some outcome indicators at the district level.** Data on outcomes (e.g., share of children under-five that are fully immunized or net enrolment rates) are often measured through Indonesia's national household survey, Susenas. While Susenas is representative at the district level and can be used to measure outcomes for the most part, it is primarily designed to track poverty rates rather than outcome indicators, and hence may not be suitable for some indicators where the specific subpopulation is too small (for example, households with children under five years old). When used to measure districts' incremental performance improvements, Susenas year-on-year changes at the district level should be used with caution to ensure differences are statistically significant.

**Even when data on outcomes are available, they are not necessarily well-integrated and used to drive improvements in the quality of spending.** In the health sector, for example, multiple monitoring systems are managed by different directorates within the MoH for different health interventions, and there are multiple systems to process JKN claims under BPJS Healthcare. With the lack of interoperability between different data systems and poor coordination among key stakeholders, there is limited useful information that can inform strategic prioritization and resource allocation at the district and national levels. This contrasts with the social assistance sector, where the introduction of the unified poverty targeting database (*Basis Data Terpadu*, BDT), in 2011, currently known as integrated social welfare database (*Data Terpadu Kesejahteraan Sosial*, DTKS), resulted in a more efficient allocation of social assistance benefits in subsequent years. However, DTKS has not been systematically updated since 2015, and is not fully used by all major social assistance programs.

<sup>62</sup> Some types of infrastructure are captured at level 2 of COFOG (water supply, housing, street lighting, waste management and waste water management), but others are only captured at level 3, which Indonesia does not follow consistently (roads are captured at level 3, under Transport; and irrigation is not separately captured at all, but is a component of spending on Agriculture).

<sup>63</sup> See “*belanja per fungsi*” or spending by function, <http://www.djpk.kemenu.go.id/?p=5412>

<sup>64</sup> While it is possible to map around 70 percent of programs to the standard classifications, less than one-quarter of activity definitions can be mapped to the standard.

<sup>65</sup> Joint Committee on Reducing Maternal and Neonatal Mortality, National Academy of Sciences, 2013 Reducing Maternal and Neonatal Mortality in Indonesia, Saving Lives, Saving the Future, Chapter 2 The Data Conundrum. [http://staff.ui.ac.id/system/files/users/tjahyono.gondhowiardjo/publication/saving\\_lives\\_saving\\_future.pdf](http://staff.ui.ac.id/system/files/users/tjahyono.gondhowiardjo/publication/saving_lives_saving_future.pdf)

<sup>66</sup> The number of children who should receive vaccinations (i.e., those born in the past 12 months).



C

## Constraints to private sector participation

**W**hile progress has been made, with the establishment of a joint office for PPPs representing seven key agencies involved in PPPs,<sup>67</sup> the private sector faces four key challenges when looking to invest in infrastructure. First, the still complex legal landscape for PPPs has resulted in project delays and cancellations, acting as a disincentive to new investments. Second, the multitude of different actors and a lack of standardized processes at the project identification, planning and preparation stages have resulted in few attractive projects being put to the market. Third, the dominance of SOEs in infrastructure provision risks crowding out the private sector. Fourth, local debt and equity market limitations make it difficult for private sector players to access long-term local currency financing.<sup>68</sup>

The central government, through regulations and public expenditure, can create a more enabling environment to attract private financing to close the infrastructure gap. This PER looks in more detail at the following issues: mispricing of tariffs of core infrastructure, allocation of commercially viable projects to SOEs rather

than bringing them to the market with the risk of inefficient delivery, and an increase in fiscal risk.

In the water supply sector, the majority of local water companies (PDAM) do not have adequate capacity to invest in new infrastructure. More than half PDAM (263 out of 378) were loss-making in 2017, while accumulated losses remain persistent even among profit-making PDAM. A tariff that is below the full cost-recovery level is a major reason behind the inability of PDAM to be profitable even for those PDAM that are categorized as healthy. The recently completed debt restructuring has helped improved financial situation of those that were facing debt arrears, but this improved situation will not last. Although the MoHA has issued two regulations regarding tariff and subsidy (MoHA Regulation Nos. 71/2016 and 70/2016), implementation of these regulations has not been enforced and monitored. Meanwhile, the actual levels of non-revenue water (NRW) are far higher than standard levels (20 percent) in many PDAM and this exacerbates the issues created by the low tariff level in meeting full cost recovery.

In the housing sector, the FLPP and SSB subsidy programs crowd out the private sector and do not offer a clear exit strategy for the GoI. Both FLPP and SSB offer a subsidized interest rate of 5 percent for eligible households—far lower than private banks' interest rates, which start at around 6 to 8 percent for the first five years before converting to a floating rate of 12 to 14 percent. This makes it impossible for commercial banks to compete and crowds them out of the market for middle-income salaried workers. In addition, the low fixed interest rate obligates the GoI to continue subsidizing the loan for its entire life (up to a maximum of 20 years) and offers no clear exit strategy for disengaging.

In the roads sector, the GoI has mostly relied on SOEs to expedite its Expressway Development Program, which may not be efficient and could lead to contingent liabilities. While there has been some progress in recent years using PPP schemes for expressway development, PT Jasa Marga and other SOEs are still the dominant players. Inadequate project planning, preparation and packaging, the lack of a comprehensive, reliable funding envelope and other uncertainties may dampen interest from prospective private sector bidders. While relying on SOEs has contributed to BPJT's ability to meet the target, it may not be the most sustainable or efficient option for developing nearly 3,500 km of expressways that have not yet been awarded or assigned. This is because, in numerous cases, projects assigned to SOEs require government support to reach viability at entry or sustain viability during the operation of the concession, or both. Moreover, most SOEs capable of taking new road concessions are already highly leveraged and may not have capacity to raise more equity or debt without more explicit government subsidies,<sup>69</sup> which would increase the fiscal risks from contingent liabilities.

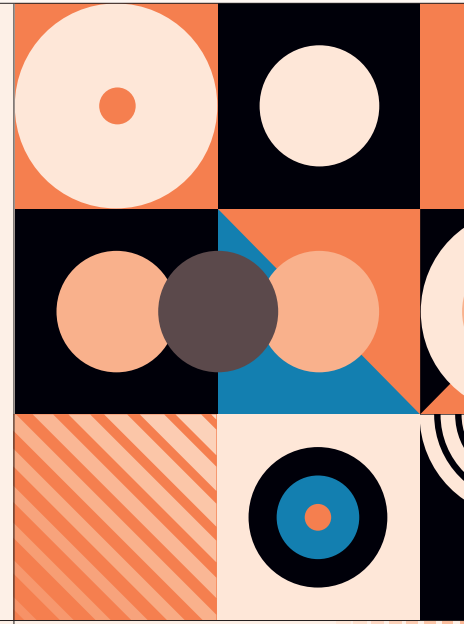
Central-local coordination challenges also affect the GoI's efforts to mobilize private sector investment. Local policies and regulations are often inconsistent with national policies. With proliferation of local regulations, coordination among 514 district governments has been challenging, with a limited coordination role for the provinces.

<sup>67</sup> This joint office is based at the Ministry of National Development Planning (Bappenas) and includes the Coordinating Ministry for Economic Affairs (CMEA), Ministry of Finance (MoF), National Procurement Agency (LKPP), Investment Coordinating Board (BKPM), Ministry of Home Affairs (MoHA) and the Indonesia Infrastructure Guarantee Fund (IGF).

<sup>68</sup> InfraSAP, as summarized in "Indonesia Economic Quarterly: Closing the gap", October 2017, World Bank. <https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-quarterly-october-2017>

<sup>69</sup> The liability-to-equity ratio for some major SOEs involved in construction of toll roads have been increasing over 2015-17: PT Jasa Marga (from 2.3 to 3.3), PT Waskita Karya (from 2.2 to 3.3) and PT Hutama Karya (from 1.3 to 4.7).

# 1.5



## How can the Government improve the quality of public spending?

- A** *Emphasize quality over quantity*
- B** *Prioritize more effective programs and interventions*
- C** *Strengthen public financial management*
- D** *Improve coordination across and between levels of government to deliver better services*
- E** *Reform the fiscal transfer system*
- F** *Collect better data and improve the management of information systems*
- G** *Attract more private sector financing for infrastructure*

**W**hile many sectors analyzed in this report could use more public resources, the priority should be on improving efficiency and effectiveness of spending to close the large human capital and infrastructure gaps that are holding Indonesia back from fulfilling its full potential. Considering the crit-

ical role of SNGs that manage more than half of public spending, more meaningful improvements are also required at the subnational level. This section focuses on recommendations that are closely related to expenditure and aimed at central ministries. The full recommendations and background can be found in the subsequent sectoral chapters.



*A*

## *Emphasize quality over quantity*

**T**here should be more focus on quality and outcomes in designing development targets in national and sector planning rather than only quantity and outputs. For example, in the roads sector, strategic plans of DG Highways do not include transport efficiency indicators such as energy used per ton/person-km traveled by road transport, reliability of travel time (congestion index), social connectivity (mean time that people travel to access to essential services such as health or educational facilities), air quality (emissions of air pollutants from road transport) and road traffic noise. They also do not include road safety indicators such as road mortality (i.e., the number of road deaths per million inhabitants), road deaths per vehicle-distance traveled, road deaths by type of vehicle (heavy, light, motorcycle, bus, coach or bicycle) and by type of road user killed (driver, passenger, pedestrian or cyclist). Road space, in terms of lane-km, should be included in annual road statistics

and in program preparation. Journey times between super nodes need to be surveyed using a standard methodology every five years.

**In the water resources management sector, relating sector objectives to focus on outcomes such as improved irrigation efficiency and agricultural productivity (“more crop per drop”).** The objective of the sector is still focused on outputs (e.g., the number of dams and irrigation networks built).

**In the housing sector, the GoI should focus not just on houses constructed, but also ensure that subsidized homes are of good construction quality and are built in well-located areas.** To do so, the Ministry of Public Works and Housing (MoPWH) should consider: (i) developing spatial suitability tools and guidelines for subsidized housing, including location screening with hazard mapping, to ensure well-located housing development and to protect beneficiaries from investing in poorly located projects that can strain their social and economic livelihoods; (ii) developing a robust

M&E system using geo-tagging technologies to track quality and take actions to address non-compliance of quality standards; and (iii) promoting the development of a nationwide developer certification and scoring system in partnership with real estate associations and MoPWH Directorate General of Construction Development (Bina Konstruksi) to disengage poorly performed developers, while incentivizing quality developers.

**The GoI needs to monitor along the results chain, so that underperformance can be identified and addressed.** Development of more robust intervention logic for interventions would identify more clearly the key intermediate steps in achieving outcomes, and establish measurements to monitor whether they are being achieved. For interventions that depend on contributions from both central and subnational governments, a more complex intervention logic will help to clarify exactly what SNGs are expected to contribute, and support monitoring of their performance.

## B

## Prioritize more effective programs & interventions

**A**cross sectors, the GoI can increase spending on priority areas by continuing to eliminate unproductive expenditures. Spending on regressive fuel and electricity subsidies still amounted to IDR 53 trillion in 2018, or 1.0 percentage point of GDP. While protecting poor and vulnerable households from higher energy prices is a laudable goal, alternative mechanisms, notably direct social assistance transfers, would be more effective and efficient compared with providing energy subsidies. Continuing with the energy subsidy reform agenda would therefore free up much-needed additional resources for increasing on other sectors.

● **Within sectors, shifting expenditures toward more efficient and effective programs would help the GoI achieve better outcomes for every rupiah of spending.**

**In the health sector, transform the health-care system to deal with the long-term care needs of older and chronic condition patients, i.e.,** shift the focus toward preventive care from curative care. An aging population and the rising prevalence of chronic diseases will put even more pressure on public budgets. Coordinated care across provider levels, as well as throughout the continuum of care, is needed to facilitate integrated clinical pathways and two-way referral systems.

**In the education sector, spend more on early childhood education and development (ECED).** International evidence (Carneiro et al. 2003; World Bank 2018) strongly suggests expanding access to quality ECED services will give the highest return of investment in education, as these are the most important years of a child's cognitive development that influences its future health and productivity.

● **The infrastructure sectors should focus more on maintenance to avoid costly rehabilitation and safety concerns later:**

**In the roads sector, closer monitoring of expenses is needed to ensure that the higher costs of road treatments and lifecycle costs are justified.** DGH needs to closely monitor the impact of more expensive treatments and concrete pavements on lifecycle costs to justify the higher investment cost. The high costs for delivery of the preservation and development programs should be further examined. Other ways to improve efficiency in these programs should also be identified by DGH to ensure that optimal value for money is derived from government spending. It is recommended that the MoF increases its active cooperation with the MoPWH in defining and approving road preservation and development unit costs across the country.

**In the water resources management sector,** it is recommended to: (i) create incentives for SNGs to increase budget for O&M; (ii) apply asset management/lifecycle cost planning; (iii) introduce SOE-Public-Partnership (SPP) to identify revenue mechanisms to provide alternative long-term financing mechanisms; (iv) build capacity of technical staff in river basin organizations and in SNGs for O&M; and (v) introduce clear service agreements describing the roles, responsibilities, rights and obligations of the service provider and the recipient of the service.

**In the water supply and sanitation sector,** the central government also needs to ensure that its water supply investment is aligned with local governments' needs and investment plans, and that there will be adequate budget and institutional arrangements for O&M allocated in local governments' budget documents prior to implement the construction. In situations where the local government's poor financial health makes this

impossible, the central government should consider whether to fund the whole project or not based on its overall economic value. However, if the local government can afford to pay its share but chooses not to, central government should not proceed with a partial upgrade to the system unless there are sufficient benefits from doing just this element alone.

● **Move funding from inefficient to more efficient, better targeted programs:**

**In the social assistance sector:** Increase spending on targeted social assistance spending while reducing remaining spending on untargeted subsidies. The GoI should, for example, continue to phase out the Rasta rice subsidy in favor of Saembako, PKH and other better-targeted social assistance programs.

**In the housing sector,** the GoI should shift public funding toward more efficient, progressive, and better-targeted subsidies, and existing subsidy programs can be further optimized to ensure per-unit cost efficiency and equity. Phasing out SSB is a good start, and the GoI should further consider shifting funding for housing subsidies toward more efficient and effective programs, such as BP2BT. BP2BT expands access to housing finance for a greater range of households, with the potential to include those with informal income, while increasing the variety of qualifying properties, such as landed, multi-storey, low-rise and self-built houses.

**Investment in strengthening M&E systems is critical to support the evidence-based evaluation of which programs are performing and which are not.** Many of the interventions mentioned above involve subnational delivery. One of the most important functions played by central line ministries is the robust monitoring of interventions in their sector, and periodic evaluation of whether key interventions are achieving their goals. Two practices characterize the stewardship role of a line ministry in a well-performing performance-oriented budgeting systems: (i) strong *ex-ante* appraisal of proposed interventions to establish a business case for allocating resources; (ii) *ex-post* evaluation of spending programs conducted on a rolling basis to assess whether programs achieved their desired objectives, fed back into budget performance; and (iii) use of spending reviews and performance budgeting instruments to review program performance and ensure spending is focused in areas where results are being achieved.<sup>70</sup> Ministries should be accountable for their contribution to the effectiveness of all three functions.



# Strengthen public financial management

**T**here are priority areas for PFM improvements that could raise the quality and effectiveness of government spending. These proposed areas are based on the findings and dialogue with central agencies of the MoF and Bappenas of where changes may be most needed and could be most effective.

**1**

## Improve coordination between the MoF & Bappenas on budget planning.

Harmonize planning architecture, budget architecture, performance management framework, and organization structure by improving business processes and using common program coding and consistent planning and budget classification structure to fully implement Performance-based Budgeting.

Roll out the integrated planning, budgeting, execution, accounting and reporting system (SAKTI)- to all spending units (Satker) of line ministries.

Achieve seamless data exchange and interoperability between Krisna and SAKTI (erstwhile RKA-KL) to reduce gap between plan and budget allocations; between e-Money and SMART KL systems to align outputs with planned outcomes; and between OM-SPAN and Krisna for reporting progress to Planning.

**2**

## Strengthen implementation of money follows programs.

Expand budget tagging of expenditure and outputs for measuring results achieved under national priority and thematic programs.

Introduce program-based budget classification structure toward money follows programs and pilot program-based budgeting in selected ministries, including program restructuring initiative within the MoF as a pilot ministry in FY2020.

Fully implement performance-based budgeting and move from money follows functions to money follows programs by harmonizing organization structure, budget structuring, policy planning structure, and performance management structure.

Introduce a new sub-economic classification and program code for COVID-19 expenditure to track allocation, expenditure and outputs of the Government’s COVID-19 response, considering FY2020 Budget has been largely reallocated for the COVID-19 response through Government Regulation in Lieu of Law (*Perppu*) No. 1 of 2020.

**3**

## Strengthen medium-term perspective in planning and budgeting.

Strengthen medium-term perspective in planning and budgeting (Medium-Term Expenditure Framework, MTEF) by issuing indicative budget ceilings for two years following the budget year to each line ministry (in addition to the budget year) at the time of the first budget circular (indicative ceiling circular), jointly issued by Bappenas and the MoF. Indicative (hard) ceilings for outer two years will allow line ministries to do medium-term planning based on resource constraints.

The MoF to change the requirement for the line ministry to submit its estimates of MTEF only at a strategic level (program and activity level) rather than MTEFs by each individual spending unit.

Clear visibility of fiscal constraints should lead to more competition for resources, challenges to proposals and strategic allocation of resources.

**4**

## Improve the “intervention logic” concepts in program/ performance design.

Strengthen managerial linkages between policy objectives, programs, activities and outputs by providing capacity building on the overall implementation of intervention logic process to all central agencies and line ministries.

The MoF, Bappenas, and the Planning and Finance Bureaus under all line ministries to strengthen the quality control on the intervention logic that has been designed by the line ministries.

Define intervention logic at two levels: (i) a complex results chain at the whole-of-government level, which includes the contribution by both levels of governments to the achievement of intermediate outcomes; and (ii) a simpler results chain in which intermediate outcomes are more proximate to a ministry itself, and for which it is reasonable to hold its managers accountable.

5

**Continue to move to smaller and fewer in-year budget revisions, both for the mid-year budget revision (APBN-P) and self-blocking budget cut.**

Continue concerted efforts to avoid large in-year budget revisions through strengthened capacity, transparency and realism, and hence much improved accuracy, in budget revenue estimations. Where significant mid-year budget revisions are unavoidable, the MoF should ensure that delegating detailed decisions to line ministries is accompanied by appropriate oversight and the challenging of their reallocation decisions, in particular to secure the allocations for spending on national priority programs.

6

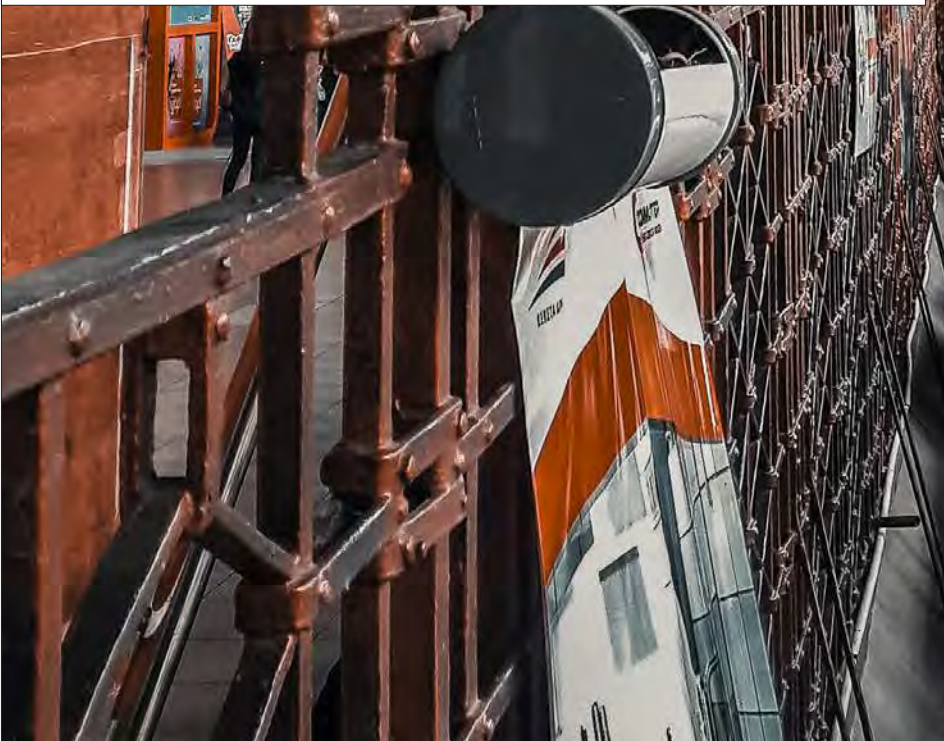
**Strengthen the “performance management environment” that will encourage and support higher quality spending by the public sector.**

Support central government ministries and agencies to strengthen the “performance management environment and culture” within their organizations.

7

**Enable a performance budgeting system that is adapted to the requirements of a significantly decentralized fiscal process.**

Enable more effective application of the performance budgeting system in a decentralized fiscal system by: (i) providing clarity about what each level of government is responsible for; (ii) coordination around complementary investments; (iii) aligning the geographic allocation of funding with need and priorities; (iv) more policy-oriented design of conditional transfers clearly focused on a policy outcome, with an attendant intervention logic; and (v) a common Chart of Accounts to support stronger evaluation of spending and performance.



*There is also scope to improve the efficiency of public investment with reforms aimed to improve public investment management (Indonesia PIMA 2019).*

**BOX 1.9. How to improve the efficiency of public investment management?**

**P**ublic investment management (PIM) practices in Indonesia, covering a significant share of public expenditure, are broadly solid, but there is scope to improve their performance to obtain more efficient spending. The 2019 Public Investment Management Assessment report shows that Indonesia's PIM performance is mostly in the middle range both for institutional strength and effectiveness. Institutional strengths lie mostly in the planning and implementation phases. These reflect the strong fiscal framework and rules that provide overall targets for fiscal policy, the use of alternative financing means for infrastructure, such as public-private partnerships (PPPs), the availability of funding within a budget year, and the strong reporting of state assets.

Many of the shortcomings in Indonesia's infrastructure governance and PIM stem from the absence of focus on specific investment projects when planning, budgeting, and monitoring public investment. This lack of focus means it is difficult to determine if the

best projects are selected, and whether they are properly managed and implemented. As a result, the weakest practices can be found in project appraisal and project implementation (the latter both in institutional design and effectiveness). In particular, the lack of project-level information in the medium-term development plans and of rigorous project appraisal limit their effectiveness in guiding project selection, while the virtual absence of capital project management (including project audits) and portfolio management oversight all hamper the delivery of projects on time, on budget and according to specifications. Multiyear budgeting is another area with shortcomings, mostly due to absence of information on the medium-term spending envelopes, ongoing and new projects, and the total cost of projects.

On the basis of these, the report recommends six high priority actions to enhance the efficiency of public investment management: (i) enhance the focus on capital projects and their visibility; (ii) identify major capital proj-

ects in the medium-term development plans; (iii) strengthen multiyear budgeting framework for capital spending; (iv) improve the quality of project preparation and selection; (v) modernize capital portfolio oversight and monitoring; and (vi) strengthen capital project management.

In addition, Indonesia could strengthen the climate and disaster resilience of infrastructure by taking priority actions to improve infrastructure governance, e.g., conduct detailed assessments of natural disasters and climate change on key infrastructure to inform public investment planning and funding needs; include climate and disaster risks in project appraisal; expand the budget-tagging framework to include disaster-related expenditure; establish framework agreements in advance for supply of goods and services commonly required in disaster response situations so that call-in orders can be rapidly placed if and when a disaster happens; and enhance the existing MoF asset database (SIMAN) with improved data collection and reporting frameworks, tools, and methodologies.

Source: Indonesia Public Investment Management Assessment report (2019), IMF and World Bank.

**D**  
*Improve coordination across & between levels of government to deliver better services*

**I**mprove coordination among central agencies, particularly in implementing key national priority programs, through better program integration and convergence, and data sharing. For example, for social assistance programs, better integration and coordination among social assistance program will provide adequate benefit and improve the effectiveness of social assistance programs (PKH, Rastra/Sembako, PBI-JKN and PIP). Better data sharing and use of common data for policymaking is also important to improve service delivery and increase

efficiency. For example, JKN claims data, which is collected by BPJS Healthcare, can help monitor adherence to guidelines and protocol-based care, helping to improve the quality of service delivery (e.g., detecting adverse events or inappropriate or low-value care). Claims data could also help to identify high cost and frequency items, which could be used to inform policies tackling the open-ended payments to hospitals by running simulation and budget impact analyses based on current utilization patterns.

**Strengthen central-local coordination in policymaking, investment deci-**

**sions, and program implementation.** Optimizing the subnational spending requires considerable coordination around: (i) complementary investments. For example, the central government's investment in water supply infrastructure should be followed by local government investment in local water distribution networks to ensure investment improve service delivery (see Water Supply and Sanitation chapter); and (ii) clarify the expected role of subnational governments in implementing national programs, for example:

1

In the health sector, the MoH proposed adding a performance element to determine how DAK resources are allocated to districts, presenting a unique opportunity to better coordinate supply-side investments and ensure even capacity to deliver health services. Facility accreditation could provide a useful framework/tool for district governments to better coordinate supply-side planning and resource allocation, and to incentivize health facilities to achieve accreditation status by making DAK transfers more needs-based and/or performance-oriented (see Health chapter).

2

In the social assistance sector, the central government should improve coordination with SNGs and encourage them to improve the implementation of social assistance (SA) programs, as they have an important role to ensure the effectiveness of these programs. It is therefore important to: (i) encourage SNGs to take strong ownership of core SA programs and are at least partially accountable for program implementation performance; (ii) formulate the roles and responsibilities of SNGs in terms of SA program implementation by a government regulation rather than a MoSA regulation; and (iii) use the newly proposed Social DAK starting in 2020 to supplement SNGs' own resources devoted for national priority programs, particularly if it is linked with performance or results (see Social Assistance chapter). Furthermore, while the core social assistance programs are centrally-funded and managed, SNGs have an important role to ensure the effectiveness of these programs. For example, PKH is not going to function well if its beneficiaries cannot access local health, nutrition, and education services, or if these service providers do not cooperate with respect to compliance verification.







€

# Reform the fiscal transfer system

**F**iscal transfers to SNGs should be allocated to close fiscal gaps and designed to incentivize performance. SNGs are important players delivering services in the priority areas discussed above. The central government uses limited mechanisms to influence or incentivize the generation of outputs and outcomes from the use of resources at the subnational level. Moreover, some SNGs have less capacity to deliver an equivalent level of services. The distribution of the main transfers, such as unconditional General Allocation Grant (*Dana Alokasi Umum*, DAU) and the Village Fund (*Dana Desa*) begin with an assumed ‘average fiscal needs’ that is equal across districts and villages regardless of the population size and proxy of development needs of each region, rather than an ‘adjusted per capita’ distribution that takes these factors into account. As a result, governments of the more populated districts have access to eight times less revenue per capita than governments in the least populated districts. This constrains the availability of resources for infrastructure and other development needs in larger urban areas.

The GoI should seize the opportunity of the ongoing revision of Law No. 33/2004 for a fundamental review of its intergovernmental financing system to improve equity and strengthen results-orientation. The GoI could in particular consider:

1

## Improving the vertical balance of the fiscal transfer system

**Better align districts’ revenue autonomy with their spending responsibility, in the medium term.** This would help address the deep-seated vertical imbalance in Indonesia’s intergovernmental financing systems and strengthen the accountability of local leaders to their citizens. An important first step to this end could be to incentivize districts to exert more tax effort for collecting property and sales taxes (such as Hotel and Restaurant Taxes). The simplest way of doing so would be to remove own-source revenues from the fiscal capacity component of the DAU fiscal-gaps formula.<sup>71</sup>

2

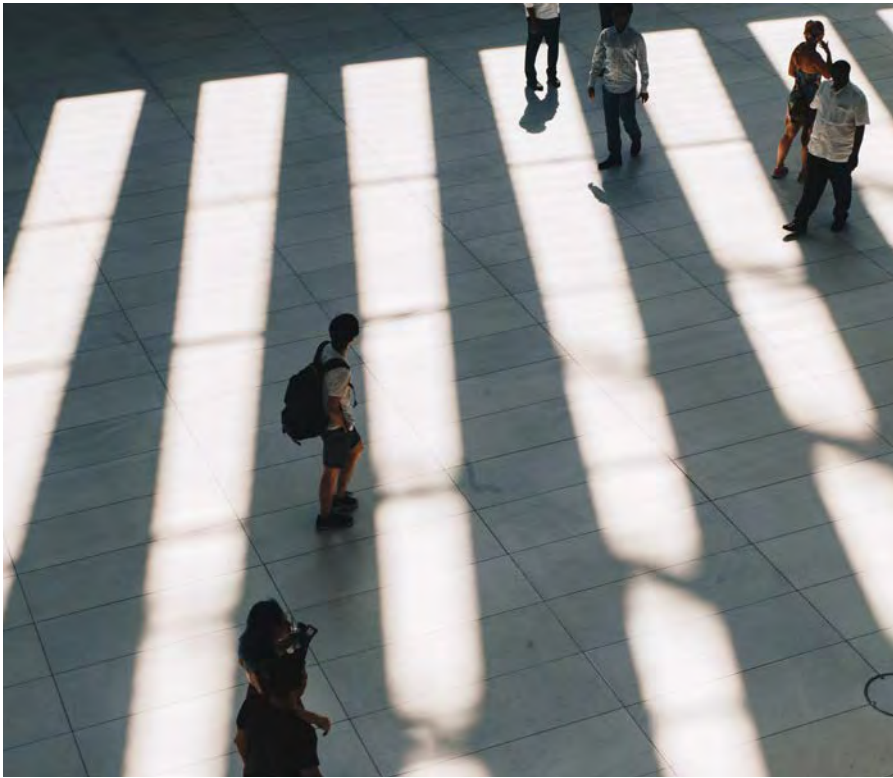
## Improving the vertical balance of the fiscal transfer system

**Move the design of the fiscal equalization formula toward a per-client basis to ensure sufficient financing for a minimal standard of service delivery across the country.** One promising approach could be to estimate fiscal needs based on proxies of sectoral service delivery needs (for example, number of school-age children), such as in South Africa.

**Develop a (transition) strategy that holds the net losers of this change—especially large and thinly populated districts—harmless or limits their losses.** This will be critical for making the transition to a new fiscal formula politically viable.

**Redesign the DAK *Afirmasi* as an instrument for bringing infrastructure up to a minimal standard in districts with a low capital stock.** Many of the losers of the DAU reform also have large infrastructure backlogs. Making up the difference with earmarked capital transfers could be one promis-

<sup>71</sup> Currently, increases in own-source revenues result in a corresponding reduction of DAU transfers (because of the reduced fiscal gap), removing any incentive to exert effort to raise revenues. A good practice in fiscal transfers would use the value of revenue potential rather than actual revenues in the fiscal capacity formula, to address this perverse incentive. To create even more incentive, own-source revenues could be discounted in calculating DAU entitlement, which would create the maximum possible incentive for increasing collection. Each additional rupiah collected would be a net increase in total revenues.



ing way of holding net losers of the DAU reform harmless for their losses, while at the same time strengthening their accountability for bringing their infrastructure stock within a defined percentage of national averages.

**Further increase the effectiveness of earmarked transfers to enhance the GoI’s ability to direct funding to national priority programs.**

Specifically, the GoI could transform the DAK *Penugasan* into a “DAK for National Priority Programs”. This DAK would focus on a small number of the GoI’s top strategic priorities. As many of the most pressing challenges, such as stunting, are multi-sector, it could “follow programs, not follow functions,”<sup>72</sup> and be allocated for multiple years.<sup>73</sup>

**Develop an instrument—potentially building on the *Hibab*—to fill the “missing middle” of mid-sized urban infrastructure.** Building on its success as a performance-oriented transfer, the GoI could use the *Hibab* to structure a

suite of national urban grant programs that incentivize crowding in of local resources. Financed through the Regional Infrastructure Development Fund (RIDF), these programs could target: (i) slum upgrading and affordable housing; (ii) urban solid waste management; (iii) urban flood risk management; (iv) urban transport; and (v) urban water supply and sanitation. The *Hibab* is well-suited for this purpose because (a) it encourages SNG ownership of the assets built and healthy competition among SNGs for funding; (b) it can flexibly be used for projects of all sizes; (c) it uses a strong joint line-MDA and MoF oversight mechanism; and (d) using grants as the principal source of long-term finance for basic infrastructure in small and poor municipalities (and as additional finance for growing municipalities) reflects good international practice.

**Better integrate the DAK and other conditional transfers with the local budget process.** Annual DAK policies are currently unpredictable,<sup>74</sup> un-

dermining good planning and budgeting of DAK at the local level. The central government could improve this by committing DAK to national priority programs over the medium term, instead of on an annual basis only. Furthermore, it could involve Parliament (Dewan Perwakilan Rakyat, DPR) in prioritizing DAK types and in agreeing on early ceilings for key DAK.

**Improve the proposal-based allocation mechanism for the DAK by making allocations more predictable and by better targeting districts with the greatest needs.** Predictability could be enhanced by introducing indicative (per-district and per-sector) multi-annual funding ceilings. Such funding ceilings would also help prevent districts from spending extra time on proposals that stand little chance of being funded. A more transparent and consistent approach to calculating infrastructure gaps across different districts would support allocation of DAK to the areas with the largest gaps.

3

## Efficiency

**Abolish the basic allocation in the DAU to reduce perverse overstaffing incentives.** Since the basic allocation ameliorates the inequity of the ‘per region’ approach to the formula, this would need to be done in tandem with reforms to the whole formula.

**Move toward an asymmetric design of the fiscal transfer system in a way that grants more autonomy to better performing districts.** For example, well-performing (in terms of spending efficiency) district governments could be financed largely through unconditional transfers (the DAU), whereas poor performers could be more tightly centrally managed through conditional transfers.

**Carefully experiment with performance-oriented transfers with the goal of strengthening top-down accountability for results.**

The GoI should carefully pilot and evaluate performance-oriented transfers, before scaling them up.

<sup>72</sup> In 2016, President Joko Widodo announced a new approach to linking the plan to the budget under the catch phrase “money follow program, not money follow function” which mandated a stronger link between resource allocation and government priorities, rather than resources being allocated to the administrative structures of government (functions).

<sup>73</sup> This DAK could be implemented in three ways: (i) by assigning DAK to support specific national priorities in the annual work plan (RKP), (ii) by specifying the policy objectives of the DAK in the line ministry technical guidelines, and (iii) by requiring local governments to develop plans to implement the national priorities and demonstrate the link between their planned inputs and the objective of the national policy. This would build on the proposal-based approach initiated in 2016.

<sup>74</sup> Different DAKs appear and disappear in the national budget from one year to the next and the technical guidelines (juknis) change each year.

F

## *Collect better data & improve the management of information systems*

**I**mproved data are critical to improving the quality of spending in Indonesia. The GoI needs data to identify which programs/interventions are working and to undertake evidence-based policymaking. To improve the collection and integration of data on inputs, outcomes and outcomes, the GoI could undertake the following recommendations:

**At the central government level, improving the definition of programs and activities (sub-programs) in the budget classification and Chart of Accounts would help collect more relevant information that can be used to drive performance.** The GoI could ensure that budget classifications are better aligned with an ‘intervention logic’ and priorities expressed in the national plan to make sure that it collects relevant spending information, such as on infrastructure. To do this, outputs need to be better defined, to make it easier to link them to inputs and outcomes and a results chain. Moreover, capturing information on large infrastructure projects through a project ID in planning and budget management systems (e.g., in SPAN) would make it easier to track their allocation, expenditure and cost and time over runs. One option that could be explored is to require ministries to identify all projects over a certain size as a standalone output in the budget. In addition, linking SPAN and the procurement would yield useful data to support expenditure

analysis, for example, the time taken in procurement processes (to enhance efficiency of spending) or whether the same vendor gets selected by single-source or other non-competitive methods (which would allow the GoI to monitor corruption).

**At the subnational level, recent reforms to improve the quality of spending data are in the right direction but implementing them is a huge task.** The MoF is leading efforts to implement a standard budget classification and Chart of Accounts (*Bagan Akun Standar*, BAS) through Government Regulation No. 12/2019 (issued in January 2019), which requires SNGs to budget and report using a common classification system and specifies that a separate government regulation will determine the classification system. However, the task of rolling out the new classification system in 500+ SNGs will be a huge one, and has taken 8-10 years in similarly large, decentralized countries. To ensure this reform is managed properly across all 500+ SNGs, adequate resources should be allocated to manage the process.

**Data on access, outputs and beneficiaries should be integrated into common platforms and more attention paid to their maintenance.** Where common databases already exist, such as the integrated social welfare database (DTKS) and Dapodik in education, the GoI needs to ensure that these are regularly updated and fully utilized in the respective sectors. Meanwhile, other sectors

need to take the first step in establishing a common database. For example, an integrated “Housing and Real Estate Information System (HREIS)” containing data on key metrics (e.g., housing backlog, substandard housing, and affordability) by geography and consumer income could help policymakers identify gaps between housing supply and demand. In health, a common dashboard to benchmark performance among districts and facilities could be established. Moreover, JKN claims data would be valuable in helping to improve the quality of service delivery and in identifying cost savings.

**Minimum standards in service delivery should focus on measuring gaps in inputs.** Allocation of transfers such as DAK could be more efficient if they are targeted to jurisdictions with the greatest need, but the GoI needs to impose a more consistent way of measuring need across SNGs. Minimum standards were intended to serve that function, but the latest refinement to minimum standards has focused more on measuring the services received by citizens rather than the gaps in inputs, such as schools, health centers, water supply systems and roads. In infrastructure, for example, the standards need to provide a not just a benchmark for the quality of individual infrastructure assets, but a benchmark for infrastructure quantity as well.

**The GoI is making efforts to improve the quality and coverage of civil registra-**



tion data, which is critical for measuring outputs and outcomes accurately. Birth registration and national IDs have important implications for removing barriers to the poor accessing health and education services. Increasing access to these data by all ministries and SNGs is therefore critical. Moreover, a more targeted combination of incentives and support is needed to stimulate districts that are lagging, reward those that are performing well, and foster innovation and dissemination of ideas on how to improve registration systems. More transparency of discrepancies between different data sources could help stimulate improvement.

**Overall, the GoI has already laid a solid foundation to improve the quality of data through the One Data (Satu Data) initiative and the recent Presidential Regulation on e-Government.** Many of the weaknesses in routine administrative systems result from fragmented management of data collection, lack of common standards, and an unwillingness by system managers to share information, resulting in duplicate systems being established to collect the same data twice. The Satu Data or One Data

initiative,<sup>75</sup> spearheaded by Bappenas and the President's office, is a promising start in addressing these issues. Implementing these initiatives requires major behavioral change, ensuring that program administrators' needs are addressed, and helping them to see how more centralized data systems can produce better quality and more meaningful data. However, careful planning and management will be needed to ensure that centralization does not inadvertently lead to deterioration of data. An expanded One Data initiative could focus on: (i) integration of data collection, quality assurance and management across ministries; (ii) establishment of data quality standards and standard data definitions (including but not limited to, for example, the adoption of standard codes for districts, subdistricts and villages); and (iii) facilitating inter-agency agreement on data exchange. In addition, BPKP, the internal audit agency, can play a greater role in verifying data quality and monitoring.

**To support the implementation of data improvement with integrity, more attention is needed on the enabling environment for ministries to discharge**

**their data stewardship functions: (i) the capability and financing of ministry data centers (typically housed in Secretary General's Office); (ii) cyber security and information privacy policies; (iii) incentives for civil servants to specialize in data and technology; and (iv) improving the quality of government IT procurement (for example, modelling the UK Government Digital Service function in the Cabinet office, which provides oversight of the quality of IT development for the Government of the United Kingdom).**

**The demand for better data is unlikely to increase unless the data are used, especially in the case of subnational data.** Improving access to data at the central and subnational level to all stakeholders across all levels of government and the public is critical in generating improvements. The budget process could be used as an entry point to increase the use of data, for example, requiring ministries to substantiate requests for funding increases or to introduce new programs with business cases based on evidence. Periodic spending reviews of major spending programs should also be undertaken.

G

## *Attract more private sector financing for infrastructure*

**The following recommendations will support Indonesia in better leveraging private finance for infrastructure development.** A recently completed World Bank Infrastructure Sector Assessment Program (InfraSAP)<sup>76</sup> systematically assessed how infrastructure is planned, procured, delivered, funded, financed and governed, at the national, sector and subnational levels, to identify constraints to commercial and private investment in Indonesia. The InfraSAP covers four cross-cutting themes: (i) project planning, preparation and procurement; (ii) the role of SOEs; (iii) the legal and regulatory framework; and (iv) financing, as well as four key sectors: (i) energy, (ii) transport (toll roads, ports, airports and urban transit), (iii) water and sanitation, and (iv) urban (municipal finance and housing).

1

### **Strengthen the regulatory framework**

Apply a clear decision-making framework to prioritize private financing and conserve scarce public resources.

Subject all business-to-business (B2B) transactions to clear and consistent procedures designed to ensure value and delivery of the GoI's infrastructure agenda and develop targeted acceleration plans in key sectors to maximize the impact of B2Bs.

Revise regulations and institutional arrangements governing PPP project selection, preparation and government support processes.

Facilitate the mobilization of private financing by SNGs.

2

### **Reform SOE incentives**

Reform SOE incentives and performance indicators to promote efficiency gains, further harden SOE budget constraints and ensure the open, competitive tendering of all new, commercially viable projects.

Encourage and better enable SOEs to pursue asset recycling, but only within an overarching framework that maximizes value and ensures fiscally prudent decision-making.

3

### **Enhance pricing**

Tariffs need to be increased on aggregate, with tariff levels that reflect operating cost recovery, new financing objectives, and what end-users can afford to pay.

4

### **Deepen capital markets**

Introduce new capital market solutions and products, coupled with enabling regulatory reforms, to maximize the mobilization of capital from both domestic and foreign investors.

<sup>76</sup> "Indonesia Sector Infrastructure Assessment Program", World Bank, June 2018. Forthcoming

## In addition, there are recommendations specific to each sector to attract private sector financing

**While increasing the efficiency and effectiveness of spending is key, the GoI also needs to increase its funding for national roads and expressways to meet growth in demand and government targets.** With the estimated annual public investment need at IDR 47.5 to 51 trillion, this would require about IDR 2 to 6 trillion more of budgetary resources than the central government currently spends. However, when insufficient fiscal resources are available, it is recommended that the GoI prioritizes asset preservation over new investment. In terms of road development, expressways should be prioritized to address the capacity backlog on main corridors.

**In the roads sector, measures should be taken to leverage private sector investment for expressway development.** More space for private sector participation should be created by BPJT in coordination with the MoF through the revision of the Standard Concession Agreements to conform with good industry practice and the reform of SOEs' incentives to ensure commercially prudent behavior in bidding for projects. Moreover, BPJT should publish an annual monitoring report on the operational performance, asset condition and development status of the expressway network.

**In the housing sector, the GoI could also support the development of a public-private partnership (PPP) framework for affordable housing to support access to affordable and well-located land.** One of the main drivers of poorly-located subsidized housing is the high cost of land in well-located urban areas. PPPs can leverage

underutilized urban land to create affordable housing. A systematic process of identifying affordable land in well-located areas that may belong to SOEs, SNGs, and/or waqf<sup>77</sup> is a good starting point for PPP pilot projects. Technical assistance should be provided by central to SNGs to develop feasible PPP models for mixed-income, affordable-housing projects, while the MoF-led PPP unit and/or a MoPWH-led grant system could provide funding to SNGs for project implementation.

**Integrating affordable housing as a part of the GoI's current infrastructure strategic planning and land development by crowding in affordable housing in Transit-Oriented Development (TOD) projects is another option for producing well-located housing.** Affordable housing can be required as part of TOD projects in return for incentives, such as lower land and tax costs, reduced parking, expedited permitting, and/or density bonuses. Without affordable housing as a component of infrastructure development, low-income housing would certainly be segregated and the opportunity for shared prosperity and inclusivity would not be realized.

**In the water supply and sanitation sector, achieving development targets will also require the participation of the private sector and the utilization of commercial financing in the water supply and sanitation sector.** Local governments should support their PDAM to access different financing sources for (especially medium- and large-scale) capital investment through improving their performance and creditworthiness. Ministry of Home Affairs' regulations and guidelines on full cost-recovery tariffs should be enforced to ensure that there is adequate revenue for O&M, in addition to small capital investments. Meanwhile, central government investment should be utilized as incentives for local governments and PDAM to continue improving their performance, and to leverage non-public financing and public funding should be targeted toward provision of services for the poor through targeted subsidies such as the house connections development.

**Improved coordination and fund channeling mechanism between central-level ministries and different government levels is instrumental in ensuring that expenditure leads to increased levels of service.** Achieving the GoI's targets for the water supply and sanitation sector requires a coordinated approach between central and local governments. Local governments should be enabled to increase their own investment and support their PDAM to be able to obtain enough revenue to cover

their O&M and to invest in improved and expanded services. Increase awareness and establishment of incentives to encourage private sector participation and commercial financing will be required to fill the financing gap. This will require clarity on the scope and confirmation of the legal framework for private sector involvement in the water supply sector.

**Reforming the regulatory environment for PDAM may enhance their financial sustainability.** Government Regulation No. 54/2017 on Local Government-Owned Enterprises (BUMD) has provided clarity on profit-generating function of BUMD. However, it does not specifically address underlying issues causing poor piped-water performance in urban areas such as the financial difficulties of PDAM and therefore their inability to invest. The regulations (or lack thereof) preventing PDAM from achieving full cost recovery and from reinvesting profits should be reformed. For example, regulation on dividend payment obligations needs to be issued soon in order to provide further clarity and enforcement in support of Law No. 23/2014, which allows PDAM to retain their profits for reinvestment toward new infrastructure with the approval from the wali/bupati. That said, the tariff structure for PDAM should still take consideration of affordability to avoid further reducing incentives to use piped water. The MoHA's regulations on tariff and subsidy (MoHA Regulations No. 71/2016 and 70/2016) needs to be enforced and implementation needs to be monitored and evaluated. To implement this, PDAM should start measuring their non-revenue water (NRW) rate (i.e., produced water that is lost before it reaches the customer through leaks or metering inaccuracies) as the basis to calculate the real full cost-recovery tariff level, including the subsidy that might be required to ensure affordability. Given that the average NRW rate of PDAM is far in excess of the 20 percent standard stipulated in the tariff guideline, the MoHA and the MoPWH should modify the current requirement, otherwise this will cause local governments to set tariffs that are below actual cost recovery.

**In the water resources sector, introduce SOE-Public-Partnership (SPP) to identify revenue mechanisms to provide alternative long-term financing mechanisms.** While they need to cope with a higher need for O&M in the future, River-Basin Organizations (RBOs) need to generate their own revenue from users. It is recommended for RBOs to consider possibility of converting RBOs into revenue receiving entities such as BLU and the possibility of introducing SPP based on PJT management contracts of irrigation services in other basins.

<sup>77</sup> Waqf is a charitable endowment made under Islamic law.



<b>TABLE A 1-1.</b>	<b>Central Government Fiscal Table, 2011-19 (percent of GDP)</b>								
	2011	2012	2013	2014	2015	2016	2017	2018	2019 Preliminary
<b>Revenue</b>	15.5	15.5	15.1	14.7	13.1	12.5	12.3	13.1	12.4
<b>Tax Revenue</b>	11.2	11.4	11.3	10.9	10.8	10.4	9.9	10.2	9.8
Income Tax	5.5	5.4	5.3	5.2	5.2	5.4	4.8	5.1	4.9
Sales Tax (VAT)	3.5	3.9	4.0	3.9	3.7	3.3	3.5	3.6	3.4
Excises	1.0	1.1	1.1	1.1	1.3	1.2	1.1	1.1	1.1
International Trade Tax	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3
Other taxes	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
<b>Non-Tax Receipts</b>	4.2	4.1	3.7	3.8	2.2	2.1	2.3	2.8	2.6
<b>Grants</b>	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0
<b>Total Expenditure</b>	16.5	17.3	17.3	16.8	15.7	15.0	14.8	14.9	14.6
<b>Primary Expenditure</b>	15.3	16.1	16.1	15.6	14.3	13.6	13.2	13.2	12.9
<b>CG Expenditure</b>	10.1	10.6	10.7	10.1	8.9	7.8	7.7	8.1	7.7
Personnel	2.2	2.3	2.3	2.3	2.4	2.5	2.3	2.3	2.4
Material	1.6	1.6	1.8	1.7	2.0	2.1	2.1	2.3	2.1
Capital	1.5	1.7	1.9	1.4	1.9	1.4	1.5	1.2	1.1
Subsidy	3.8	4.0	3.7	3.7	1.6	1.4	1.2	1.5	1.3
· Energy	3.3	3.6	3.2	3.2	1.0	0.9	0.7	1.0	0.9
· Non-energy	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.3
Grant expenditure	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Social assistance	0.9	0.9	1.0	0.9	0.8	0.4	0.4	0.6	0.7
Others	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1
<b>Transfers to Sub-national</b>	5.3	5.6	5.4	5.4	5.4	5.7	5.5	5.1	5.1
<b>Interest</b>	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.7
<b>Primary Fiscal Balance</b>	0.1	(0.6)	(1.0)	(0.9)	(1.2)	(1.0)	(0.9)	(0.1)	(0.5)
<b>Overall Fiscal Balance</b>	(1.1)	(1.8)	(2.2)	(2.1)	(2.6)	(2.5)	(2.5)	(1.8)	(2.2)
<b>Central Government Debt</b>	23.1	23.0	24.9	24.7	27.4	28.3	29.4	29.8	30.2

Source: Ministry of Finance, staff calculations

<b>TABLE A 1-2.</b>	<b>Central, Province and District Government budget realization, 2011-18 (percent of GDP)</b>								
	2011	2012	2013	2014	2015	2016	2017	2018	
<b>Revenues</b>	16.9	17.1	16.7	16.7	15.0	14.4	14.3	14.9	
Central Government	15.5	15.5	15.1	14.7	13.1	12.5	12.3	13.1	
Province	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	
District	0.5	0.5	0.6	0.8	0.8	0.8	0.9	0.8	
<b>Expenditure</b>	17.5	18.4	19.3	18.4	17.7	16.9	16.7	16.8	
Central Government	11.3	11.7	11.9	11.4	10.3	9.3	9.3	9.8	
Province	1.3	1.6	1.7	1.5	1.6	1.7	1.8	1.8	
District	4.9	5.1	5.7	5.5	5.8	6.0	5.5	5.2	

Source: Ministry of Finance, COFIS, staff estimations



**TABLE A 1-3. Composition of economic expenditure by level of government, 2011-18 (percent of GDP)**

<b>General Government</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Personnel Expenditures	5.2	5.3	5.4	5.3	5.3	5.3	4.9	4.8
Material Expenditures	2.9	3.0	3.3	3.2	3.7	3.8	4.0	4.1
Capital Expenditures	2.9	3.2	3.9	3.1	3.7	3.1	3.1	2.6
Subsidies	3.8	4.0	3.7	3.7	1.6	1.4	1.2	1.5
Grants	0.2	0.5	0.6	0.5	0.6	0.6	0.5	0.5
Social Assistance (only at central level)	0.9	0.9	1.0	0.9	0.8	0.4	0.4	0.6
Others (include financial/social assistance in districts)	0.4	0.3	0.3	0.4	0.6	0.8	0.9	0.9
Interest Payments	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7
<b>Total</b>	<b>17.5</b>	<b>18.4</b>	<b>19.3</b>	<b>18.4</b>	<b>17.7</b>	<b>16.9</b>	<b>16.7</b>	<b>16.8</b>
<b>Central Government</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Personnel Expenditures	2.2	2.3	2.3	2.3	2.4	2.5	2.3	2.3
Material Expenditures	1.6	1.6	1.8	1.7	2.0	2.1	2.1	2.3
Capital Expenditures	1.5	1.7	1.9	1.4	1.9	1.4	1.5	1.2
Subsidies	3.8	4.0	3.7	3.7	1.6	1.4	1.2	1.5
Grants	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Social Assistance	0.9	0.9	1.0	0.9	0.8	0.4	0.4	0.6
Others	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Interest Payments	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7
<b>Total (excl. transfers to SNGs)</b>	<b>11.3</b>	<b>11.7</b>	<b>11.9</b>	<b>11.4</b>	<b>10.3</b>	<b>9.3</b>	<b>9.3</b>	<b>9.8</b>
Transfers to SNGs	5.3	5.6	5.4	5.4	5.4	5.7	5.5	5.1
<b>Total (incl. transfers to SNGs)</b>	<b>16.5</b>	<b>17.3</b>	<b>17.3</b>	<b>16.8</b>	<b>15.7</b>	<b>15.0</b>	<b>14.8</b>	<b>14.9</b>
<b>Province-level Government</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Personnel Expenditures	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6
Material Expenditures	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5
Capital Expenditures	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3
Grants	0.1	0.4	0.4	0.3	0.4	0.5	0.4	0.4
Others	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
<b>Total (excl. transfers)</b>	<b>1.3</b>	<b>1.6</b>	<b>1.7</b>	<b>1.5</b>	<b>1.6</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>
Transfers / assistance to District-level Government	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4
<b>Total (incl. transfers)</b>	<b>1.7</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>2.1</b>	<b>2.3</b>	<b>2.2</b>
<b>District-level Government</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Personnel Expenditures	2.6	2.6	2.7	2.6	2.5	2.4	2.1	1.9
Material Expenditures	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.4
Capital Expenditures	1.0	1.2	1.6	1.4	1.4	1.4	1.2	1.0
Grants	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2
Others	0.3	0.2	0.3	0.2	0.5	0.7	0.8	0.7
<b>Total</b>	<b>4.9</b>	<b>5.1</b>	<b>5.7</b>	<b>5.5</b>	<b>5.8</b>	<b>6.0</b>	<b>5.5</b>	<b>5.2</b>

Source: Ministry of Finance, COFIS, staff estimations

**TABLE A 1-4. Sectoral composition of General Government expenditure 2007-16 (percent of total)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Government General Administration	23.2	23.6	25.5	23.7	21.1	22.1	22.3	22.0	23.1	17.1
Defense	3.9	2.7	3.3	3.5	3.7	3.9	4.7	4.4	5.1	4.5
Public Law and Order	3.9	2.8	3.2	3.6	3.6	3.4	3.6	3.7	4.6	5.9
Economy	2.3	1.8	2.0	1.9	1.9	2.0	2.1	1.9	2.4	2.3
Environment	1.3	1.2	1.8	1.3	1.1	1.1	1.4	1.3	1.4	1.5
Housing and Public Facilities	1.3	1.3	1.4	1.8	1.7	1.7	1.8	1.6	1.0	1.7
Health	5.2	4.5	5.3	5.6	5.2	5.2	5.4	5.8	6.9	7.8
Tourism and Culture	0.5	0.4	0.4	0.6	0.6	0.5	0.4	0.5	0.5	0.6
Religious Affairs	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.4
Education	15.6	13.6	18.9	19.4	18.9	17.9	17.3	17.3	19.3	19.7
Social Protection	0.6	0.6	0.7	0.8	0.7	0.7	1.4	1.1	1.5	5.8
Infrastructure	10.2	9.9	11.7	9.9	10.3	10.5	11.2	10.7	14.1	12.9
Agriculture	2.8	2.7	2.6	2.4	2.7	2.8	2.7	2.4	3.3	3.3
<b>Total (excl subsidy and interest payment)</b>	<b>71.1</b>	<b>65.2</b>	<b>77.1</b>	<b>74.7</b>	<b>71.7</b>	<b>71.9</b>	<b>74.6</b>	<b>73.0</b>	<b>83.5</b>	<b>83.7</b>
<i>Subsidies</i>	18.9	26.4	13.6	17.3	21.5	21.8	19.3	20.2	9.0	8.0
<i>Interest payments</i>	10.0	8.5	9.3	7.9	6.8	6.3	6.1	6.9	7.5	8.4
<b>Total (incl subsidy and interest payment)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**TABLE A 1-5. Sectoral composition of General Government expenditure 2007-16 (percent of GDP)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Government General Administration	4.4	4.7	4.3	3.8	3.7	4.1	4.3	4.1	4.2	3.0
Defense	0.7	0.5	0.6	0.6	0.7	0.7	0.9	0.8	0.9	0.8
Public Law and Order	0.7	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.8	1.0
Economy	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4
Environment	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.3
Housing and Public Facilities	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.3
Health	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.2	1.4
Tourism and Culture	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Religious Affairs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Education	3.0	2.7	3.2	3.1	3.3	3.3	3.3	3.2	3.5	3.5
Social Protection	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	1.0
Infrastructure	1.9	2.0	2.0	1.6	1.8	1.9	2.2	2.0	2.5	2.3
Agriculture	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6
<b>Total (excl subsidy and interest payment)</b>	<b>13.5</b>	<b>13.1</b>	<b>13.1</b>	<b>12.1</b>	<b>12.6</b>	<b>13.3</b>	<b>14.4</b>	<b>13.4</b>	<b>15.1</b>	<b>14.8</b>
<i>Subsidies</i>	3.6	5.3	2.3	2.8	3.8	4.0	3.7	3.7	1.6	1.4
<i>Interest payments</i>	1.9	1.7	1.6	1.3	1.2	1.2	1.2	1.3	1.4	1.5
<b>Total (incl subsidy and interest payment)</b>	<b>19.0</b>	<b>20.0</b>	<b>16.9</b>	<b>16.2</b>	<b>17.5</b>	<b>18.4</b>	<b>19.3</b>	<b>18.4</b>	<b>18.0</b>	<b>17.6</b>

Note: actual data for Central Government and for Subnational Governments 2007-2014, budget data for Subnational Governments for 2015 and 2016.

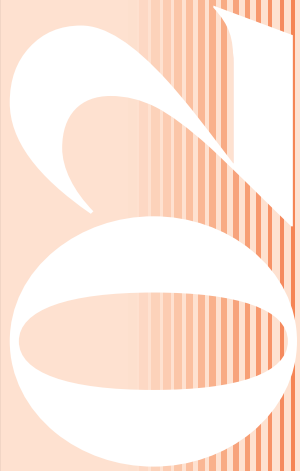
Source: Ministry of Finance, COFIS, staff estimations





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PFM



# PFM: Improving Expenditure Management for Better Quality of Spending

2.1	2.2	2.3	2.4
Introduction	Overview of achievements and the present stage of development	The identified PFM challenges Part A: Budget planning Part B: Budget Implementation Part C: Organizational structure & responsibilities	Priority areas for improving PFM: Proposed recommendations

# Key Messages

## A

Indonesia has made commendable progress in many aspects of public financial management (PFM) over the past 20 years. Much improved legal and regulatory frameworks have been established for PFM, and new budget formulation and control systems have been designed and implemented. Expenditure control systems in particular have improved considerably and financial reporting has been strengthened.

## B

Nonetheless, as indicated in the 2017 Indonesia Public Expenditure and Financial Assessment (PEFA), these PFM reforms are not complete. Systemic constraints on expenditure management in achieving high-quality spending are still observed in all sectors and need to be addressed in order to achieve better outcomes.

## C

These systemic constraints start with inconsistencies between planning architecture, budget architecture, the performance management framework, and the organizational structure of government. There is inconsistent terminology and architecture in the planning and budgeting systems. The concept of ‘money follows programs’ cannot be fully implemented because programs in the planning structure are based on national plan priorities and those under budget are based on the organizational structure. Therefore, money under Plan follows ‘programs’ and money under Budget follows the ‘functions’ of government.

## D

The current practice lacks tools to be tough on line ministries’ budget requests. The current process requires the MTEF to be prepared up to the spending unit level, where expenses are mostly on salaries and operational expenditure, which do not change dramatically from year to year. The MTEF should instead be prepared at the strategic level of programs and activities. The MTEF practice is also still not complemented with a top-down medium-term budget ceilings from the MoF to line ministries, which can be used as guidance for them in preparing their spending plans. Clear visibility of fiscal constraints should lead to competition for resources, challenges to proposals, and a more strategic allocation of resources.

## E

There is weak implementation of ‘intervention logic’, which provides linkage between policies and spending decisions. Indonesia already has a well-designed framework of intervention logic, but the implementation of the logic framework remains suboptimal. The definitions of outputs and outcomes are often not clearly stated. Outputs are determined at the discretion of line ministries and often look like inputs, processes, or activities. Most importantly, the outputs produced by public spending under Budget are not linked with planned outcomes under Annual Plan. Redesign of outputs will be critical, particularly under a decentralization framework, as they need to serve as a link between detailed tasks and intermediate outcomes at the activity level by capturing what combination of goods and services is needed to produce the intermediate outcome.

## F

Good quality performance information is key to expenditure performance, but unfortunately this is still scarce in the Indonesian context. Information is particularly needed in decentralized sectors such as education, water, infrastructure, and health. Line ministries often express concern at their inability to control, or even monitor, outputs and effectiveness once the responsibility for service delivery is passed on to local governments. Devolving responsibility may have met certain political objectives, but it appears in many cases to have disconnected line ministries from outcomes, including program information and performance, which are necessary for the successful implementation of many performance-based budgeting methods.

## G

Fifth, institutional coordination—both vertical and horizontal—as one of the key factors to ensure the delivery of public services efficiently and effectively remains in crucial need of strengthening.

## H

The President has used his emergency powers to issue Government Regulation in Lieu of Law (*Perppu*) No. 1 of 2020 to mitigate risks of COVID-19 pandemic. Through this regulation, the Government has been given wide-ranging powers to reallocate resources across programs and line ministries. Hence, there is a need to ensure efficiency and effectiveness and proper monitoring and evaluation of COVID-19 related expenditure.

# Summary of recommendations

A

## Improve coordination between the MoF and Bappenas on budget planning.

Harmonize planning architecture, budget architecture, the performance management framework, and organizational structure by improving business processes and using common program coding and a consistent planning and budget classification structure to fully implement performance-based budgeting.

Roll out the integrated planning, budgeting, execution, accounting and reporting system (SAKTI) to all spending units (Satker) of the line ministries.

Achieve seamless data exchange and interoperability between Krisna and SAKTI (erstwhile RKA-KL) to reduce the gap between plan and budget allocations; between e-Monev and SMART KL systems to align outputs with planned outcomes; and between OM-SPAN and Krisna for reporting progress to Planning.

B

## Strengthen implementation of 'money follows programs'

Expand budget tagging of expenditure and outputs for measuring results achieved under national priority and thematic programs.

Introduce a program-based budget classification structure toward 'money follows programs' and pilot program-based budgeting in selected ministries, including a program restructuring initiative within the MoF as a pilot ministry in FY2020.

Fully implement performance-based budgeting and move from 'money follows functions' to 'money follows programs' by harmonizing organization structure, budget structuring, policy planning structure, and performance management structure.

Introduce a new sub-economic classification and program code for COVID-19 expenditure to track allocation, expenditure and outputs of the Government's COVID-19 response, considering FY2020 Budget has been largely reallocated for the COVID-19 response through Government Regulation in Lieu of Law (*Perppu*) No. 1 of 2020.

C

## Strengthen the medium-term perspective in planning and budgeting.

Strengthen the medium-term perspective in planning and budgeting (Medium-Term Expenditure Framework, MTEF) by issuing indicative budget ceilings for two years following the budget year to each line ministry (in addition to the budget year) at the time of the first budget circular (indicative ceiling circular), jointly issued by Bappenas and the MoF. Indicative (hard) ceilings for the outer two years will allow line ministries to undertake medium-term planning based on resource constraints.

The MoF to change the requirement for line ministries to submit their estimates of MTEFs only at a strategic level (program and activity level) rather than an MTEF by each individual spending unit.

Clear visibility of fiscal constraints should lead to more competition for resources, challenges to proposals and a more strategic allocation of resources.

D

## Improve the 'intervention logic' concepts in program/performance design.

Strengthen managerial linkages between policy objectives, programs, activities and outputs by providing capacity building on the overall implementation of intervention logic process to all central agencies and line ministries.

The MoF, Bappenas, and the Planning and Finance Bureaus under all line ministries to strengthen quality control on the intervention logic that has been designed by the line ministries.

Define intervention logic at two levels: (i) a complex results chain at the whole-of-government level, which includes the contribution by central and subnational Governments to the achievement of intermediate outcomes; and (ii) a simpler results chain in which intermediate outcomes are more proximate to the ministries themselves, and for which it is reasonable to hold their managers accountable.

E

## Continue to move toward smaller and fewer in-year budget revisions, both for the mid-year budget revision (APBN-P) and self-blocking budget cuts.

Continue concerted efforts to avoid large in-year budget revisions through strengthened capacity, transparency and realism—and hence much improved accuracy—in budget revenue estimation. Where significant mid-year budget revisions are unavoidable, the MoF should ensure that delegating detailed decisions to line ministries is accompanied by appropriate oversight and the challenging of their reallocation decisions, in particular to secure allocations for spending on national priority programs.

F

## Strengthen the 'performance management environment' to encourage and support higher-quality spending by the public sector.

Support central government ministries and agencies to strengthen the 'performance management environment and culture' within their organizations.

G

## Enable a performance-based budgeting system that is adapted to the requirements of a significantly decentralized fiscal process.

Enable the more effective application of the performance-based budgeting system in a decentralized fiscal system by: (i) providing clarity on what each level of government is responsible for; (ii) coordination around complementary investments; (iii) aligning the geographic allocation of funding with needs and priorities; (iv) more policy-oriented design of conditional transfers clearly focused on a policy outcome, with an attendant intervention logic; and (v) common Chart of Accounts to support the stronger evaluation of spending and performance.

### Further key reading

"Indonesia: Public Expenditure and Financial Accountability (PEFA) report, 2017, World Bank: <https://pefa.org/country/indonesia>

"Indonesia: Public Investment Management Assessment", International Monetary Fund, World Bank, June 2019

# 2.1



# Introduction







**T**he Government of Indonesia (GoI), in particular the Minister of Finance (MoF), has stressed the importance of value for money in achieving better outcomes from current government spending. This is not only because the current revenues have become tightly constrained in the short term, thereby severely restricting increases in government expenditure, but also because there is concern that much of the current spending is having insufficient impact on outcomes. Some aggregate expenditure policies aimed at improving social wellbeing—for example, the GoI policy of maintaining minimum expenditure allocation shares of 20 percent of the budget for education and 5 percent for health—are considered to have had only a modest impact on actual service delivery outcomes.

**Getting better value from public expenditures requires not only improved policies or increased spending in selected areas but also improving the capacity of expenditure management, i.e.,** systems, processes and information, to enable good policy design, and the effective delivery of goods and services, underpinned by strong financial and non-financial performance in reporting, evaluation and accountability. This is the area in which the public financial management (PFM) system comes into play. In particular, it should enable the annual budget process to work more efficiently, effectively and with greater transparency and accountability. The broad range of PFM re-

forms introduced by the GoI since 2003 onwards was intended to achieve and support exactly these attributes of a good expenditure management process. Nevertheless, as indicated in the 2017 Indonesia Public Expenditure and Financial Assessment (PEFA), these PFM reforms are not complete.

**A better functioning PFM system would be needed to contribute in the following ways:**

1. More responsive and effective allocation of funding within and across programs and activities;
2. Better targeted budgetary interventions with improved impact on outcomes;
3. More accurate and efficient budget reporting (including both financial and non-financial performance reporting);
4. Better quality information for supporting policy design and innovation; and
5. Stronger feedback loops between performance reporting and policy design.

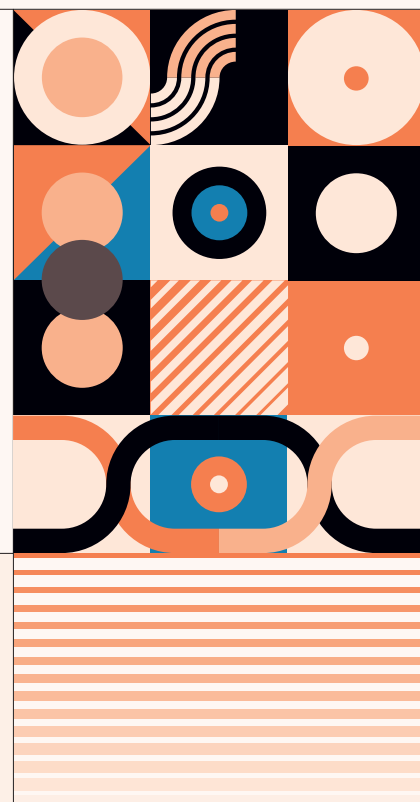
**This chapter examines some major features of the PFM system that remain under-developed or that need to be improved for optimal budget management.** These factors contribute directly to administrative inefficiency and to suboptimal socioeconomic outcomes. ‘Up-grading’ some aspects of the PFM system will lift budget

performance and assist the GoI in achieving ‘better value for money’. It addresses especially those factors that bear most directly on expenditure performance. These include budget planning and preparation; budget implementation, including monitoring and reporting; and organizational functions and capabilities that support budget management operations.

**The analysis on the PFM mostly focuses on the central government budget (APBN).** While experience and examples have been drawn from the health, education, and selected infrastructure sectors in particular, an effort has been made to make these findings as applicable as possible to the wider scope of public expenditure management. In addition, the discussion and recommendations in this report also include key interactions between central and local governments with regard to the execution of public expenditure policies and operations. Inevitably, this analysis has focused much more on the challenges ahead, rather than the achievements already in place. Recognition of what has been achieved, however, is also highlighted in many parts of the section.

**This chapter is organized into three main parts.** Following an overview of achievements and the present stage of development, this chapter discusses PFM challenges on budget planning (Part A), budget implementation (Part B), and organizational structure and responsibilities (Part C). Finally, the last section provides policy recommendations based on the findings from the previous parts.





## Overview of achievements & the present stage of development

over the past 10 years in particular, i.e., from 2008 to 2018, it is evident that the PFM reform process has not ‘stopped’. Rather, ongoing improvements during this period have modified and improved some aspects of the system. In some cases, however, they have not addressed, much less overcome, some of the underlying obstacles to improved expenditure efficiency and effectiveness. It is therefore not so much a matter of deciding ‘*what*’ further reforms are needed, but ‘*how*’ to complete some of the key systemic changes, enabling them to work much better.

**In parallel with its development of the PFM system, the GoI has introduced the rapid and extensive decentralization of services in many sectors to subnational governments.** This has complicated the implementation of some reforms and has added an extra and very challenging dimension, especially for achieving expenditure effectiveness. It is apparent that there is also still a long way to go in this area of effective decentralization of spending.

**One of the stand-out conclusions from several of these recent diagnostic studies and reviews is the need for a clear, ongoing ‘reform agenda’.** This agenda should comprise specific actions targeted at a number of areas in which improvements in budget management have become skewed or remain incomplete, which is also shared by this part of the analysis on the PFM system.

**T**here have been numerous assessments and reviews of the PFM system in Indonesia over recent years that recognize the exceptional progress that Indonesia has made in the development of its PFM system since 2000.<sup>78</sup> Much improved legal and regulatory frameworks have been established for PFM, and new budget formulation and control systems

have been designed and implemented. Expenditure control systems in particular have improved considerably and financial reporting has been strengthened, with resulting benefits for fiscal control, financial integrity and accountability (see Box 2.1).

**Nonetheless, there is also a general recognition that the PFM reform process is still very much a ‘work in progress’.** In assessing what has been achieved

<sup>78</sup> Indonesia 2017 PEFA (WB), synchronization of planning and budgeting in Indonesia (2017, internal World Bank), Indonesia Infrastructure Planning and Budget process (2014, internal World Bank report), Indonesia’s Experience in Implementing MTEF (2014, internal World Bank), Spending Review at the MoF (2018, internal World Bank report).

## BOX 2.1.

## Summary of Indonesia 2017 PEFA

Indonesia's most recent Public Expenditure and Financial Accountability (PEFA) assessment was published in early 2018 and was the first assessment based on the new 2016 revised PEFA framework. It covers the three fiscal years from 2014 to 2016. This period was marked by a political transition and a change of government composition, which affected the policy agenda. Reforms introduced in 2016 after the appointment of the current finance minister are not reflected in this assessment. Nevertheless, the assessment remains an important guide to the strengths and weaknesses of Indonesia's PFM systems.

The PEFA assessment scores seven dimensions of PFM systems across the whole PFM cycle: budget reliability, transparency of public finances, management of assets and liabilities, policy-based fiscal strategy and budgeting, predictability and control in budget execution, accounting and reporting, and external scrutiny and audit.

## Areas of strength

Key areas of strength in PFM systems have allowed for prudent fiscal management and control of budget execution. The roll-out of a financial management information system (FMIS), together with strict cash consolidation management rules, a well-defined treasury management system in central government, consistency between budgeting and accounting classifications, and the convergence of accounting rules with international best practice, have improved the quality of financial reporting and oversight.

Strong fiscal discipline has come about through better budget formulation, a clear fiscal and debt-management strategy, and fiscal rules on the annual budget deficit. Expenditure arrears are strictly controlled. The budget process is both transparent and participatory. Budget documentation is comprehensive, the budget process is well defined, and the budget calendar is strictly adhered to. Parliamentary scrutiny of the budget is improving.

## Areas for improvement

Budget reliability remains an ongoing challenge, driven during the 2014-16 period by the persistent over-projection of revenues. This improved in the two following budget years. At

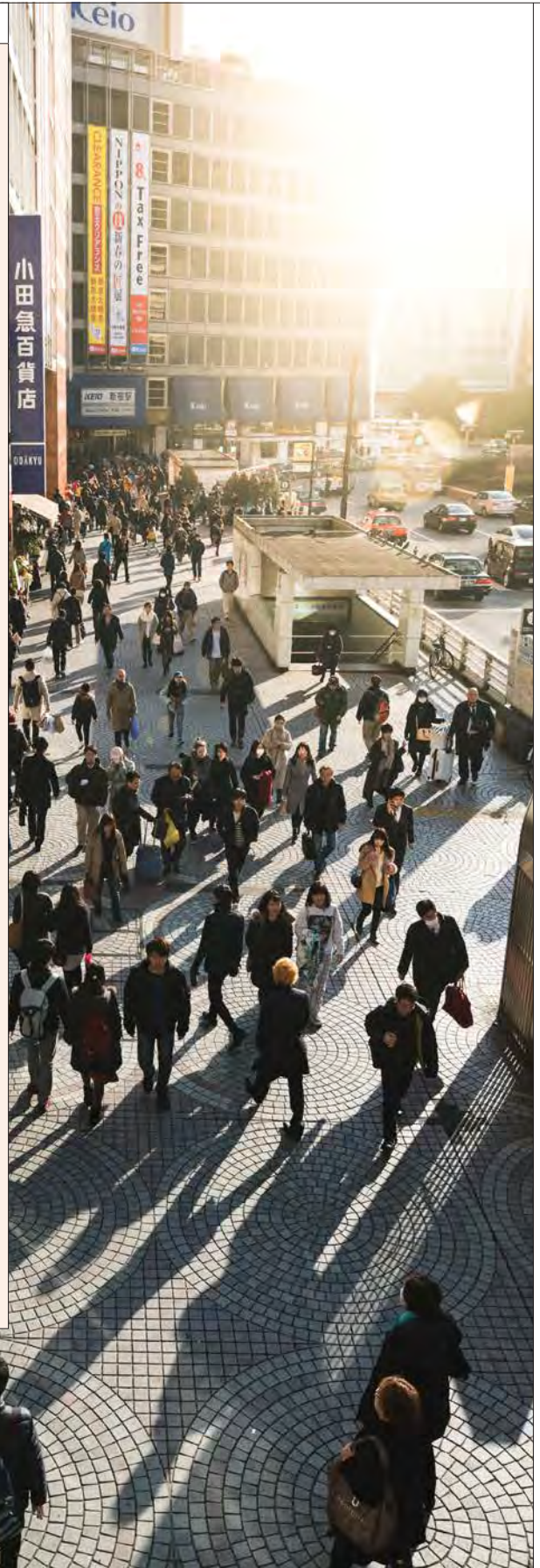
the aggregate level, ongoing challenges in maintaining fiscal discipline are seen in weaknesses in revenue administration and the tracking of contingent liabilities for PPP-related guarantees, and a lack of information around other contingent liabilities, including those related to social protection programs and the potential risks associated with state-owned enterprises (SOEs).

Strategic allocation is undermined by unreliability in revenue estimates, resulting in large in-year budget revisions, which undermine the effective implementation of programs. Although five-year sector plans are in place, they are not based on realistic funding projections, and do not provide a reliable cost basis for a well-functioning medium-term expenditure framework (MTEF). Inconsistent classification of programs between the plan and budget make it difficult to track the allocation of money to planned programs. Performance information is too detailed and the inconsistent definition of outputs from year to year undermines the use of performance information in budget allocation.

Although the GoI has placed a priority on increasing the stock of infrastructure, public investment management processes are not conducive to the effective selection and implementation of projects. Many major projects are not prepared with robust design or technical specifications, and projects that could be screened for private implementation are financed from the public budget. There is no systematic reporting of progress or performance in implementation of projects. Of the more than IDR 400 trillion spent through procurement processes each year, 30 percent cannot be tracked through the procurement system and only limited data are available on the remainder. The procurement system would be strengthened by greater transparency of complaint resolution and the addition of an independent body to review appeals.

Finally, while the external audit is functioning effectively, the scrutiny and follow-up of audit findings is poor. Publishing ministry audit findings and responses would add pressure for them to be addressed. Parliament's scrutiny of audit follow-up is less effective than its ex-ante review of the budget.

Source: Indonesia Public Expenditure Financial Accountability 2017 report. <https://pefa.org/country/indonesia>



# 2.3

## The identified PFM challenges



### A

## Part A: Budget Planning

- A** *Part A: Budget Planning*
- B** *Part B: Budget Implementation*
- C** *Part C: Organizational Structures and Responsibilities*

### A.1 Complex and inefficient relationship between planning and budgeting

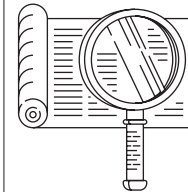
**I**ndonesia has a well-developed planning framework that provides strategic direction for medium-term development, but this has not yet been adequately integrated with the budget planning process. The National Medium-Term Development Plan (RPJMN), developed by Bappenas, and the line ministries' plans (Renstra) are the strategic, but static, planning documents that provide a five-year horizon at program, activity, and project level with targets and funding requirements. Both documents serve as the basis for, and are translated into, an annual Government Work Plan (RKP by Bappenas) and sectoral annual work plan (Renja by line ministries), with a direct link to the annual state budget (APBN), developed by the MoF and the annual line ministry budget (RKA-KL), developed by the line ministries. However, there is a lack of linkage between the planning and the annual budget allocation processes, which results in deviations between the projected budget in the medium-term planning and the actual annual budget.

TABLE 2.1.

Ministry annual and medium-term plans and IT systems

	Bappenas	MoF	Line ministry
<b>Medium-term</b>	National Medium-Term Development Plan (RPJMN) Static 5-year plan	MTEF: top-down MTEF: top-down and bottom-top rolling 3-year plan	Ministry strategic plan (Renstra), static 5-year plan
<b>Annual</b>	Government Annual Work Plan (RKP)	Annual state budget (APBN)	Annual work plan (Renja); and Annual budget plan (RKA-KL)
<b>Planning, budgeting and accounting IT systems</b>	Krisna: planning	SAKTI <sup>79</sup> SPAN: budgeting, treasury, and accounting	Krisna (Bappenas) SAKTI (MoF)
<b>Monitoring and reporting IT system</b>	e-Monev	Smart DJA OM-SPAN: monitoring and reporting	

Source: World Bank team.



The deviations between medium-term budget planning and actual budget allocations remain significant. The analysis in the Water Resources Management chapter indicates that central government spending on water resources remains well below the Strategic Plan target in the Renstra, where the Renstra’s budget is almost three times larger than the annual budget allocation in the 2019, or at the end of the five-year planning period. A similar case is also found in the health sector, where the Renstra’s budget is double the annual budget allocation (Figure 2.1a and Figure 2.1b). The weak linkages between the medium-term framework and the annual budget process reflect a silo approach between annual budgeting and medium-term planning, and a lack of quality assurance on monitoring and consistency in reporting at the aggregate level.

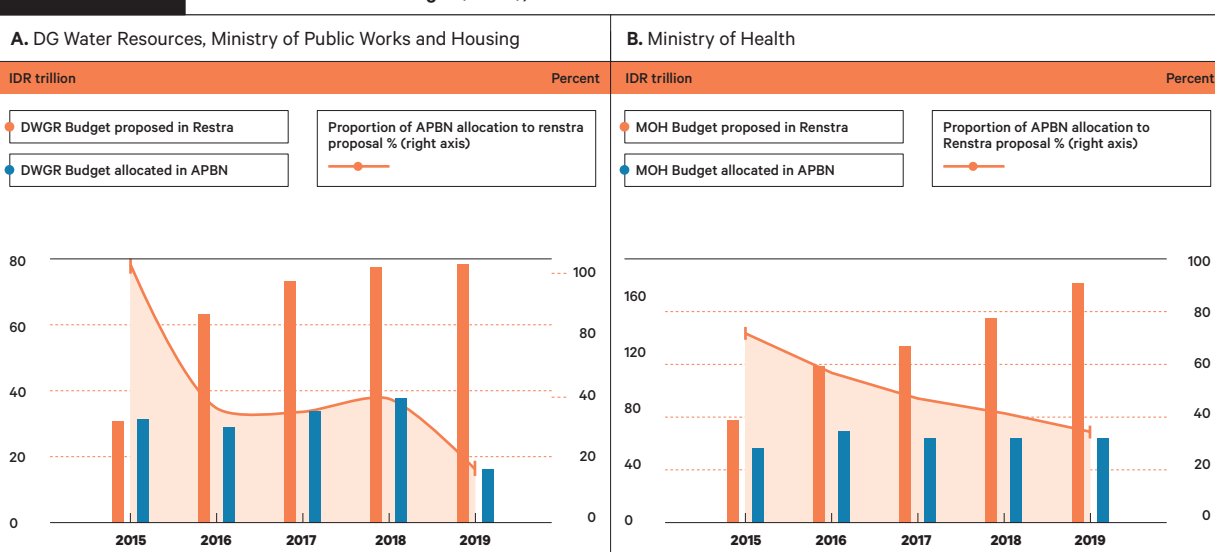
The above examples indicate that the RPJMN and the Renstra do not constitute a reliable basis for the sector strategy costing required for a proper Medium-Term Expenditure Framework (MTEF), and that a rolling multi-year budget framework is needed. The static five-year plans are not useful as a basis for strategic planning across the medium term, not least of all because the fiscal estimates on which they are based are not realistic. Therefore, performance measurement in such an environment cannot provide a meaningful policy target to meet the objective. Substantially reducing resources while maintaining five-year planned targets means that either the GoI is setting itself up to fail against its own ambition or, if targets are being met, suggests major weaknesses in costing underpinning the original planning. Indonesia needs to implement the mechanisms of a modern, rolling multi-year budget framework if it wants to spend better.

“The deviations between medium-term budget planning and actual budget allocations remain significant”

<sup>79</sup> SAKTI will replace the annual line ministry work and budget plan (RKA-KL) application.

FIGURE 2.1.

There are significant deviations between the proposed budget in the Strategic Plan (Renstra) and the budget allocation in the State Budget (APBN), 2015-2019



Note: For the 2015 MoH Budget, figures taken from the Revised State Budget (APBN-P) instead of the State Budget (APBN), due to a lack of available data.

Source: World Bank staff calculations based on the Ministry of Health Renstra and the State Budget (APBN) 2015-2019

## A.2 The medium-term budgeting approach has not aligned with international best practice

**The current budget format does not support clear identification of what resources are available for new spending.** The GoI has developed a baseline methodology to support the review and development of the annual budget using a ‘bottom-up’ approach. This contains new policy requests that are not yet part of existing policy, and that have not been scrutinized and prioritized within an expenditure ceiling. In preparing the baseline, however, there is not an adequate separation of the baseline from new spending initiatives, re-costing of existing expenditures, efficiency savings, or policy cutbacks.<sup>80</sup> Budget expenditure estimates therefore remain susceptible to significant ‘bottom-up’ pressures in an incremental budget based on the previous year’s allocation.

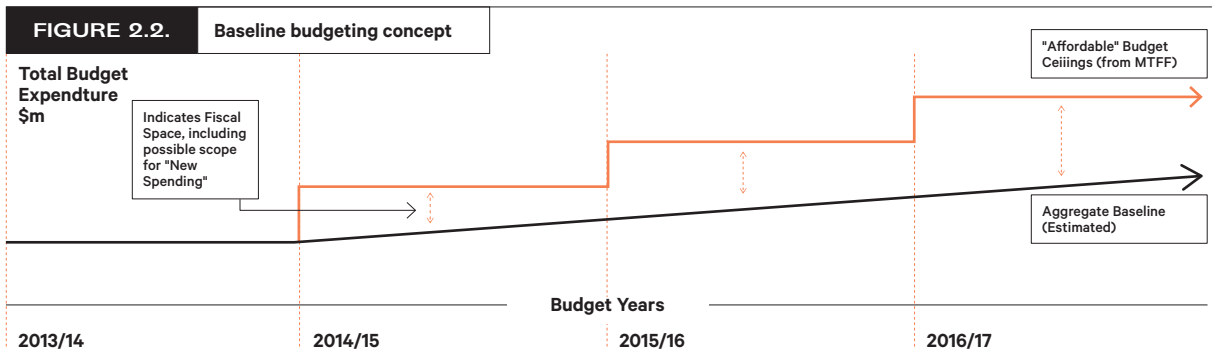
**Adopting international best practice on baseline budgeting, fiscal space, and new spending techniques would almost certainly help to ensure that limited resources are allocated within a more transparent, planned and efficient process.** The main advantage of following international best practice is that it enables central agencies—the MoF and Bappenas—to challenge

line ministries to make clearer and more efficient choices between existing spending commitments and new proposals, including any new ‘national priority programs’. Spending priorities can be better made in the context of an aggregate fiscal envelope (or fiscal strategy) in which it is clear exactly how much is available for competing allocations and budget proposals. Figure 2.2 indicates how these choices can be managed in the context of a Medium-Term Fiscal Framework (MTFF) in which baselines are growing annually as a result of both volume and cost increases.

**The GoI has made some improvements on the medium-term budget formulation process, but the MTEF is still required at too granular a level by units that mostly spend on salaries and operational expenditure.** Formerly, the MTEF calculation started from the level of the Spending Unit, where each of the 24,000+ spending units prepared an expenditure estimation that was sent directly to the MoF.<sup>81</sup> Now, the MTEF calculation from the Spending Unit is compiled at the upper level by the program manager (Echelon 1 level) to be sent to the Planning Bureau of the line ministry for quality review before submitting to DG

Budget in the MoF.<sup>82</sup> However, this process still requires the MTEF to be done by the Spending Unit—where expenses are mostly on salaries and operational expenditure and do not change dramatically from year to year—instead of at the strategic level of the program and activity.

**The MTEF is also not sent at an early stage to the line ministries to feed into their planning (compared to practices elsewhere).** It is also still not complemented with top-down indicative medium-term budget ceilings from the MoF to the line ministries, which can be used as guidance for them in preparing the spending plans at the time of the first budget circular, jointly issued by Bappenas and the MoF. In the Russian Federation and South Africa, the three-year budget and appropriations are updated annually and fully integrated with the MTEF. In Russia, all federal government spending and two-thirds of general government spending are covered. Unused budget allocations can be carried over into the next year and a contingency reserve is kept. In the Republic of Korea, a five-year rolling performance framework is used, where out-year ceilings do not constrain successive MTEFs or budgets.



<sup>80</sup> IMF (draft, 2019). Indonesia: Budget Planning and Scoping and Training.

<sup>81</sup> These include 12,000 religious schools.

<sup>82</sup> Attachment 2 of Minister of Finance Regulation No. 143/PMK/02/2015.

### A.3 Operational disconnect on the ‘money follows program’ approach

**I**n an attempt to make budgeting more responsive to policy priorities, Indonesia introduced the ‘money follows program’ approach. Government Regulation No. 17/2017 provides the basis in the conduct of budget management to a ‘money follows program’ approach. Up to 2017, annual plans were framed around qualitative text analy-

sis and targets. In 2017, Bappenas began to introduce a concept of national priorities, followed by priority programs, activities, and projects. The ‘money follows program’ approach is defined as a development planning approach, which is more holistic, integrative, thematic, and spatial from various priority programs that conform to the vision and missions of the President (Box 2.2).

#### BOX 2.2.

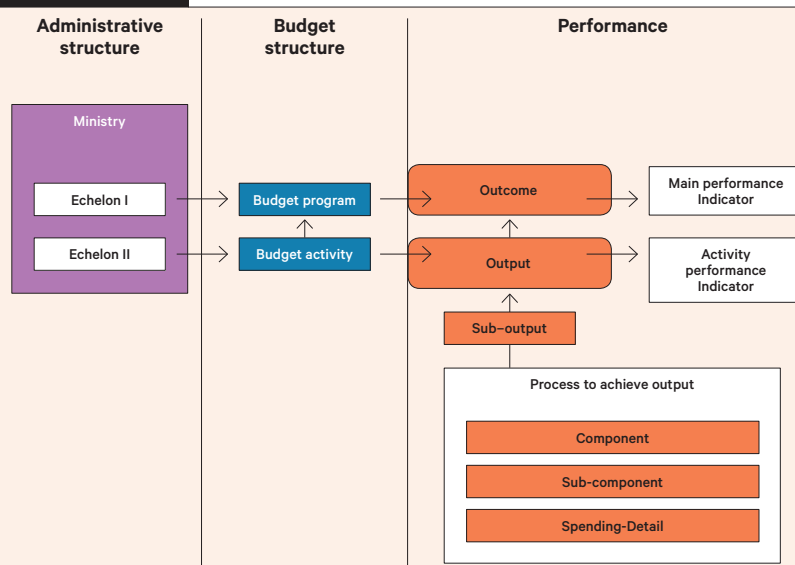
#### Program terminology in planning and budget documents

**T**he word ‘program’ is used widely, and with different meanings, when discussing PFM systems and budget management issues. This is also the case in Indonesia and may lead to some confusion and/or misunderstanding. In this chapter, government expenditure ‘programs’ may refer to:

**National Priority Programs:** These are programs that have been defined by the Gol (usually under the stewardship of Bappenas) to be areas of expenditure with particularly important social or economic objectives. These national priority programs may change from year to year and may affect the expenditure operations of one, or more frequently several, ministries, departments or agencies (MDAs). It is expected that this type of program will be given top priority in the annual decision-making and budget management of the entities concerned.

**Budget Programs:** Indonesia adopted a four-tier program budget structure<sup>83</sup> comprised of: function, sub-function, budget programs and sub-programs (budget activities in Indonesia). Budget programs have been aligned directly with Echelon 1 ministry structures, while Budget Activities are similarly aligned with lower echelon structures (mainly directorates and below). Good design of these Budget Programs and Activities is a core requirement for a successful ‘program and performance’ budgeting system.

**FIGURE 2.3.** Program budget classification and administrative mapping



Source: WB team based on Ministry of Finance Regulation No. 136/2014

<sup>83</sup> The program budget classification is one of three classifications: the functional classification (Indonesia uses COFOG up to level 2) and the economic classification.



**However, there is a functional disconnect between the Planning and Budget programs.** There is no clear alignment between the strategic concept of national priorities, priority programs, priority activities and priority projects, and the operational and managerial concept of the annual budget programs and activities. National priority programs are not directly aligned with the 'budget programs' of the sector ministries (which nearly all follow administrative functions at Echelon 1 level). This means that any

actual allocation (or change in allocation) of budget funding in relation to national priorities is often uncertain and may be, to some extent, at the discretion of sector ministries. This similarly applies to the 'activities' attached to these priority programs. These procedures also raise doubts about the level of attention and resourcing that should be given to many budget 'Programs' and 'Activities', which are not part of national priority programs (see Box 2.3).

### BOX 2.3. Challenges with tracking priority programs and budget programs

**T**here are three main challenges with tracking priority programs and budget programs: (i) priority programs and activities in the Government Annual Work Plans do not correspond to individual programs and activities listed in the State Budget; (ii) priority activities in the Government Annual Work Plans may refer to State Budget programs and State Budget activities; and (iii) there are changes in nomenclature and level of priority aggregation from one year to another.

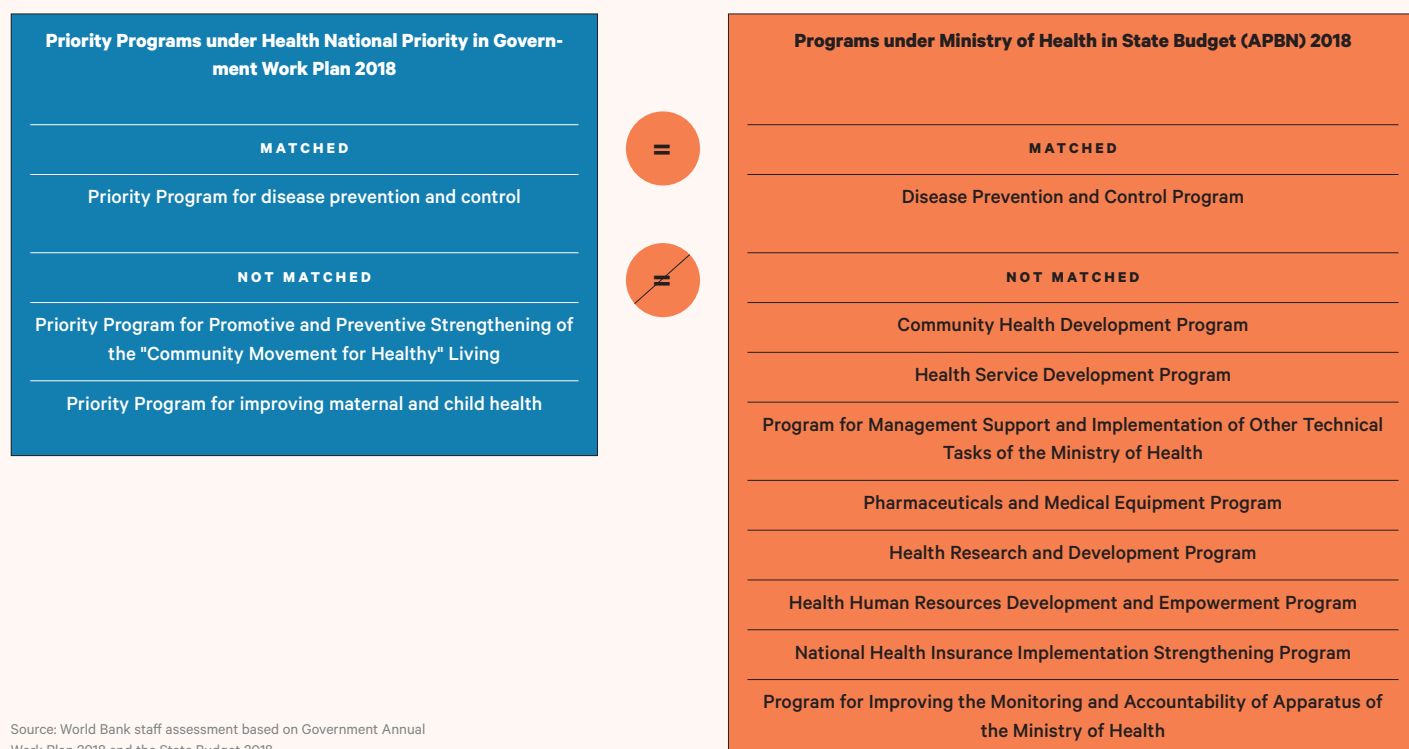
Priority programs and activities aimed at achieving different national priorities listed in the Government Annual Work Plans 2017 to 2019 do not correspond to individual pro-

grams and activities listed in the State Budget. This indicates that the budget size dedicated for achieving each year's national priorities is therefore not a straightforward process. As an example, in 2018 there were three priority programs under the health national priority and nine budgetary programs under the Ministry of Health. With the exception of 'Priority program for disease prevention and control', none of the other program names matched with those listed in the 2018 State Budget (APBN) under the Ministry of Health. Even for 'Priority program for disease prevention and control' there is no one-to-one correspondence between the names of its priority activities to those listed in the 2018

State Budget (Figure 2.4)

There are, however, multiple points at which the two systems could correspond one to another, but often at different levels in the hierarchy. For example, some priority activities in the 2019 Government Annual Work Plans may refer to State Budget programs, but others may refer to State Budget activities (Table 2.2.). Some seem to have one-to-one correspondence, while some may refer to multiple budget programs or activities. The corresponding budget programs and activities may also be under different line ministries. This may make linking planning and budgeting more difficult.

**FIGURE 2.4. Comparison of priority programs under health national priority in the Government Work Plan 2018 and programs under the Ministry of Health in the 2018 State Budget**



Source: World Bank staff assessment based on Government Annual Work Plan 2018 and the State Budget 2018.

## BOX 2.3.

## Challenges with tracking priority programs and budget programs (cont.)

TABLE 2.2.

Identifying the correspondence of activities under Priority Program "Health and Community Nutrition Improvement"<sup>84</sup> to State Budget 2019 programs and activities

Government Annual Work Plan (RKP) 2019 State Budget (APBN) 2019		State Budget (APBN) 2019			
Priority Program	Priority Activity	Budget Program	Budget Activity	Line Ministry	
Health and Community Nutrition Improvement	Strengthening of the Community Movement for Healthy Living and Disease Control	Disease Prevention and Control Program		Ministry of Health	
			Health Promotion and Community Empowerment	Ministry of Health	
	Increased Access and Quality of Health Services	Health Service Development Program		Ministry of Health	
	Improvement of Maternal, Child, Family Planning and Reproductive Health			Community Nutrition Development	Ministry of Health
				Family Health Development	Ministry of Health
				Development of Families with Toddler and Children	National Family Planning Coordinating Board
				Increased Participation of Family Planning in the Region and Special Target	National Family Planning Coordinating Board
				Increasing the Development of the Government Family Planning Program Participation	National Family Planning Coordinating Board
				Reproductive Health Quality Improvement	National Family Planning Coordinating Board
	Acceleration in Stunting Reduction	<i>May refer to a range of programs and activities across multiple line ministries, including those also relevant for Priority Activity "Improvement of Maternal, Child, Family Planning and Reproductive Health"<sup>85</sup> mentioned above</i>			
Increasing the Effectiveness of Food and Drug Control	Food and Drug Control Program		National Agency of Drug and Food Control		

## Color Legend:

Priority Program in Government Annual Work Plan 2019

Priority Activity in Government Annual Work Plan 2019

Budget Program in State Budget 2019

Budget Activity in State Budget 2019

Source: World Bank staff assessment based on the Government Annual Work Plan 2019 and the State Budget 2019.

Lastly, the change in nomenclature and level of priority aggregation from one year to another exacerbates the existing situation, making tracking and comparing these priorities over different years challenging. Tracking the priority program over the years is even more challenging as the priority activities and their associated indicators may fall under different priority programs in different years. The architecture of the

national priority has changed between 2018 and 2019, with the result that priorities in one year have become programs in the next year, and programs in one year have become activities in the next (Table 2.3). The target indicators used for similar activities may also vary from year to year, making tracking progress and/or achievement over time difficult.

Few of these priorities could be imple-

mented meaningfully in a year if this kind of mechanism continues. If a priority planned in 2017 gets one-third of the way through implementation before being dropped in 2018, then it will be likely to lead to inefficiency. Adopting a rolling medium-term approach within the annual planning process could enhance efficiency and continuity from one year to the next.

<sup>84</sup> Peningkatan Pelayanan Kesehatan dan Gizi Masyarakat.

<sup>85</sup> Peningkatan Kesehatan Ibu, Anak, Keluarga Berencana, dan Kesehatan Reproduksi.

**BOX 2.3.**

**Challenges with tracking priority programs and budget programs (cont.)**

**TABLE 2.3.**

**Shifting hierarchies of national priorities across Government Annual Work Plans: tracing back 2019 health sector priorities in past Government Annual Work Plans**

Government Annual Work Plan 2017	Government Annual Work Plan 2018	Government Annual Work Plan 2019
Health (Increasing the Degree of Community Health and Nutrition)	Health	Improvement of Community Health and Nutrition Services
Promotive and Preventive Strengthening: "Community Movement for Healthy Living"	Promotive and Preventive Strengthening: "Community Movement for Healthy Living"	Strengthening the Community Movement for Healthy Living and Disease Control
Increased Access and Quality of Health Services	Not identified as a priority	Increased Access and Quality of Health Services
Mothers, Infants and Children Nutrition Development	Improving maternal and child health	Improvement of Maternal, Child, Family Planning and Reproductive Health
Improvement of Family Planning and Reproductive Health Services	Family planning and reproductive health components not identified as a priority	
Acceleration of Community Nutrition Improvement	Improving maternal and child health	Acceleration in Stunting Reduction*
Not identified as a priority	Not identified as a priority	Increasing the Effectiveness of Food and Drug Control

**Color Legend:**

National Priority
Priority Program
Priority Activity

Note: \*Stunting reduction may actually be broader than the past priorities listed above (Acceleration of Community Nutrition Improvement in 2017 and Mothers, Infants and Children Nutrition Development in 2018) and so may not be a one-to-one correspondence. However, there might also be overlaps between Acceleration in Stunting Reduction and Improvement of Maternal, Child, Family Planning and Reproductive Health as many stunting interventions target mothers and children, as well as include interventions on family planning and reproductive health.

Source: World Bank staff assessment based on Government Annual Work Plans 2017-2019.

**One cause of disconnect is the need for Bappenas to identify priorities in quite different ways that do not lend themselves to direct translation into budget programs.** This is because national priorities will not be directly seen in the budget as 'priorities', since they can go below the program level. For example, the Tourism National Priority includes programs to implement strategic infrastructure in very specific locations. In the budget these infrastructure investments could well be below the level of budget program and activity.

**Budget tagging at the output level is an interim solution to connect planning and budget programs, which has been adopted in the case of thematic programs that cut across multiple agencies, such as stunting and climate change.** However, there is a risk that every program manager

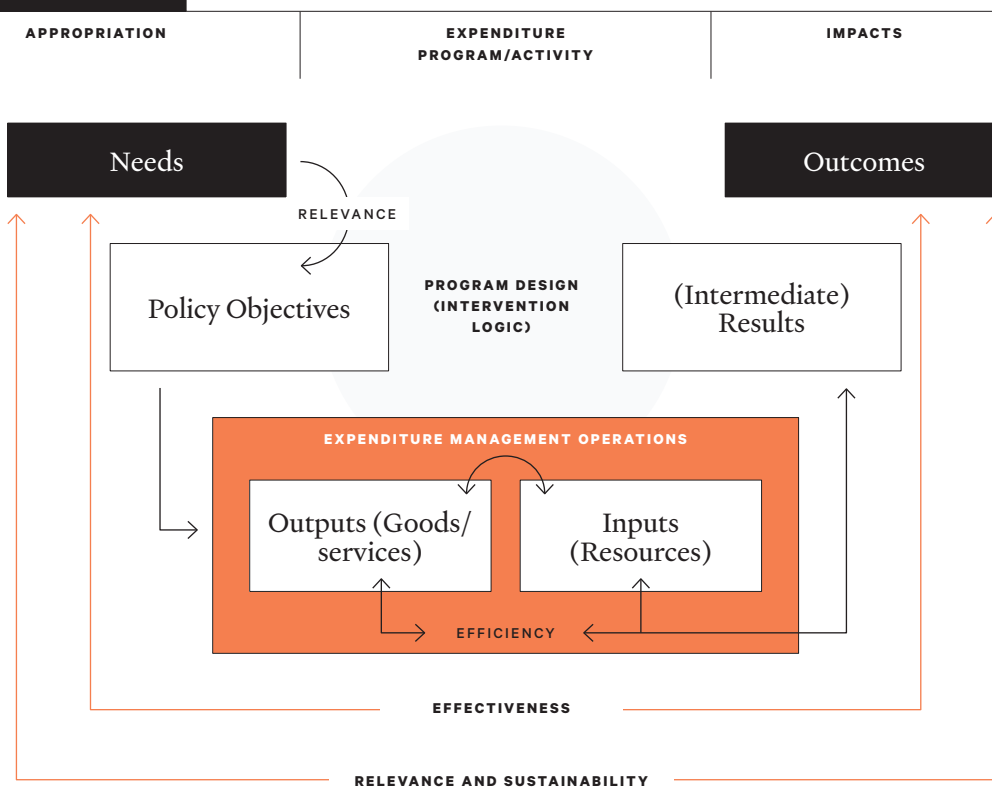
wants their programs and activities to be tagged. In this case, the MoF needs to be able to 'challenge' whether specific outputs do contribute meaningfully to a priority in order to be tagged.

**It is evident that much greater operational clarity is required for the 'money follows program' approach to succeed.**

To establish a link between the plan and the budget, Bappenas will need to readjust its approach to classifying the architecture of strategic priorities, and the MoF may need to consider introducing additional elements that can capture the information Bappenas needs to track as part of monitoring the implementation of the plan. Integrating IT systems will help to establish the links between the plan and the budget, but the rules for cross-walking between the two different concepts need to be agreed upon first.

## A.4 Poor ‘intervention logic’ design

**FIGURE 2.5.** Best practice performance budgeting architecture



Source: David Webber, "Managing the Public's Money: From Outputs to Outcomes – and Beyond" originally published in OECD Journal on Budgeting, Vol. 4 No. 2, Jan. 2004. <https://www.oecd.org/gov/budgeting/43488736.pdf>

**U**nder performance-based budgeting, good expenditure management is based on several key attributes that connect the resource allocation (decision-making) process to effective execution (the delivery of goods and services). The key linkage between policies and spending decisions involves the use of a clear ‘intervention logic’. Figure 2.5 sets out the kind of performance budgeting architecture that underpins more advanced

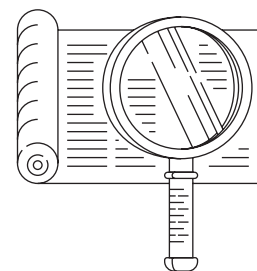
models internationally. It draws attention, at a high level, to aligning ‘Needs’ with ‘Outcomes’ through a detailed structure involving well-designed policy and program interventions and performance information.

It also shows that, under performance-based budgeting, efficiency concepts are about finding the best, least-cost relationships between inputs and outputs. In other words, efficiency is to ensure whether public resources have been used efficiently

in delivering public services, i.e., allocated to the ‘right’ interventions and with the optimal cost per unit. Effectiveness, on the other hand, is all about ensuring that public resources are used effectively to achieve Indonesia’s development objectives, including who benefits (or not) from public spending. This is achieved through the alignment of policy objectives, program design, program management (i.e., effective interventions) and outcomes. At the same time, fiscal ‘sustainability’ is about ensuring that the policy problems, or social needs, addressed by public expenditure programs are not only relevant from a government policy perspective, but are achievable and affordable. The performance information should measure and report achievements under all three of these concerns/objectives: efficiency, effectiveness and sustainability.

In the current framework, budget programs are mapped to outcomes and budget activities are mapped to outputs, but there is no clear sense of how they are connected in a results chain framework—and outputs often look like inputs. Lack of a well-defined ‘intervention logic’ concept is found in the sectoral examples in health and infrastructure sector. The Health chapter indicates that the Annual Work Plan on the health sector fails to articulate a results chain from activities, to outputs, to outcomes. The definitions of outputs and outcomes are often not clearly stated. This challenge limits the usefulness of reported achievement in LAKIP (Implementation and Performance Report<sup>86</sup>). The National Roads chapter suggests that the strategic planning of the sector is not currently guided by indicators of transport efficiency and road safety, and still

“Introducing a more robust intervention logic into Indonesia’s output-based budgeting system will strengthen the budgeting system’s capacity to be a vehicle for implementing strategic priorities”



**TABLE 2.4.** Examples of outputs that seem effectively to be inputs in the State Budget 2017 of the Ministry of Health

<b>Budget program</b>	<b>Health Service Development Program</b>	
<b>Budget activity</b>	<i>Management Support and Implementation of Other Technical Tasks for the Health Service Development Program</i>	
	<b>Outputs</b>	<b>Look like inputs</b>
<b>Defined as output</b>		Medical devices
		Ambulance/hearse
		Service buildings
	Echelon I Management Support Services	
	Internal services (Overhead)	
	Health Center Operational Services	
	Hospital Operational Services	
	Program Development and Technical Work Plans Services	
	Office Services	
		Drugs and Medical Supplies
	Facilities and infrastructure	

Source: World Bank staff assessment based on the State Budget 2017

focus too much on the quantity of outputs produced. Moreover, outputs are currently determined at the discretion of line ministries, may change for no good reason, and often look like inputs (Table 2.4).

**Introducing a more robust intervention logic into Indonesia’s output-based budgeting system will strengthen the budgeting system’s capacity to be a vehicle for implementing strategic priorities.** Intervention logic is something that can be introduced ministry by ministry. Outputs will need to be more robustly defined to capture groups of goods and services focused on intermediate outcomes, not inputs. Redesign of outputs will be critical as they need to serve as a link between detailed tasks and intermediate outcomes at activity level by capturing what combination of goods and services is needed to produce the intermediate outcome.

**Ministries should eventually be required to provide a Statement of Intent, and indicators for each program and activity specified in the budget.** Once line ministries have developed a basic competence in using intervention logic methods, they should be required by the MoF to present an annual statement or specification (sometimes referred to as a Statement of Intent, or SOI) detailing the intervention logic connecting their major expenditure policies with performance-oriented budget programs, activities and outputs. Statements of Intent should be prepared by all lead spending agencies—i.e., sector ministries in the case of central government spending—in parallel with their annual Budget documentation. An example of a Statement of Intent can be seen from the South Africa Water and Sanitation Department for its Water Infrastructure Development Program, which is:

develop, rehabilitate, and refurbish raw water resources and water services infrastructure to meet to meet the socioeconomic and environmental needs of South Africa.

**A key challenge in designing intervention logic in Indonesia’s decentralized public service delivery environment is that the outputs controlled by many line ministries cannot logically be assumed sufficient to deliver the outcomes for which they are currently accountable (see Box 2.4).**

**It may be necessary to define intervention logic at two levels:** (i) a complex results chain at the whole-of-government level, which includes the contribution by central and subnational Governments to the achievement of intermediate outcomes; and (ii) a simpler results chain in which intermediate outcomes are more proximate to a ministry itself, and for which it is reasonable to hold its managers accountable.

## BOX 2.4.

## Designing intervention logic is more complicated for sectors that are decentralized

There is a limited control by line ministries over achieving their performance targets, as many of the targets depend on the services delivered at the local level. In Ministry of Health 2015-2019 Strategic Plan (Renstra), there were 25 performance indicators for the Nutrition and Maternal and Child Health Program under the Directorate General of Nutrition and Maternal and Child Health (now known as the Public Health Program of the Directorate of Public Health). This is comprised of two program-level and 23 activity-level indicators.<sup>87</sup>

However, although the achievement of some activity-level indicators is fully within the Ministry of Health's control, such as the number of Community Health Centers receiving the Health Operational Grant, others require significant involvement of local governments, such as the percentage of pregnant women suffering

from chronic energy deficiency (CED) receiving supplementary feeding, or the percentage of early initiation of breastfeeding. For supplementary feeding, the Ministry of Health has the authority to procure supplementary feeding material, but ultimately the implementation is the responsibility of the local governments. It is the local governments, or rather the local Community Health Centers and community health-care workers who will identify these CED pregnant mothers and distribute the supplementary feeding material.

For the promotion of the early initiation of breastfeeding, the role of the Ministry of Health is even more indirect. It may help achieve this goal by, for example, releasing a set of training materials for use in nurse/midwife training or printing materials for outreach programs, but the training of the nurses/midwives and the distribution of these outreach materials are primarily

conducted by provincial and district governments, respectively.

Meanwhile, the budget allocated to achieve the program's target is about 4 percent of the Ministry of Health's budget. The budget allocated to the program in 2017 was IDR 2.33 trillion, corresponding to 3.78 percent of the central government health sector budget, and 1.16 percent of the total national health sector budget (Table 2.6). The allocation decreased in 2018 both in absolute and relative terms to IDR 2.10 trillion, corresponding to 3.23 and 0.97 percent of the central government and total national health budgets, respectively.

Given the limitation of functions at the central government level, it is important to consider having and designing performance targets that are achievable and within direct responsibility and control of the Ministry of Health, which would ideally be applied to other sectoral ministries too.

TABLE 2.5.

Applying the results chain to the Nutrition and Maternal and Child Health Program, responsible agency in *italic* below

Ministry	Program	Outcome	Activity	Output
Ministry of Health	Nutrition and Maternal and Child Health Program <i>DG Nutrition and Maternal and Child Health</i>	1. % of Birth in Health Facilities <i>Ministry of Health</i>	Health Operational Grant (BOK) <i>Secretariat General for Nutrition and Maternal and Child Health</i>	1. # of Community Health Centers receiving Health Operational Grant <i>Ministry of Health</i>
		2. % of Pregnant Women with Chronic Energy Deficiency <i>Ministry of Health</i>	Community Nutrition Improvement Development <i>Directorate for Nutrition Development</i>	2. % of early initiation of breastfeeding <i>Local government</i>
			Other activities	Activity-level indicators 3-23

Source: World Bank staff assessment based on Ministry of Health Strategic Plan 2015-2019.

TABLE 2.6.

Size and proportion of budget allocation of the Nutrition and Maternal and Child Health/Public Health Program compared with the Ministry of Health, central government, and state budgets

Budget	Allocation (IDR trillion)		Percent of program budget (%)	
	2017	2018	2017	2018
Nutrition and Maternal and Child Health/Public Health Program	2.33	2.10	100.00	100.00
Ministry of Health budget	58.27	59.10	4.00	3.56
Central Government (Health)	61.72	65.07	3.78	3.23
Central + Subnational Governments (Health)*	200.49	216.00	1.16	0.97
Central Government (Total)	1,315.53	1,454.49	0.18	0.14
Central + Subnational Governments (Total)	2,412.41	2,608.35	0.10	0.08

Source: World Bank staff calculations based on Indonesia State Budget Financial Note (2017 and 2018).

<sup>87</sup> This, however, tended to vary from year to year, and between the current year's Work Plan (Renja) and Performance Report (LAKIP). For example, in 2016 there are three program-level indicators in the Work Plan but six in the Performance Report.

## B

## Part B: Budget Implementation

## B.1 Managing adverse impact of in-year budget revisions

**I**n order to implement the strategic plan with integrity, ministries need predictability regarding the resources that will be available to them to implement those plans. Gaps between planned and actual revenues estimates were so significant in 2014, 2015 and 2016 that Indonesia's score on the 2017 PEFA assessment was a "D".<sup>88</sup> This flowed through to scores of "C" and "C+", respectively, on the aggregate and composite measures of expenditure outturn. This trend was curbed in 2017 and 2018, such that by 2018 no in-year budget revision was needed.

**Revisions of the approved budget may have reduced the efficiency and effectiveness of budget implementation, but good progress has been made.** Some budget adjustments in recent years have been very significant—at least by international standards—for many spending agencies (Table 2.7). In the past three years, the median increase in ministry budgets has been around 15 percent or more, while the median decrease in the same years has ranged from about 5 to nearly 20 percent. Budget revisions of this size are almost certain to impact performance management and hence

policy effectiveness. The recent PEFA report scored the GoI "B" on this aspect of budget reliability, noting however, that some recent years (e.g., 2015) were more disrupted than others.

**The PEFA report also gave credit to the GoI's policy of 'self-blocking'—i.e., allowing ministries to determine their own priorities in effecting expenditure reductions.** This may be desirable, given that program managers usually have the best sense of where savings can be made. In practice, though, program managers often have limited flexibility in applying reductions to the lowest priorities given that a large proportion of costs may be on already committed expenditures (salaries, utilities, etc.). However, it is also important to note that focusing on cutting operational spending, such as travel, may have a significant impact on the quality of central government support and supervision of district implementation, in decentralized sectors.

**Significant mid-year budget revisions may interfere with a unit's ability to implement its programs and activities and, consequently, in achieving its intended targets.** For example, the targeted num-

ber on the pregnant mothers with chronic energy deficiency (CED) that receive supplementary feeding was not met. In 2017, only 75.8 percent of CED pregnant mothers receive supplementary feeding out of the 95 percent target. This program is under Directorate of Community Nutrition, which experienced a budget reduction by about 30 percent during the budget revision process.<sup>89</sup>

**Managing in-year revisions is necessary to minimize any adverse impact on policy outcomes.** To overcome the impact on spending effectiveness, this requires: (i) improving the quality of revenue forecasting and the realism of budget revenue estimations; (ii) setting a self-imposed target for reducing the median variance to, say, consistently less than 5 percent (for any ministry), within the next three years; (iii) developing clear protocols for how ministries should apply in-year budget reductions, when necessary, so as to minimize negative impacts, not only on their core functions and national priority programs, but on other impact-sensitive expenditures. These may be activities or projects where spending delays/ reductions could have a disproportionate impact on policy effectiveness, and/or credibility with the public; and (iv) if significant mid-year budget revisions are unavoidable, the MoF should ensure that delegating detailed decisions to line ministries is accompanied by appropriate oversight and the challenging of their major re-allocative decisions (i.e., not simply for 'national priority programs').

<sup>88</sup> The PEFA applies the scores on the following criteria: "A" High level of performance that meets good international practices; "B" Sound performance above the basic level; "C" Basic level of performance broadly consistent with good international practices; and "D" Either less than the basic level of performance or insufficient information to score.

<sup>89</sup> There is no information on activity-level budget revisions in the 2017 Ministry of Health Performance Report, but budget revision at the Echelon II level is reported. The Echelon II units generally correspond to a state budget activity of the same name, so here it is used as a proxy to approximate the budget change at activity level. However, it should be noted that some of these activities may be carried out at Regional Units of the DG or deconcentrated to subnational governments.

TABLE 2.7.

In-year budget revisions between 2013 and 2017 (from approved APBN to revised APBN-P)

Budget Year	2013		2014		2015		2016		2017	
	Median	LM#	Median	LM#	Median	LM#	Median	LM#	Median	LM#
Increased budget	+5.8%	32	+2.5%	7	+18.2%	52	+16.7%	19	+14.2%	27
Decreased budget	-3.5%	43	-10.1%	79	-19.6%	4	-8.3%	67	-4.8%	47
No change	-	8	-	0	-	29	-	0	-	12
Total budget (% changed)	+4.6%	75	-5.6%	86	-22.9%	56	+2.1%	86	+4.6%	74
% ministries impacted		88%		100%		68%		100%		85%

Note: LM#: number of line ministries.

Source: World Bank team estimation based from MoF data.

## B.2

## Limited and poor quality of performance information

**A well-functioning performance budget system allows central government to challenge ministries to demonstrate that spending is delivering the desired outcomes, but good performance information is essential for this to work.** Good performance information supports the key tasks that underpin effective performance budgeting: analyzing institutional performance and output efficiency, conducting baseline and other expenditure reviews, assessing budget requirements and challenging expenditure estimates, and understanding performance issues and constraints.

**The task of establishing performance information systems should not be underestimated.** This is a challenge of institutional incentives, as much as of capacity. Plenty of monitoring takes place, but it is fragmented, and focused on monitoring absorption rates, and measuring cost efficiency. This needs to be balanced with an emphasis on measuring the benefits of policy in terms of outcomes (non-financial component)—in other words, the quality of spending. The non-financial component of the performance information system should aim to have the following characteristics for each ministry:

**A clearly defined** set of agreed policy out-

comes for each budget program, including an annual (official and published) statement of the output and intermediate outcome targets that the ministry/agency seeks to achieve.

**1. Baseline information** concerning the existing status of well-being/stage of development associated with each program outcome.

**2. A clear set** of performance indicators for each program, including a small number of both output and outcome indicators and, where desirable/practicable, policy targets.

**3. Clear assignment of responsibilities** and resources for the collection, collation and analysis of performance data across all relevant parts of the organization associated with budgetary operations.

**4. A system and capability** for centralized performance data management, which ensures that accurate and consistent data relating to the sector are collated and available to all who need them.

**5. A mandatory, annual (non-financial) 'performance report'** by each ministry, for submission ultimately to Parliament, which brings together a full summary of all the

available performance evaluation work gathered on budget activities during the previous year (available by end-May).

**The scarcity of quality performance information has contributed to the mistargeting of beneficiaries for certain programs, reducing the spending effectiveness of sector programs.** The Housing chapter describes how built subsidized housing units tend to be poorly located—situated in rural areas or far from urban centers, although housing needs are concentrated in urban areas—and be of inferior quality. These factors combined with the lack of enforcement of residency compliance requirements have led to high vacancy rates. Such homes do not contribute to the GoI's objective of achieving 'housing for all'. The use of geo-tagging technologies is an option to help track quality and take actions to address non-compliance of quality standards. Likewise, the quality of septic tanks and standards in overall sanitation value chains remain poor despite significant increases in sanitation spending. As mentioned in the Water Supply and Sanitation chapter, only 8 percent of households would qualify as having 'improved sanitation' against the GoI's measure, i.e., having adequate, multi-chamber and sealed septic tanks. Conversely, the availability of quality

**TABLE 2.8.** Multiple reporting for performance information

Activity	Whole Government	Cross Sectors/ Convergence programs	Individual Ministry/ one program (DG)	Local Government Level
Planning	Bappenas	Bappenas	Bappenas	Bappenas MoHA
Budgeting & realization	Bappenas MoF (DG Budget & DG Treasury)	Bappenas MoF (DG Budget & DG Treasury)	Bappenas MoF (DG Budget & DG Treasury)	Bappenas MoF (DG Fiscal Balance) MoHA
Development and Budget Performance	Bappenas		MoF (DG Budget)	MoHA
General performance/ Accountability	MoABR	MoABR	MoABR Presidential Staff Office	MoABR Presidential Staff Office

Note: Bappenas = Ministry of National Development Planning, MoF = Ministry of Finance, MoHA = Ministry of Home Affairs, MoABR = Ministry of Administrative and Bureaucratic Reform.  
Source: World Bank staff assessment.



performance information has been shown to lead to resource savings, as mentioned above in the use of the modern, web-based Roads Asset Management System (RAMS) by DGH.

**Information on needs is particularly important for more accurate targeting of subnational transfers.** Information failures have been found to contribute to problems such as the mismatch of DAK allocation amount to district need and low convergence of social assistance programs at the beneficiary level. These issues undermine effectiveness in central government spending and suggest limited prior assessment by the central government of local governments' fiscal and/or institutional capacity and development priorities due to the incomplete information at the subnational level.

**Given the importance of this kind of information for both the targeting and monitoring of spending, more emphasis on the quality of systems for collecting it is warranted.** A second phase of the One Data initiative could potentially support upgrading of government data management. This could include: developing standards for data collection and management (including sharing and publication), followed by having specific KPIs on meeting these standards within each ministry Renstra, which are then measured in the annual LAKIP. In parallel, a function within the Central Bureau of Statistics (BPS) is also important to support better data management.

**There is also considerable room to rationalize parallel systems collecting similar performance information and ensure more systematic information sharing.** Three agencies—Bappenas, the MoF, and the Ministry of Administrative and Bureaucratic Reform (MoABR)—are involved in monitoring 'performance'. The MoABR is responsible for 'organizational performance' monitoring, but undertakes this task largely from the same basic budget performance information available to the other two central agencies. Efforts are being made to align and connect separate planning and budget preparation systems, for example Krisna and SAKTI, but this can only be a partial improvement. In addition, various reporting

applications, such as Smart DJA and OM-SPAN by the MoF and e-Monev by Bappenas, have also been developed. However, the linkages between these reporting applications and the usage of the applications for the following budget planning process remain unclear. The actual mandates of each organization need to be better specified. Within sectors such as in health, the Health chapter has also called for more clarity between the roles of the MoH, BPJS Healthcare, and the Social Security Council in monitoring and ensuring provider performance in JKN implementation (Table 2.8).

**While Government Regulation (PP) 17/2017 Article 34 mandates a requirement for MoF and Bappenas to carry out data sharing for the planning, budgeting and realization of budgets, the use of an integrated IT system and common data exchange among Bappenas and MoF is still occasional.** This is mainly due to the lack of coordination among the two agencies, which stems primarily from differing views in terms of their appropriate roles and responsibilities. At present, line ministries are required to submit data through two separate IT systems --Krisna for planning and SAKTI for budgeting-- which creates a duplication of data. If the data sharing can be fully realized and the systems are in place to create one consistent data structure, Bappenas and MoF would be able to monitor the line ministries' data throughout the planning, budgeting, execution, and reporting processes.

**As with the implementation of a more strategic performance architecture, introducing more robust information systems could be done in stages, focusing on a few ministries first and learning from experience.** For many line ministries, the immediate need is to ensure that: (i) the data are collated centrally and made accessible to all relevant departments; (ii) the performance reporting process is structured and mandatory; and (iii) the information is used to challenge policy and resourcing decisions, both internally and externally, in particular through engagement with the MoF and Bappenas during budget preparation.

## B.3



**“Information on needs is particularly important for more accurate targeting of subnational transfers”**

## Weak monitoring of subnational performance

**I**nformation is particularly needed in decentralized sectors such as education, water supply and sanitation, infrastructure, and health. The information should capture how subnational governments (SNGs) perform, both in terms of the amount and mix of spending on different interventions and sectors, as well as the achievement of outputs and outcomes. About IDR 200 trillion, or 8.1 percent, of the budget goes to SNGs in the form of conditional transfers (State Budget 2019) and monitoring of whether they are achieving policy objectives is fundamental. The MoF is best placed to leverage the generation and reporting of this information, since it controls the disbursement of fiscal transfers, but line ministries are best placed to identify specifically what kind of information is needed to monitor performance.

**Decentralization in Indonesia has a potential to weaken the underlying concept of clear and direct accountability, which is implicit in, and necessary for, successful implementation of many performance budgeting methods.** Line ministries often express concern at their inability to control, or even monitor, outputs and effectiveness once the responsibility for service delivery is passed to local governments. Devolving responsibility may have met certain political objectives, but it appears in many cases to have disconnected line ministries from outcomes, including program information and performance. For example, despite increasing BOS allocations, which are often complemented by BOSDA, 42 percent of schools still lack basic requirements needed to fulfill the MSS that could be provided by using these resources. Not all SNGs make achieving education MSS a performance indicator in the monitoring and evaluating of education spending.

**Improving the availability and quality of performance information coming from local and subnational (mostly service delivery) spending units is essential.** The kind of performance information that is needed on SNGs for line ministries to oversee the performance from a higher

level includes comparable data on spending, covering at least the main interventions that SNGs are responsible for administering. This needs to be complemented with strengthening local capacity for data collection and reporting. The immediate challenge is to ensure that capacity building and support for subnational authorities is accompanied by sound top-down guidance and standardization in both financial and non-financial reporting procedures.

## B.4

### Unavailability of formal expenditure reviews

**E**xpenditure reviews do not yet play a major role in GoI performance management, but efforts to undertake ‘non-regular’ evaluations have started in several line ministries. In addition to performance information collected as part of budget monitoring, expenditure reviews are an important way of doing a deeper dive into the performance of specific interventions, particularly those that are of priority importance for national policy goals, or that absorb large amounts of budget. Establishing a sound performance evaluation process in line ministries should include the examination of at least one, but preferably two, major policy interventions (budget programs) within the mandate of each ministry. Reviews that measure ‘cost effectiveness’ make the greatest contribution to improving performance with major interventions and warrant a major effort to demonstrate performance.

**Formal expenditure reviews should be part of identifying and building performance management systems in a ministry to inform decision-making and to demonstrate where performance improvement is necessary and feasible.** Budget programs and activities must be responsive not only to changing needs and priorities but also to new opportunities and improved methods for output delivery etc. Periodic expenditure reviews help to ensure continuous improvement in policy design and implementation.

## C

# Part C: Organizational Structures & Responsibilities

## C.1

### Overlapping budget management process between central agencies

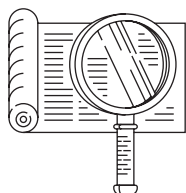
**T**he organizational nexus between the MoF and Bappenas is critical for the efficient and effective delivery of all budget programs. Government Regulation No. 17/2017 established a clear mandate for Bappenas to have a role in the budget process, but also effectively proposed that both agencies manage different stages of the budget process jointly, without saying how this should be operationalized. The uncertainty on the division of roles between the two central agencies also creates a lack of clarity for other ministries and agencies regarding the type and degree of challenge that will be made to their estimates of expenditure (and to their delivery performance), and to which central ministry they should respond on specific ‘budget impact’ issues.

**This parallel function on budget management also partly contributes to the weak linkage between the planning and budgeting documents.** The preparation of medium-term and annual planning by Bappenas needs to have input on the resource envelop from the MoF, and vice versa the budget allocation needs to have input on the economic planning perspective from the economic development needs and priorities. The evidence from the previous section on the deviation between planning and budgeting documents clearly indicates that this coordination remains to be further strengthened.

**Greater effort is still required to minimize the duality in the budget process, in particular to achieve greater integration of the ‘routine’ (non-discretionary) and ‘development’ (discretionary) budgets.** Routine and development expenditures were part of the historical dual-budgeting process in Indonesia. State Finance Law No. 17/2003 requires the integration of both expenditures. However, the initiatives seem to have been only partially successful so far. There remains an enduring duality in budget formulation that compromises resource allocation and policy consistency, and reduces budget transparency.

**The coordination issues on budget formulation are not only found in the two main central agencies, but also between agencies in a sector and within agency.** The Health chapter indicates that health sector performance is affected by a lack of clarity in governance and accountability arrangements of JKN, and poor coordination among key institutions. While BPJS Healthcare is tasked with managing the health insurance fund and ensuring the overall financial sustainability of the scheme, it has limited authority to do so, since decisions on contribution rates, benefit packages, cost-sharing arrangements, reimbursement rates, and contract terms are determined by the MoH. There are also conflicting guidelines for service delivery, quality standards, and referral protocols set separately by the MoH and BPJS Health.

## C.2 Ineffective vertical coordination



**“...further work is needed to clearly define the respective functions of Bappenas and the MoF in relation to all aspects of budget planning and management.”**

**Current practices are improving.** MoF Regulation (PMK) No. 214/2017 sets out a number of directives for line ministries and agencies relating to (non-financial) performance measurement and evaluation responsibilities and methods. The preamble to this regulation recognizes the close connection between the GoI’s economic framework, line ministries, work-plans and the performance-based budgeting system. It correctly emphasizes the dual purpose of monitoring and evaluation on improving quality (performance), and ensuring accountability across budget operations.

**Nonetheless, further work is needed to clearly define the respective functions of Bappenas and the MoF in relation to all aspects of budget planning and management.** Improving expenditure effectiveness requires resolution and clarity on the following: the core functions of each organization, including proper separation of economic management and fiscal management tasks; more effective integration of macro-fiscal analysis with medium-term budget forecasts and annual budget allocations; a single process for ensuring that national policy priorities are adequately reflected/incorporated into budget programs/activities; and clearly separated and defined expenditure performance evaluation and reporting responsibilities.

**B**oth national and subnational spending contribute to many of the policy outcomes that government cares about. Optimizing this spending requires considerable coordination around: (i) clarity on what each level of government is responsible for; (ii) coordination around complementary investments; (iii) aligning the geographic allocation of funding with needs and priorities; (iv) more policy-oriented design of conditional transfers clearly focused on a policy outcome, with an attendant intervention logic; and (v) common Chart of Accounts to support stronger evaluation of spending and performance (see Data chapter).

**Multiple examples from the sectoral chapters have stressed the importance of vertical coordination between central and subnational governments to ensure spending efficiency and effectiveness.** Coordination failures due to the lack of clarity of role and function for each level of government have been found to contribute to problems on the delivering of services, such as underinvestment by local governments in supporting central government WSS infrastructure, and incongruity between central government and local government planning in the selection of dam construction locations. The Housing chapter also highlights that, sometimes, conflicting regulations regarding the responsibilities of local governments prevent them from complementing the central government’s spending on a particular intervention.

**Fiscal decentralization over the past 20 years has been accompanied by some fragmentation of funding to subnational levels.** This multiplicity of funding chan-

nels potentially complicates the task of: (i) directing resources efficiently to particular needs; and (ii) monitoring the quality and effectiveness of service delivery at lower levels. At the subnational level, fragmentation of funding sources has led to an increase in the administrative burden for local governments and, in the case of health, also primary care providers such as Puskesmas. It is often the case that the different sources of funding (e.g., district budget, central government budget, JKN) have varied schedule and reporting requirements, and restrictions on the use of funds. As highlighted in the Health chapter, coordination challenges between LGs, health-care providers, and BPJS Healthcare have negatively impacted budget absorption at the Puskesmas level, and consequently compromised the quality of services delivered. Given that rationalizing these funding channels is unlikely in the near term, other approaches need to be explored to achieve greater clarity and consistency in the relationship between central and local government budget management.

**Effective implementation of a performance budgeting framework requires a ‘performance management’ environment at both central government and, as far as possible, local levels.** The GoI has been putting in place measures to improve governance, including increasing organizational and individual capacity, responsibility and accountability for budget management, especially since 2014. However, similar to other aspects of the PFM system, the form and use of these performance management tools could be much improved, especially the range of organizational performance measures.

# Priority areas for improving PFM in Indonesia: Proposed recommendations

**T**here are seven priority areas for PFM improvements that could raise the quality and effectiveness of government spending. These proposed areas are based on the findings and dialogue with staff in the central agencies of the MoF and Bappenas, and where they consider changes may be most needed and could be most effective.

## 1

### Improve coordination between the MoF and Bappenas to align planning and budgeting.

Harmonize planning architecture, budget architecture, the performance management framework, and organizational structure by improving business processes, and using common program coding and a consistent planning and budget classification structure to fully implement performance-based budgeting.

Roll out the integrated planning, budgeting, execution, accounting and reporting system (SAKTI) to all spending units (Satker) of line ministries.

Achieve seamless data exchange and interoperability between Krisna and SAKTI (erstwhile RKA-KL) to reduce the gap between plan and budget allocations; between e-Monev and SMART KL systems to align outputs with planned outcomes; and between OM-SPAN and Krisna for reporting progress to Planning.

## 2

### Strengthen implementation of the 'money follows programs' approach

Expand budget tagging of expenditure and outputs for measuring results achieved under national priority and thematic programs.

Introduce a program-based budget classification structure toward the 'money follows programs' approach and pilot program-based budgeting in selected ministries, including a program restructuring initiative within the MoF as a pilot ministry in FY2020.

Fully implement performance-based budgeting by harmonizing organizational structure, budget structuring, the policy planning structure, and the performance management structure (move from 'money follows functions' to 'money follows programs').

Introduce a new sub-economic classification and program code for COVID-19 expenditure to track allocation, expenditure and outputs of the Government's COVID-19 response, considering FY2020 Budget has been largely reallocated for the COVID-19 response through Government Regulation in Lieu of Law (Perppu) No. 1 of 2020.

## 3

### Strengthen the medium-term perspective in planning and budgeting.

Strengthen the medium-term perspective in planning and budgeting (MTEF) by issuing indicative budget ceilings for two years following the budget year to each line ministry (in addition to the budget year) at the time of the first budget circular (indicative ceiling circular), jointly issued by Bappenas and the MoF. Indicative (hard) ceilings for the outer two years will allow line ministries to undertake better medium-term planning.

The MoF to change the requirement for line ministries to submit their estimates of MTEFs only at a strategic level (program and activity level) rather than MTEFs by each individual spending unit.

As a result, clear visibility of fiscal constraints should lead to more competition for resources, challenges to proposals, and ultimately a more strategic allocation of resources.

# 2.4

## 4

### **Improve the ‘intervention logic’ concepts in program/ performance design.**

Strengthen managerial linkages between policy objectives, programs, activities and outputs by providing capacity building on the overall implementation of the ‘intervention logic’ process to all central agencies and line ministries.

The MoF, Bappenas, and the Planning and Finance Bureaus under all line ministries to strengthen the quality control on the intervention logic that has been designed by the line ministries.

Define intervention logic at two levels: (i) a complex results chain at the whole-of-government level, which includes the contribution by central and subnational Governments to the achievement of intermediate outcomes; and (ii) a simpler results chain in which intermediate outcomes are more proximate to a ministry itself, and for which it is reasonable to hold its managers accountable.

## 5

### **Continue to move to smaller and fewer in-year budget revisions, both for the mid-year budget revision (APBN-P) and self-blocking budget cuts.**

Continue concerted efforts to avoid large in-year budget revisions through strengthened capacity, transparency and realism, and hence much improved accuracy, in budget revenue estimations. Where significant mid-year budget revisions are unavoidable, the MoF should ensure that delegating detailed decisions to line ministries is accompanied by appropriate oversight and the challenging of their reallocation decisions, in particular to ensure the allocations for spending on national priority programs.

## 6

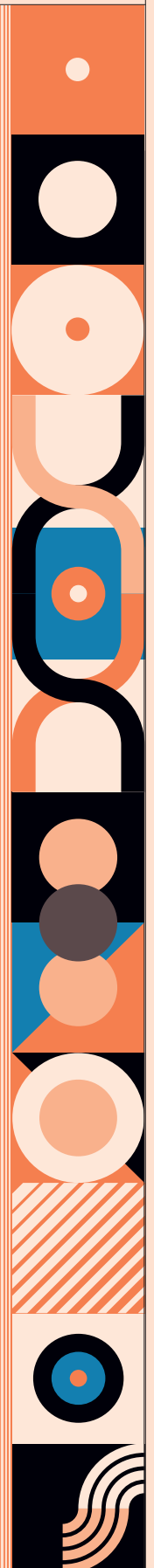
### **Strengthen a ‘performance management environment’ that will encourage and support higher-quality spending by the public sector.**

Support central government ministries and agencies to: (i) strengthen the ‘performance management environment and culture’ within their organizations; and (ii) review and improve alignment between their expenditure policies, organizational structures and the revised program and performance budget structures (with input from the MoABR).

## 7

### **Enable a performance-based budgeting system that is adapted to the requirements of a significantly decentralized fiscal process.**

Enable more effective application of the performance-based budgeting system in a decentralized fiscal system by: (i) providing clarity on what each level of government is responsible for; (ii) coordination around complementary investments; (iii) aligning the geographic allocation of funding with needs and priorities; (iv) more policy-oriented design of conditional transfers clearly focused on a policy outcome, with an attendant intervention logic; and (v) common Chart of Accounts to support the stronger evaluation of spending and performance.



*Annex 2.1***Sectoral Chapter Matrix on PFM Issues**

<b>Sector</b>	<b>Planning</b>	<b>Budgeting</b>
<b>Health</b>	<p>Health sector RKP fails to articulate a results chain from activities, to outputs, to outcomes and the definition of outputs and outcomes are often not clearly stated. This challenge limits the usefulness of reported achievement in LAKIP (<i>Laporan Akuntabilitas Kinerja Instansi Pemerintah</i>) or implementation and performance report.</p>	<p>Although SNGs play an increasingly dominant role in health service delivery following decentralization, only 33 percent of districts are able to allocate a minimum of 10 percent of health.</p> <p><i>Dana Alokasi Khusus</i> (DAK)—the main supply side inter-governmental fiscal transfer that is earmarked for health—is not linked to need or performance resulting in wide variation in facilities' ability to deliver services.</p>
<b>Education</b>		
<b>Social Assistance</b>		

Execution	Monitoring and evaluation	Organizational roles
<p>Health facilities must apply for funding from different sources (e.g. district budget, central government budget, JKN) with varied schedule, reporting requirements and restrictions on the use of funds. These place significant administrative burden on Puskesmas and cause coordination challenges among districts, health service providers, and BPJS Healthcare, affecting program implementation and quality of health services. In 2015, 85 percent of Puskesmas reported they were unable to use all their revenue from capitation and around 10-15 percent of capitation funds were undisbursed.</p>	<p>There is also a lack of clarity from either institution on who is responsible for monitoring and ensuring provider performance. The Social Security Council (<i>Dewan Jaminan Sosial Nasional</i>, DJSN) has overall supervisory authority over JKN's implementation and BPJS Healthcare's operations, but it has limited power and capacity to carry out these roles.</p> <p>Financing and performance are also reviewed by separate institutions making it difficult to link health sector spending with performance. The MoF reviews financing data, while the MoABR and the MoH review performance separately.</p> <p>PBI-JKN targeting outcomes have worsened and JKN-PBI monitoring and evaluation systems are outdated and do not focus on outcomes at the beneficiary level. Monitoring and evaluation systems should be able to monitor bottlenecks in benefit uptake and access. In addition, grievance redress systems are functioning weakly while existing communication efforts have not been effective in addressing the lack of information to beneficiaries, as well as health service delivery points on the ground.</p>	<p>The tiered referral system that relies on primary care providers as the system's gatekeepers does not function well.</p> <p>The fragmented information system (e.g., multiple systems managed by different departments of the MoH for different health programs, and multiple systems to process JKN claims developed by BPJS Healthcare), poor coordination among key stakeholders, and lack of interoperability between data systems provides limited useful information for oversight and planning to inform strategic prioritization and resource allocation at the district and national level and strategic prioritization and resource allocation at the district and national level.</p> <p>Fragmented in financing constrains districts' ability to plan and manage for health care and creates challenges for allocating and using resources more holistically.</p>
<p>Although there is limited information to measure the effectiveness of PIP program, the continuing high drop-out rates between SD and SMP to SMA level of schooling indicates limited impact of PIP program.</p>	<p>Not all SNGs are making the achievement of the education MSS as a performance indicator for monitoring and evaluating education spending. The use of the electronic planning platform, ERKAS, by some SNGs could serve as an example of how expenditure could be linked with performance.</p>	<p>Despite increasing BOS allocation, which is often complemented by BOSDA, 42 percent of schools still lack basic requirements needed to fulfill the MSS that could be provided by using these resources. Joint planning of national and local BOS programs could improve the efficiency and effectiveness of these fund sources to meet the MSS. Resource allocation to support education infrastructure are weakly linked to district's needs, particularly for DAK Fisik.</p>
	<p>Although Rastra targets the 25 percent poorest of the population, in practice around 50 percent of the population received the benefit at a third of the designed value. The allocation of rice and eggs via E-Warong stores or agents will allow for much greater control over the targeting of beneficiaries and make the full benefit packages available to 15.6 million families.</p> <p>There is limited information to measure the effectiveness of the PIP program.</p>	<p>Ensuring social assistance programs converge at the household level remains challenging. Integration of beneficiaries at the household level across programs remains low. Although all the poorest 10 percent households are eligible to receive all major SA programs, only 2 percent have access to the four major SA programs in 2014 and increased only marginally to 3.2 percent in 2017. While some of this can be explained by measurement error in the Susenas survey, the very low share receiving all four programs reflect the need to improve integration and coordination among key programs. While existing policy on the use of DTKS by PKH, Rastra/Sembako, PBI-JKN and PIP was developed to ensure the same list of potential beneficiaries used by main social assistance programs, the implementation result is yet to be optimal due to inconsistent implementation by the relevant implementation ministries and local government offices.</p>

Sector	Planning	Budgeting
National Roads	<p>Strategic planning is not currently guided by indicators of transport efficiency and road safety, and still focus too much on quantity.</p>	<p>Total spending on national roads is insufficient to meet growth in demand and Government targets as stated in the 2025 RPJPN and 2034 draft Long Term Master Plan of National Roads Network. The 2018 budget allocation for national roads (IDR 42 trillion) is below needed levels of IDR 47.5-51 trillion.</p>
Housing	<p>The targeting design of the existing subsidy schemes needs to be strengthened to reduce leakage and to be focused on lower income households with most acute affordable housing needs. To be eligible for FLPP and SSB, the maximum individual basic income eligibility criteria is IDR 4 million per year if they intend to purchase landed houses and up to IDR 7 million per year for multi-story units. These ranges translate into the middle- and high gross household groups corresponding to deciles 5 to 9. This can put applicants to these schemes at the 90th percentile of income-earners, who are not meant to benefit from the subsidized programs. Moreover, the current targeting of both programs exposes them to leakage, as an applicant with an eligible individual income can successfully apply to the programs even if the household income is above the eligibility target.</p> <p>The GoI has primarily defined success in housing policy as a reduction of the quantitative and qualitative deficit, which does not guarantee the creation of sustainable communities. Simply producing more new housing units without considering proximity to economic centers, livability and greater land-use patterns will not help Indonesia achieve SDG 11.1 by 2030, i.e., to “ensure access for all to adequate, safe and affordable housing and basic services”. Poorly built subsidized housing units may in fact increase the number of substandard housing units. Poorly-located subsidized housing will also continue to facilitate sprawl, increase traffic congestion, and expenditure associated with providing basic infrastructure.↓</p>	<p>Poorly designed and regressive subsidy schemes such as FLPP and SSB have caused larger budgetary resources to be allocated annually with lesser volumes being achieved. SSB creates large future liabilities which are yet to be allocated from the future budgets, whereas FLPP’s cost per unit funded as liquidity support to banks rises every year with increase in home prices, thereby necessitating larger subsidy resources to keep up with the same volume. Besides, the current subsidy interventions do not adequately leverage private sector financing and risk absorption capacity as both lenders and developers can readily access the subsidized housing market and generate relatively risk free returns.</p>



Execution	Monitoring and evaluation	Organizational roles
<p>Budget absorption have improved in recent years due to a new policy on advance procurement and an earlier approval of the budget warrant. However, there was a slight drop in 2016 mainly due to mid-year budget cuts.</p> <p>Bad quality engineering designs prepared without systematically applying the relevant design standards and with insufficient attention to the road condition have led to frequent civil works contract modifications, delays in work implementation and additional costs.</p>	<p>Poor data collection and management systems have led to fragmented and ineffective program prioritization. However, trials of a modern and web-based Road Asset Management System (RAMS) in several <i>Balai</i> showed that substantial resource savings could be obtained if a modern system is used to formulate expenditures.</p>	<p>Organization of DGH is highly decentralized, which has hampered the quality, efficiency, and speed of implementation of national road projects.</p>
<p>Subsidized housing units tend to be poorly located and fail to meet the demand for housing in urban areas. Despite the fact that housing needs are concentrated in urban areas, 57 percent of FLPP subsidized housing units were located in rural areas in 2017. Poorly located housing may result in higher long-term expenses for beneficiaries and infrastructure development and maintenance cost for the Government.</p> <p>A sample of 14,393 new housing units purchased with Government subsidies showed that approximately 36 percent of all units are vacant. The primary reason for vacancy was poor basic infrastructure conditions (44 percent), followed by faulty building construction (27 percent) and lack of electricity and clean water (17 percent). This is further confirmed by an assessment done in 2018 by the Evaluation Directorate of the Directorate General of Housing Finance, which shows that 55.4 percent of developer-built subsidized units do not meet the minimum construction standards and infrastructure requirements as stipulated in the KPR subsidy regulations.</p> <p>The poor quality of subsidized homes does not help the Government meet its goal of ensuring “housing for all”. Funds are being spent on housing units that do not provide beneficiaries with a long-term solution to their housing needs.</p> <p>The poor quality of housing is in part exacerbated by the fact that subsidized housing developers are generally fragmented, localized and small in scale. These small developers do not have the economies of scale necessary to produce good quality housing as they lack access to skilled construction workers and project managers, good quality construction materials, technology and finance. They also may not be as concerned with reputational risk when compared to larger-scale developers.</p>	<p>The monitoring and evaluation of housing subsidized schemes is to ensure that the funding has been spent for the construction and/or upgrading of the housing units. Though, there is a lack of monitoring and enforcement of housing construction quality standards and the residency compliance requirement leading to high rate of poorly-built housing coupled with a high vacancy rate.</p>	<p>The heterogenous fiscal and institutional capacity of local governments has been a key challenge in improving the quality of spending on housing. About 70-85 percent of funding for low-income housing is dedicated to national ministries such as the MoPWH and Ministry of Agrarian and Spatial Planning/ National Land Agency (ATR/BPN), leaving local governments with insufficient resources to develop and implement urban plans, housing programs and data management systems. Moreover, variations in local government capacity have also prevented inclusionary housing laws from achieving their expected results. Although there are inclusionary laws mandating the production of housing for low-income individuals, enforcement is generally weak at the local level.</p> <p>Conflicting laws over the responsibilities of local governments to provide housing for low-income people also creates disincentives for them to do so. While Law No. 1/2011 on Housing and Settlement mandates the delivery of housing for low-income people as the responsibilities of both central and local governments, Law No. 23/2014 states that local governments are only responsible to deliver housing for disaster survivors as well as for relocation-affected people</p>

Sector	Planning	Budgeting
	<p>purchase landed houses and up to IDR 7 million per year for multi-story units. These ranges translate into the middle- and high-income group in deciles 5 to 9. However, lenders underwrite beneficiaries' capacity to pay based on household gross income, not individual basic income. Given that the average Indonesian household has 1.8 working adults, the average applicant to these schemes (assuming income of IDR 5.5 million per month) has an annual household income of about IDR 10 million. This puts the average applicant to these schemes at the top 20 percent of income-earners, who are not meant to benefit from the subsidized programs. Moreover, the current targeting of both programs exposes them to leakage, as an applicant with an eligible income can successfully apply to the programs even if the household income is above the eligibility target.</p>	
Water Resources Management	<p>New dam construction is not always prioritized based on net benefits, nor is dam planning integrated with spatial planning, e.g., political considerations outweigh technical consideration in deciding new dam locations.</p>	<p>If recent budget allocation trends were to continue into 2018 and 2019, it is estimated that only 68 percent of the MoPWH's irrigation targets, as written on their strategic plan, could be achieved by 2019. Similarly, only 25 percent of the total estimated budget needed to construct 65 dams had been allocated so far.</p>
Water Supply and Sanitation	<p>Local governments should ensure that their PDAM develop a multi-year business plan that include strategy and action plan to improve their performance in order to escape from reliance on subsidies. Many PDAM still do not have a realistic and good quality business plan aligned to the RPJMD and other local government planning document such as the master plan for water supply development (RISPAM). Many PDAM prepared business plan only to fulfill readiness criteria for projects and/or just because it is required by regulation, and many of these business plans were prepared by consultants without involvement of the PDAM. As a result, most of this business plans are not being utilized and updated. PDAM should prepare a realistic business plan that include strategy and action plan to improve their performance that is discussed and approved by local governments, and hence aligned to the local development plan.</p> <p>Government output targets for the sub-sector should be changed to only include those households whose connection to the network meets the minimum standards for quality and reliability. ↓</p>	<p>Overall, the level of WSS spending is still far below the amount that is required to meet the government's targets. Implementing the RPJMN requires a public investment of around IDR 253 trillion (US\$20 billion) over five years or IDR 55.5 trillion annually. This indicates a gap of IDR 43.4 trillion compared with the current level of investment in the sector.</p>

Execution	Monitoring and evaluation	Organizational roles
<p>Several planning and implementation challenges have led to low budget absorption by DGWR in recent years. These challenges include assessment to update data on infrastructure quality and the need for intensive consultation with various stakeholders to prioritize (i.e., to reach agreement on land acquisition, to adjust construction with farmer cropping cycle, and to reach consensus between multiple SNGs involved one service area).</p>		<p>More coordination would be needed between the central and SNGs in planning and budget allocation. Twenty-four out of 65 dams planned in the RPJMN will be located in Java and could irrigate an additional 220,000 ha of new rice fields. It has been unclear whether SNGs in Java are planning for agricultural growth of such magnitude.</p> <p>The management of national irrigation involves multiple stakeholders. Clear service agreement that describe the roles, responsibilities, right and obligations of the service provider and the recipient are absent, making the provision of services to farmers unreliable.</p> <p>DAK allocation is weakly linked to needs—the biggest DAK beneficiaries were not those who were the biggest rice producers.</p>
	<p>Central government should monitor the performance of local governments in maintaining and utilizing sludge treatment plants and use a funding mechanism that allows them to take resources away from those local governments that are not using them effectively.</p> <p>Local governments should also monitor and evaluate the implementation of the business plan and ensure that PDAM reviewed and updated it on an annual basis.</p> <p>In the medium term, financing arrangements should be modified to ensure that local governments/PDAM play their part in developing network facilities. Financing arrangement through performance-based grants could be considered as one of the mechanisms to channel funds. These options will require a reliable monitoring and evaluation system with credible data and enforceable penalties for non-performing local governments.</p> <p>The 'blacklist system' currently being considered by the MoPWH's Directorate General <i>Cipta Karya</i> ↓</p>	<p>The growing central government infrastructure investment is often not complemented by local government investment in supporting infrastructure. Therefore, when the projects are later handed over to the local entities, they are often not immediately operational due to lacking necessary investment such as local distribution networks. This indicates lack of coordination across government levels, as well as central government's limited pre-allocation assessment on local government's existing capacity and development priorities.</p> <p>With the issuance of the Government Regulation on the Minimum Service Standards (MSS) and the relevant Ministry of Home Affairs (MoHA)'s implementing guidelines, the MoPWH should instead collaborate and coordinate with the MoHA to ensure that local governments include provision of adequate budget for MSS achievement (including for water supply and sanitation) in their budgeting and planning documents.</p> <p>Greater fiscal space for WSS can only be achieved through overall expenditure rationalization by ↓</p>

Sector	Planning	Budgeting
	<p>Given the multi-dimensional nature of issues in the sector, the focus needs to be expanded to include both centralized and decentralized system, making up a comprehensive view of the urban sanitation system. Capacity and system development to effectively manage the whole system is as important as infrastructure development and, given the current poor performance, are areas that need addressing urgently. In practice, this means a reprioritization away from the current RPJMN plan of major infrastructure investment to focus on a wider range of services.</p>	

Source: authors

Execution	Monitoring and evaluation	Organizational roles
	<p>for local governments that have not complied with earlier agreements may not be effective and can jeopardize target achievement in the sector. The MoHA is also considering inclusion of MSS achievement as KPI for governors, mayors and <i>bupati</i>.</p>	<p>local governments, including on personnel and general administration spending. This will require development [by the MoHA] of better and clear guidelines on budget planning as well as guidelines on classification of types of expenditures for SNGs and its prioritization by SNGs.</p> <p>There is currently no national sanitation management policy to guide local governments.</p> <p>Infrastructure investment programs should be integrated with an effective capacity-building program for SNGs and PDAM. Currently, investment and capacity building programs are planned and implemented separately for different recipients. More effective coordination between these programs could ensure a sustainable operation and maintenance for the infrastructure.</p> <p>The GoI should resolve the separated responsibility between surface and groundwater management to ensure the comprehensive management of water resources under the MoPWH (DG Water Resources). Groundwater management currently remains under the responsibility of the Ministry of Energy and Mineral Resources (MEMR), while surface water management remains under the MoPWH.</p>

# 3

## Reforming *the* Intergovernmental Fiscal transfer System *for* Better Services

103-124

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| 3.1 | Introduction   |
| 3.2 | History of Intergovernmental Fiscal Relations and Vertical Balance |
| 3.3 | Managing Horizontal Fiscal Disparities                             |
| 3.4 | Improving Efficiency of Subnational Spending                       |
| 3.5 | Conclusion: Key Policy Messages                                    |

# Key Policy Messages

*The GoI should seize the opportunity of the ongoing revision of Law No. 33/2004 for a fundamental review of its intergovernmental financing system, with a view to strengthening its results orientation. The GoI could in particular consider the following guiding principles:*

## A

Measure fiscal capacity in the DAU fiscal gap formula based on potential, rather than actual, own-source revenues to incentivize districts to exert more tax effort for collecting property and sales taxes (such as Hotel and Restaurant Taxes), and to address Indonesia's persistent vertical imbalance;

## B

Move the design of Indonesia's fiscal equalization formula toward a per-client basis, with a view to ensuring sufficient financing for a minimal standard of service delivery across its territory; at the same time, abolish the basic allocation in the DAU to reduce perverse over-staffing incentives. To be politically viable, this will require a transitional strategy that limits revenue losses for net losers;

## C

Move toward an asymmetric design of the fiscal transfer system, in a way that grants more autonomy to better performing districts;

## D

Redesign the DAK Afirmasi as an instrument for bringing infrastructure up to a minimal standard in districts with a low capital stock;

## E

Further increase the share of earmarked transfers with a view to enhancing the GoI's ability to provide direct funding for national priority programs;

## F

Reform Otsus arrangements performance expectations, provide support for improvement, monitor progress, and reward performance.

## G

Scale up the *Hibah* with a view to filling the "missing middle" of mid-sized urban infrastructure;

## H

Improve the proposal-based allocation mechanism for the DAK, by making allocations more predictable, and better targeting those districts with the greatest needs; and

## I

Carefully experiment with performance-oriented transfers, with a view to strengthening top-down accountability for results.

### Further key reading

The World Bank. 2017. World Development Report 2017: Governance and the Law, The World Bank, Washington, DC. <https://www.worldbank.org/en/publication/wdr2017>

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# Introduction

**I**ndonesia's decentralization is in many respects one of the great global development success stories. The world's fourth-largest country, its largest majority Muslim nation, and one of the most geographically and culturally diverse large countries, has successfully transformed into a vibrant democracy and simultaneously decentralized power to over 500 subnational governments (SNGs).

**Almost two decades on, Indonesia has much to be proud of.** Threats of disintegration, which loomed large at the start of the 21st century, have subsided. Despite lingering concerns about local corruption, a new breed of developmental local leaders is emerging and succeeding in parlaying their achievements in delivery for their citizens into personal political success, paving the way for others to emulate them. Driven by a highly engineered central planning system, Indonesia has achieved commendable success in expanding access to basic services across the length and breadth of this extraordinarily geographically diverse country. Values of regional equality are hardwired into its bureaucratic culture and systems at a most fundamental level.

**However, while most citizens today have access to basic services, improving their quality remains a major challenge, as noted throughout the preceding chapters.** As Indonesia's SNGs bear most responsibility for delivering services to citizens, the question of how to improve the quality of basic service

delivery is primarily one of local governance and of central-local relations. Between 2001 and 2017, provinces and districts were responsible for about half of total general government expenditures, compared with merely 23 percent pre-decentralization (1994-2000).<sup>90</sup> Indonesia's SNGs—provinces (*provinsi*), cities (*kota*), districts (*kabupaten*), and villages (*kelurahan/desa*)—deliver most services that shape the opportunities in life for their citizens. Cities and districts manage primary and junior high school education, basic health care, and local water, and road and sanitation infrastructure, among others. While there is a widespread sense that SNGs are not using their resources as effectively as they could be, finding effective entry points for reforms has been challenging.

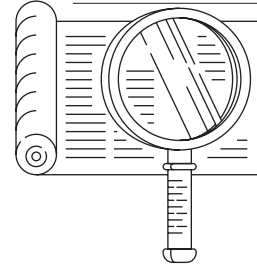
**Indonesia's rapid development and urbanization since it passed its major decentralization laws in 2004 through Laws No. 23/2004 and No. 33/2004 also confront it with new challenges.** As Indonesia modernizes and becomes more urbanized in its most populous regions, the persistent development challenges in its rural periphery grow starker. New challenges in urban areas are emerging that threaten not just the quality of life, but Indonesia's productive potential. The funding packages that accompanied the political settlement for Eastern and Western periphery provinces have not translated into those regions catching up to the extent that was anticipated 20 years ago.

**The 'last mile' of improving service quality, expanding access in remote and lagging regions, creating conditions for inclusive growth, and improving meaningful accountability will likely be the toughest.** These challenges will require Indonesia to dig more deeply to uproot the path-dependent bureaucratic norms that persist from the New Order system, take a leap of faith to embrace new norms of public management that many countries adopted more than 30 years ago, and think more pragmatically about the model of governance that best fits the country's means as a lower middle-income country. It is an opportune time to rethink the one-size-fits-all model of configuring decentralization and seek out new models that are more agile and better suited to the different challenges faced by regions in different parts of the country.

**Recognizing these challenges, the Government of Indonesia (GoI) is embarking on significant reforms of its intergovernmental fiscal system.** The Ministry of Finance (MoF) is currently revising Law No. 33/2004 and, in particular, the design of the General Allocation Grant (*Dana Alokasi Umum*, DAU), the centerpiece of its intergovernmental fiscal system. The Ministry of Home Affairs (MoHA) and the MoF are working jointly on harmonizing subnational budget classifications and Charts of Accounts (Government Regulation (PP) No. 12/2019, MoHA regulation (Permendagri)

<sup>90</sup> Between 1994 and 2000, central government spending on average amounted to 77 percent of expenditures, provincial spending to 9 percent and district spending to 14 percent. In contrast, between 2001 and 2017, the equivalent shares were 49, 11 and 14 percent, respectively.

# “Recognizing it is only one piece of the puzzle for improving service delivery results, this chapter focuses on the question how the GoI can reform its intergovernmental transfer system”



No. 90/2019 and G.R. on subnational Chart of Accounts PP *Bagan Akun Standar* or BAS. These reforms are essential to enabling subnational governments to make better spending decisions for service delivery. They will also enable benchmarking of subnational spending efficiency. Several agencies, including the Ministries of Education and Health, are piloting more performance-oriented designs of specific purpose grants, with a view to strengthening SNG accountability for results.

**Improving subnational service delivery, however, ultimately requires strengthening the accountability of local leaders to their citizens—and reforming intergovernmental transfers alone will have only limited impact.** Indonesia’s choice to largely decentralize service delivery responsibility inherently limits the central government’s ability to influence results. It is ultimately the accountability of local elected leaders to their citizens that needs to drive them to provide better services, but this is often challenging in practice. Local elite capture and clientelism can undermine service provision to the poor (Mansuri and Rao 2012). For Indonesia, there are promising signs that some local leaders are rewarded at the ballot box for improving service delivery. But there is also evidence that incumbent office holders have an advantage, because they can use their control over public money to raise their popularity. Rather than providing public goods to the poor, their best strategy for winning may be to target transfers (Gonschorek 2018) or private goods to critical constituents (patronage), such as jobs to teachers (Pierskalla and Sacks 2016).

**Besides reforming the transfer system, the central government should hence focus on strengthening bottom-up accountability of local leaders through the ballot box, in particular by:**<sup>91</sup>

**1. Providing local voters with credible information about their SNG’s performance.** In Brazil, for example, disclosure of

municipality audit results prior to elections significantly reduced the likelihood of corrupt public officials getting re-elected (Ferraz and Finan 2007), and that the media—local radio stations in this case—played a key role in reducing information asymmetries. In Indonesia, with its vibrant NGO sector and (relatively) free media, such transparency has the potential to increase the chances of developmental leaders winning office. The GoI should therefore more proactively empower citizens by making SNG fiscal and performance information public, for example by publishing a dashboard that benchmarks district health indicators, as currently planned by the Ministry of Health. To credibly compare and benchmark district spending efficiency, standardizing district spending information through a subnational Chart of Accounts will be critical (see Data Spotlight).

**2. In the medium term, better balancing districts’ revenue autonomy with their spending responsibilities would strengthen the local “fiscal social contract”.** There is a strong (theoretical) argument for “tax bargaining”, i.e., that “local residents are more likely to hold officials accountable if local public services are financed to a significant extent from locally imposed taxes and charges as opposed to central government transfers” (Bird 2011). There is some emerging evidence in support of this argument: again, in Brazil, Gadenne (2016) finds that increasing the share of SNG tax revenues leads to a larger increase in local public health and education services than correspondingly large increases in transfers. Rigorous evidence in support of the “tax bargaining” argument is only just emerging and stronger reliance on local taxes certainly needs to be weighed against other considerations, in particular equity. Nevertheless, given the current imbalance between district spending and revenues (Figure 3.4), the GoI should make increasing local tax autonomy and effort—for example, by giving districts more

discretion over the property tax rate—a key consideration for its National Medium-Term Development Plan 2020-2024 (RPJMN).

**Furthermore, reforming other aspects of central-local relations will shape critical complements to reforming the transfer system.** It will be critical for the GoI to address the many coordination problems between and within levels of government that have surfaced in this report. These coordination challenges are the price for a decentralized service delivery model and become exacerbated in the context of urbanization. Other important potential complementary reform areas are: (i) civil service reform, and potentially delegating greater autonomy to SNGs to manage their establishment, pay setting and recruitment; (ii) creating a more enabling central regulatory environment for SNGs, in particular for public financial management; (iii) improving SNG financial accountability through a better audit function; and (iv) strengthening judicial enforcement, as a complement to reforms within the executive.

**Recognizing it is only one piece of the puzzle for improving service delivery results, this chapter focuses on the question how the GoI can reform its intergovernmental transfer system.** Reforming transfers is perhaps the central government’s most direct means of influencing subnational service delivery results. As noted above, the GoI could first seek to correct longstanding (vertical) imbalances between SNGs’ spending and revenue autonomy. Second, it can review the horizontal distribution of transfers across local governments, with a view to addressing persistent regional disparities in service access and quality. Third, it can optimize the design of transfers with a view to encouraging more efficient and effective local spending. This chapter will address these three issues in turn, focusing on districts as the level of government that bears the most responsibility for service delivery.

<sup>91</sup> The “levers” for influencing service delivery discussed here are by no means exhaustive. Other important potential levels comprise (i) civil service reform, and potentially delegating greater autonomy to SNGs for managing their establishment, pay setting and recruitment; (ii) creating a more enabling central regulatory environment, in particular for public financial management; (iii) improving SNG financial accountability through a better audit function; and (iv) strengthening judicial enforcement, as a complement to reforms within the executive.





# 3.2

## History of Intergovernmental Fiscal Relations & Vertical Balance

**S**ince 1999, Indonesia's system of intergovernmental finance has been marked by a fundamental imbalance between SNG spending and revenue autonomy. While SNGs, in particular districts, have major spending responsibilities and autonomy over the allocation of resources, they have very limited autonomy and capacity to raise own-source revenues (to finance the services they provide). In 2018, districts spent 32 percent of general government expenditures, but their own-source revenues only represented 5 percent of total government revenues.

**Districts have significant spending responsibility and autonomy.** In line with their responsibility to deliver all major basic services, districts are responsible for the lion's share of expenditures for education, health, infrastructure, etc. (Figure 3.1). They also have wide-ranging autonomy to decide

on what to spend the majority of their resources. As Figure 3.2 shows, districts have discretion<sup>92</sup> over about 85 percent of their revenues (all bars except the DAK), despite their high reliance on transfers.

**The main reason for districts' spending autonomy is that Indonesia's intergovernmental financing system heavily relies on a General Allocation Grant for fiscal equalization, Dana Alokasi Umum (DAU).** Current regulations mandate that the DAU pool should amount to at least 26 percent of total net domestic revenues, with 90 percent of the pool transferred to districts and only 10 percent to provinces. Consequently, since 2001, DAU transfers have consistently made up the majority of districts' revenues, and over 60 percent in 2018 (Figure 3.2).<sup>93</sup>

**Indonesia initially opted against strong reliance on earmarked<sup>94</sup> sectoral**

**grants, but this has gradually changed since 2003.** Earmarked grants, typically an instrument for central governments to steer subnational spending to central priorities, played little or no role in early decentralization. Since its inception in 2003, however, Indonesia's most important earmarked grant, *Dana Alokasi Khusus* (DAK),<sup>95</sup> has gradually grown in importance (Figure 3.2) for SNGs. Box 3.1 summarizes the evolution of the DAK from 2003 until 2015. Starting in 2016, DAK financing doubled compared with the previous year because the GoI re-classified various vertical programs (i.e., programs run by central government) that provide additional recurrent cost financing of service delivery, such as school and health operational assistance (BOS and BOK, respectively) into a so-called "DAK *Non-Fisik*" for recurrent expenditures.<sup>96</sup>

<sup>92</sup> Discretionary revenues are here defined as such that are largely unearmarked to specific spending purposes or tied to other forms of conditionality (performance, etc.). SNGs are hence large free to spend these revenues according to their priorities, with "no or few strings attached".

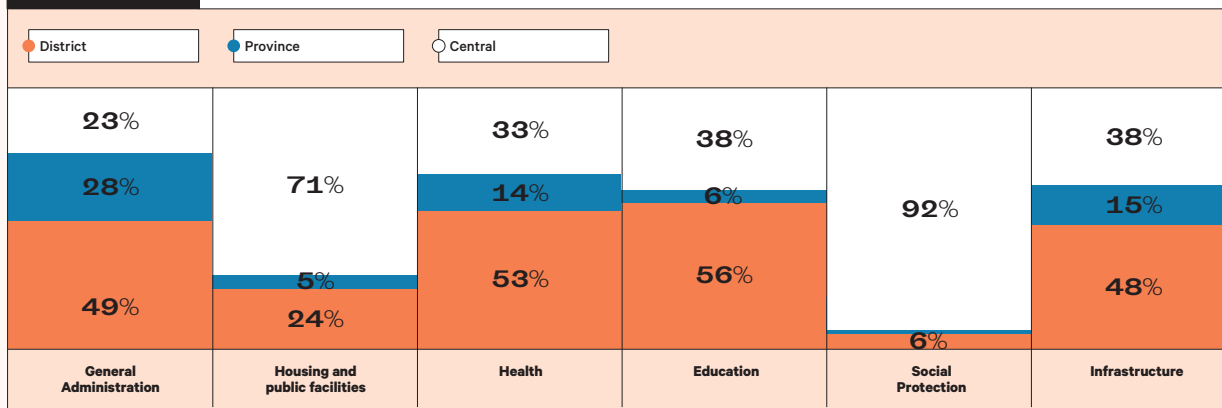
<sup>93</sup> Besides the DAU, districts also have discretion over their own-source revenues, the Dana Bagi Hasil and other revenues, totaling 85 percent.

<sup>94</sup> An earmarked grant is a grant that is given under the condition that it can only be used for a specific purpose.

<sup>95</sup> The DAK (supports SNG capital and recurrent expenditures in a range of sectors. It comprises the DAK Fisik, which co-finances capital investment and the DAK non-Fisik, which co-finances recurrent expenditures. In addition, in recent years, the Dana Desa has grown in importance as a transfer to villages from the national government and from district governments (Alokasi Dana Desa), introduced in the context of Indonesia's 2014 Village Law.

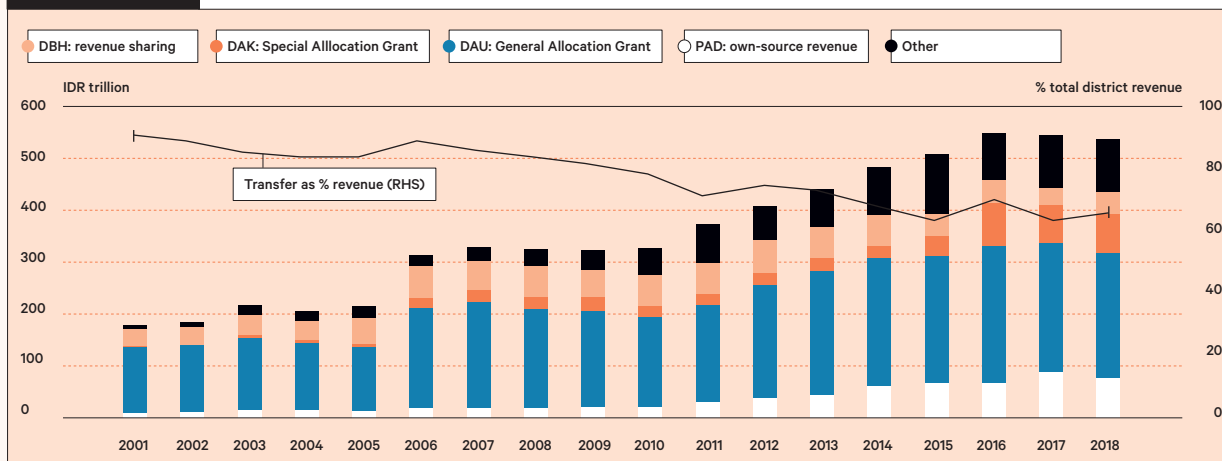
<sup>96</sup> This new category is also used to channel funds previously managed as deconcentration funds.

**FIGURE 3.1** Share of general government expenditure by level of government (%), 2016



Note: General administration mostly comprises salaries, including teacher salaries. BOS (education) spending may be classified as general administration expenditure for some SNGs. Most spending on housing comprises housing subsidies, which are centrally managed. JKN (National Health Insurance) subsidies or PBI is classified as Health spending—not Social Protection. Source: World Bank staff estimates based on data from DG Fiscal Balance, MoF.

**FIGURE 3.2** Composition of district government revenue (real terms), 2001-18



Note: "Other" revenues include grants; emergency funds; revenue sharing from province/other districts; adjustment and special autonomy funds; and financial assistance from other provinces and districts. 2018 is budgeted data. DAK = Dana Alokasi Khusus; DAU = Dana Alokasi Umum; DBH = Dana Bagi Hasil (tax & non-tax); PAD = SNG own-source revenues. Source: COFIS (World Bank staff estimates based on SIKD-MoF data).

**BOX 3.1.** The evolution of the DAK, 2003-15

The DAK was originally introduced in 2003<sup>97</sup> as an *earmarked grant*, intended to fund specific national priorities under the responsibility of districts and cities, to support the achievement of minimum service standards (MSS) and to address spillovers between local governments. It was designed as a *matching grant*, with central government matching SNG allocations tenfold. In 2016, this matching requirement was abolished.

Until 2015, the DAK was allocated to eligible SNGs based on a formula, from a fixed pool defined in the annual budget. Eligibility was based on: (i) general criteria (*kriteria umum*), reflecting SNGs' fiscal capacity; (ii) criteria designed to target specific localities (*kriteria*

*khusus*) identified by law,<sup>98</sup> and (iii) sectoral technical criteria (*kriteria teknis*), such as the size of the irrigated area, for the DAK irrigation. In a second step, the amount allocated to each eligible SNG was determined by a formula that combined fiscal, special and technical criteria.

Over time, the DAK has become increasingly fragmented: in 2003, it only covered five sectors, while by 2014 it covered 19 sectors. This fragmentation has been associated with a significant shift in the sectoral allocation of the DAK: originally it was primarily a capital grant, but the weight of infrastructure declined from about half to one-quarter of DAK allocations, as new sectors were added. Besides roads, education and health have remained the largest regular DAK recipients (with about 30 and 10 percent, respectively, in 2015).

**Despite growth in DAK earmarked grants, the central government's ability to steer district spending to national priorities remains limited.** By 2018, the DAK allocation had grown nearly fivefold in real terms since 2014 and represents about 26 percent of the total intergovernmental fiscal transfer to provinces and districts. Yet, it still only represented about 15 percent of district revenues in 2018, relatively little compared with the weight of earmarked grants in many other countries. This limits the center's ability to steer district spending. In some sectors, such as health, the center's ability to steer spending is further limited by demand-side financing mechanisms: social health insurance funds, for example (JKN), are the single most important financing source for primary health care and flow directly to primary community health-care facilities (*Puskesmas*).

<sup>97</sup> DAK operations actually began in 2001. However, for the first two years, it focused solely on reforestation, with funding based on reforestation levies (*dana reboisasi*).

<sup>98</sup> These localities comprise SNGs in Papua and West Papua and regions identified as: (i) lagging, (ii) in border, and (iii) coastal areas. Among the later three, only a subset of SNGs would be eligible for the DAK based on their rank on indexes that weight their needs and fiscal capacity.

**Indonesia's centrally managed civil service is perhaps the single biggest constraint to SNG spending autonomy.** As a legacy of the pre-decentralization era, civil servants working for SNGs remain part of the central civil service (*Aparatur Sipil Negara*, ASN). While entry exams for selecting candidates for civil service positions are centrally conducted, for example for teachers, SNGs do have significant influence over which candidates they recruit and over managing their careers. But SNG influence over other critical human resource decisions is very limited. They need to seek central government approval for changes in their number of civil service positions and have no control over base pay setting and career regimes, with a view to attracting better talent. Especially in education and health, where the lion's share of spending is consumed by the salaries of teachers, doctors and nurses, this limits SNGs' autonomy in managing service delivery.

**In addition, SNGs continue to have limited autonomy and capacity for raising own-source revenues.** About a decade ago, the GoI significantly increased district autonomy in raising own-source revenues with the passing of Law No. 28/2009 on Local Government Taxes and Retributions. The law authorized districts to expand local tax and user fees (*retribusi*), increasing their discretion for setting their own tax and fee rates. Its centerpiece was the devolution of property taxes to districts, including both recurrent (PBB P2) and property transfer taxes (BPHTB). Property taxes have since become the most important source of district own-source revenues, representing 41 percent in 2017.<sup>99</sup> These reforms contributed to significant growth of own-source revenues, to about one-third of SNG expenditures by 2018, compared with only one-seventh in 2001 (Figure 3.3). Despite this, compliance with local tax has been poor, largely due to limited administrative enforcement capacity, local tax-to-GDP ratios have not grown and SNG dependency on transfers remains high. As of 2018, districts depended on transfers for an average of 78 percent of their revenues, while for villages it was about 94 percent.

**Indonesia's imbalance between SNG spending and revenue autonomy is accentuated in international comparison.** Indonesia is on par with federal countries in terms of the decentralization of spending responsibility but lags far behind them and resembles unitary countries in terms of SNG revenue authority. At about 38 percent of general government spending, SNG expenditures in Indonesia are comparable to those of large federal countries (such as Brazil, Germany, Australia) and to unitary countries with highly decentralized spending responsibili-

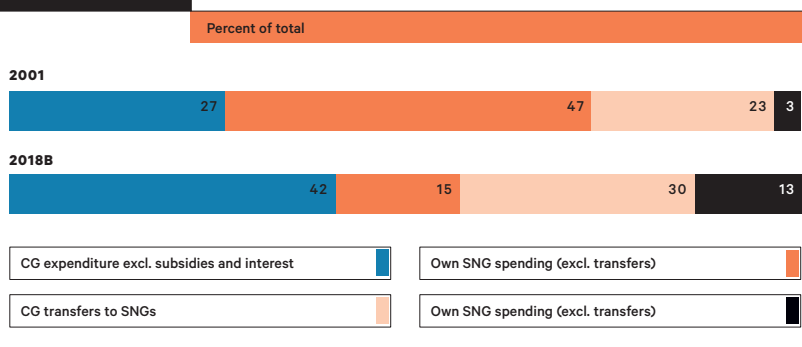
ties (such as Peru and Finland) (Figure 3.4). But Indonesia lags far behind these "peers" in terms of its SNGs' own-source revenues, which represented only 13.5 percent of general government revenues in 2016.

**A striking feature of Indonesia's intergovernmental system is the weak role of provinces.** In 2018, provinces were only responsible for 12 percent of total spending compared with 32 percent for districts. Provinces have some responsibility, in particular for regional infrastructure, but otherwise primarily play the role of regional representatives of the central government, in charge of coordinating districts. While this weakness is partially by design for historical reasons (Box 3.2), it exacerbates intergovernmental coordination challenges, especially as the number of

districts has nearly doubled since decentralization, from 298 in 1996 to 514 today.<sup>100</sup>

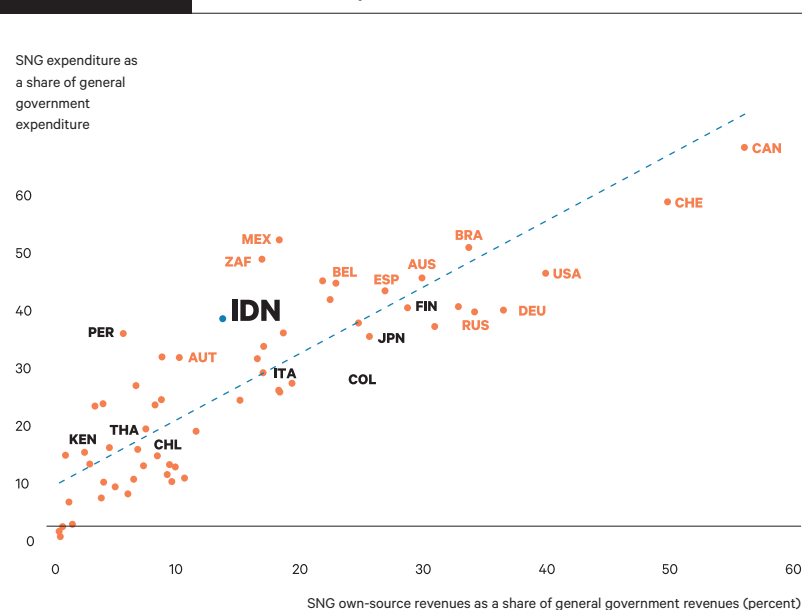
**Overall, the vertical (im)balance in Indonesia's intergovernmental financing system has remained relatively stable since 1999, despite the above-mentioned noteworthy reforms.** SNGs' expenditure responsibilities grew from only 20.2 percent of total government expenditures in 2001, to 31.5 percent in 2018. As Figure 3.2 shows, non-earmarked transfers, in particular the DAU, continue to shape the lion's share of SNG revenues, with own-source revenues playing only a limited role. With Law No. 33/2004,<sup>101</sup> the major legal foundation for Indonesia's transfer system has remained unchanged.

**FIGURE 3.3. Composition of total government expenditures, 2001 and 2018**



Note: The figure reports expenditure outturn data for 2001 and budget data for 2018. Source: Ministry of Finance, COFIS database, staff calculations

**FIGURE 3.4. Indonesia's SNG expenditure and own-source revenue shares in international comparison, 2015-16**



Note: Federal countries are in red and unitary countries in black. The classification of countries as "federal" is based on OECD data (OECD/UCLG, 2019a and 2019b). Both axes are truncated at 60 percent, omitting countries outside this range (e.g., China). Countries for which relevant data were unavailable are omitted. Source: IMF Fiscal Decentralization Database; OECD Consolidated Fiscal Database for Mexico.

<sup>99</sup> Other major district own-source revenues are traffic taxes and selected sales taxes (for hotels, restaurants, and entertainment).

<sup>100</sup> Districts have incentives to split, among others as a means of increasing their transfers, given the "per district" allocation of the DAU. These figures include the 6 administrative units that make up DKI Jakarta.

<sup>101</sup> Law No. 33/2004 replaced the original Law No. 25/1999 on Intergovernmental fiscal Relations.



## BOX 3.2.

The role of provinces in Indonesia<sup>102</sup>

Prior to the 1999 decentralization reforms in Indonesia, both provinces and districts served a dual function. First, they served as local representatives of the central government. Local heads coordinated with the deconcentrated vertical units of central agencies—the so-called *kantor wilayah* at provincial level, *kantor departemen* at district/city level. Second, they had limited “autonomous” functions as local governments. Pre-decentralization, the public administration system was dominated by the former deconcentrated structures, with limited autonomous functions. Provinces were the most powerful tier of local government.

Indonesia’s decentralization,<sup>103</sup> however, fundamentally altered this structure. It emphasized the delegation of power to the sub-provincial level, to *kabupaten* and *kota*. Sub-provincial regents (*bupati*) and mayors (*wali*) became entirely focused on their “autonomous” roles. Provincial governors, in contrast, continued to serve in both autonomous functions (*daerah otonom*) and as local representatives of the central government, reporting vertically through the Minister of Home Affairs (MoHA) as before.<sup>104</sup> In fact, the role of provincial governors became increasingly focused on representing the central government (*Gubernur Sebagai Wakil Pemerintah Pusat*, or GWPP). Subsequent legal changes in 2004 and 2014 on the political and administrative aspects of decentralization (Law No. 23/2014)<sup>105</sup> aimed to reduce the perceived excessive autonomy of regional government and to create greater vertical integration and synergy. In practical terms, they have added more weight to the role of the governor as a representative of the central government or GWPP, and recapturing

bupati/wali under a direct command for certain general government functions (*urusan pemerintahan umum*).

Today, provinces’ GWPP tasks are wide ranging, with large implications for the district/city governments as they seek to discharge their functions. Some key functions of the GWPP include: (i) support and supervision of the discharge of autonomous functions and assistance tasks (including public services) of the district/city governments; (ii) approval of draft district/city government regulations pertaining to the medium-term plan, annual plan, spatial plan, and annual budget; and (iii) recommendations for the Special Allocation Fund (DAK) for district/city governments. In principle, these tasks give a great deal of responsibility, and leverage, to the governor (as GWPP) in relation to district/city governments.

This potential, however, has yet to be realized, primarily due to unfinished efforts to clarify organizational issues and funding. To this end, in July 2018, the GoI adopted Government Regulation No. 33/2018 concerning the Implementation of Tasks and Authority of the Governor as Representative of the Central Government. The regulation confirmed the ongoing practice: GWPP functions are funded from the national budget (APBN) and funds are channeled to the governor through the MoHA. Governors must report to the MoHA and other ministries on these expenditures, and their performance on these functions is evaluated foremost by the MoHA. However, a significant lack of clarity remains regarding the organizational structures for executing these functions at the provincial level.

<sup>102</sup> This box draws heavily, in part verbatim, on an informal note by Gabe Ferrazzi, entitled “Deconcentration Channel in Support of Minimum Service Standard Systems”.

<sup>103</sup> Law No. 22/1999 and Law No. 25/1999.

<sup>104</sup> One potential motive for weakening provinces may have been to avoid political unrest, as provinces historically were the locus of such unrest. Under the administration of President Abdurrahman Wahid “Certainly many at the center felt that pushing more resources to sub-provincial governments would weaken the appeal of secession by provinces” [Marks 2009:43-4, cited in Booth (2011)].

<sup>105</sup> Law No. 23/2014 replaced the original Law No. 22/1999.




# 3.3

## Managing Horizontal Fiscal Disparities

The centerpiece of Indonesia's intergovernmental financing system—the General Allocation Grant (DAU)—is well designed in several ways. The DAU formula<sup>106</sup> measures districts' fiscal needs based on a transparent formula that accounts for major cost drivers, including population, the surface area of the district (to account for diseconomies of scale), a human development index and a cost adjustment factor.<sup>107</sup> It seeks to finance the gap between districts' fiscal needs and their fiscal capacity by using a fiscal gap formula. When the DAU formula was originally designed, after the fall of Suharto and in the context of decentralization, the DAU played an important role in holding together Indonesia's diverse regions; by allocating resources according to districts' fiscal needs rather than population, it targeted high per capita revenues to lagging regions, such as Papua and Kalimantan. In addition to DAU and DAK, two regions benefit from additional special autonomy funding (Otsus). At decentralization in 2001, special autonomy arrangements were introduced for the province of Papua (extended to West Papua when the province split in 2003). These arrangements gave the provincial governments a stronger role and provided for additional funding. The province of Aceh was incorporated into these arrangements in 2006. Both arrangements are time-limited, with Papua and West Papua due to graduate from Otsus in 2021.

However, Indonesia today still faces major challenges in ensuring a similar minimal standard of service delivery across its territory, as highlighted throughout this report. For example, there are major differences in learning outcomes both across and within regions (Figure 3.5). To illustrate, in 2017, average junior secondary school (SMP) national exam scores in parts of northern Sumatra (Kabupaten Padanglawas Utara, 73.2) were more than twice as high than in parts of Aceh (Kabupaten Bireuen, 29.4).

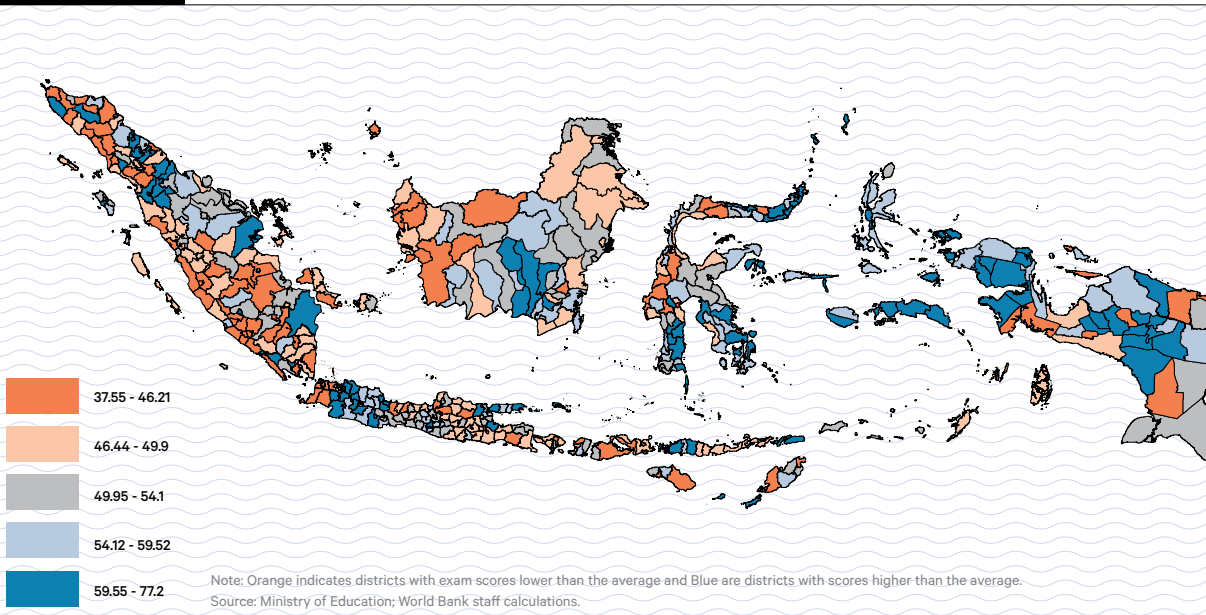
Vast differences in district per capita spending for delivering the respective service could in part explain these different outcomes. In the case of education, in 2016, district per student expenditures differed by a factor of 400, ranging from about IDR 31,000 per student (in Kabupaten Aceh Tenggara, Aceh) to IDR 13 million per student (in Kabupaten Tambrauw, West Papua). Preliminary econometric analysis suggests

<sup>106</sup> The current DAU formula comprises two elements, each constituting about half of the total DAU transfer, on average: (i) the "basic allocation", which depends on the number of civil servants employed by the district; and (ii) the "fiscal gap formula", which accounts for the gap between a district's fiscal needs and its fiscal capacity, here defined as the district's potential ability to raise own source revenues.

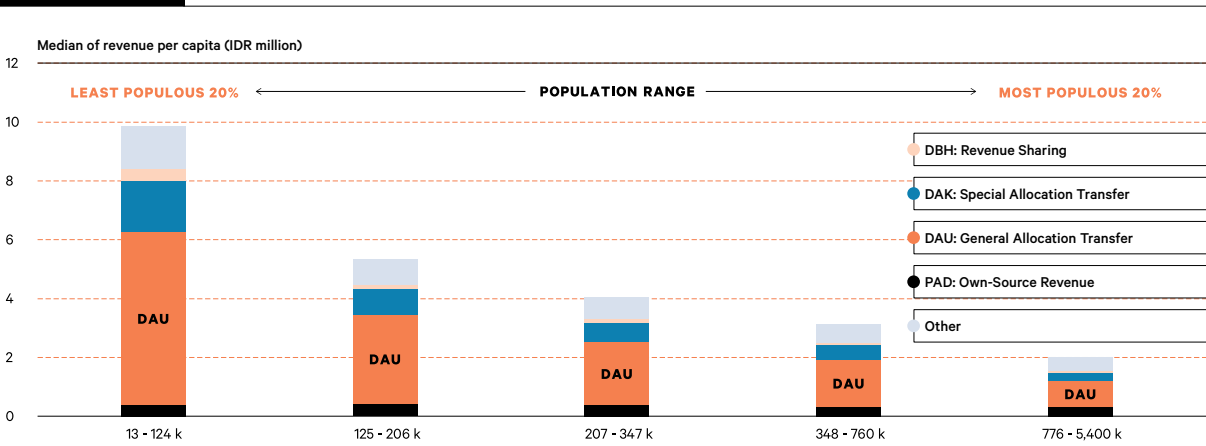
<sup>107</sup> Indeks Kemahalan Konstruksi or IKK.



**FIGURE 3.5** District average junior secondary school (SMP) national (UN) exam scores, 2017



**FIGURE 3.6.** Median total revenue per capita, by district population quintile FY2018



Note: District revenue data uses 2018 realization data; population data uses 2015 data from SUPAS  
Source: COFIS; World Bank staff estimates based on SIKD-MoF data.

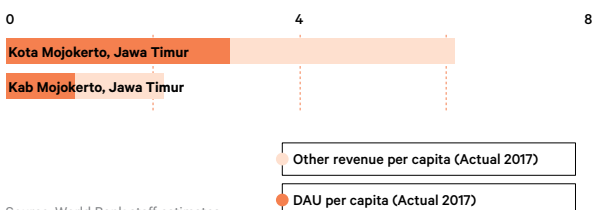
**FIGURE 3.7.**

**Differences in total per capita revenues across districts**

**PANEL A.** Real growth rate of total average per capita revenue (%) from 2010 to 2016, Kab/Kota level



**PANEL B.** Per capita revenue gap between small urban kota and large surrounding kabupaten (example) (IDR million per capita)



Source: World Bank staff estimates.

that higher per capita education spending is associated with better learning outcomes.

**Differences in per capita spending for service delivery are, in turn, partly driven by large differences in intergovernmental transfers across Indonesia's districts.** For example, discrepancies in education expenditures are at least in part explained by discrepancies in total transfers. In 2018, districts in the 20 percent least populous percentile received about five times more revenue per citizen than those in the 20 percent most populous percentile. As Figure 3.6 shows, the DAU and the DAK drive much of this difference, as these transfers constitute the largest sources of revenue most SNGs, across population quintiles. The transfers of special autonomy funding (classified as 'other' in Figure 6) also contribute to the higher per capita revenues received

by districts in the first quintile, but DAU and DAK are more important.

**The current transfer system produces a few particularly noteworthy fiscal disparities.** First, urbanizing areas face pressing service and infrastructure financing needs, but the current transfer system underfinances them. As one indication, total per capita revenues in districts with above-average population growth increased far more slowly between 2009 and 2016 than in districts with below-average population growth (Figure 3.7, panel A). Second, some urban kota with small populations (such as Kota Mojokerto, Figure 3.7, panel B) receive much higher total per capita revenues than far more populous surrounding or neighboring kabupaten (such as Kab. Mojokerto), even though they may have similar per capita expenditure needs.

More generally, transfers are also far from proportional to the number of people who lack access to basic services (as a measure of unmet service delivery needs). On average, as the number of people without access to basic services doubles in a district, its total transfers only grow by less than one-third (Figure 3.8).

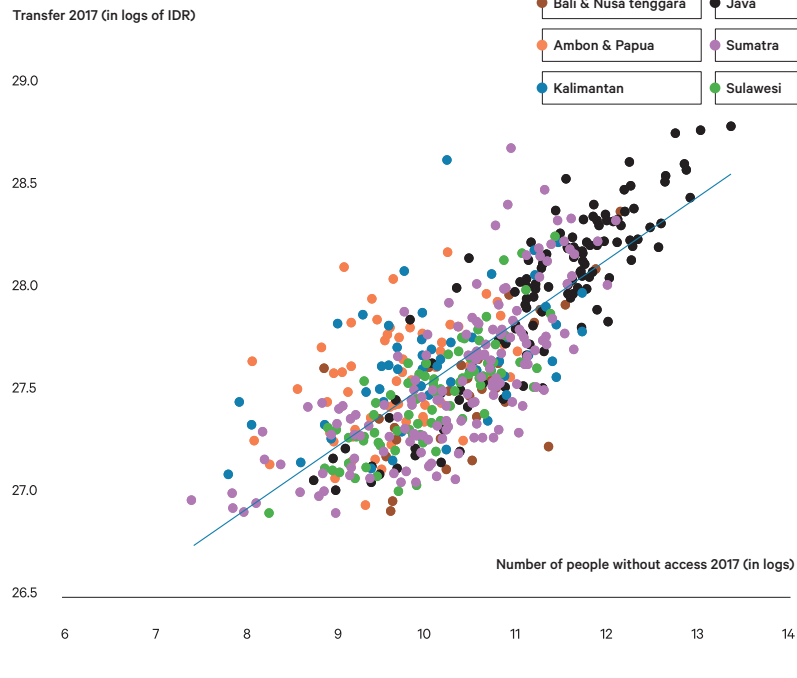
This raises the question of how Indonesia can revise its intergovernmental transfer system with a view to ensuring a minimum standard of service delivery across all districts. Moving toward a transfer allocation that assumes similar expenditure needs by person, not by place, certainly has to be part of the answer, with adjustments for regional variation in demand and unit costs (Box 3.3).

In revising the design of both the DAU and the DAK, Indonesia will need to strike a fine balance between different—and in part competing—objectives. Real-allocating spending to more populous districts will need to be balanced with the diseconomies of scale in thinly populated regions and the need to create economic opportunities and improve basic services in lagging regions. The GoI will need to finance both the costs of current service provision and the infrastructure catch-up needs of lagging regions. With a view to enhancing bottom-up accountability and spending efficiency (see following section), the GoI may wish to incentivize own-source revenue collection. And it may grant well-performing especially urban districts, such as Jakarta and Surabaya, significant spending autonomy, while holding poor performers more tightly to account for how they spend. The ongoing revision of Law No. 33/2004 provides an opportunity for the GoI to fundamentally redesign its intergovernmental financing system with a view to better balancing these objectives.

Besides ensuring minimal service standards, a key factor that calls for reforming the current DAU design is that it creates incentives for SNGs to overspend on personnel. The reason is that the so-called “basic allocation” (*Alokasi Dasar*) ties the DAU to the number of civil servants employed by the respective district. Whereas the “basic allocation” was originally established to ensure that districts could afford their wage bills, it unintentionally created incentives for districts to overspend on wages, and to underspend on capital.<sup>108</sup> In principle, the Ministry of Administrative and Bureaucratic Reform (MoABR) controls the establishment centrally and can hence contain wage bill growth. But, de facto, politically influential *bupati* and *wali* (mayors) may well be able to negotiate their way to inefficiently large workforces. While this

FIGURE 3.8

Number of people without access to basic services and total per capita transfers, FY2017



Note: Both axes are in natural logs. The number of people without access to basic services in each district is defined as a simple average of the number of people that lack access to the following services: (i) enrolment in junior high school; (ii) enrolment in senior high school; (iii) access to protected water; (iv) access to protected sanitation; and (v) births attended by a skilled health worker;  $n = 501$ ;  $R^2 = 0.38$ ; 4 outliers removed.

Source: Susenas and SIKD data, World Bank staff calculations.

### BOX 3.3.

### Population as the central driver of SNG expenditure needs

Countries estimate SNG expenditure needs in a variety of ways, ranging from using lagged expenditure values to regression-based expenditure systems. The method chosen is largely shaped by history, politics, and also the limits of data availability. As Boex and Martinez-Vazquez (2007, 9) note, “individual residents/voters are the ultimate clients of local government services”, and hence “many countries use population as an important factor in arriving at expenditure needs. In some countries it is the sole factor in the allocation formula”. A population-based approach is preferable to equalizing transfers by region, which can lead to severe discrepancies in per capita revenues.

Furthermore, fiscal needs are generally driven by (a) variation in per capita demand for service delivery, depending among others on demographic factors, and by (b) variation in unit costs for delivering a standard package of services. Besides population, fiscal needs estimates hence ought to take into account relevant predictors of demand and unit costs. Many countries, including Indonesia (for the DAU), use a weighted index of relative needs for this purpose. While such approaches are, in principle, technically sound, in practice they run the risk that political pressures can influence the choice and weighting of factors, resulting in an allocation of transfers that poorly reflects needs.

Source: World Bank compilation, based on Boex and Martinez-Vazquez (2007).

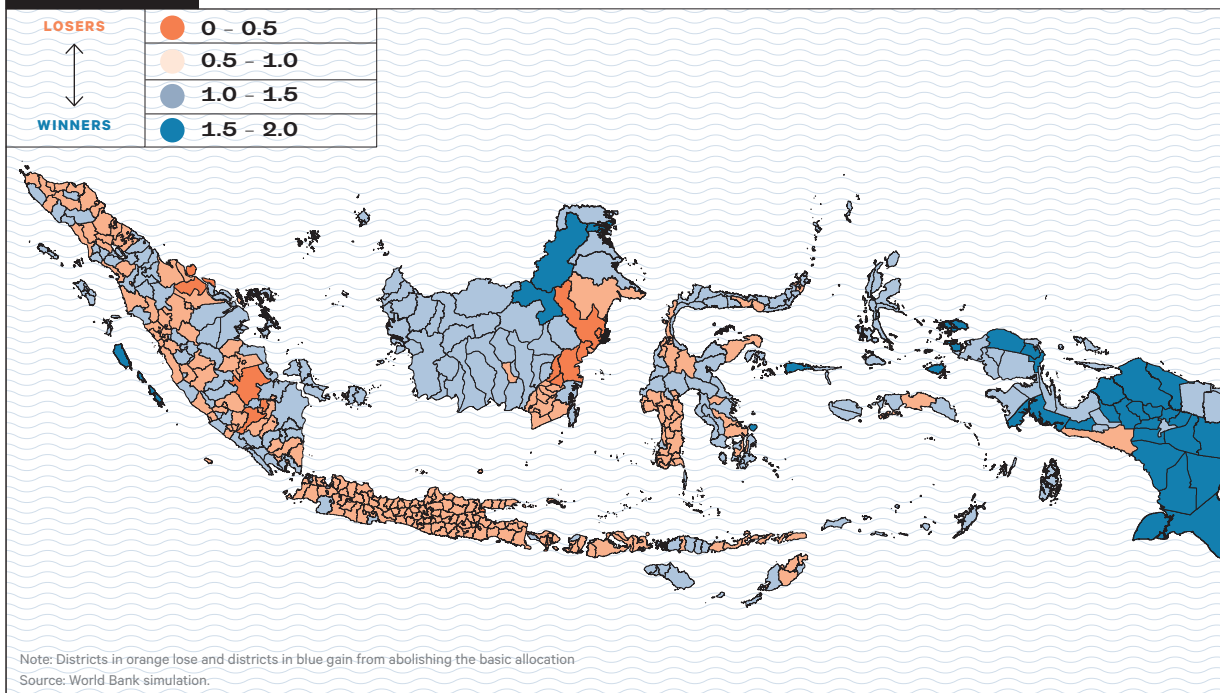
provides a strong case for abolishing the basic allocation, this can only be done as part of a broader DAU reform. If done in isolation, it would exacerbate, not reduce, inequalities in per capita transfers across districts, as preliminary simulation results in Figure 3.9 clearly show, leading to losses in particular in densely populated districts, especially in Java.

Furthermore, the DAU is currently not well-targeted toward poor districts—

with a view to compensating for lack of economic opportunities—or toward districts with diseconomies of scale. In 2017, the DAU was only weakly targeted toward poorer districts, even though a human development index, closely correlated with district income, is an important factor in the formula (Figure 3.10, panel A). Similarly, differences in districts’ surface area only explain 1.13 percent of the variance in 2017 DAU transfers (Figure 3.10, panel B).

**108** In a hypothetical example, if a district faced a choice between hiring additional teachers and investing in better school management, it might favor the former as the costs would partially be covered by an increased “basic” DAU allocation. This is manifest in the high share of DAU transfers that districts devote to personnel spending: between 2001 and 2009, out of every IDR 100 transferred, districts spend IDR 40 on personnel (Lewis and Smoke 2017). By contrast, districts only spent IDR 15 out of every IDR 100 in shared taxes on personnel, and only IDR 3 out of every IDR 100 in shared non-taxes. However, it is important to note that there are also practical reasons for districts to heavily use DAU for personnel spending: DAU is a relatively stable source of funding, and reliably transferred at the beginning of each fiscal year, and hence well suited for covering the monthly payroll.

**FIGURE 3.9** Winners and losers of abolishing the basic allocation



With regards to the DAK *Fisik*, President Joko Widodo’s administration’s recent reforms have aimed to better target it to meet SNGs’ ‘true’ needs, especially for infrastructure investments. To this end, since 2016, the GoI requires SNGs to submit proposals for specific investment projects that they seek funding for, replacing the previous formula (‘proposal-based’ DAK). Other changes in the DAK include the introduction of a new Affirmative DAK (DAK

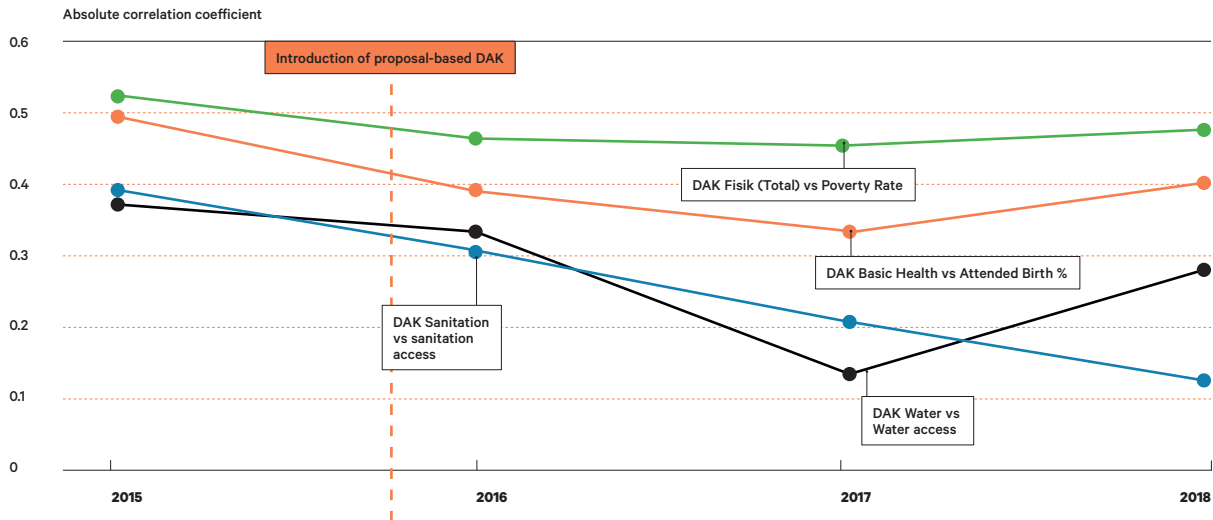
*Afirmasi*), allocated to 196 disadvantaged and/or border areas with low fiscal capacity,<sup>109</sup> and of a DAK *Penugasan*, a category of DAK *Fisik* that the central government allocates based on specific criteria.

However, these reforms have had limited impact on focusing DAK spending on national priorities or in targeting SNGs with the greatest needs. First, prior to the reform, the DAK’s increasing fragmentation has made it less effective in supporting SNGs

in achieving national priorities. Not only has the number of sectors funded by the DAK grown rapidly (see Box 3.1), diluting its focus on national priorities, even within sectors DAK allocations often do not reflect national priorities. For example, in the health sector, allocations to referral services have roughly doubled between 2016 and 2017, even though the National Health Strategy calls for increasing funding to basic health services. Second, initial evidence suggests that the

<sup>109</sup> The DAK *Afirmasi* covers three infrastructure sectors: Water and sanitation, irrigation, Village/rural road and transportation, although the DAK *Afirmasi* sectors vary from year to year.

FIGURE 3.10. Correlation between DAK per capita allocation and lagging sectoral needs indicators, 2015-18



Note: The figure represents the correlation between DAK Allocation at time T and the district's 'need' (as measured by sectoral outcomes) at time T-2, as two-year lagged data are the primary figure by which need can be measured and assessed. For simplicity, this figure shows that absolute values of correlation coefficients. The signs of the correlation coefficient depend on the indicator. For example, for the percentage of the population with water access, the correlation is negative, meaning that districts with less access receive higher transfers. For poverty, in contrast, the correlation is positive.

Source: World Bank calculations, based on DAK allocation (DJPK) and Susenas data.

proposal-based approach to allocating the DAK *Fisik*, introduced in 2016, has reduced its responsiveness to needs, contrary to the GoF's intentions. As Figure 3.10 shows, DAK allocations to districts in 2016-18 were less correlated with district needs than in 2015, as measured by indicators of access to services, especially for water supply and sanitation.<sup>110</sup> One reason may be that low-capacity districts are less capable of preparing eligible proposals. The proposal-based approach has also made allocations more volatile, making it difficult for SNGs to plan multi-year investments. The MoF has tried to give districts greater budget certainty by providing early notification of which *projects* will be funded, even if it cannot provide projections of proposed *allocations* before Parliament has voted on them.

**The proposal-based DAK has also posed significant implementation challenges that undermine effective targeting based on needs.** In 2017, for example, late finalization of the eligible expenditure menus left SNGs with only one month to

prepare and submit their proposals, likely undermining their quality. In 2017, three-quarters of submitted proposals were rejected, exacerbating unproductive transaction costs for SNGs. Assessing how relevant the proposals are for national and subnational priorities has been difficult, because SNGs submit proposals for broadly defined programs. Which proposals were funded and why has not been very transparent, and Bappenas and DG Fiscal Balance are still working on developing standard evaluation procedures. The submission of all proposals through the KRISNA information system in 2018 could be a key step toward increasing transparency.

**Reform of special autonomy funding could play an important role in addressing inefficiencies in targeting, inefficiencies in spending and pervasive infrastructure gaps in lagging regions.** After 18 years of providing additional funds to the Papua region, the benefits of this investment are not clear. Recent analysis by the MoF

suggests the outcomes have not been as expected.<sup>111</sup> The Otsus arrangements are scheduled to expire in 2021, presenting an immediate opportunity for trying a new approach to lagging regions. Such a new approach could draw on experience of targeting lagging regions in other parts of the world. The European Union places a very high priority on lagging regions.<sup>112</sup> A potential approach could involve: (i) greater conditionality on transfers (either tied to specific investments, or to the achievement of agreed results); coupled with (ii) evidence-based identification of needs that differentiates the challenges faced by districts within the region; (iii) institutional arrangements that promote inclusion, transparency and citizen engagement; (iv) independent monitoring of implementation; and (v) proactive but demand-driven capacity support. Identifying a fair approach to crowding in districts' own funding will be key to ensuring investments are both efficient and sustainable.

<sup>110</sup> For example, South Sumatra was the fifth-largest rice producer, but it was the fourth-smallest recipient of the DAK Irrigation (no 31 of 34 provinces) (see Water Resources Management chapter).

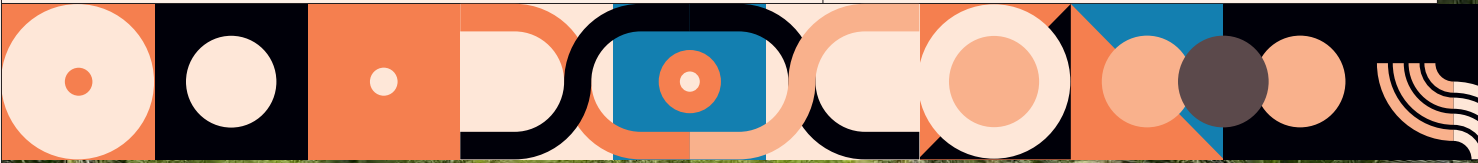
<sup>111</sup> <https://bit.ly/2HvKlIO>; Widodo, B. T., 2019. Evaluasi Dinamis Dampak Fiskal Otonomi Khusus terhadap Efisiensi Layanan Publik Dan Pertumbuhan Ekonomi di Provinsi Papua, Papua Barat dan Aceh Tahun 2011-2017. *Kajian Ekonomi Keuangan Volume 3(1)* see also on Aceh: Butarbutar, I.R., D. Hediya, Sutarto, Analisis Pelaksanaan Dana Otonomi Khusus Provinsi Aceh dan Dampaknya terhadap Pertumbuhan Ekonomi.

<sup>112</sup> See the new EU Cohesion Policy outlined at [https://ec.europa.eu/regional\\_policy/en/2021\\_2027/](https://ec.europa.eu/regional_policy/en/2021_2027/)



# 3.4

## Improving Efficiency of Subnational Spending



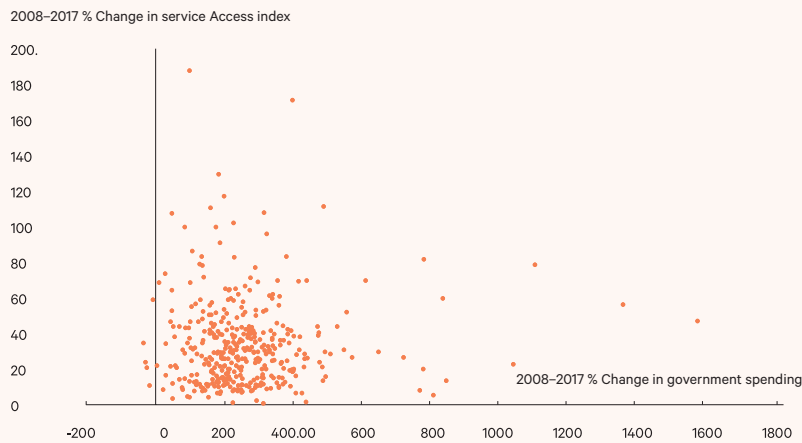
**E**nsuring that SNGs use public money efficiently to deliver services remains a major challenge for Indonesia. One indication for this is that access to basic services, while much improved since decentralization, has not kept pace with growth in local spending. Whereas real per capita spending increased significantly between 1994 and 2017, by 258 percent on average, “access to basic services”<sup>113</sup> on average only increased by 33 percent. At the district level, the increase in spending was not clearly associated with better access. The simple correlation between changes in total local spending per capita and changes in access to services at the district level between 2008 and 2017 is therefore weak (Figure 3.12).

**Intergovernmental transfers could play an important indirect role in strengthening both bottom-up and top-down accountability for results.** As noted, there is significant potential for districts to exert more effort for collecting own-source revenues already under their authority, especially for property taxes. In 2017, Indonesia only collected about 0.12 percent of GDP in local recurrent property taxes, far less than comparator countries. Anecdotal evidence suggests that this is because compliance rates are very low in most districts. For district sales taxes, Figure 3.13 estimates the variance in enforcement and compliance, using district service GDP as a proxy for the tax base. It suggests that many districts collect far less of these taxes than possible. Hence, incentivizing districts to exert at least “average” revenue effort has significant potential for strengthening the local “fiscal social contracts”.

**However, currently the DAU fiscal gap formula does not incentivize districts to exert more revenue effort.** The DAU formula currently measures districts’ fiscal capacity based on actual,<sup>114</sup> rather than potential, revenues. As districts can expect transfers to at least partially compensate for low own-source revenues, they may have little incentives to redouble revenue collection efforts—an argument already made in 2002 (Brodjonegoro). It is important to note, however, that available evidence does not corroborate this argument that transfers “crowd out” own-source revenue efforts in Indonesia. On the contrary, using fiscal data until 2009, Lewis and Smoke (2017) find that rising DAU transfers were associated with increases in own-source revenues. While further research is needed, simply dropping actual own-source revenues from the fiscal capacity component of the DAU formula or moving toward a measure of potential own-source revenue could be options

**FIGURE 3.11**

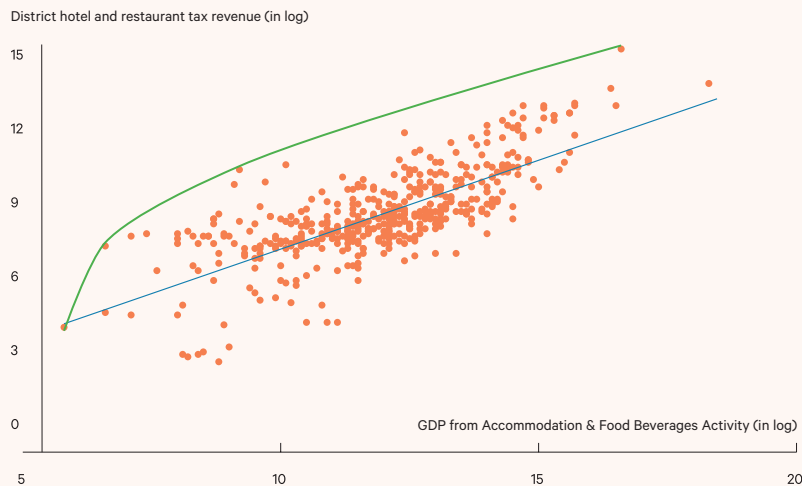
**Changes in service access over changes in government spending per capita, 2008-17**



Note: Average access is a simple average of five sectoral indicators access. The sectoral access indicators themselves are composites of multiple indicators, as described in footnote 11. The change in government spending is GDP-deflated. Source: Susenas and SIKD data, World Bank staff calculations.

**FIGURE 3.12**

**District service tax revenues and service sector GDP, 2012**



Note: The horizontal axis shows the log of GDP from Accommodation & Food Beverages Activity. The vertical axis shows the log of Hotel Tax and Restaurant Tax Revenue. The red line represents how much tax revenue a district would collect, given its GDP level, if it exerted average revenue effort. The green line represents the “possibility frontier”, as indicated by those districts with the highest revenue at a given GDP level. Source: BPS and MoF-SIKD data; World Bank staff calculations.

for strengthening own-revenue collection efforts by districts.

**Furthermore, the GoI could be tempted to use earmarked transfers to hold SNGs more tightly to account for the results they financed.** Although earmarked transfers—the DAK, the *Hibab* and the DID—have gained in importance, these remain mostly conditioned on inputs,<sup>115</sup> rather than on performance.<sup>116</sup> Attempting to strengthen the top-down accountability of local leaders for results is particularly tempting, as strengthening bottom-up accountability is a challenging long-term effort that requires building SNGs’ own-revenue raising

capacity and altering deeply rooted patterns of local elite capture and clientelism.

**Nonetheless, both international and Indonesia’s experience caution that performance-based earmarked transfers are far from a silver bullet, and that the devil is in the detail of getting incentives right.** Indonesia itself only has limited experience with performance-oriented transfers. For infrastructure, as an output-based earmarked grant, the water *Hibab* reimburses selected participating SNGs for water connections to poor households, and has been evaluated as successful (Box 3.4).<sup>117</sup> In 2017, the GoI introduced limited performance conditions

**113** As a simple aggregate measure of “average access to basic services”, the average of five indicators that reflect access to locally provided basic services is used: (i) net enrolment rate for junior high school; (ii) net enrolment rate for senior high school; (iii) access to protected water; (iv) access to protected sanitation; and (v) proportion of births attended by a skilled health worker. An average score of 100 means that all households in the relevant district have access to protected water and sanitation, all births were attended by a skilled worker, and everyone in the relevant age groups are enrolled in junior or secondary school; a score of 0 means that no households have access to protected water or sanitation, no births were attended by a skilled worker, and no child in the relevant age groups are enrolled in junior or secondary school.

**114** The current fiscal capacity measure of the DAU fiscal gap formula sums own-source revenues, revenues from tax sharing and natural resource revenues.

**115** “Input-oriented transfers” are here (loosely) defined as transfers that condition financing on SNGs spending needs and behaviors, such as the gap between spending needs and fiscal capacity or SNGs’ ability to fully spend their past budget allocation (absorption rate).

**116** “Performance-oriented transfers” are here (loosely) defined as transfers that condition financing on results produced by SNGs, with results comprising process and quality improvements, as well as service delivery output and outcome measures. “Input-oriented transfers”, by contrast, focus on inputs, such as co-financing, absorptive capacity, or sound PFM. Transfers can combine both aspects and they are hence not mutually exclusive.

**117** Between 2014 and 2016, SNGs connected more than 600,000 new households and received almost IDR 1.4 trillion through *Hibab* reimbursements. The MoF’s Regional Incentive Fund (Dana Insentif Daerah, DID) combines input, process, output and outcome indicators, but has little fiscal weight and lacks focus.

**BOX 3.4.****Successful precedents for performance-based infrastructure grants in Indonesia**

**K**ey precedents for performance-based transfers in Indonesia include the Water *Hibah* and the Local Government and Decentraliza-

tion Project (P2D2). Success factors in both cases included that outputs were independently verified (for P2D2: by the GoI's internal auditors, BPKP). A key feature of the *Hibah* is the division of labor between the relevant line ministry and

the MoF. The line ministry, which understands the technical area, is responsible for supervision and for ensuring that achievement of outputs is independently verified, which then triggers the disbursement by MoF.

Source: World Bank compilation.

for the DAK *Fisik*, for example by rewarding districts for past compliance with reporting requirements in the DAK allocation, and by conditioning disbursement of DAK *Fisik* tranches during the fiscal year on evidence that a minimal share of the contracted amount has been paid to the contractor. Tying the DAK more strongly to the independent verification of outputs is a promising direction of reform.

**Indonesia's recent efforts to move toward performance-based financing of selected recurrent expenditures highlight the inherent challenges with getting the details right.** In education, the GoI has re-

cently introduced a performance-element in the BOS, the BOS *Kinerja*. In line with good practice, BOS KINERJA rewards districts for both improvements in test scores and in school characteristics (such as teacher attendance). However, the transfer is currently tied to far too many school characteristics, some of which are hard to measure, diluting clear signals that could trigger behavioral change. As noted in the Education Chapter, it will be crucial to invest in monitoring and evaluation (M&E) arrangements to evaluate if the current design has the desired performance effects. Similarly, efforts to make the *Bantuan Operasional Kesehatan* (BOK) for

health more performance-oriented have highlighted the inherent data challenges. While coverage data, such as the share of pregnant women delivering at health facilities, are systematically available, this is not the case for data on the quality of maternal and child health care. This makes it challenging to design a performance-transfer that incentivizes quality of care improvements, a critical goal for Indonesia. More generally, performance incentives will only work if they build on reliable and independently vetted service delivery data, whereas in Indonesia major concerns over the reliability of administrative data prevail.





CONCLUSION:

# Key Policy Messages

# 3.5

**O**verall, the GoI should seize the opportunity of the ongoing revision of Law No. 33/2004 for a fundamental review of its intergovernmental financing system, with a view to strengthening its results-orientation. The above analysis suggests that the GoI could consider the following guiding principles:

## 1 Vertical Balance

**Better align districts' revenue autonomy and effort with their spending responsibility, in the medium term.** This would serve to correct the deep-seated vertical imbalance in Indonesia's intergovernmental financing systems and to strengthen the accountability of local leaders to their citizens. An important first step to this end could be to incentivize districts to exert more tax effort for collecting property and sales taxes (such as Hotel and Restaurant Taxes). This could be achieved by measuring fiscal capacity based on potential revenue estimates, or simply by removing own-source revenues from the fiscal capacity component of the fiscal-gaps formula.

## 2 Horizontal Balance

**Move the design of Indonesia's fiscal equalization formula toward a per-client basis, with a view to ensuring sufficient financing for a minimal standard of service delivery across its territory.** One promising approach could be to estimate fiscal needs based on proxies of sectoral service delivery needs, such as in South Africa. For example, for education, districts could receive an allocation per school-aged child, for health an allocation per capita, etc. These per-client allocations could be adjusted to account for regional differences in unit costs, driven inter alia by diseconomies of scale.

**Develop a (transition) strategy that holds the net losers of this change—especially large and thinly populated districts—harmless or limits their losses (Box 3.5).** This will be critical for making the transition to a new fiscal formula politically viable.

**Redesign the DAK Afirmasi as an instrument for bringing infrastructure up to a minimal standard in districts with a low capital stock.** This could be one promising way of holding net losers of the DAU reform harmless for their losses, while at the same time strengthening their accountability for bringing their infrastructure stock within a defined percentage of national averages.

**Further increase the share of earmarked transfers to enhance the GoI's ability to provide direct funding for national priority programs.** Specifically, the GoI could transform the DAK *Penugasan* into a "DAK for National Priority Programs". This DAK would focus on a small number of the GoI's top strategic priorities. Rather than limiting financing to a menu of eligible project types, the DAK *Penugasan* could "follow programs".<sup>118</sup> Financing could then be directed to those projects most suited to reaching the respective program's objectives. A DAK *Penugasan* for tourism development, for example, could focus on those infrastructure investments deemed most critical to tourism development in a region. Such a DAK could also be allocated for multiple years, to enable medium-term planning and increase predictability.<sup>119</sup>

**BOX 3.5.**

**Guiding principles for a transition strategy to a per capita formula for general transfers (DAU)**

**K** International experience suggests the GoI should consider the following critical factors in designing a transition strategy to a per capita DAU formula:

- 1. Ensure that fiscal needs are estimated realistically and reliably.** This means both making the right assumptions about the cost drivers of expenditure needs and investing in reliably measuring them (such as population and local unit costs, see Box 3.3). It may also help to differentiate unit costs between urban and rural areas. For example, the per capita costs of securing water access will typically be higher in urban than in rural areas.
- 2. Smoothen revenues for losing localities through fixed-term complementary funding.** This requires identifying SNGs with the biggest revenue losses and designing a mechanism for providing them with complementary funding for a fixed period. Managing the transition requires a medium- to long-term time horizon, as the example of Spain illustrates. Until 1986, Spain

relied “lagged expenditure values” for determining transfers to its regions, perpetuating regional inequalities in service provision, among other shortcomings. In 1986, the Spanish government decided to transition toward a on allocation based on a weighted index, with most weight on population. However, a transitional “hold harmless provision” ensured that no region would see a decline in revenues and accounted for a significant share of SNG revenues for many years (López-Laborda, Martínez-Vazquez, and Monasterio 2006).

- 3. Utilize transition funding pools<sup>120</sup> to also encourage better spending.** For example, losing districts could be compensated from a structural fund that aims to fill critical infrastructure gaps.
- 4. Develop a medium-term political communication strategy for building and sustaining reform support.** As a first step, government should focus on advocating for the reform and on building public support, even if reform adoption and implementation will likely not be feasible within a single legislative period.

**Scale up the Hibah to fill the “missing middle” of mid-sized urban infrastructure.** Building on its success as a performance-oriented transfer, the GoI could use the *Hibah* to structure a suite of national urban grant programs that match local resources. Financed through the Regional Infrastructure Development Fund (RIDF), these programs could target: (i) slum upgrading and affordable housing; (ii) urban solid waste management; (iii) urban flood risk management; (iv) urban transport; and (v) urban water supply and sanitation. The *Hibah* is well-suited for this purpose because (a) it encourages SNG ownership of the assets built and healthy competition among SNGs for funding; (b) it can flexibly be used for projects of all sizes; (c) it uses a strong joint line-MDA and MoF oversight mechanism; and (d) using grants as the principal source of long-term finance for basic infrastructure in small and poor municipalities (and as additional finance for growing municipalities), reflecting good international practice.

**Better integrate the DAK and other conditional transfers with the local budget process.** DAK policies are currently unpredictable,<sup>121</sup> undermining good planning and budgeting of DAK at the local level. The central government could improve this by committing DAK to national priority programs over the medium term instead of on an annual basis only. Furthermore, it could involve Parliament (*Dewan Perwakilan Rakyat*, DPR) in prioritizing DAK types and in agreeing on early ceilings for key DAK.

**Improve the proposal-based allocation mechanism for the DAK by making allocations more predictable and by better targeting districts with the greatest needs.** Predictability could be enhanced by introducing indicative (per-district and per-sector) multi-annual funding ceilings. Such funding ceilings would also help prevent districts from spending extra time on proposals that stand little chance of being funded.

## 3 Efficiency

**Abolish the basic allocation in the DAU to reduce perverse overstaffing incentives.**

**Move toward an asymmetric design of the fiscal transfer system in a way that grants more autonomy to better performing districts.** For example, well-performing (in terms of spending efficiency) district governments could be financed largely through unconditional transfers (the DAU), whereas poor performers could be more tightly centrally managed through conditional transfers.

**Carefully experiment with performance-oriented transfers with the goal of strengthening top-down accountability for results.** The GoI should carefully pilot and evaluate performance-oriented transfers, before scaling them up.

**118** In 2016, President Jokowi announced a new approach to linking the plan to the budget under the catch phrase “money follow program, not money follow function” which mandated a stronger link between resource allocation and government priorities, rather than resources being allocated to the administrative structures of government (functions).

**119** This DAK could be implemented in three ways: (i) by assigning DAK to support specific national priorities in the annual work plan (RKP); (ii) by specifying the policy objectives of the DAK in the line ministry technical guidelines; and (iii) by requiring local governments to develop plans to implement the national priorities and demonstrate the link between their planned inputs and the objective of the national policy. This would build on the proposal-based approach initiated in 2016.

**120** Transition funding pools are temporary funding arrangements that serve to top up formula-based transfers for SNGs that lose revenues in the transition to a new fiscal formula. Their primary purpose hence is to help smoothen the fiscal impact of the transition for these SNGs.

**121** Different DAKs appear and disappear in the national budget from one year to the next and the technical guidelines (juknis) change each year.



# *Data for* **Better Policy Making**

**125–136**

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4.1 Inadequate data and information systems constrain efforts to improve the quality of spending

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4.2 Improving the collection and management of data to support better spending



# 4.1

**Inadequate data  
& information  
systems constrain  
efforts to improve  
*the quality  
of spending***

**A** *Data on inputs*

**B** *Outputs*

**C** *Outcomes*

**D**ata are key to measuring and driving effective government performance. Broadly speaking, two types of data are needed to evaluate the quality of spending:

1 Fiscal data on government spending (inputs) classified according to type (economic classification), function, and policy purpose (program/activity); and

2 Sector-specific data on outputs (e.g., the number of schools built, or immunization coverage rate) and outcomes (e.g., student test scores or stunting rate).

These two types of data are necessary to measure the relationship between inputs and outputs (allocative and technical efficiency) and between outputs and outcomes (effectiveness). These data should be available at both the central and subnational levels, and sufficiently disaggregated to undertake meaningful analysis.

*A*

## *Data on inputs*

**I**ndonesia has made notable progress in monitoring and reporting spending data at the central government level. Since 2015, the GoI has also fully implemented the electronic State Treasury and Budget System or SPAN (*Sistem Perbendaharaan dan Anggaran Negara*), an automated payment and budget execution information system that provides timely information on the financial position. SPAN is now being used in 222 locations across Indonesia and manages all financial transactions performed by over 24,000 government spending units.<sup>122</sup> The information contained in SPAN enables the MoF and other core financial agencies to produce comprehensive reports on the use of the central government's resources in a timely and accurate manner.

However, the classification of spending makes it difficult to analyze some types of spending in detail. Spending by the central government is regularly reported by economic classification and by standard functions/sub-functions.<sup>123</sup> Indonesia follows international standards (the Classification of the Functions of Government, or COFOG) in the classification of functions at the level of divisions (*fungsi* or functions) and groups (*subfungsi* or sub-functions), but does not use the third level of the functional classification (classes). This makes it more difficult to some types of spending which are of importance to government. For example, some types of infrastructure spending are captured at level 2 of COFOG (water supply, housing, street lighting, waste

TABLE 4.1

Data on subnational spending reported by economic classification and by function, 2014-18

Year	Spending by economic type			Spending by function			Completeness of function data
	No of SNGs	Date of data set	Amount (IDR trillion) rounded	No of SNGs	Date of data set	Amount (IDR trillion) rounded	
2014	542	21-Oct-16	799	324	10-Apr-17	541	68%
2015	542	4-Jul-17	916	529	2-May-17	238	26%
2016	542	18-Oct-18	1003	503	18-Sep-17	667	67%
2017	542	18-Apr-19	1058	542	5-Sep-19	1043	99%
2018	542	5-Sep-19	1092	542	5-Sep-19	1088	100%

Source: Ministry of Finance: <http://www.djpk.kemenkeu.go.id/?p=5412>

management and waste water management), but others are only captured at level 3, (roads are captured at level 3, under Transport; and irrigation is not separately captured at all, but is a component of spending on Agriculture). Since Indonesia does not use level 3 of COFOG accurately, capturing monitoring infrastructure spending is not straightforward. Furthermore, Indonesia does not classify intergovernmental transfers as spending, as is the international practice under the Government Financial Statistics (GFS) standard issued by the IMF. This is likely to mean that transfers have to be classified by function as part of a manual collation process.<sup>124</sup> Analyzing central government spending on the education function is hampered by the way the largest single expense, salaries, are recorded. In the budget, salaries are shown as a single amount against each Directorate-General, which means the planned costs of delivering individual activities does not include the largest cost item. At the point of execution, salary spending is not captured by sub-function, but instead is classified as ‘general government’. Finally, both in budget and spending reports, it is not possible to distinguish spending on religious teachers from spending on religious education administrators, spending on religious teachers in non-religious schools from spending on teachers in religious schools, nor is it possible to distinguish spending by level of the education system.<sup>125</sup>

**Data on SNG spending mapped to key functions are available from 2014 to 2018 but are less credible for some functions and for earlier years.** Low credibility of data for some functions results from inaccuracies in the mapping of the subnational functional classifications to national ones.

Following regulations prescribed by the MoHA, SNGs report their spending according to a more granular set of 34 functions (*urusan*) prescribed in Law No. 23/2014 on Regional Autonomy. A MoHA regulation maps *urusan* to the 11 functions used by central government, but this mapping is not accurate.<sup>126</sup> The MoF has made a significant effort to improve the completeness of spending reported by function, but data are only reliable for 2017 and 2018. Table 4.1 compares data on subnational spending reported by economic classification (left columns) with that reported by function (right columns) on the website of the MoF’s Directorate General of Fiscal Balance (*Direktorat Jenderal Perimbangan Keuangan*, DJPK) website for 2014-18 as at December 2019.<sup>127</sup> For earlier years the dataset on spending by function is incomplete as to the number of districts covered, but for 2015 the total reported by function is only around one-quarter of that reported by economic type.

**The decision to switch to reporting subnational data according to the 11 national functions has limited the scope to track spending on infrastructure, an important area of spending for the GoI.** Prior to 2014, the reporting of subnational spending by *urusan* meant it was possible to estimate subnational spending on infrastructure by combining two *urusan* (public works, and housing and sanitation). Now that subnational spending is reported by nine functions, it is more difficult to identify infrastructure spending. Whereas at central government level most infrastructure spending can be identified by level 2 of the functional classification (sub-function), only the first level functional classification is reported for subnational spending. For 2014, SNGs

were responsible for more than 60 percent of total public spending on infrastructure, and it seems likely this has increased during the term of the current administration, which has increased allocation to capital transfers (DAK *Fisik*) and required a minimum of 25 percent of DAU to be allocated to infrastructure. The lack of a way to accurately monitor infrastructure spending is a significant hindrance to the GoI in accurately analyzing the quality of subnational spending.

**Evaluating subnational spending efficiency within sectors is even more challenging.** The regulations on budget and reporting formats for SNGs do not require them to use the standard classifications for programs and activities, which are important for analyzing the efficiency and effectiveness of spending. A recent World Bank analysis of subnational spending information identified around 15,000 unique program definitions (compared the standard, which provides about 210)<sup>128</sup> and more than 170,000 unique activity definitions (compared with the 1,200 provided in the standard) used by districts in reporting their spending. While it is possible to map around 70 percent of programs to the standard classifications, less than one-quarter of activity definitions can be mapped to the standard. The presence of overlapping definitions means that similar spending could be classified in multiple ways, vastly complicating comparison of spending across districts in order to evaluate its quality.

**The MoF attempted to improve the quality of subnational fiscal data through a central automated reporting system, *Sistem Informasi Keuangan Daerah* or SIKD, in 2012.** Over the past four years the compliance of districts and the quality

<sup>122</sup> These include around 12,000 religious schools.

<sup>123</sup> Excluding interest payments and subsidies, data on public expenditures in Indonesia are broken down according to economic classification (personnel, material, capital and social) as well as into 11 functions (General Public Services, Defense, Public Order and Safety, Economic Affairs, Environment, Housing and Communities, Health, Tourism and Culture, Religious Affairs, Education and Social Protection). The World Bank Consolidated Fiscal Database reclassifies these 11 functions into 13 sectors (adding Infrastructure and Agriculture).

<sup>124</sup> The central government budget (APBN) separates religion from the ‘recreation, culture and religion’ function in COFOG. Therefore, at the central government level, Indonesia uses 11 standard functions and 82 sub-functions to classify spending.

<sup>125</sup> Although MoF regulation (PMK) 102 of 2018 on Classification of the Budget provides separate sub-classifications for primary and secondary education, the budget and spending reports for the Ministry of Religious Affairs use a composite sub-function classification of ‘primary and secondary education’.

<sup>126</sup> For example, although MoHA Regulation No. 13/2006 specifies that spending against the *urusan* of public works corresponds to spending against the central government function of economic affairs, an examination of the sub-*urusan* level shows it actually maps to three different central government functions: economic affairs, housing and public facilities, and environment and spatial planning.

<sup>127</sup> See “*belanja per fungsi*” or spending by function, <http://www.djpk.kemenkeu.go.id/?p=5412>

<sup>128</sup> The standard program and activity descriptions are provided in MoHA Regulation No. 13/2006. However, an amendment in 2007 authorized local governments to customize the classification structure.

TABLE 4.2

Comparison of national and subnational functional classification in education under proposed subnational classification system in MoHA Regulation No. 90/2019

Education is a function defined in PMK 102/2018 for central government	Education is a function defined in MOHA 90/2019 for subnational government	
Level 2 function definitions for central government (PMK 102/2018)	Level 2 function definitions for subnational government (MOHA 90/2019)	
Early childhood education programs	Education	<b>Level 3 of Education sub-function defined in MOHA 90/2019</b> Education management Curriculum development Teachers and teaching personnel Education licensing Language and literature
Basic Education	Youth and Sports	
Intermediate education	Library	
Non-formal and Informal Education		
Official Education		
Higher education		
Educational Assistance Services		
Religious Education		
Education and Culture Research and Development		
Youth and Sports Coaching		
Cultural Development		
Other Education		

Note: Under the MoHA regulation the functional and program classifications are linked. Level 3 of the functional classification shown in the right column is part of the program segment.

Source: MoF Regulation No. 102/2018 for national function classification, MoHA Regulation No. 90/2019 for subnational function classification.

of data has improved substantially, but production of meaningful data from the SIKD system depends on use of a more standard classification by SNGs, which will entail major change management of local accounting and reporting practices. Traditionally, the MoHA has regulated the classification system used by SNGs. Implementation of a more standard approach will require support of other ministries including the MoHA. In addition, the MoF continues to extract data manually from paper reports for the purpose of public reporting of subnational spending. Data are available by economic classification and by function (as shown in Table 4.1 above), but not the intersection of both. Hence, it is not possible to evaluate effectiveness of subnational sectoral spending by looking at the relevant spending mix (e.g., how much do SNGs spend on salaries, capital, and goods and services in the health sector).<sup>129</sup>

**A new MoHA regulation on classification of subnational budgets and spending contains improvements but will make it more difficult to obtain a comprehensive picture of total government spending.** MoHA Regulation No. 90/2019 provides

for additional segments in the subnational budget classification and standardizes the way programs and activities are captured. However, it also fully aligns the classification of programs and activities to the *urusan* classification structure at three levels, which will make it more difficult to consolidate central and subnational spending. A new segment on function is introduced, which uses the national functional classification at level 1, but creates an entirely new classification structure at level 2, as shown in Table 4.2 for the Education function. Whereas a breakdown of spending by level of the education system is possible from the central government classification structure, this will not be possible from the subnational classification structure. In some cases, given the differences between the sub-functional components of each different system of functional classification, the types of spending captured at subnational level will be quite different from that captured at national level.<sup>130</sup> If the GoI wants to analyze total government spending in a rigorous way, it is important that the two classification systems properly align in terms of detail, not just in name.

<sup>129</sup> For the 2018 budget data, the MoF (DJPK) has published a breakdown of spending on each function into broad economic categories—salaries, goods and services and capital. These data are not yet available for spending, but it is a promising start.

<sup>130</sup> For example, although the *urusan* classification of 'public works' (*pekerjaan umum*) at subnational level is mapped to the national function of 'economic affairs', it covers sub-functions which at the national level are mapped to different functions: (i) Solid waste and Waste water, which at national level are classified under the function of 'Environment and Spatial Planning'; (ii) Housing and Street lighting, which at national level are classified under the function of 'Housing and public facilities'.



# B

## Outputs

**Data on outputs are available in some sectors but are not consistently used and lacking in quality.** Outputs are usually collected through administrative systems maintained by each line ministry. The MoEC has developed a ministry-wide system, Dapodik, an effort that other ministries could emulate. In other sectors, data are highly fragmented across multiple departments of the same ministry and/or prone to different definitions and lack of quality assurance in the collection process (see Box 1 in the chapter on Health and the 2013 report on maternal mortality<sup>131</sup>). Information on the current quality of infrastructure (used to inform a needs-based allocation of capital funding and to measure achieved performance of programs or projects) is captured in similar ways through administrative systems. Such administrative data are prone to manipulation and gaming. If indicators are increasingly used to reward performing SNGs and to name and shame laggards, SNGs will face growing incentives to overreport their achievements or to focus on “hitting the target”, while missing the point. A World





Bank-financed project, the Local Governance and Decentralization Project, helped Indonesia to pioneer the use of independent verification to check the validity of self-reported performance assessments for individual subnational infrastructure projects.

**A recent IMF/World Bank assessment of public investment management systems has identified a gap in data on public investment projects.<sup>132</sup> In many countries, budget classification systems include a project segment which allows expenditure on capital projects to be monitored more closely during budget execution and tracked across years.** The absence of project-level information for tracking capital projects in plans and budgets undermines good management to ensure full budget absorption and efficiency. Given the importance of infrastructure investments for government, this is a major gap.

**While data on outputs may generally be reliable for measuring performance at aggregate national level, their use to measure performance of individual districts is more problematic.** In the health sector, for example, it is not uncommon for

district immunization rates to be well over 100 percent. These errors likely result from inaccurate calculation of the denominator—the number of children who should receive vaccinations (i.e., those born in the past 12 months). Accuracy in measuring outputs at subnational level is not just important for comparing the performance of districts with each other; it is also important to guide district managers where they need to focus attention. This includes information about performance across a single district. For example, current systems for monitoring stunting are designed to produce a robust result at the district level, but they are not reliable for identifying locations where stunting rates are higher within a district.

**More generally, there are competing sources of population data of beneficiary target groups, which allows administrative data on outputs to be converted into comparable performance measures.** There are two sources of population data in Indonesia: Intercensal and Census surveys (conducted every five and ten years, respectively), and civil registration data collected by the MoHA. Since 2013, a law on civil

registration<sup>133</sup> has directed public agencies to use civil registration data (MoHA population data) in calculating entitlements and allocating resources. However, population estimates generated based on the Indonesia Intercensal Population Survey tend to differ starkly from administrative population data as reported to the MoHA. In 2015, the difference in population estimates exceeded 10 percent for over one-third of districts and exceeded 20 percent for about 11 percent of districts.

**The GoI is making efforts to improve the quality and coverage of civil registration data.** Beyond expanding coverage and underpinning the reliability and sustainability of the national ID system, the quality of demographic and health statistics depends on accurate and timely registration of births and deaths. One reason may be that SNGs only capture those births and deaths that are reported to a Posyandu or a Puskesmas. Birth registration and national IDs also have important implications for removing barriers to the poor accessing health and education services. Increasing access to these data by all ministries and local governments is therefore critical.

<sup>131</sup> Joint Committee on Reducing Maternal and Neonatal Mortality, National Academy of Sciences, 2013 *Reducing Maternal and Neonatal Mortality in Indonesia, Saving Lives, Saving the Future*, Chapter 2 *The Data Conundrum*. [http://staff.ui.ac.id/system/files/users/tjahyono/gondhowiardjo/publication/saving\\_lives\\_saving\\_future.pdf](http://staff.ui.ac.id/system/files/users/tjahyono/gondhowiardjo/publication/saving_lives_saving_future.pdf)

<sup>132</sup> Indonesia Public Investment Management Assessment. IMF, World Bank, 2019. See box in Overview chapter.

<sup>133</sup> Law No. 24/2013, Article 58.

## C

## Outcomes

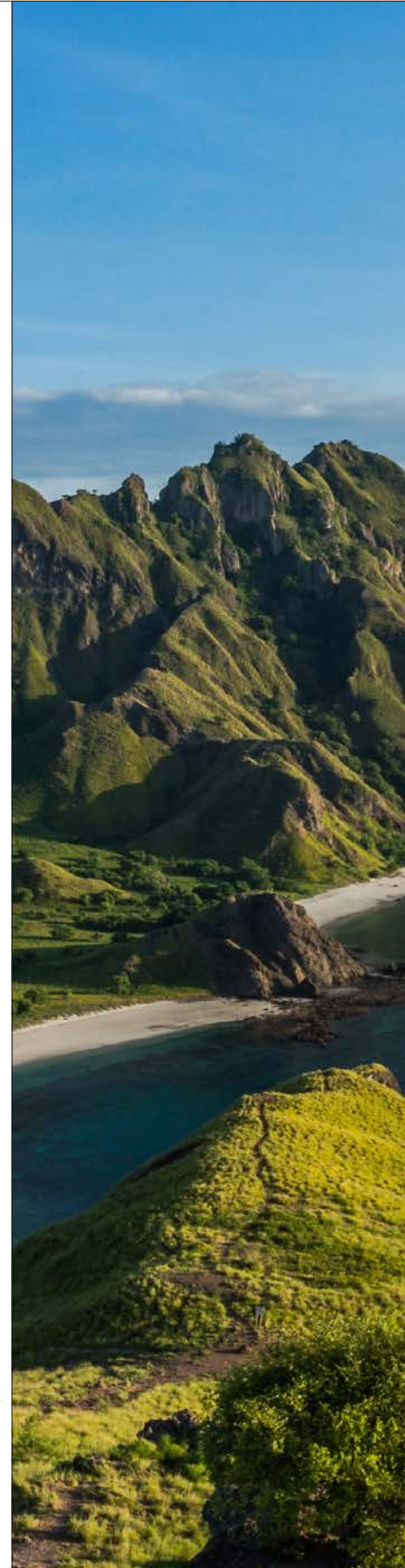
**D**ata on outcome indicators is usually obtained from the annual household survey, Susenas, or from periodic sector-specific surveys such as Risfaskes, the health facility survey. Survey data provide a more accurate measure of access to services and outcomes but may not be reliable for measuring year-on-year changes at the level of individual districts. Special surveys are often undertaken only every few years, while the routine surveys such as Susenas use a sampling approach, which is not designed to generate a robust result at the district level. For more than 200 districts, the confidence interval for Susenas at the level of individual districts is greater than 5 percent. Since expected year-on-year performance improvements are often much less than 5 percent, Susenas year-on-year changes are not a meaningful way to measure districts' incremental performance improvements. Part of the problem is that the sample size for specific subpopulations, such as households with children under five, is insufficient in some, especially small districts. Measurements from Susenas related to infrastructure (such as access to water and sanitation) are prone to additional clustering errors, arising from the way the survey is administered in blocks of 10 households. Use of a rolling average of measurements from annual Susenas surveys can increase the reliability of year-on-year measurement of performance changes.<sup>134</sup>

**Where data are available, the lack of better integrated monitoring systems is clearly impeding the GoI's ability to spend better.** In the health sector, for example, multiple monitoring systems are managed by different directorates within the MoH for different health interventions, and there are multiple systems to process JKN claims under BPJS Healthcare. With the lack of interoperability between different data systems and poor coordination among key stakeholders, there is limited useful informa-

tion that can inform strategic prioritization and resource allocation at the district and national levels. Despite improved coordination in the allocation of DAK, decisions on how much to allocate to each district are still based on information from the districts themselves. It is difficult to assess if district proposals are based on a consistent measurement of needs. The introduction of the unified poverty targeting database (*Basis Data Terpadu* or BDT), in 2011, currently known as integrated social welfare database (*Data Terpadu Kesejahteraan Sosial* or DTKS), was followed by a more efficient allocation of social assistance benefits in subsequent years. However, DTKS has not been systematically updated since 2015, and is not fully used by all major social assistance programs. As a result, it has not been able to foster convergence across social assistance programs, i.e., ensure that eligible families receive an integrated network of support.

**Without well-functioning information systems, systematic monitoring and evaluation of how public resources are spent will remain challenging.** The lack of M&E is evident across all sectors, but particularly in infrastructure, which the GoI has prioritized in recent years. In roads, poor collection of data on asset preservation and development has contributed to fragmented, ineffective prioritization of programs to improve road performance. Although more modern planning tools are starting to be utilized, many *Balai* (regional support teams) still undertake manual screening of pavement conditions using spreadsheets. In the housing sector, the lack of data on the quality of subsidized housing during audits means that there is no mechanism to hold developers accountable. There is also no system in place to systematize and enforce compliance with construction regulations for subsidized housing.

<sup>134</sup> B. Lewis, N. McCulloch and A. Sacks. 2015. 'Measuring Local Government Service Delivery Performance: Challenges and (Partial) Solutions in Indonesia'. *Journal of International Development*.





# Improving *the* collection & management of data to support better spending

- A *Inputs*

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- B *Outputs*

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- C *Outcomes*



**I**mproved data are essential to make sure that each rupiah of public money is spent efficiently and effectively in Indonesia. To identify which programs/interventions are working and to undertake evidence-based policymaking more broadly, the GoI needs better data. As previously noted, data on inputs, outputs and outcomes are often unavailable, not updated regularly or sitting in different systems that are not integrated with each other. The problems are more severe at the subnational level and adversely affect SNGs' ability to deliver better access to services.

A

## Inputs

**Although data on public expenditures by the central government are good by international standards, the GoI needs to ensure that monitoring systems collect the necessary information to drive better performance.** As previously noted, the data on spending by the central government are regularly monitored, reported and available to the public. However, Indonesia needs to monitor spending on infrastructure closely, and this analysis is not well supported by the use of functional classifications. In the international standard functional classifications, detail on infrastructure is provided at the third level of the classification, which is not used in Indonesia. In the absence of third level functional classifications, accurate monitoring of infrastructure spending will require a combination of functional and economic classifications. To ensure capital investments are properly managed, a classification for project ID should be introduced. The recent IMF/World Bank public investment management assessment recommended that information on major capital projects should be included in the next RPJMN with information on timeframe and estimated costs (see box in Overview chapter). In order to monitor implementation of planned projects, IT systems such as SPAN should be modified to include a project ID.

**Better definition of programs and activities (sub-programs) in the budget classification and Chart of Accounts would support more effective monitoring of interventions.** Tracking performance effectively starts with a clear logic as to how the desired outcome will be achieved. In many cases, the delivery of interventions

depends on inputs from multiple levels of government. The GoI plans to introduce more consistent classification of programs and activities across levels of government, and to better integrate allocations to national ministries with subnational transfers, which will support better monitoring of the overall envelope for delivery of government programs. Budget classifications could be better aligned with intervention logic and with the priorities expressed in the national plan. As currently structured, program and activity classifications are hardwired to the organization structure, which inhibits meaningful monitoring of performance.<sup>135</sup> The Annual Plan uses a different architecture of classifications from the budget, which makes it difficult to track the links between the two. Further refinement and rigor in the definition of outputs would establish a clearer results chain from inputs to outcomes. Similarly, improving the capture of large infrastructure projects in planning and budget management systems (e.g., in SPAN) would make it easier to track their implementation. One option that could be explored is to require ministries to identify all projects over a certain size as a standalone output in the budget.

**Linking SPAN and the procurement system would generate useful data to support expenditure analysis.** Currently, the procurement system (SPSE) managed by LKPP focuses on sourcing, whereas SPAN managed by the MoF focuses on recording commitments and payments of the goods and services procured or sourced. Sourcing information from SPSE is not visible in SPAN, while commitment and payment management information from SPAN is not

visible in SPSE. Establishing a link between the two systems would enhance transparency, efficiency, predictability and control over budget execution. For example, the GoI could monitor transparency in procurement by looking at the share of contracts that are open to competition. The GoI could also measure the time taken in procurement processes (disaggregated by procurement methods), whether the same vendor gets selected by 'single source' or other non-competitive methods, and whether payments are released at a faster rate in non-competitive contracts. The first indicator would enhance the efficiency of spending, whereas the latter two indicators could be used as a red flag in monitoring corruption.

**At the subnational level, recent reforms to improve the quality of spending data are in the right direction but implementing them is a huge task.** Initiatives to implement a standard budget classification and Chart of Accounts (*Bagan Akun Standar*, BAS) are underway. Government Regulation No. 12/2019 (issued in January 2019) requires SNGs to budget and report using a common classification system and specifies that a separate government regulation will determine the classification system. The MoF is leading the development of that regulation to define the architecture and definitions of the classifications that SNGs will be required to use. In the meantime, the issue of a separate ministerial regulation on budget classification and Chart of Accounts<sup>136</sup> by the MoHA and the introduction of a new system for managing subnational finances presents a coordination challenge. It will be critical for the MoHA and the MoF to work together to arrive at a harmonized classification struc-

<sup>135</sup> Programs correspond to Directorates-General and Activities to Directorates.

<sup>136</sup> MoHA Regulation No. 90/2019 was issued in November 2019 and specifies the new system will apply from January 1, 2020. Its implementation is reinforced by the roll out of a new e-planning and budgeting system, the SIPD.

ture that addresses the information needs of each organization, but which also prioritizes the production of meaningful budget and spending reports that support decision-making by SNGs. The level of granularity in subnational plans, budgets and financial reports undermines good accountability.<sup>137</sup> Classification systems should be structured to support good subnational budgeting and budget execution decision-making focused on three objectives: (i) prioritizing across sectors and services; (ii) transparency of allocations across major expenditure types and between frontline service delivery and back-office administration; and (iii) transparency of capital investments. The introduction of a new classification system offers the potential to vastly improve the tracking of capital investment projects at the subnational level, but this would require introduction of a project ID, which is not currently part of the proposals put forward by either the MoF or the MoHA.

**The integrity of these important reforms to standardize the classification of subnational spending will depend in high level inter-agency coordination and willingness to evolve the system over time.** The task of rolling out the new classification system in 500+ SNGs will be a huge one. At a minimum, local governments will need to map their current BAS to the new BAS, clean the data for transfer to the new system, and maintain audit files on how they have managed the transition process (to meet the requirements of BPK, the state audit agency). It is inevitable that it will take some time to train local government officials in how to apply the classification consistently, and the classification structure will need to be revised as gaps are identified. Other large decentralized countries (e.g., South Africa, Mexico and Brazil) have taken 8 to 10 years to implement similar reforms. To ensure this reform is managed properly, adequate resources should be allocated for dedicated staff to manage the process, and to finance technical support to the 500+ SNGs to collect and classify spending information accurately.

# B

## Outputs

**Data on access, outputs and beneficiaries should be integrated into common platforms and more attention paid to their maintenance.** The experience with the integrated social welfare database, DTKS, shows that a well-functioning data registry that is accessible by all stakeholders can yield crucial gains in efficiency and effectiveness. Continuing to update and ensure full implementation of the DTKS would help to improve the impact of social assistance programs on welfare. The MoEC has established and is continuing to refine its Dapodik database, which provides a platform of information on the status of schools under the MoEC. It could be expanded to include religious schools supervised by the MoRA. Meanwhile, other sectors need to take the first step in establishing a common database. In housing, for example, an integrated Housing and Real Estate Information System (HREIS) containing data on key metrics (e.g., housing backlog, substandard housing, and affordability) by geography and consumer income could help policymakers identify gaps between housing supply and demand. In health, a common dashboard to benchmark performance among districts and facilities, available to all stakeholders across levels of government, could be established. Moreover, JKN claims data can help monitor adherence to guidelines and protocol-based care, thus helping improve the quality of service delivery. Claims data could also be used to run simulation and budget impact analyses to help identify cost-savings from open-ended payments to hospitals.

**Assessment of relative infrastructure gaps (for example, across districts)**

**is an important component of the central government's redistributive function.** Allocation of DAK could be more efficient if it is targeted to jurisdictions with the greatest need, but that would require a more consistent way of measuring need. Minimum standards were intended to serve that function, but the latest refinement to minimum standards has focused more on measuring the services received by citizens rather than the gaps in inputs such as schools, health centers, water supply systems and roads. Some countries use minimum standards specifically for infrastructure, and these could be adopted for Indonesia.<sup>138</sup> Service accreditation systems like that for health facilities could also be used as basis for fair comparison of the relative needs of different districts. To properly inform allocation of capital funding to bring infrastructure gaps, the standards need to provide not just a benchmark for the quality of individual infrastructure assets, but a benchmark for infrastructure quantity as well.

**The GoI has already laid a solid foundation to improve the quality of data through the One Data initiative and the recent Presidential Regulation on e-Government.** The recently issued Presidential Regulation on One Data (Presidential Regulation No. 39/2019) sets out a whole-of-government approach to data governance to improve government data quality, management and integration across government. In addition to enabling sharing of data within government, this is also expected to improve the transparency, accountability and accessibility of government data for the public. The regulation establishes governance arrangements and standards for data management, covering both central and subnational lev-

<sup>137</sup> It is not uncommon for subnational budgets to be over 500 pages long and for individual department workplans to be several hundred pages long. These are prepared and approved annually and routinely revised halfway through the year, resulting in a large transaction burden on local governments which distracts them from better strategic management of good quality spending.

<sup>138</sup> An example is the Regulations for Norms and Standards for Public School Infrastructure, issued under the South African Schools Act 84 of 1996.

els. Implementation of the initiative is led by Bappenas, together with MoABR, Ministry of Communication and Information Technology, MoHA, MoF, BPS and Geospatial Information Agency (*Badan Informasi Geospasial*, BIG) on the Steering Committee. Accordingly, the One Data Secretariat will be housed in Bappenas to harmonize relevant policies on data standardization, management and exchange, and coordinate the One Data Forum, while each ministry is expected to appoint a “data custodian” to implement the policies and standards. Government data covered by the regulation not only include statistical data and geospatial data, whose standards are governed by BPS and BIG respectively, but also various data generated as by-product of government administration, such as fiscal data. One of the functions of the One Data Forum will be to establish Master Data and Reference Codes to be used across government which, along with use of common data and metadata standards, as well as requirement to store data in open and machine-readable formats, will be important for enabling data interoperability. This regulation is complementary to the e-Government regulation (Presidential Regulation No. 95/2018) issued in 2018, which focuses on establishing common standards for technical infrastructure, such as Government Data Centers and shared applications systems.

**To support the implementation of data improvement with integrity, more attention is needed on the enabling environment for ministries to discharge their data stewardship functions:** (i) the capability and financing of ministry data centers (typically housed in Secretary General’s Office); (ii) cyber security and information privacy policies; (iii) incentives for civil servants to specialize in data and technology; and (iv)

improving the quality of government IT procurement (for example, modelling the UK Government Digital Service function in the Cabinet office, which provides oversight of the quality of IT development for the Government of the United Kingdom).

**BPKP (the internal audit agency) has developed skills in verification, and more use could be made of its considerable capacity.** Administrative data should be verified, particularly where they are being relied upon to calculate performance incentives. The Local Governance and Decentralization Project supported BPKP to undertake verification of individual DAK-funded projects in roads, water, sanitation and irrigation against a set of standard criteria. BPKP has been appointed as the independent verification agent for World Bank programs for results, of which Indonesia now has four. BPKP has a wide presence across Indonesia and considerable professional capacity, as most of its staff are accountants. There is considerable potential to make more use of BPKP in monitoring. The state audit agency, BPK, has also expressed interest in undertaking performance audits which, beyond ensuring accountability for public resources, could look at value for money in terms of program design, effectiveness of eligibility and allocation criteria in terms of targeting and overall program management effectiveness.

**More may need to be allocated to the function of M&E of government programs.** While there is understandable caution about allocating resources to costs that do not translate into services or assets, under-spending on M&E is a false economy. Closer examination of M&E systems could yield evidence to make the business case to support increased allocation. Increased funding will be needed to support BPKP’s

ongoing involvement in monitoring public programs, as well as ensuring data systems are adequately resourced. International practice suggests a rule of thumb of around 10 percent of program cost, higher if the program is executed at community level or involves very significant resources.<sup>139</sup>

**Efforts to standardize and verify population data, some of which are underway, should be encouraged and prioritized.** The level of under-registration varies markedly from one district to another, even where they face similar logistic challenges. A more targeted combination of incentives and support is needed to stimulate districts which are lagging, reward those which are performing well, and foster innovation and dissemination of ideas on how to improve registration systems. To facilitate improvements in population administration services, the central government has also started providing special grants (DAK Adminduk) to local governments since 2017. The current allocation formula for districts is uniformly based on population, but changes are under consideration to link the allocation and disbursement of these grants to the performance management framework for local civil registration offices (*Dinas Dukcapil*). For lagging regions, the push will be to expand access to services and close coverage gaps, e.g., birth certificate coverage, while for the best performing regions, the results focus may shift to *quality* of services, e.g., timely birth registration, compliance with service level standards. More transparency of the discrepancies between different population data sources could help stimulate further improvement. At present, data on civil registration are intended to be published every six months, but up-to-date and complete data by province and district are still difficult to access publicly.

<sup>139</sup> F. Twersky and A. Arbreton, 2014, Benchmarks for spending on evaluation. For federally funded community level programs, an allocation of 13% of budget for evaluation is recommended: [https://www.nationalservice.gov/sites/default/files/resource/Budgeting%20for%20Evaluation\\_090914st10.17.pdf](https://www.nationalservice.gov/sites/default/files/resource/Budgeting%20for%20Evaluation_090914st10.17.pdf). The Treasury of Western Australia recommends that organizations implementing high risk government programs should quarantine between 5-10% of their program budget for evaluation. High risk programs are those involving more than AUD 5 million, which are innovative, or which are a high priority for the government: [https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Program\\_Evaluation/evaluation\\_guide.pdf](https://www.treasury.wa.gov.au/uploadedFiles/Treasury/Program_Evaluation/evaluation_guide.pdf). See also ‘State of Evaluation 2012’ [http://www.pointk.org/resources/files/inmonet-state-of-evaluation-2012.pdf?fbclid=IwAR2jx0YYwv-VYCSYcoCT4sIFOFmLZOiBj2rv1PqI6t2JaP6M\\_WmboxUfbl](http://www.pointk.org/resources/files/inmonet-state-of-evaluation-2012.pdf?fbclid=IwAR2jx0YYwv-VYCSYcoCT4sIFOFmLZOiBj2rv1PqI6t2JaP6M_WmboxUfbl).

C

# Outcomes

**I**ndonesia already has one of the most regular and accurate national poverty surveys in the world. There is a risk of over-burdening Susenas and compromising its core function to monitor poverty reduction if more indicators are added to serve supplementary purposes. However, an independent survey capacity is needed to monitor some key outcomes such as reduction in stunting. Producing outcome level information that is accurate at the level of individual districts is challenging and expensive. BPS is a critical agency responsible for producing key information about the social and economic conditions of Indonesia, ranging from economic growth, poverty, employment to prices. With rapid decentralization, urbanization and increasing complexity of the economy, demand for more disaggregated and timely data has increased, even as data collection challenges have also increased. The scope of institutional reforms to continue improving relevance and quality of data to support policy making include: (i) standardization of business processes and statistical infrastructure (to conduct different surveys and/or Censuses); and (ii) application of technology solutions for data collection, management and dissemination.

**Recent reforms to computerize test scores are an example of improvements in the reliable measurement of education outcomes.** The introduction of computer-based testing for 9th and 12th grade student exams has reduced opportunities for corruption (gaming) in the scores themselves, but the measurement occurs only at the end of the student's completion of the junior and senior school cycles. Taking an outcome measurement earlier, for example when students pass from basic to junior high school, would provide a better opportunity

to identify where in the education system challenges are most pronounced, and ensure that students who are not ready for the next stages of school are either given additional support or are not promoted to the next grade.

## Stimulating an enabling environment for better data quality

**Demand for better data is unlikely to increase unless the data are used.** This is particularly true for subnational data. In many sectors, having access to central government spending data does not inform expenditure analysis in any meaningful way, without access to subnational spending data so that there is a complete picture of resources to align with outputs and outcomes. Some actors such as the Ministry of Health have a considerable appetite for expenditure analysis but lack the data to undertake this. Once agencies have access to and are using data, they are more likely to identify its shortcomings and prioritize its improvement.

**The budget process is an important entry point to increase the use of data.** Ministries should be required to substantiate requests for funding increases, or to introduce new programs, with business cases based on evidence. Periodic spending reviews of major spending programs should also be conducted. Where data are fragmented across sectors (e.g., health, education or infrastructure) due to multiple ministries or stakeholders, annual sector reviews of performance and expenditure should also be required. Rather than attempting systematic evaluation of all government spending, a few programs involving high spending or high

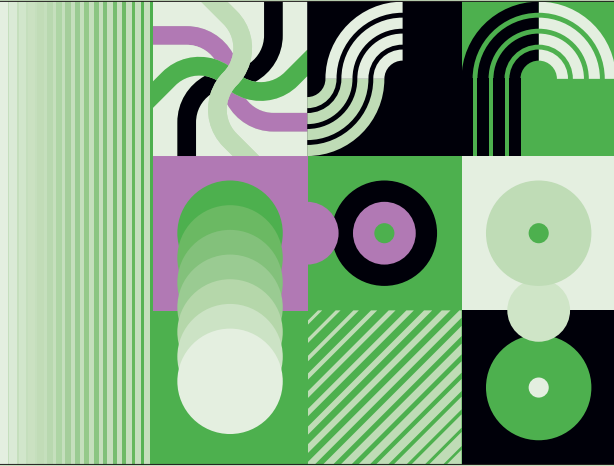
priorities for government could be selected to develop and refine more sophisticated qualitative approaches to using spending reviews in the Indonesian context. Spending reviews help to promote ministry accountability for performance, not just accountability for spending. The annual performance and expenditure reviews of the National Stunting Reduction Acceleration Strategy are a good example that could be further expanded to other spending programs.

**Integrating systems can promote harmonization of data, but the devil is in the details.** Some systems are being established in which data are being collected through PDF uploads, rather than through entry into the system itself. Real integration only comes with the use of a common data structure and closed menus to classify key data attributes to ensure comparability.

**Transparency can be a powerful driver for data improvement.** To reinforce the accuracy of these systems, key data should be made public. High-level political commitment to the principles of open data could have a catalytic effect on improvement of data quality. *Satu Data Indonesia* or the One Data Initiative,<sup>140</sup> spearheaded by the President's office and Bappenas, is a good start. An expanded One Data Initiative could focus on: (i) improving the integration of data collection, quality assurance and management across ministries; (ii) establishing data quality standards; and (iii) facilitating inter-agency agreement on data exchange. Verification is an important mechanism to ensure that data quality remains consistent. Enabling Parliament, local governments and citizens to access and utilize the data would improve both bottom-up and top-down accountability.

Part 02

Human  
Capital



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- ① Health
- ② Education
- ③ Social Assistance
- ④ Nutrition







# Health

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5.1	Context
5.2	How Effective Has the Health Sector Been in Meeting Its Goals?
5.3	Is the Level of Health Sector Spending Adequate?
5.4	How Efficient Is Public Spending in the Health Sector?
5.5	Recommendations to Spend More and Spend Better in the Sector

# Key Messages

- A** Indonesia has charted remarkable progress on its path toward universal health coverage (UHC). Health insurance coverage has rapidly expanded to 82 percent of the population and the share of out-of-pocket (OOP) expenditures has decreased by nearly 12 percentage points since the introduction of Jaminan Kesehatan Nasional (JKN) or National Health Insurance in 2014.
- B** Despite these major achievements, several challenges remain, especially in lowering maternal mortality rates, reducing stunting prevalence, and curtailing widespread tuberculosis. Regional and income-related inequalities in health outcomes also persist, highlighting the importance of good governance and health information systems to better target resources.
- C** Public health expenditure is well below regional and lower middle-income averages, so frontline providers frequently lack the drugs, equipment, and the training needed to deliver good quality services.
- D** Improving the performance of the health sector to ensure better value for money requires strengthening of the governance and accountability mechanism, addressing financial and institutional fragmentation, and introducing a better design of performance-orientation service delivery.
- E** Achieving Indonesia's ambitious goal of UHC will require the GoI to spend more and spend better on health care.

# Summary of recommendations

## Increase health sector spending to support the achievement of UHC

- A** Simplify the overall tobacco tax structure and increase tobacco excise taxes at the national level.
- B** Subsidize premiums for the informal sector to attract a larger pool of healthy members.
- C** Update JKN premiums based on sound actuarial analysis.
- D** Monitor and track legally mandated health spending.

## Improve the quality (or efficiency) of health spending

- A** Strengthen governance and accountability:
- *Improve governance and accountability by introducing an annual sector review.*
  - *Invest in health information systems to improve monitoring and evaluation of health spending performance.*
  - *Strengthen the purchasing role of BPJS Healthcare.*
- B** Pilot health financing reforms:
- *Address open-ended hospital payments where most spending occurs.*
  - *Introduce carefully designed cost-sharing for non-essential services, services prone to over-utilization, and/or to incentivize more cost-effective referral pathways.*
  - *Reinforce performance-based financing.*
- C** Improve the quality of service delivery:
- *Introduce an explicit benefit package commensurate with available resources.*
  - *Target resources to populations that would benefit most.*
  - *Use JKN claims data to inform and improve service delivery and increase efficiency.*
  - *Ensure the health system can address the long-term care needs of older and chronic condition patients.*

## Further key reading

World Bank. 2016. Health System Financing Assessment: Spend More, Right, and Better (<http://documents.worldbank.org/curated/en/453091479269158106/Indonesia-Health-financing-system-assessment-spend-more-right-and-better>)

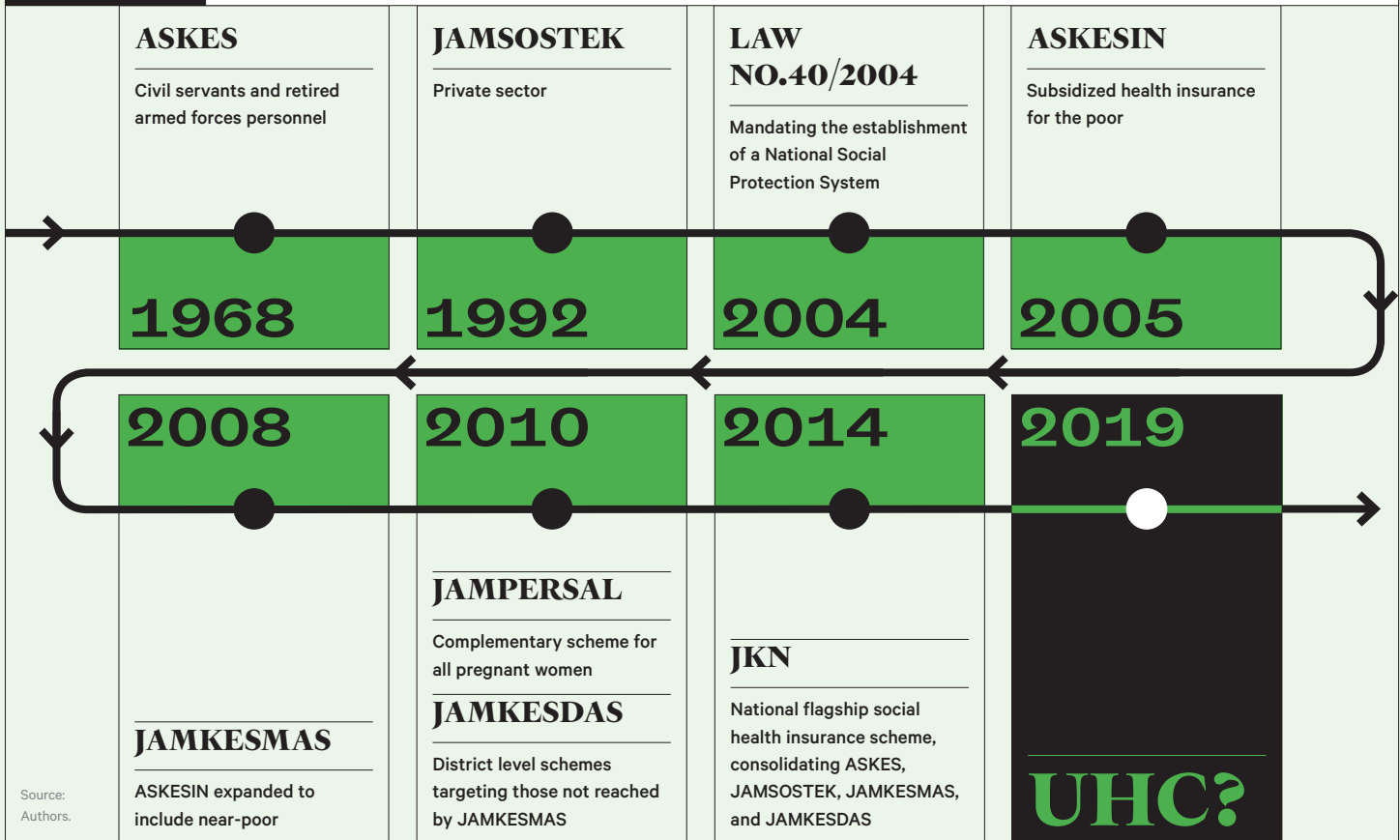
World Bank. 2017. Is Indonesia Ready to Serve? An Analysis of Indonesia's Primary Health Care Supply-Side Readiness (<http://documents.worldbank.org/curated/en/484351538653658243/Is-Indonesia-Ready-to-Serve-An-Analysis-of-Indonesia-s-Primary-Health-Care-Supply-Side-Readiness>)

World Bank. 2018. Functional and Regulatory Review of Strategic Health Purchasing Under JKN: Executive Summary (<http://documents.worldbank.org/curated/en/792001534743821191/Functional-and-Regulatory-Review-of-Strategic-Health-Purchasing-Under-JKN-Executive-Summary>)

# Context

# 5.1

FIGURE 5.1. Indonesia's path to UHC



Source:  
Authors.

Indonesia has achieved remarkable progress on its path toward universal health coverage (UHC). Prior to 2004, only civil servants, retired members of the armed forces and the police, and private sector workers had access to health insurance. Between 2004 and 2014, various schemes were set up, each catering to specific populations and offering different benefits (Figure 5.1). With the introduction of *Jaminan Kesehatan Nasional* (JKN) or National Health Insurance in 2014, Indonesia consolidated its schemes

and numerous risk pools into one national risk pool,<sup>141</sup> a uniform benefit package, and a single purchaser of health services that establishes uniform payment methods, reimbursement rates, and rules for quality of care—a massive reform that few multi-payer countries have been able to achieve. While pooling the health risk of the entire country into one national risk pool covered by the same benefits helps to enhance the equity of health care, the strong purchasing power of a single-payer system is expected to improve the efficiency of the entire system.

This chapter is organized as follows: Section 2 focuses on how effective Indonesia has been at meeting its goal of UHC—defined as *affordable* access for all to quality health-care services. Sections 3 and 4 look at health financing for UHC, i.e., whether Indonesia is spending enough on health and whether limited public resources are being used efficiently to maximize value for money. Finally, Section 5 provides recommendations for increasing and improving the quality of public health spending in Indonesia.

141 The four main schemes were: (i) Askes – for civil servants, set up at the state/province level; (ii) Jamsostek – for the private sector, set up at the state/province level; (iii) Jamkesmas – a national scheme for poor and near poor set up by the GoI; and (iv) Jamkesdas – local health insurance schemes for the poor and disadvantaged not covered by Jamkesmas, set up at the local government level (i.e., 300+ district level pools).

“Indonesia has achieved remarkable progress on its path toward universal health coverage (UHC).”



# How effective has *the* health sector been in meeting its goals?

# 5.2

**T**he Government of Indonesia (GoI) has set ambitious targets for the health sector, but progress has

been mixed. As outlined in the Ministry of Health's (MoH) five-year National Strategic Plan (Renstra 2015-2019),<sup>142</sup> the sector's main objective is to improve the health status of its population by providing UHC and financial protection. Specifically, the GoI aims to: (i) reduce high maternal mortality and stunting rates; (ii) reverse growth of communicable diseases, especially tuberculosis (TB) and human immunodeficiency virus (HIV); (iii) slow the increasing burden of non-communicable diseases (NCDs); and (iv) expand health insurance coverage. However, only six (out of 18) health sector indicators are on track to achieving their targets (Table 5.1).

**Indonesia has achieved considerable gains in health outcomes in recent decades, but several challenges remain, especially in maternal health, nutrition and in tackling persistent communicable diseases such as tuberculosis (TB).** Between 1960 and 2016, life expectancy increased from 45 to 69 years. Under-five mortality declined from 222 to 25 per 1,000 live births between 1960 and 2017, and infant mortality declined six-fold to 21 per 1,000 live births over the same period (Figure 5.2).<sup>143</sup> However, Indonesia's maternal mortality ratio (MMR) remains high relative to its income level and regional peers, despite declining to 126 per 100,000 live births in 2015, from 446 in 1990 (Figure 5.3).<sup>144</sup> In addition, one-third of children under five years old, or 9 million children, suffered from stunting in 2018—the fifth-highest prevalence in the world. Indonesia is also now the third-largest contributor to the global TB burden, with 842,000 cases reported in 2017,<sup>145</sup> and TB is the fifth-highest cause of premature death in Indonesia. In addition, new challenges such as Multi-Drug Resistant TB have emerged. Indonesia also continues to face challenges in curbing HIV.

**As the Indonesian population undergoes demographic and epidemiological transitions, new challenges are emerging, specifically a rise in non-communicable diseases (NCDs).** NCDs already account for the largest share of the disease burden (66 percent), nearly doubling since 1990, and this burden is likely to rise further as the share of the ageing population (>65 years) is expected to double from 5 to 10 percent between 2015 and 2030. Unhealthy lifestyle choices also contribute to the prevalence of NCDs. Indonesia has one of the highest rates of cigarette consumption in the world: half the adult population (i.e., 85 million people) smoked in 2016, including

<sup>142</sup> Ministry of Health's five-year National Strategic Plan (Renstra 2015-2019) is a state document operationalizing the vision and mission of the President as stipulated in the Medium-Term Development Plan (RPJMN) 2015-2019. It is available online at [www.depkes.go.id/resources/download/info-publik/Renstra-2015.pdf](http://www.depkes.go.id/resources/download/info-publik/Renstra-2015.pdf)

<sup>143</sup> Data from World Development Indicators to compare across countries.

<sup>144</sup> Data from other sources such as the census indicate that the MMR may be even higher than this estimate. The MMR accepted by the GoI (Bappenas) is 305 per 100,000 live births (SUPAS, 2015). The figures used in this report are based on the WHO-UNICEF-World Bank estimates (2017).

<sup>145</sup> 2018 WHO Global TB Report, WHO (2019).

**TABLE 5.1.** Mixed progress in achieving health sector development targets

Indicators	Baseline (2014)	Current Status (latest data available)	Target 2019
Maternal mortality ratio (per 100,000 live births)*	346	305	306 (SDG 2030 target: 70)
Infant mortality rate (per 1,000 live births)*	32	24	24 (SDG 2030 target: 12)
Underweight prevalence, percent of population*	19.6%	17.7%	17.0%
Stunting prevalence, percent of population*	32.9%	30.8%	28.0%
TB prevalence (per 100,000 population)	297	257	245
HIV prevalence, percent of population*	0.33%	0.33%	<0.50%
Number of districts where malaria has been eliminated (# district)	212	266	300
Hypertension prevalence, percent of population	25.8%	32.4%	23.4%
Obesity prevalence, percent of population	15.4%	20.7%	15.4%
Smoking prevalence among <= 18year-olds, percent of all Indonesians aged 18 and below	7.2%	8.8%	5.4%
Number of subdistricts with at least one accredited Puskesmas (# subdistricts)	0	1308	5600
Number of districts with at least one nationally-accredited hospital per city	10	201	481
Districts with >= 80 percent fully immunized infants	71.2%	85.4%	95.0%
National Social Health Insurance coverage/membership, percent of population	51.8%	81%	>95%
Number of Puskesmas with five types of health personnel	1015	1618	5600
Percent of Type C Hospitals with seven specialists	25.0%	45.2%	60.0%
Availability of drugs and vaccines at Puskesmas	75.5%	81.6%	90.0%
Quality drugs at Puskesmas*1/	92.0%	98.7%	94.0%

Note: shaded indicators with \* are on track to achieving target.

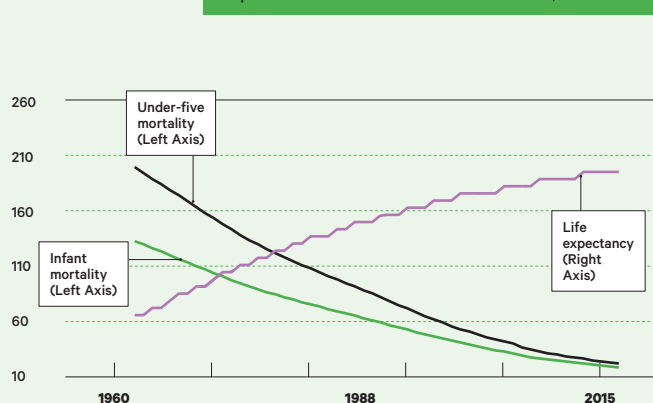
1/ Refers to the percentage of sampled drugs that met quality standards, e.g., stored appropriately and not close to expiry dates.

Source: MoH (2018); National Strategic Health Plan (Renstra 2015-2019); RPJMN 2015-2019 Mid-Year Evaluation (Bappenas, 2017).

**FIGURE 5.2.**

**Indonesia has achieved impressive gains in health outcomes over decades...**

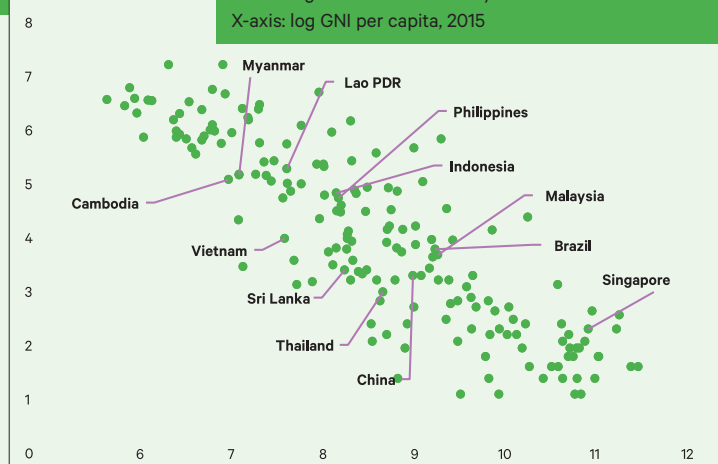
Population health outcomes in Indonesia, 1960-2015



**FIGURE 5.3.**

**...but key challenges remain, especially in maternal health**

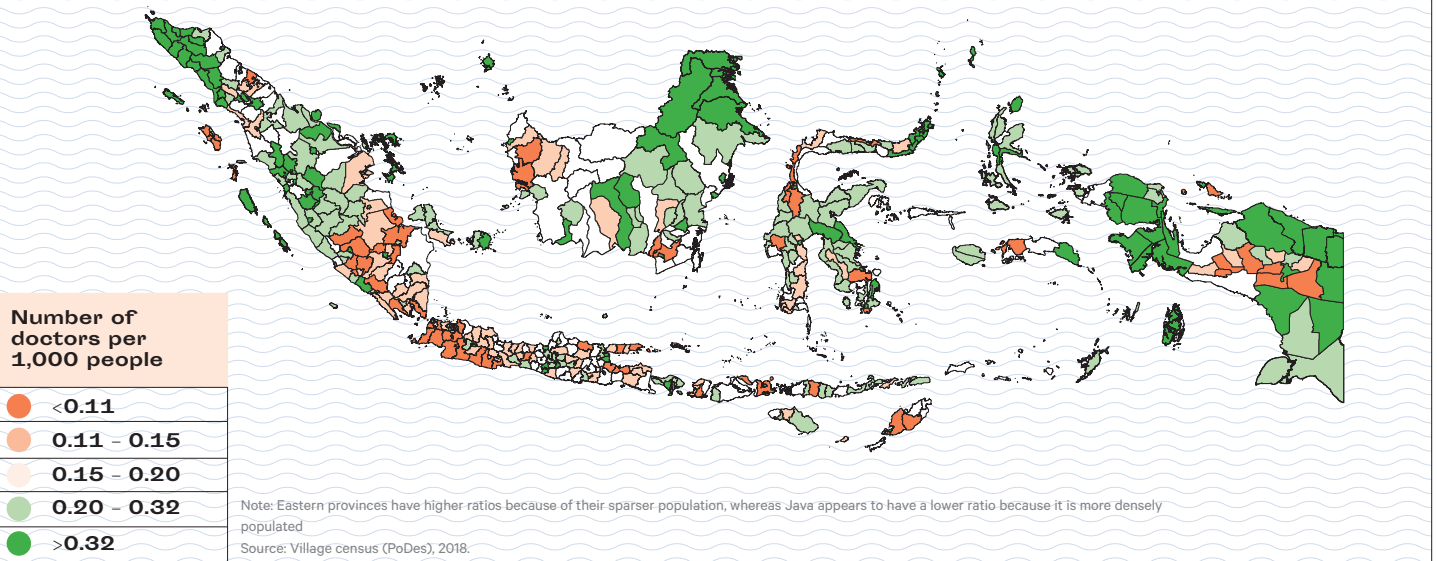
Y-axis: log of maternal mortality ratio  
X-axis: log GNI per capita, 2015



Source: World Development Indicators, 2019.

FIGURE 5.4

The success of UHC will be highly dependent upon increasing the number, skill mix and distribution of human resources in health...



68.1 percent of adult males. And tobacco is an important risk factor in the top five leading causes of death in Indonesia—stroke, ischemic heart disease, neonatal disorders, diabetes, and TB.<sup>146</sup>

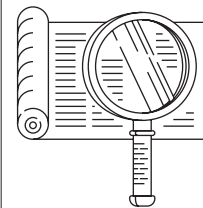
**In addition, regional and income-related inequalities in health outcomes persist.** Although the gap in health outcomes between the richest and poorest households has decreased over the past two decades, poor households still have infant and child mortality rates that are double those of richer households.<sup>147</sup> The MMR also varies substantially across the country. In eastern provinces, the MMR is above 200, while central provinces such as DKI Jakarta, West Java, and Bali have MMRs that are below 100. However, these numbers may obscure differences in population density, since eastern provinces are more sparsely populated. The current national strategy to reduce the MMR focuses on absolute numbers of maternal deaths that are naturally higher in densely populated, and more urban areas, and hence may not target these geographic inequalities. Moreover, different strategies may be needed in West Papua—a remote and rural area where the public sector will remain a critical provider—compared with urban areas where private sector plays a vital role.

**Despite the large increase in JKN coverage, out-of-pocket (OOP) payments remain high.** JKN provides a generous benefit package covering all medically necessary treatment with no caps or co-payments. As of April 2019, JKN covered nearly 220

million people, or around 82 percent of the total population, making it one of the largest single-payer social health insurance schemes in the world. While OOP has started to decrease since the introduction of JKN in 2014, it nonetheless remains high at 37 percent of total national health spending in 2016, compared with the levels observed in most developed and middle-income countries (20 to 30 percent). In addition, about 2.3 million people experience catastrophic health spending<sup>148</sup> and over 4 million people are pushed deeper into poverty due to health-related shocks.<sup>149</sup> The approach in Indonesia has been to prioritize the breadth of coverage over the depth of services, resulting in limited financial protection.

**The availability and distribution of human resources for health remains a challenge, despite the extensive network of public health facilities.** Facilities at the village and subdistrict levels primarily offer preventive and promotive services, and basic primary health care, with community health centers (Puskesmas) forming the backbone of the country's public health system. Facilities at the district level and above provide secondary and tertiary care. As of December 2018, there were 9,909 Puskesmas nationwide (and likely even more private primary care providers) serving a catchment area of 25,000 to 30,000 individuals, meeting the MoH standard at the national level. However, only six districts (out of 514) had at least one doctor per 1,000 population (Figure 5.4), 247 districts had at least one midwife

“The availability and distribution of human resources for health remains a challenge, despite the extensive network of public health facilities”



<sup>146</sup> Source: Institute of Health Metrics and Evaluation. <http://www.healthdata.org/indonesia>

<sup>147</sup> Source: World Bank staff calculations from Susenas.

<sup>148</sup> Defined as households who spend more than a quarter of their total household expenditures on health.

<sup>149</sup> Susenas 2016, poverty line is defined at the US\$1.9 per day threshold.



FIGURE 5.5

...the readiness of primary health care to deliver services...

General supply side readiness at primary care level, 2016

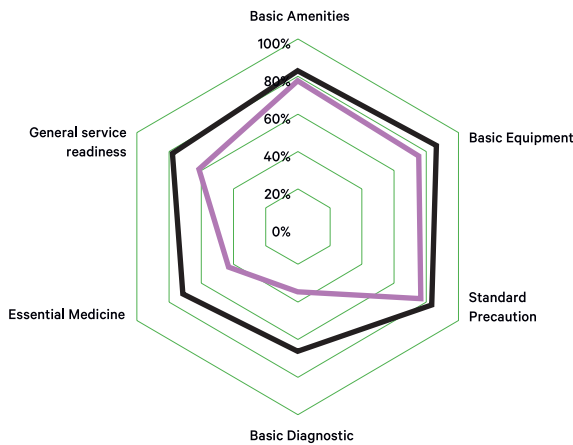
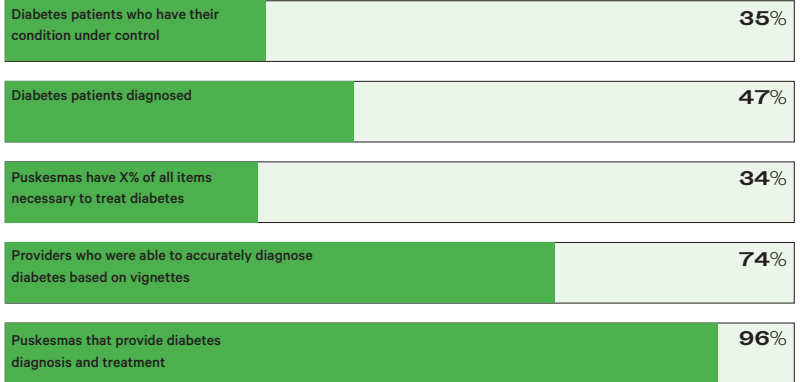


FIGURE 5.6

...and the knowledge and skills of providers to deliver quality care

Percent of Puskesmas, providers or patients, 2016



Note: General service readiness index is interpreted as facilities having on average X percent of all tracer items. For example, the average Puskesmas had 66 percent of all tracer items for basic diagnostics, compared with 35 percent for the average private facility.

Sources: QSDS Indonesia (2016) and Rifaskes (2011).



<sup>150</sup> 148 According to 2018 village census (PoDes) there were 61,251 doctors, 180,302 midwives, and 236,116 nurses.

<sup>151</sup> Service readiness is measured by a set of tracer indicators across five domains: basic amenities, basic equipment, standard precautions for infection prevention, diagnostic capacity, and essential medicines.

<sup>152</sup> General service readiness index is interpreted as facilities having on average X percent of all tracer items, e.g., the average private health facility only had 61 percent of all tracer items.

and 303 districts at least one nurse per 1,000 population.<sup>150</sup>

**Moving from coverage toward effective coverage will require improvements in the quality of care.** The general service readiness index—an index<sup>151</sup> of tracer indicators that is often used as a proxy for quality of care—for public primary health facilities was 78 percent, while private health facilities was 61 percent.<sup>152</sup> Primary health-care facilities lack basic diagnostic tests, essential medicines, and diagnostic and treatment guidelines, especially in the private sector where it is estimated more than 50 percent of health care takes place. This lack of supply-side readiness leads to the implicit rationing of services (Figure 5.5). Provider knowledge is also weak, as measured by the ability of providers to accurately diagnose and treat patients (based on clinical vignettes). For example, while 96 percent of Puskesmas mentioned that they provided services for diagnosis and treatment of diabetes, only 34 percent of providers could accurately diagnose diabetes and only 35 percent of patients had their diabetes under control (Figure 5.6). This may cause patients to seek treatment at higher-level facilities, either out of necessity or preference for better quality care.

**Given this context, Indonesia faces significant challenges in meeting its UHC goals, both in terms of improving health outcomes and providing financial protection.** This begs the question as to whether the GOI is spending enough on health and whether it is using those resources efficiently.

# Is the Level of Health Sector Spending Adequate?

# 5.3

**I**ndonesia's total health spending is low relative to comparator countries, and much of this spending is OOP. At 3.3 percent of GDP, Indonesia's total health expenditure (THE) is among the lowest in the world, especially compared with the average lower middle-income country (6.1 percent of GDP) and the average EAP country (7.4 percent of GDP) (Figure 5.7). In 2016, government budgetary spending was 44.7 percent of THE,<sup>153</sup> followed by OOP spending (37.3 percent), external aid (0.4 percent), and other private sources (17.5 percent).

**While public health spending is also low, it has been increasing in recent years.** Public expenditure on health—at 1.4 percent of GDP, or 7.8 percent of total government

<sup>153</sup> This includes 17.3 percent through the national health insurance scheme (JKN).



expenditure, in 2016—is about half of that in countries with a similar level of income (averaging around 2.7 percent of GDP). This amounts to just US\$49 per capita, well below regional and lower middle-income averages, as well as the recommended US\$110 per capita needed to deliver an essential UHC package. This suggests that current public health spending in Indonesia should more than double.<sup>154</sup> In line with the implementation of JKN and the passage of Law No. 36/2009 requiring a minimum of 5 percent of central government budget and 10 percent of SNG budgets (excluding salary) to be allocated for health, real public health expenditure has increased by 19.5 percent annually on average between 2001 and 2018 (Figure 5.8). Nonetheless, while on average

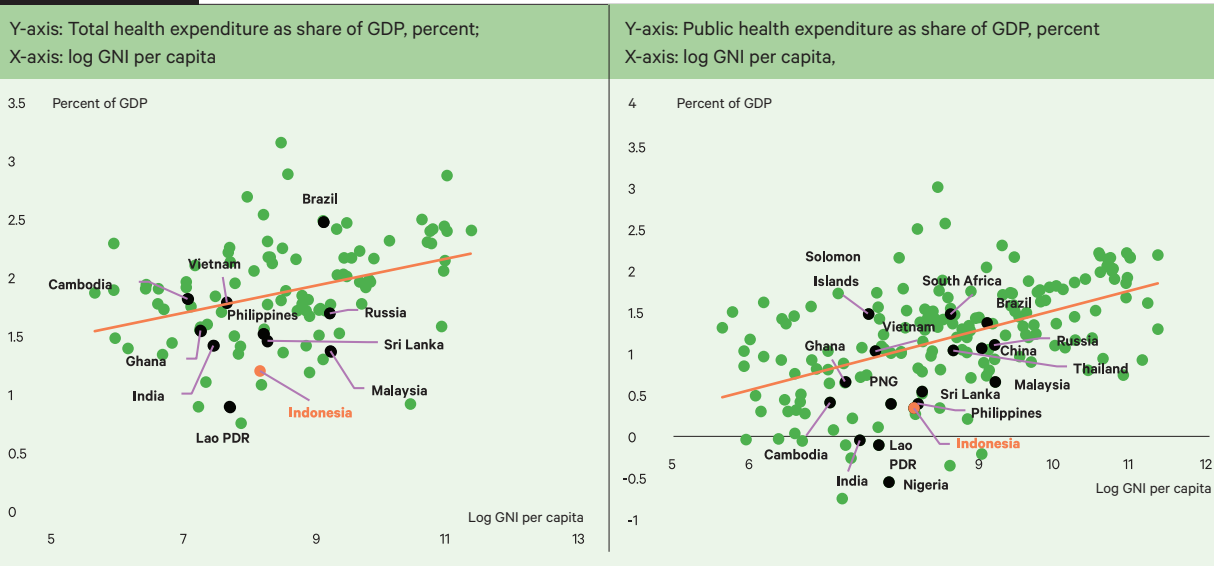
subnational governments have met the legal requirement to allocate a minimum of 10 percent of their budgets for health, this figure masks wide variations across the country, with only 33 percent of districts able to meet the minimum threshold. What is more, this benchmark does not guarantee the adequacy of financing for health, as in some districts salaries for public health personnel were included in meeting the mandated target.

**Subnational governments play a dominant role in health sector spending decisions (Figure 5.8 and Figure 5.9).**

More than two-thirds of total public expenditures on health occurs at the subnational level; central government (i.e., the Ministry of Health) manages only about one-third of total public spending. The bulk of district

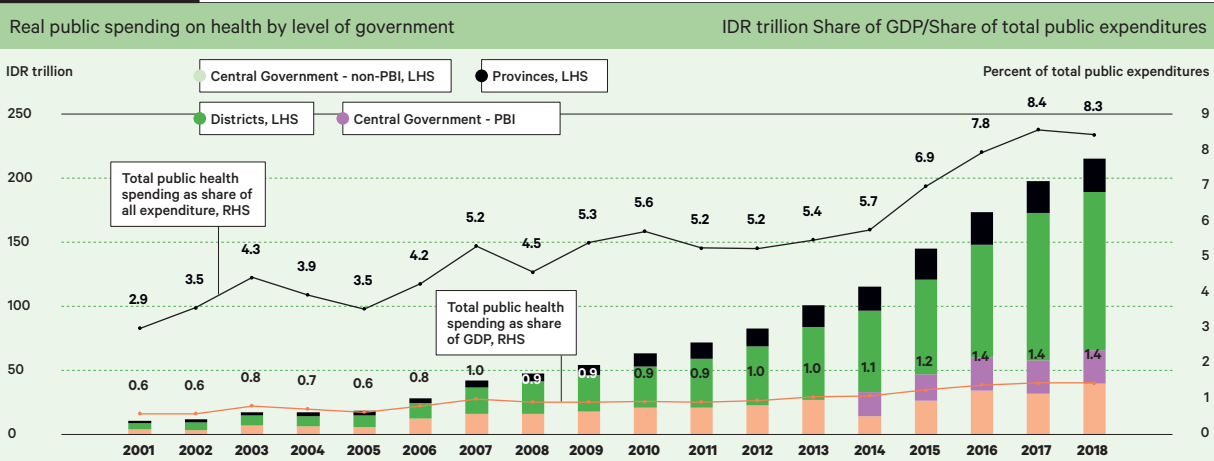
revenue comes from intergovernmental transfers from central to district level budgets. However, most of these transfers (e.g., *Dana Bagi Hasil* (DBH), *Dana Alokasi Umum* (DAU), and central grants)<sup>155</sup> are unconditional, so allocation to the health sector is at the discretion of district governments. Instead, *Dana Alokasi Khusus* (DAK)—a special allocation fund<sup>156</sup>—is the largest source of supply-side financing that is earmarked for health. And, with the gradual expansion of the JKN, *Penerima Bantuan Iuran* (PBI) subsidies that the GoI pays on behalf of the poor and near poor to enroll in JKN are now the largest source of district and facility health revenue.<sup>157</sup>

**FIGURE 5.7. Indonesia spends relatively little on health compared with other lower middle-income country peers, 2016**



Note: Total health expenditure is the sum of current and capital health expenditure. Source: World Bank WDI (GDP per capita in PPP) and WHO Global Health Expenditure Database, 2016.

**FIGURE 5.8. Districts play an increasingly important role in health service delivery**



Note: \*) The last available year of actual spending data at the subnational level are for 2014; subsequent years use budgeted expenditures. For the central government, all years refer to actual expenditures except 2018, which refers to budgeted amounts. Numbers refer to total health spending as a share of total public expenditures and as a share of GDP. Source: COFIS (Consolidated Fiscal Database, World Bank) using data from MoF, 2018.

**154** A note on the level of health spending: Several health spending targets have been set: 5 percent of GDP (WHO); 15 percent of government spending (Abuja declaration). While these targets can serve as global benchmarks, they are usually not helpful for determining appropriate levels of spending at the country level—especially where THE is driven by OOP spending. Instead, it is more useful to compare against what is fiscally feasible, what the country is trying to achieve, and how much is needed to cover an essential benefit package. Most recently, the third edition of the Disease Control Priorities initiative (DCP3) estimated the total cost per person for sustaining an essential universal health coverage package (EUHC) at 80 percent coverage would be US\$110 in lower middle-income countries.

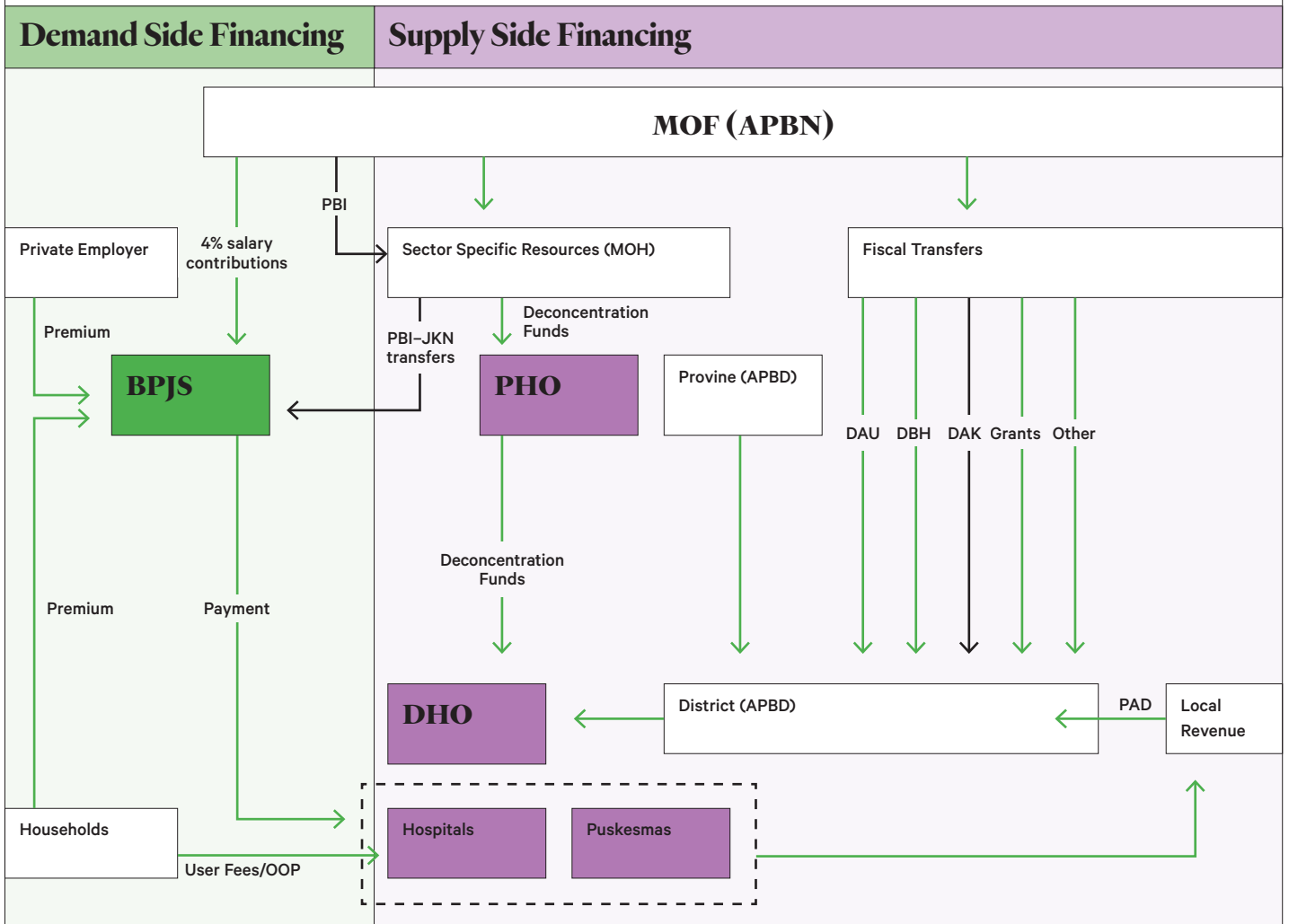
**155** They are mostly used for funding the salaries of public health personnel.

**156** DAK *Fisik* finances capital investment, medicines, and commodities; DAK *Non-fisik* finances operational expenditures of frontline delivery units; DAK *Non-fisik* is further fragmented into DAK *Akreditasi* that provides funding for the accreditation process of Puskesmas and hospitals, and DAK *Penugasan* that finance priority activities in priority regions, for instance HIV or malaria in remote, border and island areas.

**157** See Social Assistance chapter for more on PBI-JKN.

FIGURE 5.9.

Health-care providers rely more on district and BPJS Healthcare spending; as a result, the MoH has limited influence over frontline service delivery. Health financing flows in Indonesia's decentralized context



Source: World Bank team.

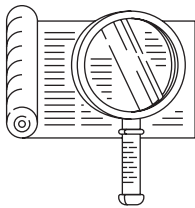
TABLE 5.2.

## JKN premiums

Membership group	Previous JKN premiums	Premiums as of January 1, 2020
PBI (poor and vulnerable)	IDR 23,000 per person, per month	<b>IDR 42,000 per person, per month</b>
PPU-BU (formal private sector)	5% of salary; ceiling IDR 8 million per month	5% of salary; <b>ceiling IDR 12 million/month</b>
PPU-P (civil servants)	5% of basic salary	5% of <b>total</b> salary (basic salary + family allowance and benefits)
PBPU (informal sector)	Class 1: IDR 80,000 per person, per month Class 2: IDR 51,000 per person, per month Class 3: IDR 25,500 per person, per month	Class 1: <b>IDR 160,000 per person, per month</b> Class 2: <b>IDR 110,000 per person, per month</b> Class 3: <b>IDR 42,500 per person, per month</b>

Source: Perpres No. 82/2018 and 75/2019

“Overall, while there is scope for the GoI to spend more on health, it should first consider ways to improve the efficiency of existing spending.”



Although overall the JKN scheme accounts for a relatively small share of total health expenditure, at 17.3 percent, this is expected to grow. The social health insurance program is financed by two mechanisms: (i) a contributory scheme for formal sector workers (who pay 5 percent of their salaries shared between employee and employer) and informal sector workers (who are expected to pay a fixed nominal premium of IDR 25,500 per month); and (ii) a non-contributory scheme known as *Penerima Bantuan Iuran* (PBI) for the poor and near poor. *Badan Penyelenggara Jaminan Sosial-Kesehatan* (BPJS Healthcare)—the JKN fund administrator—has incurred large deficits since its inception. As of 2018, BPJS Healthcare incurred a cumulative deficit of IDR 27 trillion (around US\$1.9 billion) and this is estimated to increase to US\$2.3 billion by end of 2019. In response, a new Presidential Regulation (Perpres, P.R.) No. 75/2019 to ensure JKN sustainability will see premiums increase between 67 to 116 per-

cent depending on coverage class selected starting January 1, 2020 (Table 5.2). The changes will mostly affect the informal sector. To put things in perspective, for an average household of four, JKN membership in the lowest class would now cost about US\$12 a month as enrollment is mandatory at the household level. This is roughly 4.3 percent of a household’s monthly income assuming the minimum monthly wage of US\$280.

Lastly, while development assistance represents only a small share of overall health spending in Indonesia, nonetheless it does make up a significant share of resources for certain health programs that are traditionally donor-funded—mainly TB, HIV, and immunization. In 2016, donor funding accounted for less than 1 percent of total health expenditure. However, the MoH estimated that the donor-funded share was as high as 60 percent for spending on TB and HIV, and between 10 and 15 percent for immunization program spending. Ensuring a smooth transition away from externally-fi-

nanced health programs as Indonesia loses access to donor aid has become a key concern. At the end of 2016, Indonesia ‘graduated’ from Gavi (the Vaccine Alliance) but remains eligible at least until 2024 to access support from the Global Fund. There will likely be significant gaps in service delivery if activities currently supported by donors are not picked up by the GoI.

Overall, while there is scope for the GoI to spend more on health, it should first consider ways to improve the efficiency of existing spending. As the next section shows, weak governance and accountability, financial and institutional fragmentation, and limited performance orientation for service delivery has made it difficult to link health sector spending with performance and ensure better value for money. Given data constraints, the following section assesses efficiency of health sector spending by looking at two standard measures: budget execution rates (from resources to inputs) and the national insurance claims ratio (from revenues to claims).

# How Efficient Is Public Spending in the Health Sector?

- A Governance and Accountability Issues
- B Health Financing Issues

## A Governance & Accountability Issues

**F**ragmented health management and information systems, and poor coordination among key stakeholders have made it difficult to assess the efficiency of public health spending (Box 5.1). Instead, we look at more aggregate measures of health system efficiency, such as budget execution rates (BERs)<sup>158</sup> and the JKN claims ratio,<sup>159</sup> in both of which Indonesia performs poorly:

ter). Second, financing and performance are reviewed by separate institutions, with the MoF reviewing financing data, while SNGs and the MoH each review performance separately. This limits the usefulness of reported achievements in implementation and performance reports (LAKIPs), as they are disconnected from budget and planning documents. Third, the data to track and assess spending efficiency are not readily available (Box 5.1).

### A.1 Budget Execution Rates (BERs)

Significant differences between budget estimates and actual expenditure reflect inefficiencies in budget planning and execution (Table 5.3). This is not surprising given that there is no mechanism to consolidate the allocation, use, and performance of all health sector resources based on national strategic priorities. First, there is no demand for a regular assessment of health sector spending. As a result, the quality of MoH annual working plans (Renja) fails to articulate a clear results chain with meaningful indicators and realistic targets linked to the five-year sector plan strategy (Renstra), or the President’s national medium-term development plan (RPJMN) (see PFM chap-

TABLE 5.3.

Budget execution rate (audited MoH expenditures compared with the approved MoH budget)

2014	2015	2016
83%	110%	89%
<b>PEFA SCORE</b>		
<b>C</b>		

Note: While there are no established benchmarks to assess health sector budget execution rates, public expenditure and financial accountability (PEFA) scoring guidelines can be applied. (Footnote 160)  
Source: PEFA Assessment Report (World Bank, 2017).

# 5.4



**BOX 5.1.**

**Fragmented health management and information systems result in a lack of useful information to inform prioritization and resource-allocation decisions**

**T**he most basic definition of efficiency is maximizing outcomes relative to inputs. However, the absence of a formal mechanism to coordinate and consolidate information on health resources, the cost and use of health services, and health outcomes across the tiers of government (e.g., central, provincial, district) and the various ministries, departments, and agencies (e.g., Ministries of Health, Home Affairs and Finance, Bappenas and BPJS Healthcare) responsible for the delivery of health services, has weakened the ability to effectively oversee the sector. Typically, human resources, hospitals, and pharmaceuticals are responsible for the biggest sources of inefficiency in health-care systems.<sup>161</sup> However, on the expenditure side, reliable data on salaries and pharmaceutical spending are not readily available. Actual health spending broken down by economic and functional classification has not been officially published by the MoH at the sectoral level. And while the MoH publishes yearly National Health Accounts (NHAs), there is a three-year time delay. Subnational health accounts have

also been difficult to produce, as no standard classification of activities is applied across districts. Similarly, on the output and outcome side, a lack of standardization in reporting requirements, formats, and definitions across districts makes it difficult to aggregate information at the central level. As a result, the bulk of the effort goes into collecting data rather than analyzing its findings. Annex 1 provides a list of key data needs and suggested analysis to better inform the allocation and use of resources.

Within the MoH, each health program (e.g., HIV, TB, malaria, maternal health) collects its own data, distinct from regular primary-care data (SIKDA-*generik*) and hospital data (SIRS) systems. The data are also housed in separate departments within the MoH: primary health-care data are managed by the Centre for Data and Information; hospital data are managed by the Directorate for Hospital and Referral Services; maternal-health data are hosted by the Department of Nutrition and Maternal and Child Health; and program data are stored by the Department of Disease Control and Environmental Health. As reporting requirements at the

facility level are burdensome (e.g., 16 different forms for TB) and the format is predominantly paper-based, data quality and reporting compliance is low.

As the need to process claims arose with the introduction of JKN, BPJS Healthcare developed separate systems: PCare at the primary care level and EKlaim (electronic) or VKlaim (virtual claims) for those with internet connections, at the hospital level. As these systems were tied to payment this made compliance universal for all JKN patients. JKN data are a rich potential source of data to analyze performance.

There are also several supply-side information systems tracking the accreditation status of facilities (SIAF), human resources for health (HRHIS), and facility resources more broadly (ASPAK), which could be used more strategically in resource-allocation decisions. However, as these too are housed within different departments in the MoH, access and use of data to manage health sector resources more holistically has been limited.

Source: Authors.

**B.1**

**JKN Claims Ratio**

The fact that JKN claims ratios regularly exceed 100 percent over an extended number of years reflects issues on both the revenue and expenditure sides. On the revenue side, actuarial estimates have indicated that the JKN scheme is currently under-resourced for the generous benefits that it provides, with monthly spending per member exceeding monthly revenue per member. This is due to several reasons:

1. Premiums were not set based on sound actuarial estimates considering age, sex, case-mix, and utilization patterns.
2. Premiums were also set under the assumption that everyone would participate. In practice, however, the informal sector and non-workers join on a voluntary basis.

Short activation periods (two weeks for outpatient care; 45 days for inpatient services) for new or returning members and poor verification of contribution compliance further encourages members to only sign up when they fall sick and to stop paying once treatment has been received. This is known as adverse selection (Table 5.4).

However, increasing premiums will not rectify the deficit if flaws in the design and implementation of JKN are not also tackled. On the expenditure side, key cost drivers include:

1. A nearly unlimited benefit package with no caps or co-payments.
2. An open-ended budget for hospitals where the bulk of JKN expenditures occur (about IDR 71 trillion in 2017, or around 84 percent). This removes any incentive that providers may have to manage resources more efficiently (see next section).
3. Poor quality at primary care facilities that leads patients to seek care at higher level, more expensive facilities. This essentially means that JKN is double paying for services, first at the primary care level and then second at the secondary/tertiary care level.

Most importantly, a lack of clarity in the governance and accountability arrangements of JKN has limited the ability of BPJS Healthcare to tackle these issues.

**TABLE 5.4.**

**Adverse selection among non-salaried workers**

Claims ratio by membership group, percent of total				
	2014	2015	2016	2017
Poor and near poor	69	74	70	82
District government subsidy beneficiaries	208	171	134	132
Civil servants and armed forces	62	73	80	93
Private formal	95	71	60	64
Informal/voluntary	552	328	302	347
Non-workers	342	341	375	424
Total	105	108	100	114

Note: Non-salaried workers are those who work in the informal sector and non-workers.  
Source: MoF 2018; BPJS Healthcare 2018.

**158** Budget execution rates measure the percentage of the approved budget for health in a given fiscal year that was actually executed.

**159** Claims ratios are calculated as accrued claims divided by accrued premiums.

**160** In the public financial management world, budget execution rates are measured by aggregate expenditure outturn. According to PEFA scoring guidelines: A=aggregate expenditure outturn was between 95 and 105 percent of the approved aggregate budgeted expenditure in at least two of the last three years; B=aggregate expenditure outturn was between 90 and 110 percent of the approved aggregate budgeted expenditure in at least two of the last three years; C=aggregate expenditure outturn was between 85 and 115 percent of the approved aggregate budgeted expenditure in at least two of the last three years; D=performance is less than required for a C score.

**161** Chisholm, D. and David B. Evans (2010). Improving health system efficiency as a means of moving towards universal health coverage. WHO: Geneva.

While BPJS Healthcare is tasked with managing the health insurance fund and ensuring the overall financial sustainability of the scheme, it has limited authority to do so. BPJS Healthcare was established as a separate legal public entity with responsibility for the main purchasing functions under JKN. However, in practice, most of the functions (e.g., deciding the benefit package, determining provider payment arrangements, setting reimbursement rates) that make it possible to create incentives for more effective service delivery, efficient provider behavior, and higher quality of care, are housed within the MoH. BPJS Healthcare serves as a passive intermediary, transferring payments to health providers and carrying out largely administrative functions, as it has few effective levers to manage the health social security fund for the benefit of its members. Although the original 2004 Social Security Law allocated most of the key purchasing functions to BPJS Healthcare, the purchaser-provider split<sup>162</sup> remains incomplete in many ways (Figure 5.10).

**Decentralization and limited capacity in public financial management further constrains frontline primary-care facilities to plan and manage resources more holistically.** Health facilities must apply for funding from different sources (e.g., district budgets, central government budget, JKN) with varied schedules, reporting requirements and restrictions on the use of funds.<sup>163</sup> This places a significant administrative burden on Puskesmas and causes coordination challenges between district health offices (Dinas), service providers and BPJS Healthcare, affecting program implementation and the quality of health services. This may also partly explain why patients are bypassing primary-care facilities or being referred to higher-level facilities.

<sup>162</sup> Countries have generally moved toward splitting the purchasing function, i.e., those who buy goods and services (ideally BPJS) from the function of service delivery, i.e., those who provide or supply the goods and services (MoH public sector providers). This is meant to remove conflicts of interest within the MoH and create incentives to reduce cost. In Indonesia, however, the MoH is still deciding what its public facilities/providers should be paid, limiting the tools at BPJS' disposal to act as a more efficient purchaser. By law, BPJS is the 'purchaser' of health-care services, but its powers are limited.

<sup>163</sup> There are over 100 regulations on the implementation of JKN penned by the MoF, MoH, MoHA, BPJS Healthcare, presidential decrees, and others; there are 11 regulations alone on capitation payments to Puskesmas.

FIGURE 5.10.

Figure 5.10. Finding an institutional home for key purchasing functions to improve JKN's performance

Key purchasing functions			
	By Law	By Regulation	In practice
Set premium	President with inputs from MoF, BPJS Healthcare, DJSN, MoH	President with inputs from MoF, BPJS Healthcare, DJSN, MoH	President with inputs from MoF, BPJS Healthcare, DJSN, MoH
Determine the benefit package	Unspecified	MoH	MoH
Develop provider payment systems	BPJS Healthcare	BPJS Healthcare/MoH	MoH
Set payment rates	BPJS Healthcare	BPJS Healthcare/MoH	MoH
Contract with providers	BPJS Healthcare	BPJS Healthcare	BPJS Healthcare/MoH
Monitor quality	BPJS Healthcare	BPJS Healthcare/MoH	BPJS Healthcare/MoH

Define benefits package and expansion

Decide which medicines to buy

Define service delivery and quality standards

Select providers to contract with

Select medicine suppliers

Contracting with

Decide what to buy

Decide from whom to buy

Decide how to buy

Set the terms of contract

Select provider payment methods

Set provider payment rates



B

# Health Financing Issues

**H**ealth spending and service delivery are geared toward curative episodic care<sup>164</sup> at the central and subnational levels, partly due to inappropriate financial incentives. Indonesia spends two-thirds of total health expenditure on curative care and, in 2017, 84 percent of JKN expenditures were for hospital-based inpatient and outpatient care.<sup>165</sup> Primary care is paid by capitation (a fixed budget) and hospitals are reimbursed based on diagnosis-related groups (DRGs), known as INACBGs (Box 5.2), with no cap on spending (i.e., an open-ended budget). In the absence of a strongly enforced or monitored gatekeeping system, primary-care providers thus have an incentive to refer patients to the hospital sector, while hospitals have little incentive to contain costs. This has important policy implications, not only because the cost of treating simple cases in hospital settings is significantly higher, but also because primary health-care services become underutilized and tertiary hospitals overburdened. This also shifts the financial burden either to BPJS Healthcare or to households in the form of OOPs.

**The lack of performance-orientation in health-care financing at district and health-facility levels has also contributed to suboptimal service delivery.** On the supply side, DAK—the main earmarked supply-side transfer—is not linked to need or performance, resulting in wide variation in facilities' ability to deliver services. A 2018 report assessing supply-side readiness found that DAK health spending at the district level was not correlated with the level of health infrastructure, medical equipment, drugs and supplies available—items that DAK is meant to finance (Figure 5.11). On the demand side, provider payment arrangements and infrequent supervision provide little incentive to increase the quantity and quality of care.

**In 2016, the GoI implemented *Kapitasi Berbasis Komitmen (KBK)*—a capitation payment<sup>167</sup> to primary health facilities that is linked to performance indicators.** In its first year of implementa-

tion, payments could be deducted by up to 25 percent if criteria were not met—offering Puskesmas a significant financial incentive. However, the payment reduction has since been scaled back, ranging now from just 2.5

to 10 percent. At the same time, 95 percent of Puskesmas meet all of the targets and receive the full capitation amount. This raises questions on the effectiveness of the KBK scheme to incentivize performance.

## BOX 5.2.

### The importance of the design of Diagnosis-Related Groups (DRG) on expenditures

**U**nder a Diagnosis-Related Groups (DRG) payment system:

- Providers are paid a fixed amount per admission/case based on diseases of similar clinical aspect and resource use;
- The payment rate is set prospectively based on average cost or cost of best performing hospital; and
- Provider bears some of the financial risk if the cost of treatment for a given case exceeds the payment rate for that case.

Of critical importance to DRG systems is the presence of a budget and/or volume ceiling.

DRGs are meant to be the best hospital payment method to promote technical efficiency if designed and implemented well. As hospitals are funded on the same basis for the same activity, DRGs are meant to: (i) improve hospital management and promote medical efficiency (e.g., reduce unnecessary care); (ii) promote equity in hospital financing by reducing large variations in the cost of treatment across hospitals; and (iii) enhance transparency in hospital funding by using a payment formula. But a DRG system is complex to administer, requiring substantial coding and costing expertise, strong data systems, and active oversight.

There are two main design features of the DRG system: an exhaustive patient case classification system and the payment formula. First, doctors record information on diagnosis and procedures in medical record and discharge summaries. Next, clinical coders translate that

information based on standard coding rules and guidelines. A specific DRG is assigned to each clinical case based on a classification algorithm—a grouper software. Each DRG is then associated with a specific tariff determined using a top-down costing method and standard national costing template. However, there are several shortcomings in the design:

- Issues in coding: Poor documentation by providers, a lack of clear coding guidelines, and the low competence of clinical coders, lead to the wrong DRG being assigned.
- Issues with the algorithm: Countries can either build their own grouper software or buy and modify an existing grouper algorithm. Indonesia chose to do the latter, but a lack of direct access to the algorithm has made it difficult to refine it to the Indonesian country context.
- Issues in costing: The costing template is not detailed enough to obtain accurate estimates of unit cost. Filling out the costing templates is also based on voluntary submission from about 157 public and 40 private hospitals out of more than 2,600, thus limiting the representativeness of the data. Finally, the DRG tariff is only marginally higher for private hospitals, even though public hospitals still receive significant supply side financing. Issues in costing may incentivize providers to game the system.

D. Issues in implementation: Payment to hospitals is essentially open-ended, meaning that instead of operating a DRG system, hospital reimbursement operates closer to a fee-for-service system, which incentivizes volume over quality or efficiency.

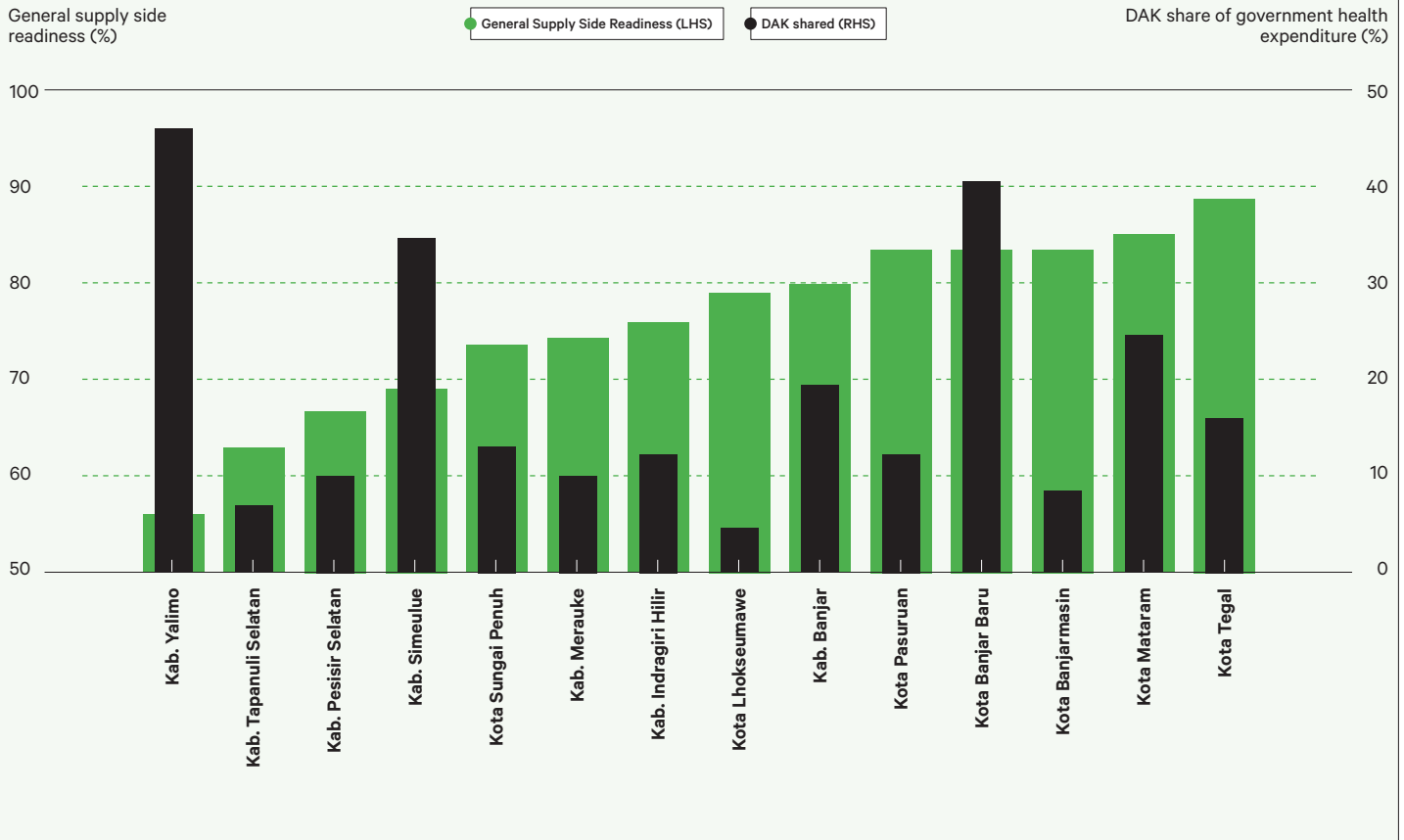
<sup>164</sup> Curative care involves treatment intended to alleviate symptoms or cure of a current medical condition; instead health promotion and preventive care aims at reducing the level of one or more identified risk factors to reduce the probability of a disease or condition occurring in the first place

<sup>165</sup> In theory, the GoI's regional referral system provides a pathway for patients to be referred from primary care facilities to district public hospitals, to provincial referral hospitals and finally to national referral (vertical) hospitals providing tertiary care only when necessary. In practice, however, the tiered referral system (*Sistem Rujukan Berjenjang*) that relies on primary care providers as the system's gatekeepers does not function well.

<sup>166</sup> <http://documents.worldbank.org/curated/en/484351538653658243/Is-Indonesia-Ready-to-Serve-An-Analysis-of-Indonesia-s-Primary-Health-Care-Supply-Side-Readiness>

<sup>167</sup> Capitation is a payment arrangement for health-care service providers. It pays a set amount for each enrolled person assigned to them, per period of time, whether or not that person seeks care.

**FIGURE 5.11.** DAK transfers and supply-side readiness appear to be uncorrelated



Source: QSDS 2016 and MoH DAK data 2013-2015, World Bank staff calculations.

“On the supply side, DAK—the main earmarked supply-side transfer—is not linked to need or performance, resulting in wide variation in facilities’ ability to deliver services.”



# Recommendations to Spend More & Spend Better in the Sector

**A** *Increase Health Sector Spending to Support the Achievement of UHC*

**B** *Improve the Quality and Efficiency of Health Spending*

5.5

**I**ndonesia's public spending on health is lower than in comparable countries and, consequently, frontline providers frequently lack the drugs, equipment, and training needed to deliver quality services. This, in turn, leads to the implicit rationing of services, foregone care, and limited financial protection, despite JKN's generous benefit package. Many countries face similar challenges as they strive toward UHC, often having to choose between increasing revenues, limiting coverage (either through limited benefit packages or cost-sharing arrangements), and/or improving efficiency in the use of funds. But increasing revenue

is limited by the fiscal capacity of the government—a relevant constraint in Indonesia.<sup>168</sup> And, in countries where benefit levels remain relatively shallow or where the breadth of coverage is prioritized over the depth of services (as in Indonesia), access and financial protection have been limited. This highlights the importance of both spending more and spending better in Indonesia.

<sup>168</sup> Indonesia has one of the lowest revenue-to-GDP ratios in the world, at just 14 percent in 2017. It also has a fiscal rule that requires the deficit be kept at, or below, 3 percent of GDP. See Overview chapter on Indonesia's overall macro-fiscal environment.



A

# Increase Health Sector Spending to Support the Achievement of UHC

**T**he GoI needs to raise more revenue for the health sector if it is to meet its ambitious goal of UHC by 2019.

This will allow the GoI to increase government health expenditures to be on a par with regional and lower middle-income averages. Options to consider include the following:

A

## Simplify the overall tobacco tax structure and increase tobacco excise taxes at the national level.

A simulation suggests that an increase of tobacco tax by 12 percent will increase cigarette prices by an average 5 percent, cut demand for cigarettes by nearly 2 percent, and raise government revenue by 6.4 percent (about IDR 11 trillion), with only a minimal impact on employment in the tobacco indus-

try.<sup>169</sup> However, these reforms have been put on hold by the GoI following strong push-back from tobacco lobbies (Box 5.3).

B

## Extend the PBI subsidy to the informal sector.

This would bring in healthier informal sector workers currently not enrolled, lowering the cost per member per month for all informal workers. These new members would be healthier and likely have lower utilization rates and claims on the system. At the same time, they would provide a more predictable source of additional revenue for BPJS Healthcare. From the MoF perspective, the public relations story changes from paying off the deficit, to investing in human capital as the MoF is already paying for this group by funding the deficit. Back of the envelope calculations suggest that, had the GoI extended the old premium subsidy to the informal sector, they could have achieved 100 percent JKN coverage at a cost of IDR 59 tril-

lion (US\$4.2 billion). Instead, the new premiums will cost the GoI IDR 68 trillion (US\$4.8 billion) and likely see the JKN coverage rate go down given the increased financial burden placed on informal sector households. Even under the old premium, 46 percent of informal sector enrollees were inactive suggesting the unwillingness or inability to pay premiums. Globally, evidence shows that few countries with persistent large informal sectors have been able to achieve UHC without significant subsidies from the government. With the new premiums, this would now cost the GoI about IDR 108 trillion (US\$7.7 billion) for a full subsidy extension.

C

## Update JKN premiums based on sound actuarial analysis.

Using individual claims data to conduct a robust actuarial assessment based on age, sex, geographic variation, membership group, and case-mix rather than a simple projection based on average growth patterns (i.e., mechanically rolling forward trends seen over the past three years) would allow for premiums to more accurately reflect expanding coverage and growing utilization patterns. The current method implicitly assumes all these variables remain constant over time, but there is no reason to believe that trends over the past three years will continue into the future, particularly because the system is still immature and evolving. For example, the trend rates for the informal sector should decrease as currently only the sickest members of this group participate. As membership is expanded, the group will become healthier and have lower average claim costs than the current covered group. The case-mix is also likely to change as NCDs become more predominant or different provider-payment arrangements are introduced. Assumptions around these parameters will help to better calculate fair premium rates across membership groups. At that point, a separate and transparent discussion should take place regarding cross-subsidization across groups.

D

## Monitor and track the legally mandated health spending

(a minimum of 5 percent for central government budget and 10 percent for SNG budgets, excluding salaries) to ensure that allocations translate to actual spending, especially at the district level.

<sup>169</sup> Under this scenario, the average excise tax burden on cigarettes would be just 49 percent of retail price, still below the 57 percent legal limit and well below the 70 percent World Health Organization (WHO) recommendation.

**BOX 5.3.**

**Recent changes to tobacco taxation in Indonesia**

**W**hile the GoI has recently proposed new policies to increase revenue for the sector by earmarking a share of the local tobacco tax for BPJS Healthcare, these efforts are unlikely to cover BPJS Healthcare's deficit. Tobacco products in Indonesia are subject to excise of 44.7 percent of the retail price collected at the national level. In 2018, total tobacco excise revenue amounted to IDR 153 trillion.

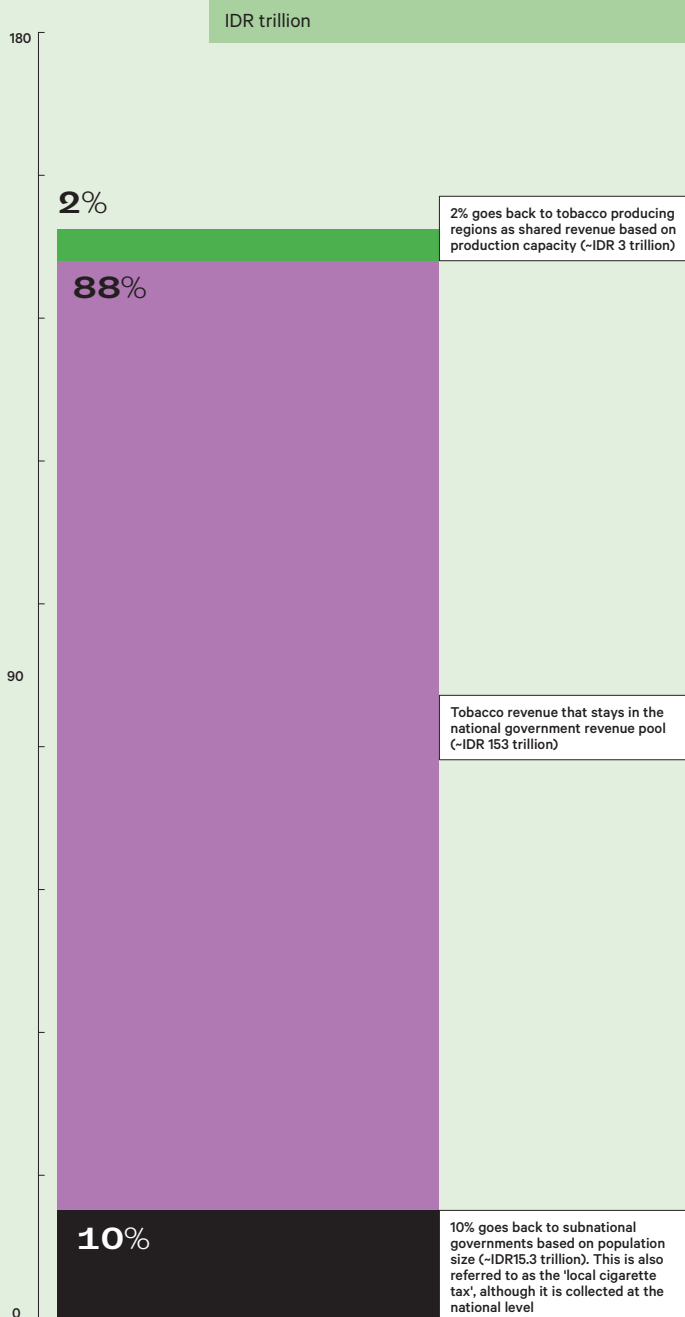
Of that revenue, 2.0 percent is transferred to tobacco producing regions as shared revenue (*Dana Bagi Hasil*, or DBH) and, since 2014, an additional 10 percent is distributed to SNGs based on population size—known as the local cigarette tax (Figure 5.12).

In 2018, P.R. No. 82/2018 specified that 37.5 percent of the local tobacco tax should be earmarked for BPJS Healthcare. The size of the local government tobacco tax for 2018 was estimated around IDR 15.3 trillion,

of which IDR 5.44 trillion could be channeled to BPJS Healthcare. However, following resistance from subnational governments, it was decided to channel these funds through local governments rather than directly to BPJS Healthcare (Figure 5.13). In the absence of a mechanism to monitor these transfers, the use of these funds remains unclear and it is likely that BPJS Healthcare receives significantly less.

**FIGURE 5.12.**

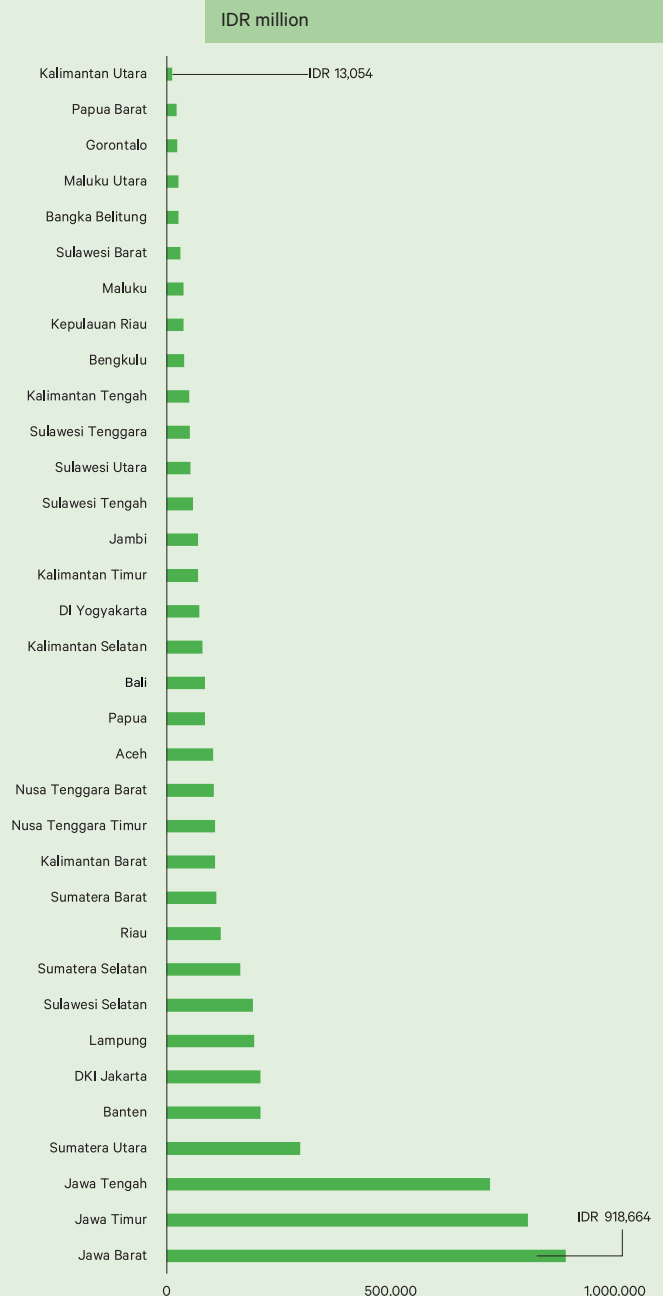
**Distribution of the total revenue from tobacco excise of 44.7 percent (IDR 153 trillion)**



Source: MoF, 2019.

**FIGURE 5.13.**

**37.5 percent of local tobacco tax should be earmarked for BPJS Healthcare, but instead is distributed to the provinces**



Note: The distribution of the local tobacco tax is based on the DJPK Circular 47/2018 on the Distribution of the Local Tobacco Tax, 2019. Source: MoF, 2019.

## B

# Improve the Quality & Efficiency of Health Spending

**T**here has been little progress in improving health spending efficiency, mainly due to the lack of systemic improvements in health sector governance and low level of investment in information systems. Focusing on these priority reforms will significantly impact the quality of health spending in Indonesia, but high-level political commitment is needed if the current status quo is to experience fundamental change.

## B.1 Strengthening Governance & Accountability

### A Improve governance and accountability by introducing an annual sector review.

Fragmentation in responsibilities for budgeting, planning, and performance monitoring across line ministries (Bappenas, the MoH, BPJS Healthcare, and the MoHA) and levels of government means that the health sector is ultimately not held accountable. What is needed is an annual assessment of budget performance for the health sector as a whole (including JKN performance), based on annual plans that have clear results chains, meaningful indicators, and realistic targets. The annual health sector review should also be couched within a broader medium-term approach to help to prioritize longer-term supply-side investments. Requiring an annual sector review will also create the need for better quality data/information systems and help to increase the institutional collaboration that is crucial for measuring spending efficiency.

### B Invest in health information systems to improve monitoring and evaluation (M&E) of health spending performance.

Fundamental to improving the quality of health spending are health management and information systems that can produce timely and useful information for budget and planning, provider performance monitoring, and overall benchmarking. Strong performance M&E, and benchmarking would strengthen accountability between facilities, subnational health offices, political leaders, the MoH and facility users, and create non-financial incentives for both districts and facilities to improve performance. The first important action would be to ensure that all agencies (especially the MoH and BPJS Healthcare) share performance, quality, and claims data covering public and private providers. The second action would be to increase inter-operability of systems and reduce the number of systems that contribute to fragmentation of data and information, among the various stakeholders. Third would be the development of a common “performance dashboard”, available to all stakeholders across levels of government, to benchmark performance among districts and facilities. (See Annex 5.1 on data needs and suggested analysis.)

### C Strengthen the purchasing role of BPJS Healthcare.

Although the original 2004 Social Security Law allocated most of the key purchasing functions to BPJS Healthcare, a series of regulations brought these functions back at least partially under the control of the MoH and, in practice, BPJS Healthcare has few effective levers to manage costs or to influence access to quality services. There needs to be clarity on who is responsible for selecting the benefit package, setting contribution rates and provider payment arrangements, and monitoring service delivery and quality standards. While there is no single blueprint on where purchasing functions should sit, global evidence suggests that the MoH and BPJS Healthcare cannot work in isolation (Table 5.5). This will likely entail re-allocating or sharing key purchasing functions to/with BPJS Healthcare, which collects and analyzes much of the underlying data on JKN implementation—data that are crucial to inform JKN policy. Most health insurance agencies have independence for many operational aspects of scheme implementation, such as tariff-setting, contracting, provider payment methods and, to a lesser extent, benefit package definition. However, provider accreditation and quality assurance are more commonly managed by the MoH.

**FIGURE 5.5.** Where do key purchasing functions sit in other countries?

	Estonia (Estonia Health Insurance Fund)	Philippines (PhilHealth)	Thailand (Universal Coverage Scheme)	Vietnam (Vietnam Social Security)	India (PMJAY)	Republic of Korea (National Health Insurance Scheme)	China (National Health-care Security Administration)	Indonesia
<b>Budget allocation for health insurance agency/Premium setting</b>	Parliament/MoF	Ministry of Budget and Management and Congress (with inputs from HIA and MoH)	Parliament/MoF	MoH in consultation with other ministries	By market if States decide to contract insurance companies as purchasers	MoH	MoF in consultation with other ministries. Needs to be approved by Congress (Revenue is collected at the prefecture level)	President with inputs from MoF, BPJS Healthcare, DJSN, MoH
<b>Determine the benefit package</b>	HIA and Ministry of Social Affairs	HIA	External agency subject to a Health Technology Assessment either by MoH or an autonomous state agency	MoH	MoH, going forward might shift to HIA	Health Insurance Policy Deliberation Committee (different ministries + HIA)	HIA (prefecture level)	Unspecified by law; MoH by regulation and in practice
<b>Develop provider payment systems</b>	HIA/MoH	HIA	HIA	HIA/MoH	Will most likely be done by HIA but states can adapt to needs	External agency (HIRA)	HIA (prefecture level)	BPJS Healthcare by law, but MoH in practice
<b>Set payment rates</b>	HIA/MoH	HIA	HIA (subject to budget cap)	MoH		HIA	HIA (prefecture level)	BPJS Healthcare by law, but MoH in practice
<b>Contract with providers</b>	HIA	HIA	HIA	HIA	State HIAs	HIA	HIA (Prefecture level)	BPJS Healthcare by law, but together with MoH in practice
<b>Monitor quality</b>	HIA/ Health Board (licensing, adherence to health-specific regulations)	MoH (licensing)/ HIA (accreditation)	MoH	MoH	Uncertain, likely combination of State HIAs and State departments of health	External agency (HIRA)	MoH	BPJS Healthcare by law, but together with MoH in practice

Note: HIA=health insurance agency.

Source: World Bank (2018). Who does what? Autonomy and Social Health Insurance agencies around the world" – internal World Bank review.

## B.2 Piloting Health Financing Reforms

A

### Address open-ended hospital payments, where most spending occurs.

Of critical importance to containing hospital expenditures is the presence of a budget and/or volume ceiling. Otherwise, if hospital debts are forgiven, or if more money is given, there is no incentive for hospitals to become more efficient. Options could include introducing global budgeting,<sup>170</sup> base-rate adjusted DRG payments,<sup>171</sup> or spending caps that would transfer some of the financial risk to hospitals (or district health offices, depending on design), which would allow hospitals to focus on value for money rather than volume. A new P.R. (No. 82/2019) has allowed BPJS Healthcare to propose alternative provider-payment designs for implementation, subject to MoH approval. BPJS Healthcare is in the process of designing two alternative schemes—a global budget scheme that puts a cap on spending at the hospital level and a value-based scheme that ties payment to performance. It will be important to pilot and refine these schemes as needed. However, the most difficult part may lie in convincing related stakeholders (central and district governments, health-care providers, doctors) to cooperate with the initiative.

B

### Introduce carefully designed cost-sharing for non-essential services, services prone to over-utilization, and/or to incentivize more cost-effective referral pathways.

P.R. No. 82/2019 has opened the door for the MoH to introduce cost-sharing for health services prone to moral hazard and abuse. However, it is unclear what the potential budgetary impact might be, as the services have not yet been defined and supporting analyses conducted. It is strongly suggested that the implementation of this policy be evidence-based. International evidence suggests that, while modest cost-sharing

may be appropriate for high-cost/low-effectiveness services and to enforce the gatekeeping system, it is likely to reduce both necessary and unnecessary utilization, particularly for the poor and vulnerable. At the same time, it is unlikely to contribute significantly to revenue. The introduction of any new cost-sharing arrangements requires the development of clear clinical protocols and referral pathways, provider training, and enhanced monitoring to ensure that cost-sharing is not adversely reducing necessary care.

C

### Reinforce performance-based financing.

In parallel to improving accountability processes, the GoI should consider refining existing performance-based indicators at the primary-care level and introducing additional measures to assess the performance of DAK. The two sources of funding that offer the most scope for performance-based financing are DAK and JKN payments, as they are earmarked for health, have the potential to be tied to outcomes, and make up a significant share of district health revenues.

1. On the demand side, the GoI could start by refining and strengthening the KBK performance indicators<sup>172</sup> to incentivize improvements in the quantity and quality of service delivery interventions linked with national priority areas (e.g., maternal health, nutrition, TB).
2. On the supply side, in 2018, the MoH proposed adding a performance element to determine how DAK resources are allocated to districts, presenting a unique opportunity to better coordinate supply-side investments and ensure even capacity to deliver health services. Facility accreditation could provide a useful framework/tool for district government to better coordinate supply-side planning and resource allocation, and to incentivize health facilities to achieve accreditation status by making DAK transfers more needs-based and/or performance-oriented.

<sup>170</sup> Global budgeting is a fixed payment for all services and for the entire enrolled (or eligible) population for a given period.

<sup>171</sup> In base-rate adjusted INACBG, the INA-CBG payment is made up of a base rate X case group weight; if the volume goes up too much, the base rate is reduced to keep total hospital expenditure within the BPJS projected budget.

<sup>172</sup> Currently there are only three 'performance-based' indicators: contact rate (150 contacts per 1,000 people per month); referral rate for services that could have been treated at Puskesmas based on agreed set of services (below 5 percent); and rate of visit of chronic disease patients (at least 50 percent of those enrolled in PROLANIS [at risk chronic disease tagged patients] program visit regularly).





## B.3 Improving the Quality of Service Delivery

A

### Introduce an explicit benefit package commensurate with available resources.

So far, attempts to rationalize the benefit package have been met with strong resistance. In the absence of an explicit and transparent process<sup>173</sup> to decide what is included/excluded from the benefit package, it has been politically difficult to scale back benefits. The media and public opinion have often helped to reverse recommendations from health technology assessments and cost-effectiveness studies.<sup>174</sup> A key factor to manage the political economy of these sensitive decisions is to make use of the richness of the JKN claims, budget impact analyses, and economic evaluations to support policy-makers with strong evidence.<sup>175</sup> These data are already available, but not currently used to inform policy. While it is unlikely that shrinking the benefit package will be politically feasible, there are several steps that the MOH can take to better align benefits with available resources:

1. Limit the enrollment period to 2-3 month once a year or lengthen the activation period to discourage adverse selection;
2. Limit treatment coverage to lowest class of hospital rooms (class 3) as per original law;
3. Cost the 144 services covered under JKN capitation to inform future premium and reimbursement rates; and
4. Develop diagnostic and clinical protocols for each intervention at each level of care included under the benefit package to incentivize more cost-effective referral pathways.

B

### Target resources toward populations that would benefit most.

There are huge variations across the country and the need for a more nuanced approach is necessary. This will require investing in health management and information

systems to ensure services reach their intended target audience. Linking the various targeting and benefit schemes at the subnational level using unique electronic identifiers would allow easier membership and benefit eligibility verification. One remaining informational gap that could help to better inform policy-makers concerns human resources for health (HRH). Findings from the supply-side readiness assessment highlighted that private providers do not seem to be operating in areas with low public density where they can fill a gap in provision, but rather operate in the same areas as dual practice providers, hinting at low income. There is also anecdotal evidence of difficulties in deploying and retaining providers in rural and remote areas. Approaching HRH from a labor market perspective would provide a deeper understanding of whether health-worker shortages are due to insufficient numbers, unattractive wages, or a poor work environment—enabling more targeted policy action.

C

### Use JKN claims data to inform and improve service delivery and increase efficiency.

Globally, potential efficiency savings at hospitals in middle-income countries have been estimated at between 5 and 11 percent of total spending. Applying these percentages to JKN hospital-based expenditures yield potential efficiency savings of between IDR 3.6 trillion and IDR 7.9 trillion in the hospital sector alone. While BPJS Healthcare is conducting basic claims checks and verification, increased claims analysis can inform additional areas for improved service delivery and fund management. For example, JKN claims data can help monitor adherence to guidelines and protocol-based care, helping to improve the quality of service delivery (e.g., detecting adverse events or inappropriate or low-value care). Claims data could also help to identify high cost and frequency items, which could be used to inform policies tackling the open-ended payments to hospitals by running simulation and budget impact analyses based

on current utilization patterns. However, currently, the quality of data is a key limiting factor in carrying out these types of analyses, necessitating improvements in the quality of medical reporting and the competence of clinical coders in the first instance.

D

### Transform the health-care system to deal with the long-term care needs of older and chronic condition patients.

An ageing population and the rising prevalence of chronic diseases will place even more pressure on public budgets. Coordinated care across provider levels, as well as throughout the continuum of care, is needed to facilitate integrated clinical pathways and two-way referral systems. Key elements in creating the supporting enabling environment for more people-centered integrated care include investing in: (i) the quality of preventive and primary care for early diagnosis and treatment; (ii) electronic health records and networked data systems to monitor patient referrals and follow-up care; and (iii) a payment regime that incentivizes the provision of integrated care.

<sup>173</sup> Commonly used criteria for prioritizing interventions include burden of disease, equity, cost, effectiveness, cost-effectiveness (based on an economic evaluation or health technology assessment), and budget impact among others.

<sup>174</sup> E.g., recent civil case over the chemotherapy drug trastuzumab ended in settlement, <https://www.thejakartapost.com/news/2018/10/04/civil-case-over-chemo-drug-officially-ends-in-settlement.html>

<sup>175</sup> Economic evaluations should especially be conducted when considering the inclusion of new expensive equipment, drugs, and treatment protocols as these are often rolled out without an assessment of budget impact or comparison to alternative options.

*Annex 5–1***Data Needs and Suggested Analysis****A MoH data**

To better assess allocative and technical efficiency of health sector spending the following information is needed:

**1.** Master facility list (with unique facility identifiers): Number and distribution of all facilities by type, ownership, and accreditation status.

**2.** Master human resources list (with unique provider identifiers): Number and distribution of all health-care providers by cadre, rank, and salary scale.

**3.** Pharmaceutical and medical supply inventory (with unique drug and equipment ids): Number and distributions of drugs and equipment by facility, expiration date, and unit cost.

**4.** At a minimum, budgeted and realized health spending data overall and by level of government (central, provincial, district); by facility type (e.g., hospitals; primary health-care facilities; ancillary services; etc.); and budgeted and realized spending data by economic classification (salary, capital, goods and services) overall, by level of government, and facility type. Realized health spending by

function would also be highly informative (e.g., curative outpatient, curative inpatient, pharmaceutical, public health or prevention, primary health care, administrative).

**5.** A selection of prioritized process, output, and outcome indicators at national and district levels. In addition to aggregate level data to be provided by BPJS Healthcare (see below), the MoH should monitor things such as: (i) provider density, caseload, and absenteeism; (ii) bed density, bed occupancy rate, average length of stay, bed turnover rate; (iii) budget execution rates; (iv) number of training events at provincial and district health offices, number of outreach visits, number of fully vaccinated children, number of maternal deaths, proportion of hospital deliveries that are c-sections, number of TB notifications; and (v) immunization rate, rate of stunting among children under 5, maternal mortality ratio, c-section rate, TB notification rate, TB treatment success rate, TB prevalence—among others, depending on national strategic health priorities.

**6.** For a deeper-dive assessment of efficiency in pharmaceutical and hospital spending the most common indicators are:



Drugs	Hospitals
Pharmaceutical spending as percent of Total Health Expenditure (THE)	Pharmaceutical spending as percent of Total Health Expenditure (THE)
Antibiotics spending as percent of total pharmaceutical spending	Antibiotics spending as percent of total pharmaceutical spending
Unit price of drugs/medical consumables	Unit price of drugs/medical consumables
Unit price compared with international reference prices (especially for high-cost/use items)	Unit price compared with international reference prices (especially for high-cost/use items)
Cost of freight/distribution to facilities	Cost of freight/distribution to facilities
Order/use of high-cost items	Order/use of high-cost items
High use items	High use items
Number or percent of expired items	Number or percent of expired items
Value of expired items	Value of expired items
Stock-outs	Stock-outs
Antibiotic prescription rates	Antibiotic prescription rates
Percent of encounters that end up in antibiotics being prescribed	Percent of encounters that end up in antibiotics being prescribed
Time to process orders	Time to process orders
Time to pay suppliers	Time to pay suppliers
Drug availability	Drug availability
Rate of anti-microbial resistance	Spending by function (e.g., outpatient, inpatient, pharmaceutical, primary health care, public health or prevention, curative care) as a percentage of General Government Health Expenditure
	Hospitals per 100,000 population, hospital bed density, bed occupancy rate
	General service readiness
	Number of visits/admissions per day/month/year/per capita
	Share of outpatient/inpatient
	Diagnostic accuracy for tracer condition
	Adherence to clinical guidelines
	Number of incidents per 1,000 patient days (e.g., center line-associated bloodstream infections, standardized infection ratio)
	Avoidable admissions for chronic obstructive pulmonary disease, asthma, hypertension, diabetes
	Referral rate
	Average length of stay
	Readmission rate
	C-section rates
	<b>To track:</b>
	Most frequent DRG code
	Most costly DRG
	Most frequent diagnosis
	Most frequent procedure codes
	Discharge status
	For top 10 diagnosis, discharge status

## B BPJS Healthcare data

At the aggregate level, it would be helpful for BPJS Healthcare to share with the MoH basic statistics on JKN implementation to inform general management and oversight, disease surveillance, and targeting of resources:

**1.** Membership data overall and by type of membership; by region, province, and district; and then cross-referenced by type of membership (e.g., poor and near poor; civil servants; private formal sector; informal sector; non-workers; and district government beneficiaries) and region, province, and district, by month, year

**2.** Expenditure data overall and by facility type; by type of visit (e.g., inpatient/outpatient); by ownership type (e.g., public/private); by region, province, and district and then cross-referenced by facility type across region/province/district and by type of visit across region/province/district and by ownership across region/province/district, by month, year

**3.** Utilization data overall and by facility type; by type of visit; by ownership; by membership group; and by primary diagnosis, and then utilization by facility type, type of visit, ownership, membership, and primary diagnosis across region/province/district, by day, month, year, per capita

**4.** Top 10 primary diagnosis overall and by region, province, and district, by day, month, year

At the individual claim level, depending on the policy question of interest, BPJS Healthcare could look at purposeful samples to identify potential sources of inefficiency in service delivery:

**1.** Member-centric analysis looks at all the

claims for a single member. It asks: do the diagnoses and services/procedures for a patient make sense over time, and have they been referred and followed up appropriately (including at the right level of care)? This would require linking eKlaim and pCare databases through unique patient identifiers. It would also be helpful for claims data to include an entry field to start tracking prescribed drugs.

**2.** Provider-centric analysis looks at all the claims for a physician or hospital. It asks: does the distribution of disease and services/procedures fit the known disease and utilization patterns of that geographic area? It enables the identification of outliers for further enquiry and relies on a master list of unique provider and facility identifiers.

**3.** Network analysis uses a combination of member-centric and provider-centric analysis. It asks: do the diagnoses and services provided for common pools of patients shared across providers make sense?

**4.** Finally, if claims data can be linked to other databases, then other policy questions become possible. For example, links to electronic medical records (where available) support adherence to guidelines and protocol-based care and help verify claims against fraud and abuse; links to surveillance systems for TB, HIV, etc. can facilitate notification rates/reporting compliance and improve disease surveillance; links to the tax collection database allow the verification of premium compliance; links to the membership/premium databases allow eligibility and class verification, and of course actuarial type analysis and simulations and budget impact analysis of various health reforms (e.g., benefit package, cost-sharing, provider payment arrangements).



# Education

**6.1**

Context

**6.2**

Is Indonesia Spending Enough on Education?

**6.3**

Is Indonesia Spending Efficiently and Effectively on Education?

**6.4**

Recommendations to Improve the Quality of Spending

**167–190**

## Key Messages

- A** Indonesia has undertaken several important reforms in the education sector over past two decades, including mandating that 20 percent of the budget be spent on education.
- B** These additional resources for education have financed a significant expansion in student enrolment, especially at the secondary level, but quality is still lacking. Despite modest improvements in learning outcomes, Indonesia has a large learning gap between school attainment and learning (4.4 years of learning). Increases in the number of certified teachers have not led to significant improvements in student learning, as demonstrated by the PISA and by the National Exam (Ujian Nasional, or UN).
- C** Resources for education are poorly distributed across subnational governments and levels of education. Early childhood education and development needs more attention.
- D** Subnational governments, especially districts, account for the bulk of education spending, but differ in their fiscal and administrative capacity to manage education performance.
- E** Despite the increase in resources, not all schools are adequately equipped to provide a conducive learning environment for students.

## Summary of Recommendations

The GoI has recently implemented several new schemes to improve student learning: e-RKAS, BOS *Kinerja* and BOS *Afirmasi* to improve the use of resources by schools, a new teacher certification scheme (PPG), KIAT Guru to improve performance-based pay for teachers in remote areas, and greater coordination over the allocation of DAK *Fisik*. These measures need to be monitored and evaluated so that they can be scaled up if successful. In addition, the GoI needs to:

- A** Strengthen coordination between the central and subnational governments, ensuring that districts have sufficient financial and institutional capacity to implement education policy;
- B** Ensure that all Indonesian students have qualified teachers, e.g., by ensuring that contract and honorarium teachers have the necessary qualifications, clarifying the responsible party for teacher training and development, ensuring continuous professional development to improve teacher competencies, and monitoring the use of TPG funds allocated; and
- C** Improve accountability by launching a National Education Quality Initiative, backed by the highest political levels, and by improving the collection/availability of education data.

### Further key reading

World Bank. 2017. "World Development Report: Learning to Realize Education's Promise": [www.worldbank.org/en/publication/wdr2018](http://www.worldbank.org/en/publication/wdr2018)

World Bank. 2018. "Growing Smarter, Learning & Equitable Development in East Asia Pacific":

[www.worldbank.org/en/region/eap/publication/growing-smarter-learning-equitable-development-in-east-asia-pacific](http://www.worldbank.org/en/region/eap/publication/growing-smarter-learning-equitable-development-in-east-asia-pacific)

World Bank. 2018. "Indonesia Economic Quarterly June 2018: Learning more growing faster": [www.worldbank.org/en/country/indonesia/publication/june-2018-indonesia-economic-quarterly](http://www.worldbank.org/en/country/indonesia/publication/june-2018-indonesia-economic-quarterly)

Promise of Education in Indonesia, Overview (English): <http://documents.worldbank.org/curated/en/968281574095251918/pdf/Overview.pdf>

# Context

# 6.I





**O**ver the past two decades, Indonesia's education system has undergone several major reforms. The main elements of these reforms, aligned with international best practice,<sup>176</sup> intended to: (i) increase the level of public spending on education by mandating an allocation of 20 percent of the budget to the sector;<sup>177</sup> (ii) improve teachers' quality by requiring them to have at least a Bachelor's degree (S1) and by introducing teachers' certification; (iii) strengthen the accountability system by improving the national test and promoting school-based management (SBM); and (iv) ensure that students are ready to learn in school by promoting early childhood education and development (ECED). Implementation of these reforms coincided with a national decentralization process which, while generating opportunities to bring decision-making closer to the users of education services, also created challenges in implementing these reforms, especially with regards to the issues of coordination and capacity.

**These reforms have achieved an important expansion in education enrolment, but only a modest improvement**

**in learning outcomes given the learning gaps.** Over the period 2003-17, lower- and upper-secondary enrolment grew from 12.9 million to 19.8 million students, increasing the net enrolment rate from 63 to 78 percent, and from 50 to 60 percent, for lower- and upper-secondary, respectively (Figure 6.1). Encouragingly, more students from poorer families enrolled in school, as participation rates among students in the lowest income quintile almost doubled from 32 to 57 percent. In terms of quality, Indonesia was able to maintain on average its education results in the context of fast expansion of student enrolment described above. Between 2003 and 2018, Indonesian students' performance on the OECD Program for International Student Assessment (PISA) improved in math by 19 points, while it decreased in reading by 11 points. Results in science remained relatively stable at a 1 point increase (Figure 6.2). However, from its performance in 2015 compared with 2018, Indonesia scores decreased in Reading, Math, and Science by 26 points, 7 points, and 7 points, respectively. Indonesia's average score (382 points) trails OECD countries, whose average is 488. At the pace

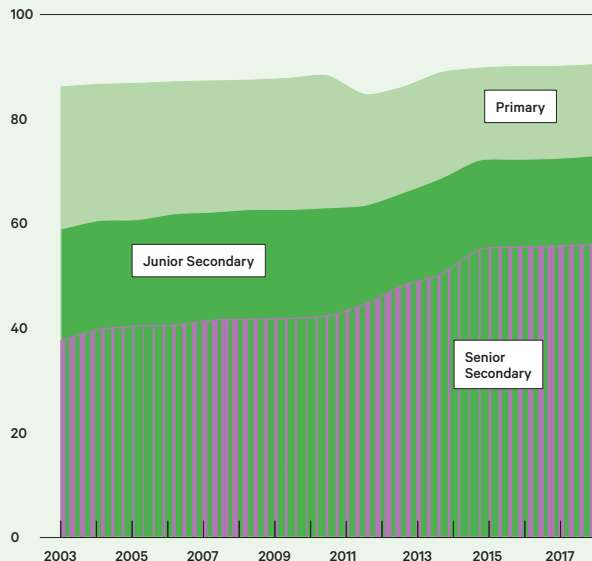
of improvement registered between 2003 and 2018, Indonesia will only reach math OECD PISA scores in 87 years and there will be no convergence in reading or science.

**Growth in enrolment in a context of low learning outcomes is undermining Indonesia's potential.** Adjusted for the quality of education, the expected years of education for an average Indonesian child can obtain by age 18 drops from 12.3 years to 7.9 years.<sup>178</sup> This learning gap of 4.4 years is among the highest in the world, which places Indonesia at a significant disadvantage, given that such a low quality of education affects the labor market outcomes of graduates and the country's overall competitiveness. Out of all new jobs created between 2008 and 2018, about 70 percent were in low value-added services sectors. Investing in the number of years of schooling is not enough; the importance of what students learn in school, and thus the knowledge and skills that they bring to labor markets, is a key determinant of future economic performance.<sup>179</sup> Given current investments in human capital, Indonesian children are expected to reach only 53 percent of their potential.<sup>180</sup> Such a situation cannot be allowed to go unaddressed.

FIGURE 6.1.

Indonesia has made important gains in secondary enrolment...

Net enrolment rates, percent

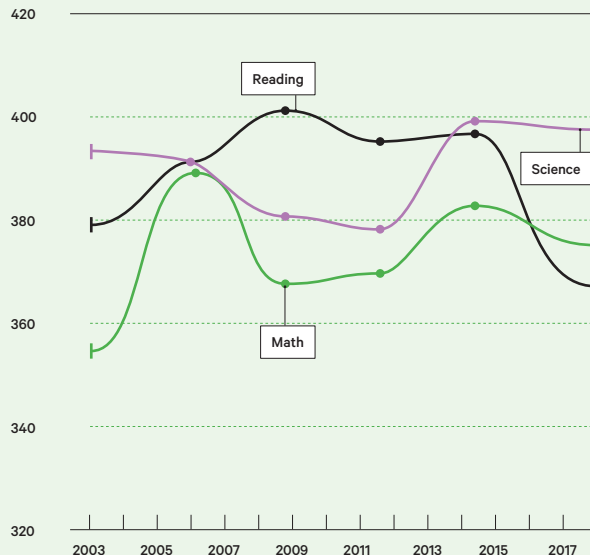


Source: World Bank staff calculations based on data from BPS (Statistics Indonesia).

FIGURE 6.2.

...but only modest improvements in learning outcomes

PISA score over time



Source: OECD PISA.

<sup>176</sup> See World Bank (2018a) on the lessons from high-performing education systems.

<sup>177</sup> Law No. 20/2003 on National Education and the Constitution Amendment III emphasize that all Indonesian citizens have the right to education, that the Gol has an obligation to finance basic education without charging fees, and that the Gol is mandated to allocate 20 percent of its expenditure on education.

<sup>178</sup> The quality of education reflects harmonized test scores from major international student achievement testing programs into a common yardstick of learning

<sup>179</sup> See for example, The Knowledge Capital of Nations (2015), where Hanushek and Woessman use the world's most comprehensive database of comparable test scores to propose that education quality best explains differences in regional and national economic growth rates since 1960. They provide careful and suggestive evidence in support of this thesis.

<sup>180</sup> World Bank Human Capital Index, 2018.

To tackle the challenge of elevating Indonesia's human capital, the National Medium-Term Development Plan (RPJMN) 2015-2019 focused mainly on ensuring full enrolment in schools. The RPJMN's main objective was to ensure that all Indonesians complete 12 years of compulsory education. Available data show that, by 2018, progress had been achieved in increasing enrolment rates for most levels of education. Exceptions were in early years and higher education, which remained similar to the baseline. Net enrolment rates at the primary, lower-secondary and upper-secondary levels have increased since 2014, likely benefiting from the continuation of financial transfers to schools and to students, as well as the creation of new schools.

The RPJMN 2015-2019 also establishes a reform agenda to improve system efficiency, but progress on this agenda has been limited. In addition to the goal of achieving 12 years of compulsory education, the RPJMN includes more qualitative targets intended to improve overall efficiency of the education sector. While some of these targets (such as the improvement of the student assessment system) have been implemented, there has been little progress in other key areas, such as the (re-) distribution of teachers, expansion in the use of the national curriculum K13 (Curriculum 2013), and the establishment of links between education institutions and the private sector for vocational education. (See Annex 6.1 for a comprehensive list of the reform agenda.)

Despite these steps by the GoI to improve the efficiency and effectiveness of resources in the education sector, low capacity, poor coordination among stakeholders, inadequate information systems, and the lack of incentives to perform appear to be limiting their impact. As Indonesia moves forward, bolder policy actions are needed to ensure that the education sector meets its goal of providing high-quality education to all Indonesians. Elevating the country's human capital is essential to lift Indonesia's long-term growth, competitiveness and productivity. This chapter assesses to what extent the GoI's spending on education has contributed to this goal.

**TABLE 6.1.** Quantitative targets and progress of RPJMN 2015-2019<sup>1/</sup>

	RPJMN 2015-2019		Progress (based on Susenas)	
	Baseline	Target	2014	2018
<b>1. Primary education</b>				
a. Net enrolment rate	91.3	94.8	96.37	97.58
b. Gross enrolment rate	111	114.1	108.78	108.61
<b>2. Lower-secondary education</b>				
a. Net enrolment rate	79.4	82	77.43	78.84
b. Gross enrolment rate	101.6	106.9	88.43	91.52
<b>3. Upper-secondary education</b>				
a. Net enrolment rate	55.3	67.5	59.24	60.67
b. Gross enrolment rate	79.2	91.6	73.95	80.86
<b>4. Early years education (3-6 yrs old<sup>2/</sup>)</b>	66.8	77.2	46.92	46
<b>5. Higher education Gross enrolment rate</b>	28.5	36.7	25.76	25.12

1/ All numbers refer to percent of eligible population (7-12 years for primary, 13-15 for lower secondary, 16-18 for upper secondary). Progress is calculated by World Bank staff based on Susenas household surveys. The methodology and precise data used to calculate RPJMN indicators may differ.

2/ Ever and currently enrolled.

Source: RPJMN 2015-2019 and Susenas (several years).

# Is Indonesia Spending Enough *on* Education?

# 6.2

**I**ndonesia is one of the biggest education spenders in the world if spending is measured as a share of total public expenditure, but it stands below its regional peers if spending is measured as a share of GDP. Indonesia's education spending as a share of the total government budget (20 percent) is about double that of advanced East Asian countries such as Japan (9.3 percent) and the Republic of Korea (12.8 percent), and on a par with Malaysia (21 percent) and Singapore (17.7 percent). However, as a share of GDP, Indonesia's education expenditure—at 3.0 percent of GDP—is about only half that of Malaysia and Vietnam, and lower than many other East Asian countries (Figure 6.3). This is in part due to relatively low levels of overall public expenditure in Indonesia that are constrained by low levels of government revenue (see Overview chapter).

**General government spending on education has increased dramatically since 2001, driven by the 20 percent budget rule.** The education budget for 2019 is IDR 491 trillion (about US\$34 billion), a more-than-threefold increase in real terms since 2001 (Figure 6.4). This was mostly driven by the 2002 constitutional mandate requiring both central and subnational governments (SNGs) to allocate at least 20 percent of their budgets for education. Although this was only eventually implemented in 2009, overall education spending increased from 2.2 percent of GDP in 2001 to 3.5 percent (2015), moderating slightly to 3 percent of GDP in 2018. Resources to the education sector are expected to increase further, based on expected future budget expansion and overall economic growth.

**At the central level, there are three main ministries that spend on education.** These are the Ministry of Religious Affairs (MoRA, at 12 percent of total spending on education), the Ministry of Education and Culture (MoEC, at 9 percent) and the Ministry of Research, Technology and Higher Education (MoRTHE, at 9 percent),<sup>181</sup> followed by other ministries at 5 percent, and other education users including education sovereign wealth funds (6 percent).

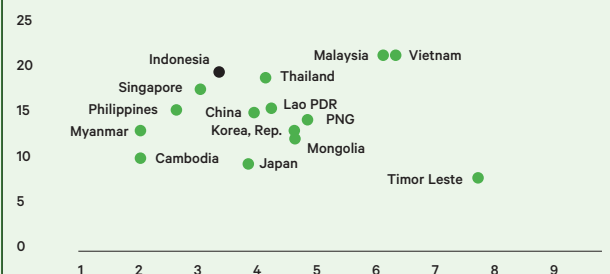
**SNGs are responsible for the bulk of public education spending.** In 2018, the central government only accounted for about 37 percent of total education spending, while the remaining 63 percent was allocated through transfers to SNGs (Figure 6.5). SNG spending on education comes mostly from central government trans-

<sup>181</sup> The MoRA system covers 9.2 million students from pre-school to upper secondary school and 775,000 students in universities. The MoEC supervises the management of 'non-tertiary general education' by subnational governments, covering 53 million students in ECED to secondary education in public and private institutions. The MoRTHE operates tertiary general education, covering 2 million students in higher education institutions. The MoRA and the MoEC also supervise private schools, which serve 13.7 million children or about one-third of all students in basic and secondary education.

**FIGURE 6.3.**

**Indonesia is one of the biggest spenders on education if looking at shares of the budget, but not if looking at shares of GDP**

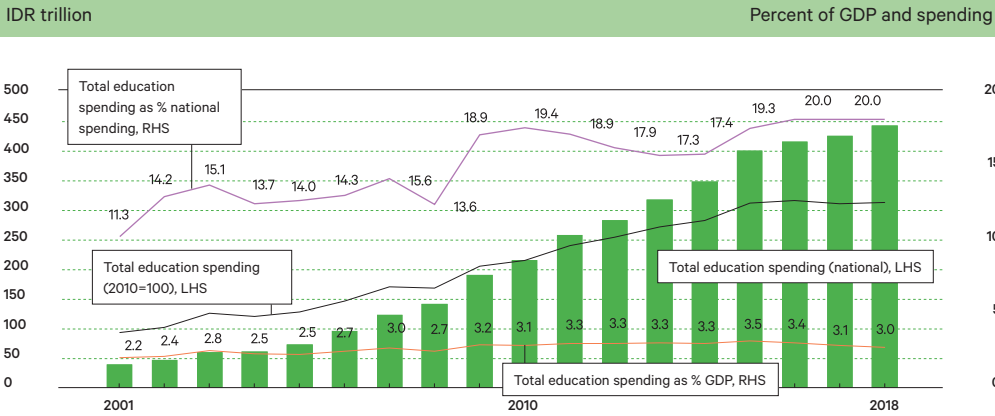
Y axis: Share of government expenditure, percent; X axis: Share of GDP, percent



Note: Latest year of data available between 2011 and 2015.

Source: EDSTATS and World Bank WDI, World Bank staff calculations.

**FIGURE 6.4.** Public spending on education has increased significantly since 2001

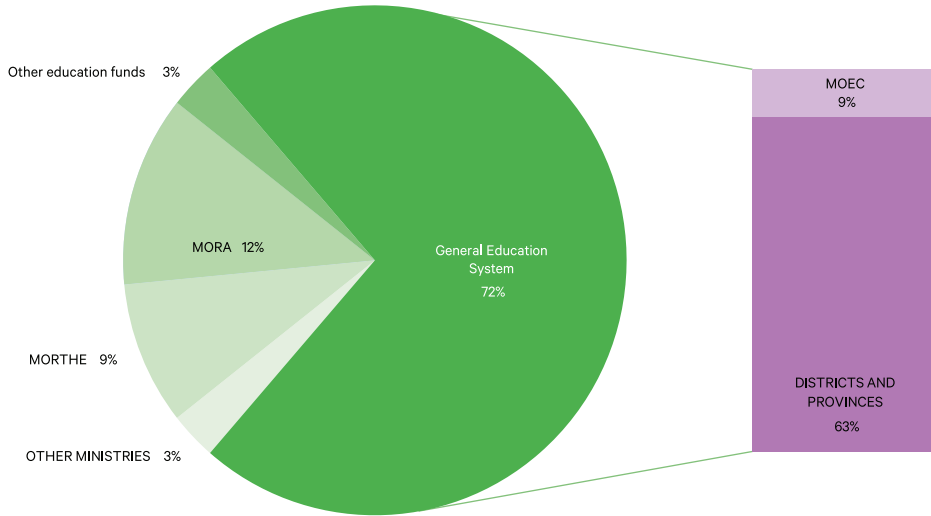


Note: Data refer to audited actual spending at the central government level from 2001 to 2017; 2018 refers to budgeted amount. Realized spending data at SNG level are available until 2014, so subsequent years utilized budgeted amounts. Realized spending data might not capture some SNG education spending if coded under the General Administration function (e.g., BOS, teacher salaries).

Source: World Bank COFIS database using MoF data and Presidential Regulation on budget details of respective years.

**FIGURE 6.5.** SNGs account for 63 percent of total spending on education, 2018

Percent of total



Source: World Bank COFIS database using MoF data.

fers for general use (*Dana Alokasi Umum*, DAU) and transfers with specific mandates (*Dana Alokasi Khusus*, DAK), in addition to some spending from own-source revenues. About 45 percent of DAU funds were used by SNGs to pay civil servant teacher salaries,<sup>182</sup> while the remainder was used for other local education expenses (including contract teachers). DAK funds are earmarked for

funding school operational funds (*Bantuan Operasi Sekolah*, BOS), teacher professional allowances (*Tunjangan Profesi Guru*, TPG), and some school infrastructure. Figure 6.5 and Table 6.2 summarize the distribution of public funds for education at the central and SNG levels, while Box 6.1 describes some of the challenges in managing education in this decentralized context.

<sup>182</sup> The DAU creates incentives for SNGs to overspend on personnel. See Intergovernmental Fiscal Transfers chapter.

**TABLE 6.2.** Allocation of APBN toward education, 2014-19 (IDR trillion)

	2014	2015	2016	2017	2018	2019	2020B
<b>Central government allocation</b>	<b>123</b>	<b>142</b>	<b>131</b>	<b>138</b>	<b>145</b>	<b>163</b>	<b>172</b>
MoEC (A) <sup>a</sup>	77	49	39	37	39	36	36
MoRTHE (C) <sup>a</sup>	0	39	37	37	42	40	41
MoRA (D)	40	45	45	51	50	52	55
Other ministries	7	9	11	13	13	26	23
Budget of State General Treasurer	0	0	0	0	0	9	17
<b>Transfers to local governments (B)</b>	<b>231</b>	<b>248</b>	<b>235</b>	<b>258</b>	<b>272</b>	<b>308</b>	<b>307</b>
DAU	138	137	142	147	153	169	167
DAK Fisik	10	9	2	7	9	17	19
DAK Non-Fisik	79	97	86	99	105	118	117
Special Autonomy	4	4	5	5	5	5	4
Revenue Sharing Fund	138	137	142	147	153	169	167
<b>National Education Development Fund</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>11</b>	<b>15</b>	<b>21</b>	<b>29</b>
<b>TOTAL</b>	<b>353</b>	<b>390</b>	<b>371</b>	<b>406</b>	<b>432</b>	<b>492</b>	<b>508</b>

Note: The MoEC and the MoRTHE were created in 2015. Values for 2014 are estimated based on total allocation to the MoEC in that year, based on relative budgets in 2015. 2020 refers to budgeted spending.

Source: Presidential Regulation No. 107/2017 on the education budget details for 2018.

**BOX 6.1.** The challenges of managing education in a decentralized context

Education is the joint responsibility of the central government, SNGs and schools in Indonesia; hence, the overall efficiency and effectiveness of education results respond to the combined results of their actions. According to the Law on Decentralization, local governments are responsible for managing schools, while the central government is responsible for managing teachers and providing overall quality assurance. School committees take decisions at the school level. The roles and responsibilities of school committees in planning and monitoring education service delivery are governed under the Law on Education, while the roles of local governments are governed under the Law on Decentralization, particularly regarding the implementation of the minimum service standards (MSS).

The central government supports the education system through the quality assurance mechanism of the MoEC, as well as through earmarked transfers. The central government has been strengthening its quality assurance role by starting to monitor the implementation of National Education Standards, improving the reliability of the testing system, and improving the quality of the data. Moreover, through earmarked transfers, the central government supports the teacher professional allowance (TPG), school operational funds (BOS) through DAK *Non-Fisik*, and resources for im-

provements in infrastructure (DAK *Fisik*).

Different amount of resources to invest in education generate different opportunities for different SNGs. Provinces that have more than 2 million students have discretionary education resources of about IDR 1 million per student, while provinces that have less than 1 million students have discretionary education resources of about IDR 4 million per student (World Bank, 2018). These different discretionary resources limit the capacity of local governments to invest in improving teachers' content mastery and pedagogical practice.

The effectiveness and efficiency of education spending is also affected by rigidities in spending decisions and limited local institutional capacity. The payment of civil service salaries absorbs a significant share of SNG budgets. Conservative estimates indicate that they allocate IDR 65.9 trillion to pay civil servant teacher salaries,<sup>b</sup> equivalent to 43 percent of education resources from DAU.<sup>c</sup> With the remaining resources, each SNG decides how to invest in education, i.e., by hiring contract teachers, supporting school operation costs, supporting teacher training groups, and investing in school infrastructure, among others. Moreover, decisions that involve civil service teachers are mostly taken at the central level, with little involvement of the local governments that manage them day-to-day.

**TABLE 6.3.****Teacher hiring authority**

Type of contract	Hiring authority
Civil servant	Ministry of State Apparatus (under MoEC guidelines)
Contract teachers	Districts and provinces
Honorarium teachers	Schools

Source: Law No. 14/2005 on Teachers, Law No. 5/2014 of the civil Apparatus, and Government Regulation No. 56/2012

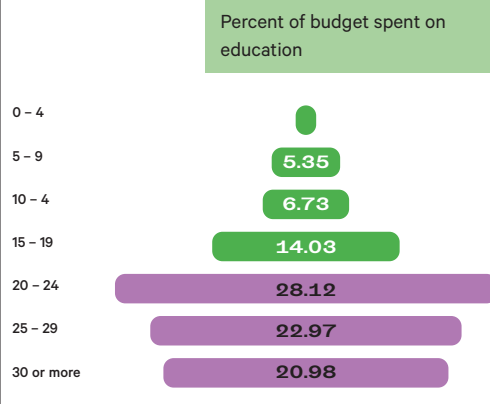
Note a): Major participation of the provincial government in the sector started in 2014. Law No. 23/2014 shifted the responsibility to manage upper secondary schools from the districts to the provinces, including this government level in the education sector.  
 Note b): Based on the total number of civil servant teachers (1.7 million), and an average teacher salary of IDR 2.7 million (including the 14th month payment).  
 Note c): Estimates of national education expenditure indicate that 40 percent of DAU is spent on education.  
 Source: Authors.

**Most districts and provinces claim to meet the 20 percent allocation requirement for education, but there are important differences among them.** In 2017, 72 percent of the districts for which data were available spent more than 20 percent of their budget on education (Figure 6.6). A further 20 percent of districts spent more than 30 percent of their budget on education, and 2 percent of districts spend more than 40 percent. However, compliance is noticeably lower for provinces: only 38 percent of provinces fulfill the constitutional mandate. In 13 percent of provinces, the budget allocation for education is less than 10 percent (Figure 6.7).

**Despite rising public resources to the education sector, household private (out-of-pocket) spending on education has also increased significantly in recent years.** The contribution of household expenditure to total education expenditure (public and private household) increased from 34 percent in 2009 to 44 percent in 2015. This out-of-pocket education spending is costly, especially for poor households. Sending only one child to a primary school could absorb about 7 percent of total household expenditure. It would also be excessively expensive for a poor household to send a child to upper-secondary school, as it could consume about 24 percent of total household expenditure.

FIGURE 6.6.

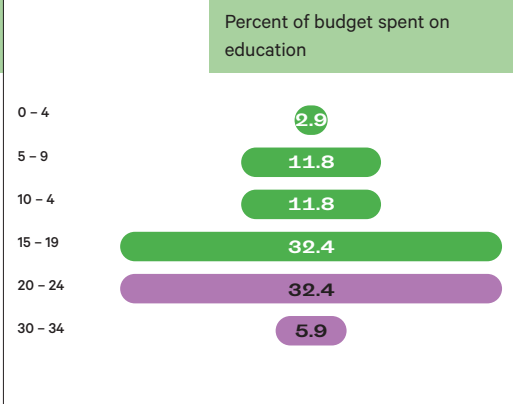
Most districts spend more than 20 percent of their budget on education...



Note: Data available for 505/514 districts.  
Source: World Bank staff calculations using data from MoF DJPK.

FIGURE 6.7.

...while only 38 percent of provinces meet this requirement



Note: Data available for 33/34 provinces.  
Source: World Bank staff calculations using data from MoF DJPK.



# Is Indonesia Spending Efficiently & Effectively on Education?



**A** *Efficiency: Has education spending been optimally allocated across schools and localities, and led to an increase in outputs in the sector?*

**B** *Effectiveness of education spending: Are students learning in school?*



*A*

## Efficiency:

*Has education spending been optimally allocated across schools and localities, and led to an increase in outputs in the sector?*

**T**he increase in public education spending over the past decade has financed an expansion in school enrolment, in line with the GoI's objective as stated in the RPJMN 2015-2019. Available data for the general education system shows an important improvement in enrolment across provinces in Indonesia, particularly for upper-secondary education. Between the 2014/15 and 2017/18 school years, the enrolment rate grew by 13 percentage points (pp) for regular upper secondary (SMA), and by 16 pp for vocational education (SMK). Total enrolment grew by 2 pp, explained by the

expansion in enrolment in private schools (11 pp), as the enrolment in public schools decreased slightly (0.4 pp) (Table 6.4). During the same period, the education budget grew by 10 percent in nominal terms and 3.5 percent in real terms. As a result, expenditure per pupil in the general education system has increased by 8 percent in nominal terms and 1.5 percent in real terms.

**However, the allocation of education resources across levels of education may be suboptimal, as spending on early childhood education and development (ECED) is clearly lagging the needed investments in Indonesia's children.**<sup>183</sup> Although the

current structure of education financial data does not allow the full disaggregation of spending by education level, the current mechanism to distribute resources and high enrolment rates indicates adequate distribution of resources among primary, lower-secondary and upper-secondary education. In contrast, existing information shows that ECED is clearly a low priority. For example, the Directorate General of Early Childhood Education only receives 4.5 percent of the MoEC's budget, or about IDR 1.8 trillion. In addition, although the GoI provided grants to ECED centers (*Bantuan Operasional Penyelenggaraan Pendidikan Usia Dini*, or *BOP PAUD*) similar to BOS transfers for primary and secondary education since 2016, only IDR 4.4 trillion was allocated for this purpose in 2019 (compared with IDR 51.2 trillion for total BOS). The low allocation to *BOP PAUD* responds to the low enrolment at that level, responding to the low demand and lack of supply. Low demand for ECED is mostly due to a lack of awareness of the importance of ECED to overall child development and future well-being. Lack of availability of a nearby ECED center also contributes to parental decisions to send (or not send) their children to an ECED center. The future expansion of ECED and resources allocated to that level will depend

TABLE 6.4.

Change in student enrolment by education level between the academic years 2014/15 and 2017/18 (Percentage point change)

	Elementary (SD)	Lower secondary (SMP)	Upper secondary (SMA)	Vocational upper secondary (SMK)	Total
Total	-2%	2%	13%	16%	2%
Public school	-4%	2%	11%	21%	-0.4%
Private school	11%	2%	16%	13%	11%

Source: MoEC.

<sup>183</sup> International evidence (Carneiro et al. 2003; World Bank, 2018) strongly suggests expanding access to quality ECED services gives the highest return on investment in education, as these are the most important years of a child's cognitive development that influence his/her future health and productivity.

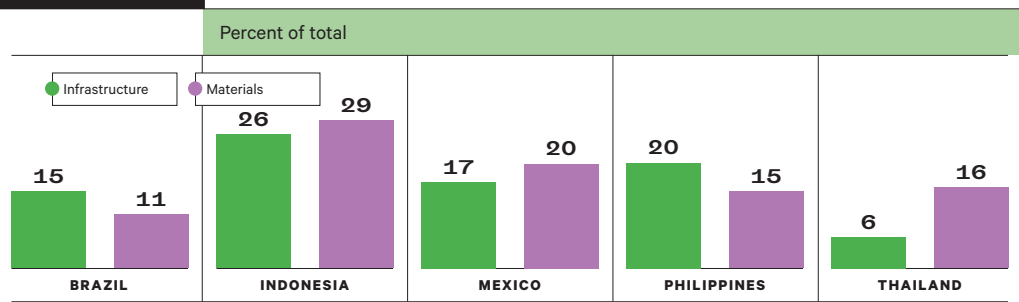
on higher demand from families for those services and, at the same time, the support from the central, district and village governments, which would translate the demand into an expansion of ECED services. Based on Law No. 23/2014 on Decentralization, the management of ECED is the responsibility of district governments. Given the financing on a per student basis, the overall amount allocated for ECED will increase as the number of students also increases.

**Despite increases in spending, many schools still lack basic elements to support student learning.** Among the participants in PISA tests, Indonesian school principals are more likely to indicate a shortage of infrastructure and materials in their schools. For example, 29 percent of Indonesian school principals indicate a major shortage of materials. This is a much higher percentage than for Mexican (20 percent), Thai (16 percent), Philippines (14 percent) and Brazilian (10 percent) (Figure 6.8).

**Administrative data from the MoEC confirm these challenges.** The data indicate that only 25 percent of the classrooms in basic education and 40 percent of classrooms in upper secondary are in good condition (Table 6.5). Only 21 percent of the schools in basic education are accredited with a level 'A', and schools attended by poor students have a lower proportion of classrooms in good condition and are less likely to be A-accredited (Table 6.5). The differences in the characteristics of schools catering to the poor and the non-poor increase as students reach upper-secondary school.

**Part of the problem lies in the uneven distribution of transfers from central government to SNGs, creating significant heterogeneity in SNGs' ability to manage education spending.** Currently, DAU transfers are not allocated based on a per capita basis, and some components of the DAU come in the form of a block grant of the same amount to all the districts regardless of the district's population (see Intergovernmental Fiscal Transfers chapter). This approach, along with variations in the number of students across districts and provinces, creates significant variation in terms of allocation of resources per student and therefore affects the resources available for service delivery. For example, the province of West Java receives about IDR 29 trillion, or IDR 4.4 million per student, while West Papua receives IDR 3 trillion, or IDR 19 million per student (Figure 6.9). These differences may account for differences in the costs of providing education services across regions, but the more than six-fold variation suggests that the allocation of these transfers is not aligned with education needs.

**FIGURE 6.8.** Share of principals reporting shortage of education inputs (selected countries)



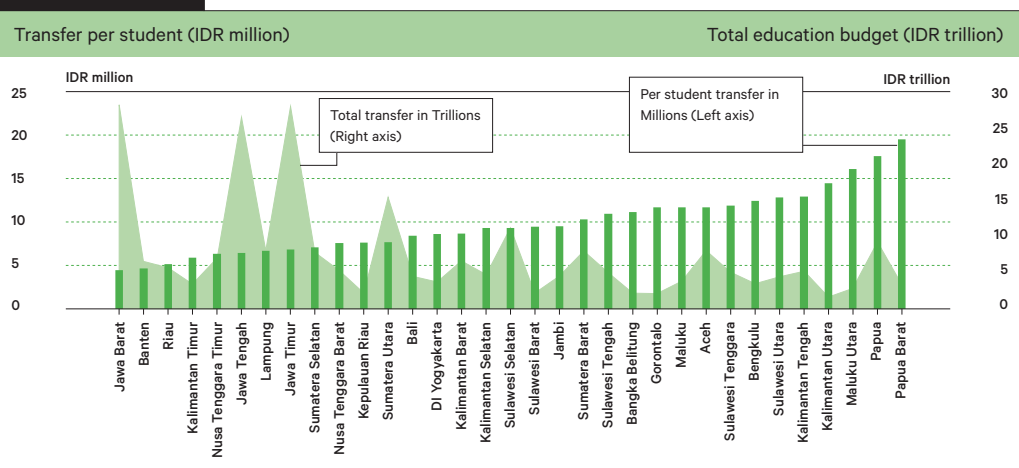
Note: Share of principals that indicated "a lot" as asked on the shortage of selected education inputs. Source: PISA 2015 (OECD, 2016).

**TABLE 6.5.** School characteristics by socioeconomic conditions

Indicator	Basic Education			Upper secondary & vocational education		
	Top quintile	Bottom quintile	Total average	Top quintile	Bottom quintile	Average
Good classrooms (%)	36	19	25	52	31	40
Teacher with Bachelor's degree (%)	86	84	86	94	93	94
Student-teacher ratio	19	15	17	19	14	17
Schools with "A" Accreditation (%)	35	13	21	55	14	34

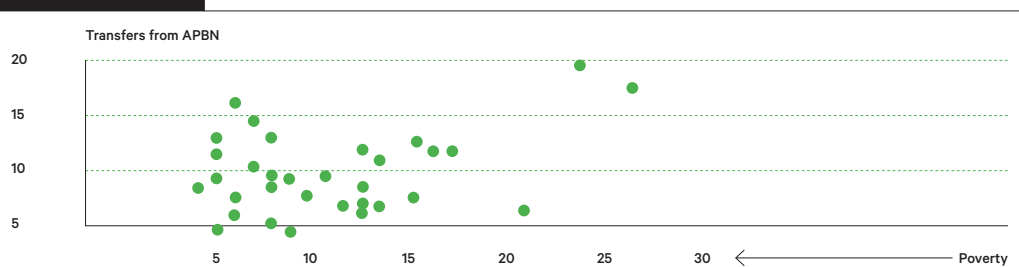
Note: School socioeconomic condition is estimated by the number of students eligible for PIP (Program Indonesia Pintar, cash transfer program for poor students). Source: World Bank estimates using Dapodik.

**FIGURE 6.9.** The allocation of transfers per student varies across provinces and districts



Source: World Bank staff estimates based on SIMTRADA and Susenas (2018).

**FIGURE 6.10.** Transfers per student are weakly related to poverty rates

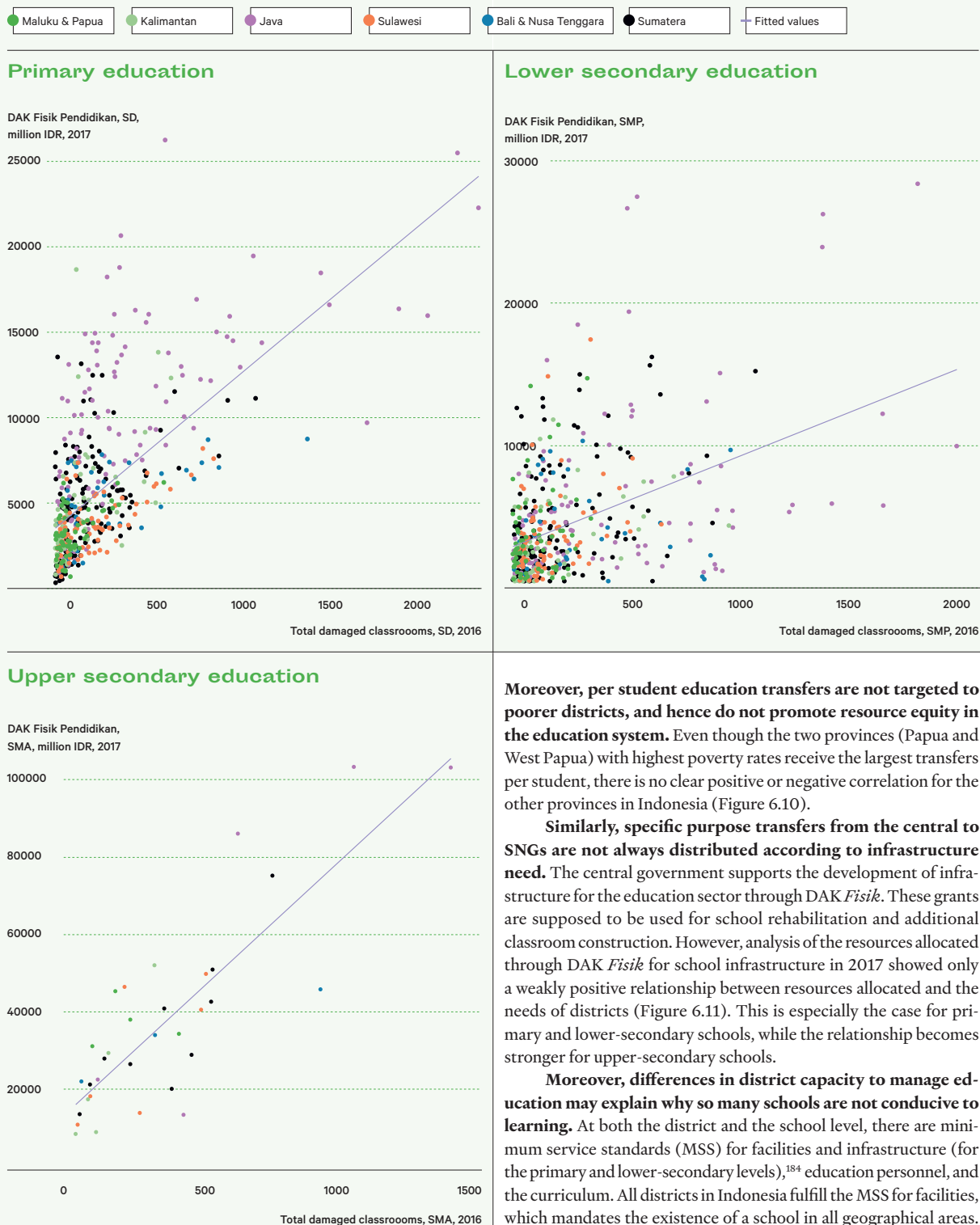


Source: World Bank staff estimates based on SIMTRADA and Susenas (2018).



FIGURE 6.11.

Allocation of DAK Fisik transfers is only weakly related to infrastructure needs, comparing damaged classrooms in 2016 with DAK Fisik allocations in 2017



**184** The MSS describes the minimum quality and quantity of education services that should be delivered by district/city education services and district-level offices of the MoRA, as well as services that are the responsibility of individual schools to deliver. According to Permendikbud No. 23/2013, there are 27 MSS indicators for education, divided into district level and school level. At the *district level* these are: (i) access and infrastructure, (ii) provision of teachers, (iii) teacher/principal qualifications, and (iv) district quality assurance and management. At the *school level* these are: (i) resources for learning, (ii) teaching processes, (iii) school quality assurance and management. However, the regulation has been recently revised with Permendikbud No. 32/2018, which defines only two categories of MSS: 1. Standards for basic learning resources (textbooks and stationaries) and 2. Standards for number of teachers and education personnel and their basic competencies.

Moreover, per student education transfers are not targeted to poorer districts, and hence do not promote resource equity in the education system. Even though the two provinces (Papua and West Papua) with highest poverty rates receive the largest transfers per student, there is no clear positive or negative correlation for the other provinces in Indonesia (Figure 6.10).

Similarly, specific purpose transfers from the central to SNGs are not always distributed according to infrastructure need. The central government supports the development of infrastructure for the education sector through DAK Fisik. These grants are supposed to be used for school rehabilitation and additional classroom construction. However, analysis of the resources allocated through DAK Fisik for school infrastructure in 2017 showed only a weakly positive relationship between resources allocated and the needs of districts (Figure 6.11). This is especially the case for primary and lower-secondary schools, while the relationship becomes stronger for upper-secondary schools.

Moreover, differences in district capacity to manage education may explain why so many schools are not conducive to learning. At both the district and the school level, there are minimum service standards (MSS) for facilities and infrastructure (for the primary and lower-secondary levels),<sup>184</sup> education personnel, and the curriculum. All districts in Indonesia fulfill the MSS for facilities, which mandates the existence of a school in all geographical areas. However, only 70 percent of districts fulfill the MSS on education personnel, and only 67 percent of districts fulfill the MSS related to curriculum implementation (Figure 6.12). Less populated districts, which tend to receive more transfers per capita, have more challenges in fulfilling both district-level and school-level MSS. This is likely because less-populated districts tend to be less capable at managing the education system (Figure 6.13).<sup>185</sup>

Source: MoF and MoEC data, World Bank staff calculations.

**185** Al-Samarrai et al. (2013) construct a measure of local education governance by assessing transparency and accountability, education service provision standards, management of control systems/information systems, and efficient use of resources.

FIGURE 6.12.

Most districts do not fulfill all the MSS, with larger gaps in facilities and infrastructure MSS at the school level, signaling poor school conditions

Percent of districts, or schools

District

Facilities and infrastructure	100
Educator and education.	70.8
Curriculum	67

School

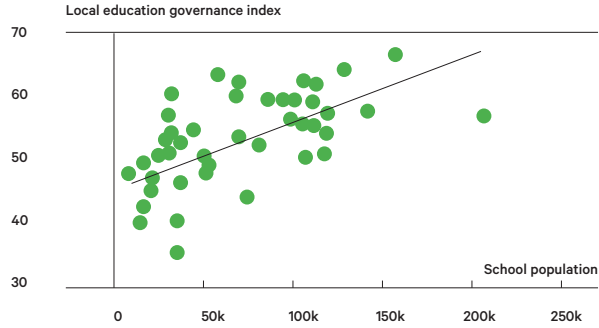
Facilities and infrastructure	46.6
Educator and education..	74.9
Curriculum	98.9
Quality of education..	71.3
Education assessment	99.9
School management	95.5

Source: MSS monitoring system (<http://spm.dikdasmen.kemdikbud.go.id/>)

FIGURE 6.13.

Smaller districts tend to have low capacity to manage the education system

Y-axis: Local education governance index;  
X-axis: School population



Note: Possible scores for the ILEG index range from 0 to 100. No schools received scores higher than 75. Scores below 45 are classified as low performance, 45-60 as average performance, and above 60 percent as high performance.

Source: Al-Samarrai et al. (2013) and Dapodik.

The capacity to manage resources received from the GoI is also lacking at the school level. The central government provides resources to all schools through BOS transfers so that they are able to support basic operations. Established in 2005, BOS transfers amounted to IDR 51 trillion in 2019, double the amount of resources allocated in 2014. The increase is due to the expansion in the number of students (Table 6.4) and the increase in the benefit level.<sup>186</sup> BOS resources should be used by schools to achieve the MSS and the National Education Standards (NES).<sup>187</sup> In practice, however, there is little knowledge at the school level of the NES and MSS, and schools do not prioritize their achievement of these standards as they prepare plans on BOS use. BOS transfers are mainly used to finance operational costs such as utility bills, security, and to pay honorarium teachers.

<sup>186</sup> On a per student basis, BOS per student allocation increased between 2015 and 2018 from IDR 235,000 to IDR 800,000 for primary school, from IDR 324,500 to IDR 1,000,000 for lower-secondary school, and from IDR 1,000,000 to IDR 1,400,000 for upper-secondary school.

<sup>187</sup> National Education Standards (NES) was established based on the Law No. 20/2003 on the National Education System and was followed up by Government Regulation No. 19/2005. NES is defined as the national standard to be achieved in education sector in the eight areas: content, process, graduate competency, teacher standards, school facilities, education management, funding, and assessment. Details of NES can be found in Annex 6.1.

B

# Effectiveness of education spending:

## Are students learning in school?

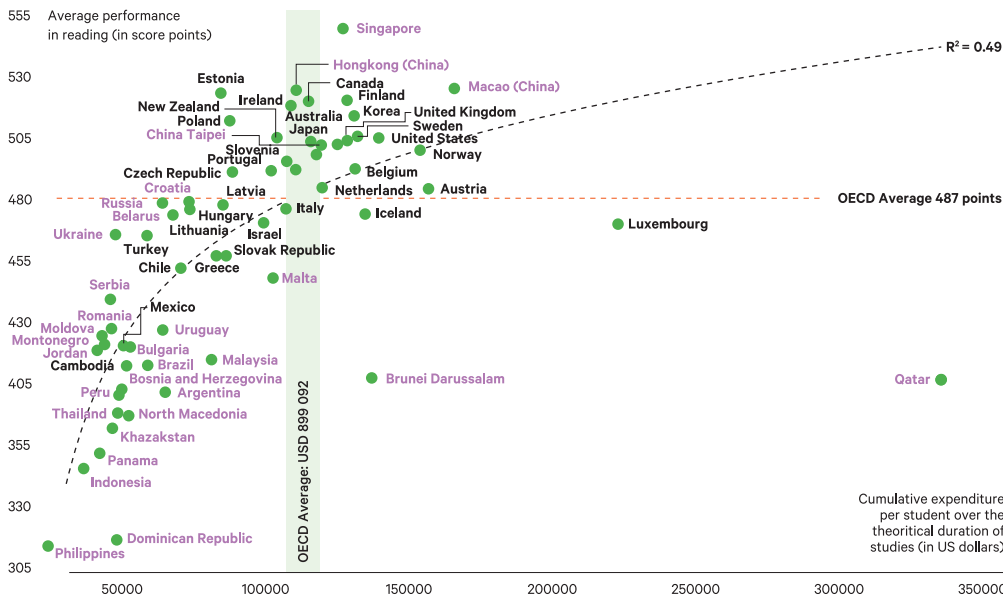
**I**ncreases in spending on education have financed an increase in certified teachers. Between 2003 and 2015, the number of teachers grew by 30 percent, while the number of students increased by 25 percent, leading to decreases in student-teacher ratios. Many of these teachers met the requirements of the Teacher Law to have a university degree and obtain certification. Certified teachers who fulfilled these minimum requirements became entitled to an allowance (TPG) on top of their basic salaries. TPG now accounts for nearly 12 percent of the total education budget, and the share of teachers with at least a bachelor's degree increased from 37 percent in 2003 to 90 percent in 2016.

However, the increase in teacher certification has not been accompanied by a significant improvement in teacher quality.

On average, teachers scored 53 out of 100 points on a 2015 MoEC study, with little difference between certified and non-certified teachers. A video study found that teachers in Indonesia lack basic pedagogical competencies: Indonesian teachers rarely pose strategic and open-ended questions that require complex and specific student responses that would demonstrate student understanding. The video study showed that close to 90 percent of the students observed responded to teacher questions using only a single word—a consequence of teachers employing weak pedagogical practices (Ragatz et al., 2015). Furthermore, an impact evaluation by de Ree et al., 2017, shows that TPG had no impact on student learning outcomes (as measured through test scores). Teacher welfare, however, has improved, as shown by the reduction in the number of teachers with a

**FIGURE 6.14.**

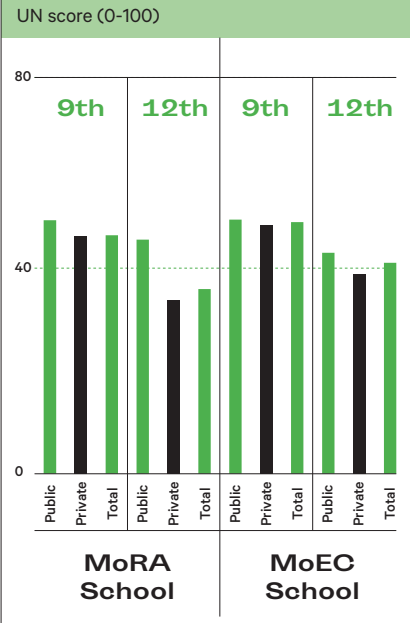
PISA scores tend to improve with rising expenditure per student, several countries do better than Indonesia despite spending a similar amount of cumulative expenditure per student



Source: OECD, 2019.

**FIGURE 6.15.**

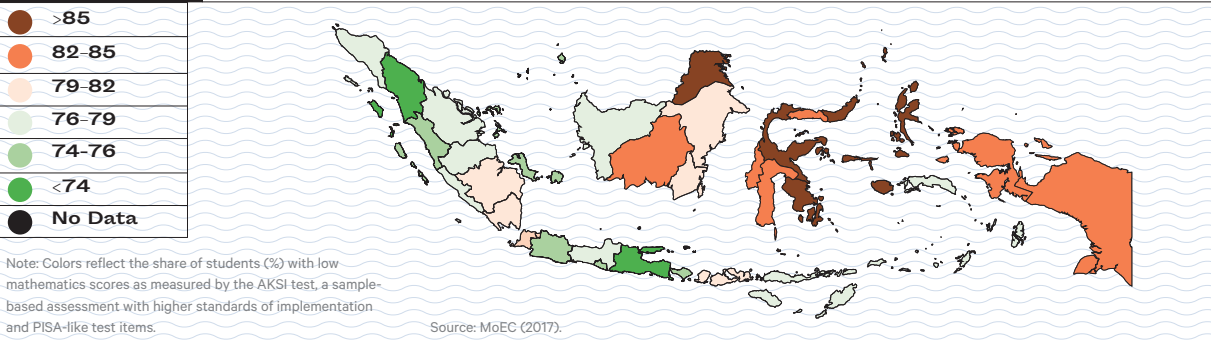
National exam for grade 9 and 12 for MoEC and MoRA schools (public and private)



Source: World Bank staff calculations using Puspendik data 2016-18.

**FIGURE 6.16.**

The AKSI test indicates that eastern provinces tend to have higher shares of low-performing students



Note: Colors reflect the share of students (%) with low mathematics scores as measured by the AKSI test, a sample-based assessment with higher standards of implementation and PISA-like test items.

Source: MoEC (2017).

second job. These results are aligned with Chang et al. (2014).

**Poor student learning outcomes and inefficient spending on education are particularly evident when comparing Indonesia's scores on the PISA test with other countries.** Although evidence from PISA shows that, at least for low levels of education spending, higher per student public education spending is associated with better PISA scores (Figure 6.14), Indonesia's PISA scores are much lower than several countries (such as Ukraine, Serbia, Romania), despite having a similar level of education spending per student.

**National assessments also demonstrate that Indonesian students are not learning enough, with private schools performing worse than public schools.** The national exam, Ujian Nasional (UN), is

conducted annually for grade 9 and grade 12 at all public and private schools under the MoEC and the MoRA that follow the national curriculum. UN serves as one of the tools to measure education quality at the national level. The average UN scores for MoEC schools are slightly higher than MoRA schools, especially at upper-secondary level, but scores are low overall, averaging 44 points out of 100 for public schools (Figure 6.15). Private schools score even lower than public schools regardless of whether they are in the MoEC or MoRA system, averaging 37 points out of 100. This discrepancy has been increasing with the introduction of computer-based assessments in recent years, which have reduced the possibility of cheating during the test. The GoI should focus on this low level of learning in their efforts to improve the quality of education, including

in private providers who play a major role in forming Indonesia's human capital.

**Learning differences are also pronounced across regions.** The results of the Indonesia National Assessment Program (*Asesmen Kompetensi Siswa Indonesia*, AKSI)—a sample-based assessment with high standards of implementation and contents that are similar to the PISA—show that provinces with higher shares of low-performing students are mostly located in eastern Indonesia. This is the case for mathematics (Figure 6.16), reading and science assessments. Moreover, there is a negative correlation between fiscal transfers per student and AKSI scores. Even though the GoI directs more resources to lagging areas to compensate for difficulties in these areas, this result suggest that eastern provinces have low capacity to implement education policy.

# Recommendations to Improve the Quality of Spending



- A** *Strengthen coordination with SNGs & their capacity to implement education policy*
- B** *Ensure that students are taught by high-quality teachers*
- C** *Improve M&E to increase accountability for the education sector*

# 6.5



## BOX 6.1.

**The challenges of managing education in a decentralized context**

Existing international evidence shows that, if designed correctly, incentives can affect the performances of the actors in the education sector. However, key elements need to be clarified for this incentive mechanism to work:

1. Who is eligible to participate;
2. Performance measures (will need to be observable, objective, attributable, and verifiable);
3. How and when the performance will be assessed; and
4. What rewards will be received.

International evidence, for example from Chile's *Sistema Nacional de Evaluación del Desempeño* (SNED) also suggests that the design of a performance-based incentive should include both the level of achievement and improvement in the incentive formula. If only achievement is used, it is expected that many teachers and school directors from poor performing schools will not increase their effort, as they will feel that they are unlikely to win; and, if schools are sure they will win, they are also not likely to increase their efforts. If only improvement is used, there is a risk that schools with low absolute levels of achievement will win. An evaluation of the initial introduction of BOS *Kinerja* should be performed to ensure that adjustments are done as needed.

Jakarta has implemented a similar program to incentivize better performance in education. An evaluation (Al Samarrai et al., 2017) finds that the introduction of the performance component had different impacts on government primary and lower-secondary schools. The program improved learning outcomes for primary schools at the bottom of the performance distribution and narrowed performance gaps across schools. However, improvements in equity were also driven by negative impacts of the program on better performing primary schools. Overall, the program reduced primary examination scores, albeit by a small amount. In contrast to the results at the primary level, the performance component improved examination scores in government lower-secondary schools. However, the impact seemed to be greatest among better performing schools and has therefore widened performance gaps. The findings also suggest that program impact was largely achieved through competition between schools to receive the performance component.

Source: Authors



*The GoI has recently implemented several promising initiatives that aim to improve student learning outcomes.*

**FIRST**, the MoEC is trying to improve the management of resources at the school level through the following initiatives, in some cases with the support of the district or provincial office:

- **E-RKAS** Following the successful implementation in Surabaya and Jakarta, the MoEC is piloting a web-based platform (*e-Rencana Kegiatan dan Anggaran Sekolah*, or electronic school planning and budgeting) to help schools in selected districts better allocate and report on BOS transfers, as well other transfers or resources they may be receiving. The e-RKAS system helps schools in their planning and budgeting decisions to achieve the NES and MSS. The model is currently being evaluated and should be expanded if the results of the evaluation are positive. Similarly, the MoRA has also recently piloted the e-RKAM (*e-Rencana Kegiatan dan Anggaran Madrasah*) system for school planning and budgeting in two provinces and will expand the pilot to 2,000 *madrasah* or religious schools in 2019. Emerging lessons from this effort should be incorporated into BOS regulations by the

MoEC and the MoRA in the near future, and electronic performance-based budgeting should be implemented across Indonesia for all schools and *madrasah*.

- **BOS KINERJA** This program aims to incentivize all schools to improve their performance. The top-performing schools, based on criteria set by the BOS regulations, will receive additional BOS resources. This program is included in the 2019 APBN among the BOS transfers, with a budgeted amount of IDR 1.5 trillion. (See Box 6.2 for more information.)

- **BOS AFIRMASI** Schools in remote areas have different costs and different needs, for example, for electricity generators. This program allocates additional resources to schools in those areas. This program is included in the 2019 APBN among the BOS transfers, with a budgeted amount of IDR 2.8 trillion.

**SECOND**, the GoI has developed a new teacher certification scheme that aims to improve linkages between the teacher professional allowance and student results.

The initial model, which was based on portfolio presentation,<sup>188</sup> was first complemented and then replaced by Teacher Professional Education and Training or *Pendidikan dan Latihan Profesi Guru* (PLPG) model, which required a 90-hour teacher training course. Similarly, in 2015, the PLPG was replaced with the Teacher Professional Education or *Pendidikan Profesi Guru* (PPG) model, which requires one year of training for new teachers, and six months of training for existing teachers. Since 2018, the PPG is the only mechanism to achieve teacher certification. However, its implementation is limited, given that there are only 45 institutions authorized to provide the training. Teachers hired under the MoRA also rely to the same institutions to obtain the PPG. This means that about 2 million teachers are currently in line to participate in the PPG to become certified.

**THIRD**, the GoI has piloted an incentive mechanism to improve teacher performance.

To improve linkages between teacher allowances and teacher performance, the MoEC has implemented the KIAT Guru Rural pilot (see Box 6.3). This pilot links the payment of the Teacher Remote Area Allowance (*Tunjangan Khusus Guru*, TKG) to indicators of teacher service performance. The first stage of the pilot was successfully implemented in rural areas and shows potential to improve student learning outcomes.

**FOURTH**, as of 2018-19, better coordination between the central government and SNGs has resulted in improvements in the process of allocating DAK Fisik for education.

Before deciding the transfer amount that each district should receive, the MoEC and local governments gather to discuss the latter's plan to address infrastructure gaps in education. The MoEC then validates the gaps with data from Dapodik, the ministry-wide administrative information system, to ensure that the plan proposed by the local governments is aligned with infrastructure needs. After the MoEC and the local government reach an agreement on the amount of DAK Fisik needed, the MoF allocates DAK Fisik funds for education and disburses them based on the progress of the agreed-upon plan. Presidential Decree No 43/2019 on Construction, Rehabilitation, and Renovation of Markets, Facilities of Higher Education Institutions, Islamic Higher Education Institutions, and Primary and Secondary Education Institutions regulates that the management of damaged classrooms has moved from MoEC to MoPWH with the aim that the classroom rehabilitation can be done in a larger-scale way. However, it is important that the validation mechanism with Dapodik data continues.<sup>189</sup>

### BOX 6.3.

#### The success of the KIAT Guru program

**K**IAT Guru Phase 1 (KGP1) has been implemented since 2016 to test two mechanisms to improve teacher presence, teacher service performance, and student learning outcomes in remote primary schools. First, a Social Accountability Mechanism (SAM) provides community members with an explicit role to monitor and evaluate teacher service performance and to ensure teacher accountability. Second, there is a Pay for Performance Mechanism (PPM), which links the payment of remote area allowances for teachers (*Tunjangan Khusus Guru*, TKG)—in the amount of up to one-time the teacher's base salary—with either teacher presence or teacher service quality.

KGP1 covers 203 primary schools in five disadvantaged districts, and it was implemented through a Recipient Executed Trust Fund (RETF) by *Bursa Pengetahuan Kawasan Timur*

*Indonesia* (BaKTI), a national non-government organization (NGO), with directions from the Steering Committee chaired by the MoEC and the National Team for Acceleration of Poverty Reduction, under the Secretariat Vice President Office (TNP2K).

The efficacy of the two mechanisms has been tested by combining them into three intervention groups: (i) SAM, (ii) SAM + PPM based on teacher presence, and (iii) SAM + PPM based on a broad measure of the quality of teacher service performance.

The World Bank conducted an impact evaluation (IE) to identify which KGP1 intervention was most effective in achieving the outcome indicators. A total of 270 schools were randomly assigned into three intervention groups and compared with a control group. The IE analysis found statistically significant positive impacts. The SAM, combined with the

PPM based on teacher presence ("Group 2"), had the strongest positive effects on student learning outcomes in mathematics and Indonesian language (at 0.19 and 0.17 standard deviations, respectively), as it increased the presence of TKG-recipient teachers in classrooms and improved parental involvement in meeting with teachers and in supervising learning at home.

The impact evaluation of KGP1, qualitative research, and process monitoring attributed the success of the interventions to four key elements: (i) actively engaging external stakeholders in monitoring and evaluating teacher performance; (ii) increasing parental involvement in learning; (iii) keeping teacher performance evaluation to a few simple and objective indicators; and (iv) paying teacher allowance based on objective performance indicator (Gaduh et al. forthcoming).

Source: World Bank team.

<sup>188</sup> Based on academic qualifications and training, evidence of teaching experience, evidence on lesson planning and implementation, supervisor and principal assessment, publication and good practices, organizational experience, and rewards

<sup>189</sup> The revitalization of SMK, regulated under Presidential Instruction No 9/2016, has also attempted to address school infrastructure and facilities issues in SMK.

**N**onetheless, much remains to be done to improve the quality of spending in the education sector. Different actors and programs should align their actions toward student learning outcomes, improving coordination to maximize synergies and ensuring that all functions in the

education service delivery system are properly fulfilled. The capacity of society to hold local governments, central government and school committees accountable for better quality education should also be increased. Specific policy recommendations include the following:

*A*

## *Strengthen coordination with SNGs & their capacity to implement education policy*

**S**NGs are responsible for managing schools, and the central government provides them with a large amount of resources to do so (63 percent of overall education spending and 90 percent of the general education budget). Nonetheless, as noted above, SNGs have differing levels of capacity to manage education service delivery. To address this, the central government should consider:

1

### **Guaranteeing minimum financial capacity to implement education policy.**

To ensure that all districts are able to deliver adequate education services, the central government needs to address flaws in the current design of the DAU transfer that create large discrepancies in education spending per student. Moving to a transfer formula that assumes similar expenditure needs per person, rather than by place, would help to ensure that more populous districts are better equipped to provide education services (see Intergovernmental Fiscal Transfers chapter for more details).

2

### **Strengthening the institutional capacity of districts to implement education policy, for example by introducing Capacity Improvement DAK**

The World Bank (2013) local education governance index identified important gaps across districts to implement education policy. Formal mechanisms should be introduced to support SNGs with low capacity, either through support from the MoEC or from peer districts and provinces with high capacity. SNGs could also be offered resources conditional on improvement plans, with disbursement linked to the achievement of key milestones. The MoHA should implement a culture of achieving MSSs and launch additional incentives to motivate the achievement of MSSs, which guide the actions of districts and provide metrics to assess progress. Transfers could also be linked to the achievement of MSSs.

3

### **Improving SNG civil servants' capacity to utilize data for evidence-based policymaking.**

The central government should help build the capacity of SNG civil servants to collect, process and analyze information related to the education sector, following the lead of cities such as Surabaya and DKI Jakarta, which use school-level data to identify gaps in the staffing of teachers and redistribute teachers across subdistricts as needed.

4

## Boosting coordination on ECED, including in villages.

The introduction of the Village Law (Law No. 6/2014)<sup>190</sup> and the Village Fund (Dana Desa) have provided potential resources that can be used to support community-based ECED services. The Ministry of Villages issues an annual regulation on the Priority of the Use of the Village Fund. Ministry of Villages Regulation No. 19/2017 on the 2018 Priorities for Village Funds,<sup>191</sup> for example, listed the following activities for ECED as eligible spending: infrastructure, books and educational toys, incentives for ECED (community) and other education and culture-related activities agreed through the village meeting.

The priority list serves as guidance to be discussed and agreed on during village meetings. Given these laws and regulations, it is necessary to support villages to make informed decisions about investing in ECED. In addition, to maximize the impact of current funding, it is important to improve the necessary coordination between central, district and village governments.

The coordination should aim to meet national ECED standards outlined in Minister of Education Decree No. 137/2014, consisting of eight standards: (i) child development milestones (by age and domain); (ii) content; (iii) process; (iv) assessment; (v) teacher and education personnel; (vi) facility and equipment; (vii) management; and (viii) financing.

The subnational budget, APBD, can be used to expand the number and improve the quality of PAUD services using a staged approach, prioritizing children by age and socioeconomic background for one year of preschool, and then work on additional year for younger children. PAUD expansion can be incentivized through grants from central government for additional centers built and managed by district governments.

5

## Strengthening the role of SNGs in helping BOS to reach its full potential.

Schools receive BOS funds to support their operations but having the capacity to use these resources is essential to improving education quality. Provinces and especially districts could provide more support to schools by guiding and monitoring the use of BOS funds. Although technical guidelines for BOS state that province- and district-level BOS teams should coordinate, not all SNGs take an active role in monitoring the proper use of BOS.

Greater enforcement of these guidelines is needed such that all SNGs help ensure that schools plan and budget BOS funds properly, receive BOS on time, execute BOS funds as required, and report on BOS utilization.<sup>192</sup>

<sup>190</sup> [http://www.dpr.go.id/dokjdi/dokument/uu/UU\\_2014\\_6.pdf](http://www.dpr.go.id/dokjdi/dokument/uu/UU_2014_6.pdf)

<sup>191</sup> <http://ditjenpp.kemendiknas.go.id/arsip/bn/2017/bn1359-2017.pdf>

<sup>192</sup> For example, BOS reporting from schools is a requirement for BOS disbursement. That said, if some schools are late in providing BOS report, provinces cannot disburse BOS funds to all schools in their jurisdiction. Having to wait until all schools complete their reporting therefore creates delays in BOS disbursement. Furthermore, with the new circular letter from MoHA 971-7791/2018, BOS has to be included in district budget. Parliament approval is needed both for the district and also the province budget. This mechanism may also contribute to the delay of BOS transfers.



## B

## Ensure that students are taught by high-quality teachers

**B**etter coordination between central government and SNGs is also needed to ensure that teachers are of high quality. According to the Law on Decentralization, the central government is responsible for managing teachers, but provinces and districts intervene as they manage schools locally and address teacher shortages. Moving forward, all levels of government need to coordinate more effectively on the following:

### 1 Ensure that all teachers have the right pedagogical and technical competencies.

Just as the MoEC, which defines and implements pre-requisites for hiring civil servant teachers, SNGs and schools should also enforce a set of minimum requisites for contract and honorarium teachers. SNGs should increase their efforts to monitor the required competencies and qualifications of contract and honorarium teachers, and take action where non-compliance is found.

### 2 Clearly define responsibilities in teacher training

It is unclear which institutions are responsible for teacher training. For example, Law No. 23/2014 on Decentralization states that the central government should manage teachers and education personnel, whereas SNGs should supervise education management for basic education. It is unclear whether teacher training falls under the first or the second level of government. In addition, under Law No. 14/2005 on Teachers, teacher development is listed as a joint responsibility of central government and SNGs. As a result, teacher training is not prioritized by any actors in their education policy decisions, adversely affecting teachers. In addition, there is no mechanism to monitor the use of TPG funds by teachers. SNGs could introduce mechanisms to verify whether teachers are actually using TPG before disbursing additional funds for professional development.

### 2 Ensure continuous professional development to improve teacher competencies.

Due to the variation of budget availability, the implementation of teacher working groups as a part of teacher professional development is inconsistent. Teachers in remote areas are often not able to join the working group activities mostly due to distance and transportation costs issues. Strengthening teacher working groups can be done by increasing the resources, blending on-the-job training and in-the-job mentoring, and supporting the design of strategies to remediate poor student learning and teaching practices.

## C

## Improve M&E to increase accountability for the education sector

**S**trengthen and evaluate current actions from the central government to improve efficiency and effectiveness of government programs, such as BOS, TPG and DAK Fisik, and the KIAT Guru pilot. This will include an evaluation of the eRKAS platform launched by the MoEC, an evaluation of the new certification procedures linked to TPG, and evaluations of the impact of BOS Kinerja and the new process of implementation of DAK Fisik. KIAT Guru is piloting and evaluating the introduction of incentives to teachers in rural areas, and similar pilots should also be introduced for urban areas.

To ensure proper accountability, good quality, timely sectoral and fiscal data related to the education sector need to be available at a sufficiently disaggregated level (Box 6.4). This is the case both for the central and SNG levels. Despite a centralized ministry that has more control on planning and budgeting its education financial resources, the way education spending is recorded in the MoRA is not consistent with functional definitions.

For example, the budget line for basic salaries, allowances, and benefits for: (i) civil servant teachers in private *madrasah*; (ii) civil servant religious teachers who teach in MoEC schools; and (iii) salaries for MoRA district staff are blended into one category and hence cannot be distinguished from one another. Similarly, spending on TPG for civil servant teachers in private *madrasah* and religious teachers in MoEC schools are also blended into one spending category. In addition, a large portion of the MoRA's *madrasah* budget cannot be disaggregated by education level (under pre-tertiary). In 2016, 23 percent of the MoRA's *madrasah* budget was non-specified, with the rest allocated to different levels of education.

The lack of disaggregated data limits the ability to analyze spending by level of education across all levels of government.

## BOX 6.4.

## Accurate and disaggregated data are essential to achieve improvements in student learning outcomes

**G**ood quality data are essential for governments in planning, budgeting, executing, and evaluating development activities. Without accurate data on number of students, it is impossible to have a good understanding of how many schools, classrooms, and teachers needed. Governments need this information to plan and budget for school construction programs, new teacher hiring, etc. Data are also needed to identify inputs that are lacking to achieve the sector's objectives.

To be able to inform decision-making, data must be accurate, timely, disaggregated and widely available. Given the circumstances that the education sector is mostly decentralized, data should be available in each district and/or province. Education outcomes and administrative-related data are currently available and disaggregated down to the school level. Most of these data are managed by the MoEC and the MoRA, while education financing-related data are currently available in each district

and/or province. However, these financing data, i.e., education budget and expenditure data, are not constructed in a standardized way that facilitates analysis of subnational education expenditure. For example, teacher training programs in Probolinggo district are coded/categorized as 'Pembangunan Keprofesian Berkelanjutan or PKB (Continuous Development Program)', while in Bireun District they are coded/categorized as 'Pelatihan bagi pendidik yang memenuhi standar (Training for Eligible Teachers)'.

Improvements in financial data require uniform program and activity classifications of reporting for education budget execution at the district and province levels. Unlike general education under the MoEC, which is decentralized, the MoRA's education financial data are managed at the central level, while the current data are not sufficiently disaggregated to estimate functional and economic classifications. For example, the budget line for salaries and allowances for civil servant teachers in private madrasah is combined with other personnel ex-

penditure, such as civil servant religious teachers in schools under the MoEC, as well as salaries for MoRA district staff. This makes it difficult to estimate total teacher costs for madrasah.

Ideally, data on education financing should be linked to data on education outcomes, such as participation rates, test scores, or other education outcomes data in each education level/subsector. In this way, government would be able to assess the efficiency and effectiveness of education spending in each subsector. This requires financial data to be disaggregated by education level/subsector. Currently, the administrative-related data such as number of students, number of teachers, school basic characteristics, and national exam test scores can be disaggregated by education level. However, most of the financial data, such as expenditure on teachers' salaries or on school infrastructure, are not sufficiently disaggregated. This is where the link of the two types of data needs to be established.

**Finally, the GoI can improve the accountability of the education sector by launching a National Education Quality Initiative.** Such an initiative would help to strengthen the student learning assessment system and improve its credibility. For example, the Center for Student Assessment (Puspendik) at the MoEC should continue its efforts to improve the credibility of the national exam and expand the scope of the national diagnostic test, the results of which should be made public and benchmarked to international exams. The National Education Quality Initiative should also make a concerted effort to improve the availability of data on education financing and the use of education resources to promote the effectiveness and efficiency of spending. In addition, it could provide better information on students' results and on the resources allocated to the sector. With backing from political leaders at the highest level, a national initiative for education would help to ensure that all Indonesians have access to high quality education.





## Annex 6–1

**TABLE A.6.1. Non-quantitative targets and progress of RPJMN 2015-2019**

Policy objective	Progress
Increase readiness of secondary students to the labor market or continue to higher education	The program to revitalize vocational educations is creating links between schools and labor market, but the program has reached a very limited number of schools.
Increase quality assurance for education service delivery	The MoEC is monitoring the National Education Standards (NES), but the results are not used yet to improve school practice.
Increase the availability of reliable curriculum, and comprehensive assessment system	The implementation of K13 has continued, but many schools are not implementing it correctly. The assessment system has been improved with the introduction of computer-based tests.
Increase proportion of vocational secondary students who participate in industrial apprenticeship programs	Apprenticeship programs reach a small set to vocational students.
Increase quality of teacher management by improving teacher distribution and fulfilling teaching hours requirement; increase incentive and facilities of teacher professional and career development for teachers in remote (special) areas	The efforts to improve teacher distribution has been modest.
Increase availability and quality of education infrastructure and facilities based on Minimum Service Standard (MSSs) criteria	Still a large number of schools have poor school conditions, not meeting MSSs.
Develop laws and/or regulations on 12 years basic (mandatory) education.	Regulations have improved, for example with the issuance of MSSs for secondary education.

Source: authors

**TABLE A.6.2. Eight national education standards (NES) and criteria**

Graduate competence Progress	
1.1.	Graduates possess attitude dimension of performance
1.2.	Graduates possess knowledge dimension of performance
1.3.	Graduates possess skill dimension of performance
Education Content	
2.1.	Learning materials are in line with graduate competence formulation/design
2.2.	School-based Curriculum is developed according to the stipulated procedure
2.3.	School is implementing the curriculum according to the regulation(s)
Learning Process	
3.1.	Schools plan learning process according to the regulation(s)
3.2.	Learning process is implemented accurately
3.3.	Supervision and authentic assessment are conducted during learning process

Education Assessment	
4.1.	Education assessment is implemented according to competence domain
4.2.	Assessment technique(s) is/are objective and accountable
4.3.	Education assessment is to be followed up
4.4.	Assessment instrument(s) is/are to be in line with assessment aspects
4.5.	Assessment needs to follow the procedure
Teachers and Education Personnel	
5.1.	Teachers availability and competency are aligned with the regulation
5.2.	Principals availability and competency are aligned with the regulation
5.3.	Administration staff availability and competency are aligned with the regulation
5.4.	Laboratory staff availability and competency are aligned
5.5.	Librarians availability and competency are aligned with the regulation
Facilities and infrastructure	
6.1.	Sufficient school student intake capacity
6.2.	Schools possess proper and sufficient facilities and infrastructure
6.3.	Schools possess complete and proper facilities and infrastructure
Management	
7.1.	Schools conduct implementation planning
7.2.	Program management is implemented according to the regulation
7.3.	Principals are to show good performance in his/her school leadership
7.4.	Schools manage MIS
(Education) Funding	
8.1.	Schools provide cross-subsidy service
8.2.	School operational load is aligned with the regulation
8.3.	School implement sound fund management

# Social Assistance

7.1

Context

6.2

Assessing the Quality of Spending

6.3

Recommendations to Improve the Quality of Spending

**191–204**

## Key Messages

- A** Indonesia's social assistance system has made impressive progress since 2014, as demonstrated by significant coverage expansion of several core programs and rapid transition to electronic payment methods.
- B** However, some risks along the lifecycle are not adequately covered. Furthermore, a lack of convergence of social assistance programs among the poorest population suggests that social assistance delivery systems need to be strengthened.

## Summary of Recommendations

### Policy reforms and adapted program design

- A** Increase spending on targeted social assistance spending by reducing remaining spending on untargeted subsidies.
- B** Mitigate several neglected risks along the lifecycle through additional budget.
- C** Consolidate overlapping social assistance programs, modify program design, and integrate social assistance programs to improve effectiveness.
- D** Adapt core social assistance programs for rapid response to natural disasters and epidemic shocks.

### Strengthen delivery systems

- A** Enhance institutional coordination with subnational governments and between agencies to improve implementation performance. This coordination must include the improvement in supply side provision, particularly in remote areas.
- B** Invest in the capacity of the integrated social welfare database (DTKS) to minimize exclusion and inclusion errors through reliable dynamic updating mechanism with the local government and related external institutions.
- C** Strengthen key delivery systems, such as grievance redress, enrollment, M&E, and payment, for the core social assistance programs.

### Further key reading

World Bank. 2017. "Social Assistance Public Expenditure Review". *The report provides an update on a 2012 Social Assistance Public Expenditure Review and seeks to provide evidence of the progress made between 2011 and 2017, together with relevant benchmarks for future reforms and policy planning.* <http://documents.worldbank.org/curated/en/535721509957076661/Towards-a-comprehensive-integrated-and-effective-social-assistance-system-in-Indonesia>

TNP2K. 2018. "The Future of The Social Protection System in Indonesia: Social Protection for All". *TNP2K recommends revamping Indonesia's social protection system to protect poor and vulnerable citizens through social safety net schemes designed across the life cycle, as well as prevent health and employment related risks through accessible social insurance schemes.* <http://www.tnp2k.go.id/downloads/the-future-of-the-social-protection-system-in-indonesia-social-protection-for-all>

World Bank. 2020. "Investing in People: Social Protection for Indonesia's 2045 Vision". *The report reviews both social assistance and social insurance, as well as associated financing strategies and delivery systems to strengthen social protection and prepare Indonesia to achieve its national development goals in the future.* <https://www.worldbank.org/en/country/indonesia/publication/investing-in-people-social-protection-for-indonesia-2045-vision>



## Context

# 7.1

**S**ocial assistance programs are one key class of policy instruments for the Government of Indonesia (GoI) to reduce poverty and inequality. A well-functioning and responsive social assistance system can protect poor and vulnerable households against risks and shocks along the lifecycle in several ways. First, it provides basic necessities that poor households do not access frequently enough, and hence reduces extreme poverty. Second, it can simultaneously assist poor and vulnerable households to absorb and mitigate negative shocks in the most flexible ways. This minimizes negative coping behaviors (e.g., sacrificing productive investments to maintain minimum consumption) and contributes to beneficiaries' human and financial capital in the long run. Third, it can make certain structural policy reforms more palatable, thereby supporting long-term economic growth.

Indonesia has come a long way in developing and consolidating a set of social assistance (SA)<sup>193</sup> policies and programs for the poor and vulnerable. The first generation of SA programs was introduced to mitigate the impacts of the 1997-98 Asian financial crisis. The GoI endeavored to en-

sure food price stability through Raskin, an in-kind rice distribution program, which was subsequently renamed Rastra (*Beras Sejahtera*, or 'prosperous rice'). The GoI also introduced several SA programs, such as unconditional cash transfers to minimize the negative impacts of energy subsidy reforms (*Bantuan Langsung Sementara Masyarakat*, BLSM, in 2009 and 2013-15), conditional cash transfers to families (*Program Keluarga Harapan*, PKH), health insurance fee waivers (*Penerima Bantuan Iuran Jaminan Kesehatan Nasional*, PBI-JKN), and cash transfers for poor and vulnerable students (*Program Indonesia Pintar*, PIP).

To help reduce poverty and inequality, the GoI has tried to reallocate more resources for SA<sup>194</sup> and expanded several flagship SA programs in recent years. Between 2014 and 2017, spending on regressive energy subsidies fell by 71 percent in nominal terms to IDR 97.6 trillion, while spending on SA rose by 28 percent over the same period to IDR 72.3 trillion in 2017 (Figure 7.1). This increase financed an expansion in coverage of core SA programs, namely PKH, PBI-JKN and PIP. In addition, in 2018, a new cash-for-work initiative (*Padat Karya*) was introduced under the Village Fund (*Dana*

*Desa*) to boost rural employment. Furthermore, the GoI established a unified poverty targeting database (*Basis Data Terpadu* or BDT), currently known as integrated social welfare system (*Data Terpadu Kesejahteraan Sosial*, DTKS), to determine eligibility of potential beneficiaries for SA and subsidy programs.

The GoI has also modified the design and delivery systems of several core programs to improve their effectiveness and efficiency. Rastra has been gradually replaced by the e-voucher food assistance program (*Sembako*, formerly known as *Bantuan Pangan Non Tunai*, BPNT). Both PKH and PIP programs have switched their benefit payment methods to "cashless" payment using bank debit cards. In addition, the implementation arrangements of core SA programs have been revised to give SNGs a greater role in program implementation and, for some programs, in coverage expansion beyond the eligible poor and vulnerable beneficiaries identified through DTKS (see Box 7.1). The Ministry of Social Affairs (MoSA), as per Law No. 11/2009, has developed a process for SNGs to register new poor and vulnerable families into DTKS, or update the registry of existing families.

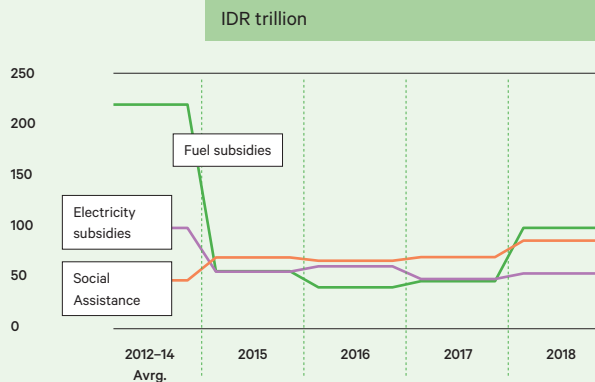
**193** The so-called "social safety net" programs (*Jaring Pengaman Sosial*) included food assistance, public works, community development, health protection, and school support.

**194** In this chapter, social assistance is defined as non-contributory cash or in-kind transfers programs targeted to the poor or vulnerable. SA spending at the central government level comprises spending on 10 major SA programs, as well as remaining MoSA and Social Protection Function expenditure. The 10 programs comprise six core household SA programs (*Rastra*, *Sembako*, *PKH*, *PIP*, *PBI-JKN* and cash for work, *Padat Karya*), and four others: child social services (*PKSA*), disabled social services (*JSPACA*), elderly social services (*ASLUT*) and unconditional cash transfers (*BLT/BLSM*).



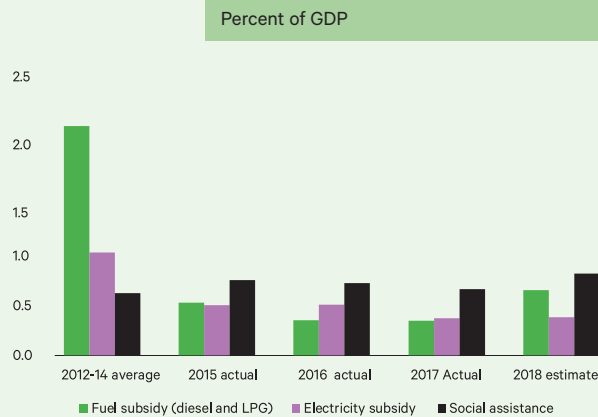
**FIGURE 7.1.**

Spending on energy subsidies has been partially redirected toward social assistance...



**FIGURE 7.2.**

...but remains substantial at 1.0 percent of GDP



Source: Ministry of Finance, World Bank staff calculations.

Note: All years refer to audited expenditure data, except 2018 household social assistance spending, which is a World Bank estimate based on preliminary data from the MoF.

**BOX 7.1.**

**Who is responsible for social assistance?**

**S**ocial assistance is a shared responsibility between central and SNGs in Indonesia. Law No. 11/2009 on Social Welfare provides the legal framework for social welfare (including SA) policy and program implementation arrangements. In addition, Indonesia has other laws and regulations setting the legal basis for various government agencies to provide some sort of SA to support the poor and vulnerable to meet basic needs. While the poor and vul-

nerable do often need multiple forms of SA support—in cash and in kind such as food, health services, and subsidized electricity—the coordination between multiple programs implemented by various agencies often is challenging. Furthermore, decentralization also adds the complexity of coordination, as both central and SNGs share the responsibility of the implementation of most, if not all SA programs (see Table 7.1 below).

**TABLE 7.1.**

**Summary of main social assistance programs**

Core program	Description	Number of beneficiaries	Implementing agency
Sembako	Food assistance programs	15.2 million households	Ministry of Social Affairs
PKH	Conditional cash transfer	10 million families	Ministry of Social Affairs
PBI-JKN	Health insurance fee waiver	96.8 million individuals	Ministry of Health, BPJS Healthcare
PIP	Cash transfer for poor and vulnerable students	18.7 million students	Ministry of Education and Culture, Ministry of Religious Affairs

Source: Ministry of Finance. 2018. *Buku Informasi APBN 2019*. <https://www.kemenkeu.go.id/apbn2019>

**Despite making impressive progress, several challenges remain and the efficiency of current spending could be further improved.** Despite the overall decline since 2014, spending on poorly targeted energy subsidies has recently increased and remains sizeable (IDR 153.5 trillion, or 1.0 percent of GDP in 2018, see Figure 7.2 and Box 7.2). Further reallocation away from regressive subsidies toward targeted cash and near-cash transfers, such as PKH and Sembako,

will improve the overall efficiency of social spending. In addition, there is scope to increase the efficiency of PBI-JKN and PIP through more rigorous targeting practices and stronger beneficiary monitoring practices. Ensuring that core SA programs are making use of the available delivery systems and platforms, such as DTKS and electronic payment systems, will improve implementation performance and efficiency.



# 7.2

## Assessing the Quality of Spending

A

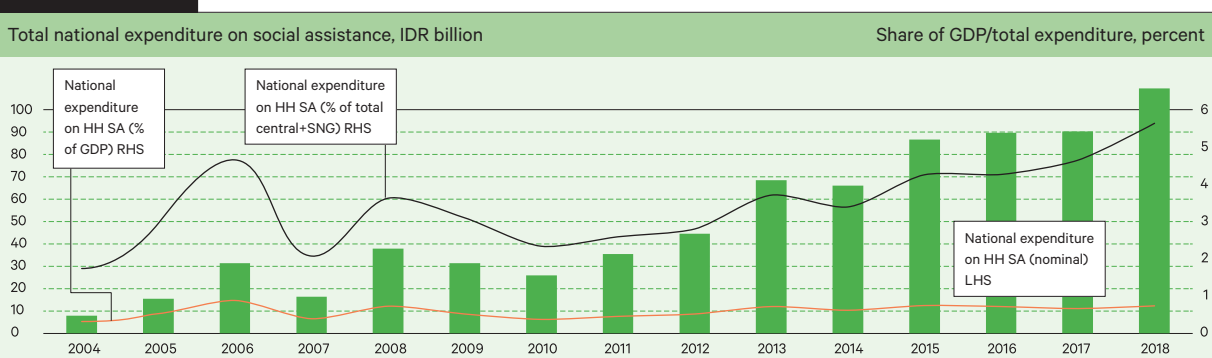
### Overall Trends: Is Spending Adequate?

**S**A expenditure has increased significantly in real terms. General government spending on household targeted SA, excluding subsidies, more than doubled in real terms between 2009 and 2018, reaching IDR 85.6 trillion in 2018 (Figure 7.3). Central government manages nearly 90 percent of total national SA spending, comprising 10 major SA programs, with the remainder spent by subnational governments (SNGs).

**Nonetheless, total spending on SA remained low as a share of GDP (0.7 percent of GDP) in 2018 (Figure 7.3).** This is especially low when compared with the average lower middle-income country, which spends 1.4 percent of GDP on SA. Compared with countries with similar revenue-raising capacity, Indonesia spends less on SA than the Dominican Republic, which spends 1.2 percent of GDP, but more than Pakistan and Sri Lanka (Figure 7.4). Global trends also suggest that SA spending rises as countries become richer.<sup>195</sup>

- A Overall Trends: Is Spending Adequate?
- B How Efficient Is Public Spending in the Sector?
- C How Effective Is Public Spending in the Sector?

**FIGURE 7.3.** Spending on social assistance has increased, but remains low as a share of GDP



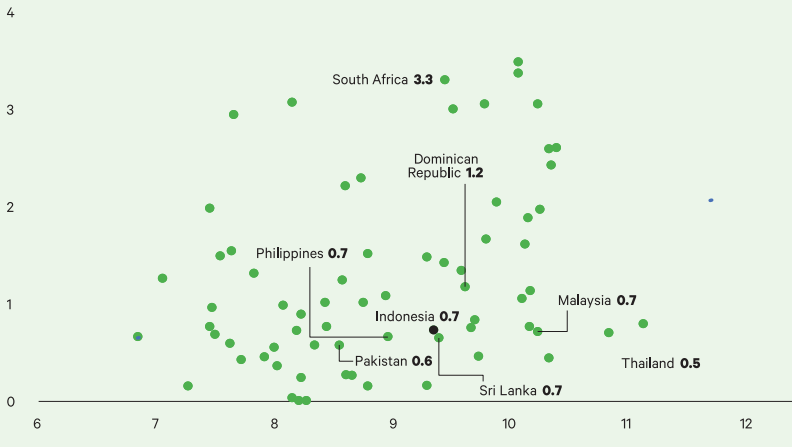
Source: World Bank staff calculations based on MoF data.

Note: Total national expenditure on social assistance consists of spending by the central government and by districts and provinces (SNGs). SA spending at the central government level comprises spending on 10 major social assistance programs, as well as the remaining MoSA and Social Protection Function expenditure (see Footnote 2). At the SNG level, expenditure under the Social Protection Function is used as a proxy for SA expenditure. All data refer to realized spending except for components of 2018 data, where expenditure on PKT and PIP are estimated.

195 World Bank (2018) State of Social Safety Nets. Washington, DC.

**FIGURE 7.4.** ... and is low compared with other lower middle-income countries

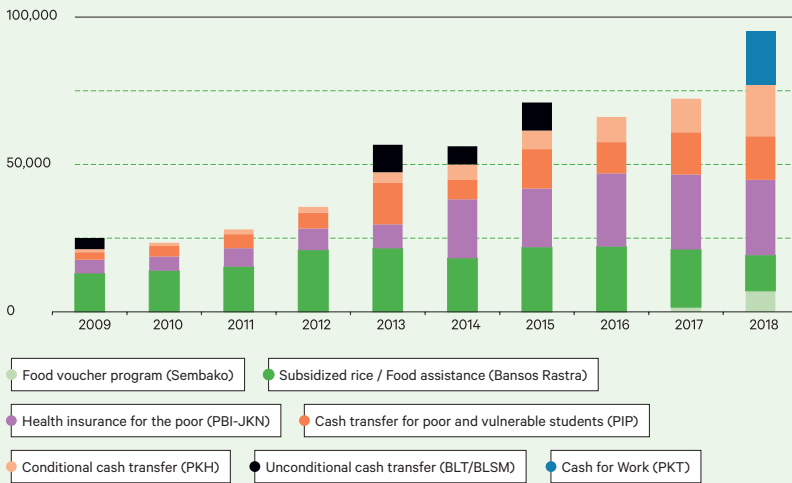
Y-axis: SA spending as a percent of GDP; X-axis: Log GDP per capita in constant PPP terms



Note: Indonesia number reflects 2018 data. Includes PBI-JKN and estimated total SNG spending.  
Source: World Bank 2019 ASPIRE and WDI.

**FIGURE 7.5.** Central government spending on household targeted social assistance programs, 2009-18

Expenditure (IDR billion, nominal)



Note: 2009-18 refer to audited actual expenditures except for PIP, PBI-JKN and PKT in 2018, where budgeted numbers are used.  
Source: MoF Financial Note and World Bank calculations.

26%



Spending allocations on PBI-JKN increased significantly from IDR 7 trillion in 2012 to IDR 25.5 trillion in 2018, and now account for 26 percent of spending on permanent SA programs

Increases in SA spending over the past decade were mostly directed toward coverage expansions of key, targeted SA programs. The rapid rise in PBI-JKN<sup>196</sup> beneficiaries (previously Jamkesmas) accounts for the lion's share of this increase. Spending allocations on PBI-JKN increased significantly from IDR 7 trillion in 2012 to IDR 25.5 trillion in 2018, and now account for 26 percent of spending on permanent SA programs.<sup>197</sup> The increase is due to the additional 16 million beneficiaries from the introduction of JKN in 2014 and an increase in the per-capita premium. In addition to the PBI-JKN expansion, both PKH and PIP's coverages have also been expanding, with the number of beneficiaries seeing a tenfold increase between 2010 and 2018.<sup>198</sup> Outlays for the two major cash transfer programs (PIP and PKH) in the 2018 budget accounted for 34 percent of spending on permanent SA programs, compared with 18 percent in 2012. In contrast, spending on Rastra has declined with the transition of Rastra to Sembako<sup>199</sup> since 2017. Rastra made up 60 percent of spending on permanent SA programs in 2012, but only 7 percent in 2018. Overall, there has been a shift of permanent-program expenditures toward better targeted and thus more pro-poor programs. SA spending on the disabled and elderly, however, has remained low, at 0.1 percent of total spending on permanent SA programs in 2018. As a result, these groups remain uncovered from significant risks they face.<sup>200</sup>

## B

### How Efficient Is Public Spending in the Sector?

SA spending has become more efficient in recent years. While outlays on core SA programs have been increasing in real terms (see above), the composition of spending within the sector has improved. As previously mentioned, the GoI allocated nearly 60 percent of its total SA budget to Rastra; now, only 12 percent goes to this program. Although Rastra targeted the 25 percent poorest among the population to receive 15kg of rice a month,

<sup>196</sup> In this chapter, the discussion on PBI-JKN focuses on subsidized premium for the bottom 40 percent of the population. The management of JKN and institutional aspect of JKN is discussed in the Health chapter.

<sup>197</sup> This refers to the 10 SA programs in footnote 2 (PKH, PIP, PBI-JKN, Sembako, Rastra, PKT + PKSA, ASLUT, JSPACA), excluding temporary unconditional cash transfers (BLSM).

<sup>198</sup> The number of PKH beneficiaries has gradually increased each year from 2.8 million families in 2014 to 10 million families in 2018-19.

<sup>199</sup> Sembako covers 10 million households as of early 2019 and the GoI plans to phase out Rastra by the end of 2019.

<sup>200</sup> Importantly, about 1.2 million elderly living with PKH families are set to receive top up benefits under the 2019 PKH benefit scheme. This will provide an important layer of protection but only for elderly living in PKH families.

FIGURE 7.6.

**Beneficiary incidence of major SA programs and subsidies (beneficiaries by class, percent) and total spending on each program/subsidy in 2018 (IDR trillion)**



Note: Numbers in green at the side of each bar refer to total realized spending on each program or subsidy in 2018, in IDR trillion. Consumption classes are estimated from Susenas, which may not fully capture high-income earners. Those who are vulnerable live between 1 and 1.5 times the national poverty line (PL); the aspiring middle class between 1.5 times the poverty line and 3.5 times the PL; the middle class between 3.5 times and 17 times the PL; the upper class above 17 times the PL.  
Source: Susenas 2018, MoF 2018 LKPP Audited, and World Bank staff calculations.

in practice around half of the population received an average of 5kg of Rastra rice a month, since it has historically been divided up equally among villagers (*bagi rata*).

**The gradual transition from the ineffective distribution of Rastra into Sembako is an important shift, as it addresses the dilution of the Rastra benefits.** Sembako, in contrast, allows only targeted beneficiaries to access selected in-kind benefits. Beneficiaries must be registered in the DTKS database and be in possession of a family welfare card (*Kartu Keluarga Sejahtera*, or KKS) to exchange a monthly cash voucher worth IDR 150,000 for a combination of 10kg of rice or eggs, to be purchased at the discretion of the beneficiary. The allocation of rice and eggs via e-Warong stores or agents with identity validation via the KKS allows for much greater control over the targeting of beneficiaries and makes the full benefit package available to 10 million families.

**Conditional cash transfer programs have been the most efficient in targeting poor and vulnerable households.** While PKH and PIP target different shares of the

population,<sup>201</sup> both are able to allocate 47 and 39 percent of program benefits to the poor and vulnerable parts of the population, respectively<sup>202</sup> (Figure 7.6). Just 7 and 12 percent of total program benefits, respectively, reach the economically secure middle class, who are not targeted to receive these programs. The GoI has recognized PKH as being the more efficient of SA programs and significantly expanded its coverage from 6 to 10 million households in 2018. It has also nearly doubled benefit levels from IDR 1.9 million to around IDR 4 million per family per year in 2019.

**However, subsidy spending remains sizeable, with fuel and electricity subsidies making up almost IDR 154 trillion, or 1.0 percent, of GDP in 2018.** Counting other non-energy subsidies such as fertilizer (IDR 34 trillion), total spending on subsidies almost reaches IDR 200 trillion. The main subsidies and their allocation by welfare class are shown in Figure 7.6, alongside SA allocations. LPG and electricity subsidies comprise the largest budget allocations, costing IDR 54 trillion and IDR 48 trillion, respectively. However, the poor and vulnerable only con-

sume 15 and 22 percent of these benefits, respectively. The bulk of energy subsidies—39 and 29 percent of LPG and electricity subsidy benefits, respectively—are consumed by the economically secure middle and upper class.

**By design, the SA package for the poorest 25 percent of families with children provides reasonably adequate protection.** The poorest 15 percent of households receiving PKH receive around 21 percent of median consumption in a direct cash transfer (Figure 7.7); if a household receives PKH, it receives the minimum level of protection. By design, the policy package of SA is well thought out, as adding on PIP, Sembako and PBI-JKN to PKH would render a very adequate package of protection for the poorest 15 percent of households with children of around 36 percent of median consumption. For the same group, however, PIP and Sembako both constitute an average of 7 percent median consumption. Thus, receiving both PIP and Sembako/Rastra (about 14 percent of consumption budget supported), or just one or the other, would not provide an adequate package of assistance.

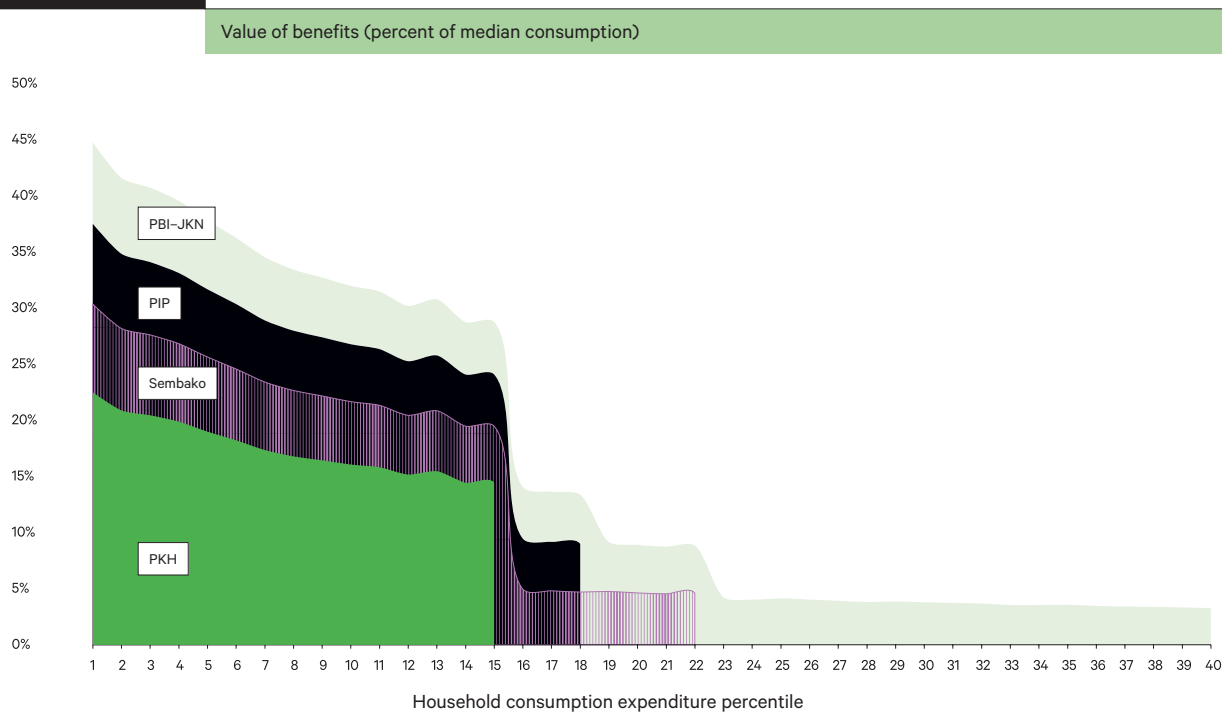
**Poor and vulnerable households without children, however, are less adequately protected.** Poor and vulnerable households without children are only eligible to receive PBI-JKN and/or Sembako/Rastra. These households are not eligible to receive any of the main cash transfer programs (PKH and PIP) and can only potentially receive basic food security through Sembako or Rastra. That said, the health services acquired under PBI-JKN are considered generous overall and a household that receives this program is adequately protected in the dimension of being protected from health expenditure shocks.

**By 2019, cash transfer programs deliver benefits of high value to poor and vulnerable households by design.** This is due to the doubling of PKH's benefit level in 2019. Figure 7.7 depicts de jure adequacy of the benefit of the main households targeted SA programs along a welfare distribution. The depiction is de jure in the sense that the cut-off points along the horizontal axis represent groups that the GoI aims to reach with each program; actual allocations stretch further along the welfare distribution. The adequacy of PKH, and Sembako and PIP can be expressed in terms of the value of the cash transfer or food voucher versus household expenditure on consumption. The adequacy of PBI-JKN (even though it is a fee-waiver program with no direct benefits provided) can be thought of in similar terms. Put simply, the value of the PBI fee waiver can be constructed as the value of the premium paid for the household by the GoI that the household would otherwise have paid for itself.<sup>203</sup>

<sup>201</sup> PKH targets 15 percent of the poorest households, whereas PIP targets children in the poorest 25 percent of households.

<sup>202</sup> In 2018, about 10 percent of Indonesia's population is considered poor and 20 percent is vulnerable. A further 47 percent are aspiring middle class and 23 percent are middle class. If the incidence is recalculated for the bottom 40 percent of the population, 73 and 64 percent of PKH and PIP program benefits accrue to this group.

<sup>203</sup> The average value of PBI-JKN in terms of insurance against health shocks is more difficult to measure but is probably much larger than the value of the fee waiver itself.

**FIGURE 7.7.** The *de jure* value of social assistance benefits for households with children, 2019

Source: World Bank Staff calculations from Susenas 2018

**In addition, major initiatives to improve the delivery systems of SA programs, such as unifying common processes across key programs, have yielded important efficiency gains.** In general, social protection programs share common processes in the delivery chain. This is also the case in Indonesia. Although programs vary greatly, they have a common delivery chain process: *assess potential eligibility* ⇨ *decide on enrolment and benefit packages* ⇨ *implement programs*. Given the common steps involved in the assessment stage, unifying this process can yield important efficiency gains. A case in point is the unification of intake, registration and assessment of needs and conditions.

**In the past decade, the GoI has made an important effort to develop a platform to target poor and vulnerable populations.** The development of the unified database (BDT), in 2011, currently known as the integrated social welfare database (DTKS), was the first major initiative to develop a single database of around 24 million poor and vulnerable households for use by multiple programs. Standardized procedures for targeting and identifying potential ben-

eficiaries were put in place to be adopted by all implementing agencies. An update of the 24 million households contained in the 2011 database was conducted in 2015 and another 2 million households were added into the DTKS via community-led recommendations. The establishment of the DTKS in 2012 yielded direct improvements in the efficiency of the allocation of SA benefits. The allocation of SA benefits is commonly measured through “beneficiary incidence”, which looks at the share of beneficiaries of a certain program by income or consumption class. Between 2010 and 2014, the share of total beneficiaries coming from the poorest 20 percent of households improved for key transfers: PKH (13 percentage points), PIP (2.5 percentage points), and PBI-JKN (2 percentage points). These improvements took place during large coverage expansions for PKH and Jamkesmas (the previous moniker of PBI-JKN), which would usually incur a worsening in beneficiary incidence.

**However, further efforts are needed to ensure full utilization of DTKS.** Although in principle all major SA programs draw beneficiaries from DTKS, PBI-JKN has

had to absorb beneficiaries from a SNG variant of the previous program (*Jaminan Kesehatan Daerah*, or Jamkesda). PIP has made use of DTKS in allocating beneficiaries, but not fully—schools are able to recommend additional students to receive PIP, which may in part explain its lower allocative efficiency vis-à-vis PKH. In addition, likely due in part to further expansions of programs, the share of the poorest households receiving PBI-JKN and PKH has declined. Only 32 percent of total households receiving (centrally-allocated) PBI-JKN in 2018 came from the poorest 20 percent of households, compared with 37 percent in 2015. A total of 44 percent of total beneficiaries receiving PKH were in the poorest 20 percent of the population in 2018, compared with 52 percent in 2015. PIP incidence also deteriorated slightly from 38 to 36 percent between 2014 and 2018.

**Ensuring the existence of a well-functioning social registry poses challenges.** The current poverty targeting database was designed to unify the “access” process that registers and filters potentially eligible beneficiaries for all family-based targeted SA programs. The usefulness of this

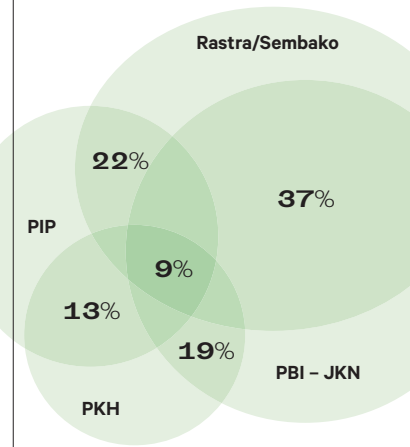
social registry depends on completeness and accuracy of its database, DTKS, which is now updated by local governments. While mechanisms such as the updating exercise via a social registry information system (SIKS NG, the IT system that supports DTKS) (updating mechanism is technically available to all SNGs) organized by the MoSA, the Integrated Referral System (Sistem Layanan Rujukan Terpadu, or SLRT), and while the on-demand application (ODA) have been implemented or piloted, these mechanisms have not yet been able to systematically update DTKS due to their limited scale or sub-optimal implementation. Such mechanisms, operating at the local-government level and managed by the MoSA, are key to ensuring that DTKS is updated frequently enough to address both inclusion and exclusion errors.

Moreover, ensuring the convergence of SA programs, i.e., eligible households receiving multiple programs, remains challenging. Integration of beneficiaries at the household level across programs remains low. Although the poorest 10 percent households are eligible to receive all major SA programs, only 2 percent had access to the four major SA programs in 2014. This share notably tripled to 9 percent in 2018 but remains low nonetheless (Figure 7.8).

Taken together, the array of SA programs provides an adequate benefit level. The value of PIP and PKH taken together accounts for about 27 percent of consumption expenditure for families living below the poverty line. However, currently, about 40 percent of the poorest 10 percent of households with at least one child receive either program, while only 13 percent receive both PIP and PKH, although these households are technically eligible to receive both programs. While a degree of low convergence of SA can be explained by measurement errors in the Susenas survey,<sup>204</sup> the very low share receiving all four programs reflects the need to improve integration and coordination among key programs. While existing policy<sup>205</sup> on the use of DTKS by PKH, Sembako, PBI-JKN and PIP was developed to ensure the same list of potential beneficiaries is used by main SA

FIGURE 7.8.

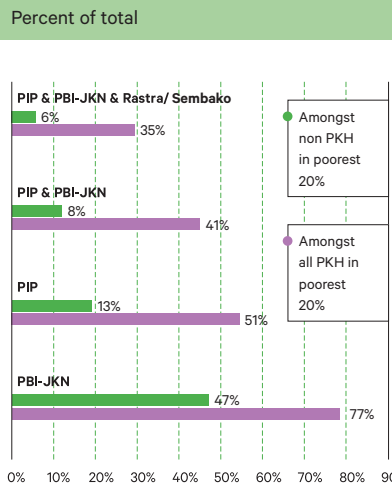
Convergence of social assistance programs is still elusive, 2018



Source: Susenas 2018. The diagram is calculated for the poorest 10 percent of households with at least one child.

FIGURE 7.9.

Convergence outcomes of social assistance for PKH and non-PKH families in the poorest 20 percent of the population, 2018



Source: Susenas 2018

programs, the implementation result is yet to be optimal due to inconsistent implementation by the relevant implementing ministries and incomplete updating practices conducted by SNG offices through the MoSA's updating exercise via a social registry information system (SIKS NG).

Under PKH, convergence outcomes are markedly better and suggest that policy efforts to integrate SA programs under PKH have been more successful. As shown in Figure 7.9, families that receive PKH are more likely to also receive other programs in addition versus a comparable family (a household in the poorest 20 percent with at least one child). Survey evidence shows that, conditional on participation in PKH, receipt of other SA programs is markedly higher. For instance, in 2018, 77 and 51 percent of the poorest 20 percent of households who are PKH recipients received PBI-JKN and PIP, respectively. For comparable families that do not receive PKH, these numbers are much lower, at 47 and 13 percent, respectively.

In delivering SA, the GoI has also made important headway in terms of unifying payment delivery. In 2017, the GoI released the National Financial Inclusion Strategy, which called for achieving greater financial inclusion through a rapid transformation of cash-based SA payment systems into a cash-less system using one single card (*Kartu Keluarga Sejahtera*, or KKS). Using the banking system (replacing the postal system) to deliver payments has yielded cost savings since transfer fees that used to be given to PT Pos were eliminated. Instead, transfer fees are replaced by interest gained from holding the payments for up to 30 days prior to the scheduled delivery of payments to the beneficiaries. This shift has been successful, with about 18 million beneficiaries for PIP programs being paid via a single bank (BNI), while 10 million PKH recipient families and the recipients of Sembako are paid via a collective of state-owned banks (Himbara). However, restricting payments to only Himbara banks has, at least in certain locations, limited the opportunities of other banks, which may be better equipped to serve the program's needs.

**204** Large programs such as Rastra and PBI-JKN have historically appeared to have the same coverage both administratively (from the program side), as well as from survey data; differing only a few percentage points. Programs such as PKH and PIP, which are smaller have larger differences. A key reason for that is that smaller programs are harder to capture using the sampling strategy of Susenas, which is representative at district level, but may survey around 500-600 households on average in a district, at low coverage the chances of capturing the actual coverage of small programs are reduced.

**205** Permennas No. 20/2017.

C

## How Effective Is Public Spending in the Sector?

**T**his section assesses the effectiveness of core SA programs in achieving their intended outcomes, i.e., to reduce poverty and inequality. The impact of PKH and Rastra is well-studied, whereas there is less robust evidence on the impact of PIP, PBI-JKN and the newly-introduced BPNT/Sembako, and no known evidence on the effectiveness of other SA programs.

**Impact evaluation evidence suggests that PKH has a strong positive impact on household consumption and human development outcomes.** PKH's initial positive impacts have continued as the program has matured (see Box 7.2). The recent drop of almost a half a percentage point in the poverty headcount has been attributed in part to the expansion of PKH. The decision to double PKH's benefit level in the 2019 budget was made based on the micro-simulation finding that additional spending in a benefit-level increase would yield a stronger reduction in the poverty rate than expansion in coverage.

**Rastra faced several challenges that limited its effectiveness in ensuring the food security needs of poor and vulnerable households and motivated the transition to Sembako.** The effectiveness of the Rastra program has been well-studied due to its large coverage and historically weak targeting accuracy, which led to lower effectiveness.<sup>206</sup> In theory, the Rastra benefit package was commensurate with the actual food security needs of poor and vulnerable households. Eligible households had the right to purchase 15 kg of rice per month at a price roughly 80 percent below market price. In reality, as previously mentioned, actual purchases as reported by households, however, were less than one-third of the official allocation of 15kg. As a result, the value of the benefit actually received was only about 2 percent of poor households' expenditure.<sup>207</sup> The evidence on Rastra's performance and overall lack of effectiveness motivated the GoI's decision to reform its delivery system by introducing and gradually transitioning to a cash voucher program, Sembako.

**Early survey evidence shows Sembako is more effective than the previous Rastra program.** With Sembako, only tar-

### BOX 7.2.

### The effectiveness of PKH



**P**rogram Keluarga Harapan (PKH), or the Family Hope Program, was launched in 2007 as a pilot. An impact evaluation using a randomized, controlled trial approach was designed to compare two groups of households, which differ only in whether they received a "treatment"—in this case, the PKH program—or not. Two evaluations have been conducted since: (i) a mid-line (2011) evaluation after about three years of exposure to the program; and (ii) an end-line (2013) evaluation<sup>208</sup> after about six years of exposure to the program. The results from both evaluations suggest that, similar to most of CCT programs, PKH would encourage beneficiaries to utilize education and health services, while also providing income support. The evaluation results and potential poverty impact simulations<sup>209</sup> contributed to the GoI's decisions to increase the coverage and benefit level of PKH. Statistics Indonesia (BPS) also attributed the decline of about half a percentage point in the poverty rate of 2017 partially to the expansion of PKH to 6 million beneficiaries. Key findings from the two evaluations on PKH carried out in 2011 (mid-line) and 2013 (end-line) are as below:

1. PKH improves welfare and increases consumption of protein-rich food. The mid-line evaluation showed that PKH beneficiaries experienced a 10 percent increase in average monthly expenditures used mainly to buy high-protein foods and to cover health costs. While the end-line evaluation results did not find significant evidence on overall consumption impact, it did find that children aged 18 to 60 months were 10 to 11 percentage points more likely to have consumed eggs.

PKH has a substantial impact on increased utilization of health and education services. In the end-line survey, it was shown that PKH led to a 13- to 17-percentage-point increase in medical professional assisted delivery. Impacts on immunization were found to comprise a 5-percentage-point increase. Interestingly, at the mid-line evaluation, PKH improved neonatal visits by 7.1 percentage points but it had no significant impact on outpatient visits or increased intake of iron tablets. Contrary to the mid-line results (with increase of almost 10 percentage points), there appeared to be no significant impact of PKH on post-natal visits to health facilities as found in the end-line results.<sup>210</sup> On education, the end-line results show PKH halving the share of children aged 7 to 15 who are not enrolled in school. For junior secondary school, the enrolment among PKH children was increased by about 8 to 9 percentage points.

2. PKH has also shown a major impact on stunting that requires cumulative investments. The end-line results show that stunting among children aged 0 to 60 months in PKH beneficiary families witnessed a decline of about 9 to 11 percentage points, representing a 23- to 27-percent reduction in the probability of being stunted. Severe stunting declined by about 10 percentage points, representing a 56 to 62 percent reduction. Both boys and girls benefited from decreased stunting and severe stunting, although the point estimates are slightly larger in magnitude for boys than for girls.

Source: Authors

<sup>206</sup> World Bank (2012) and (2017) Social Assistance Public Expenditure Review. TNP2K, 2015. Raskin: The challenge of improving program effectiveness. Jakarta: Government of Indonesia.

<sup>207</sup> Furthermore, Rastra rice does not always meet Bulog's own quality standards. Rastra rice is expected to meet a "medium" quality standard (good rice condition; free of pests) and beneficiary households have the right to reject and return below medium quality rice for exchange. However, monitoring throughout 2012, indicated that only 37 percent of villages received medium quality (or above) rice.

<sup>208</sup> Cahyadi, N. et al. (2018) Cumulative Impacts of Conditional Cash Transfer Programs: Experimental Evidence from Indonesia. NBER Working paper series.

<sup>209</sup> Preceding simulations focused on coverage expansion impacts and estimated similar impacts on the poverty headcount. World Bank (2018) Increasing PKH Benefit or expanding PKH Coverage – Poverty forecasting modelling. Unpublished presentation.

<sup>210</sup> The end-line report noted possible explanations as a prevailing belief among mothers that if their delivery went fine, there was no need for post-natal checkups and that some women noted the difficulty in arranging appointments with health care professionals.

geted households identified by KKS ownership and validation of identity using a PIN will be able to purchase 10kg of rice or a quantity of eggs at controlled distribution points called e-Warong. March 2018 Susenas survey evidence suggests that among about 800,000 Sembako beneficiaries purchased an average of 8kg of rice at an e-Warong in both January and February 2018, the early phase of Sembako implementation. Of these beneficiaries, about 500,000 also purchased an average of 13 eggs each month. Certainly, a successful implementation and scale-up of Sembako to reach 10 million families should continue to help maintain the effectiveness of the GoI's flagship food distribution program, while also boosting nutrition.

**Further evidence is needed to establish the effectiveness of PIP.** There is limited information to measure the effectiveness of the PIP program in promoting enrollment and the completion of basic education. Further research should examine drop-out rates for program beneficiaries between SD and SMP levels, and from SMP to the SMA level of schooling, to establish how well PIP is able to facilitate completion of schooling. In terms of program design, several potential issues remain to be addressed, including the low benefit levels to cover the full out-of-pocket cost of schooling and the continuing lack of a facilitation structure leading to no

accompaniment for program beneficiaries, and little information-sharing, as well as scarce pathways for grievance redressal. To address these, a process evaluation and potentially an impact evaluation of PIP could be conducted. Other options to strengthen the program's implementation could include stricter targeting procedures, using only DTKS and monitoring attendance, or schooling completion for PIP beneficiaries.

**PBI-JKN targeting outcomes have worsened and can be improved.** PBI-JKN implementers have focused largely on beneficiary expansion and may not be paying enough attention to implementation strengthening. PBI-JKN targeting outcomes have worsened and PBI-JKN monitoring and evaluation (M&E) systems are not yet able to focus on health service usage and outcomes at the PBI beneficiary level. Local PBI nominations are not very progressive, and these nominations lower the overall allocative efficiency and therewith effectiveness of the overall PBI-JKN program. Going forward, M&E systems should be able to monitor bottlenecks in benefit uptake and access. In addition, much like PIP, grievance redress systems appear to be weak, while existing communication efforts have not been effective in addressing the lack of information to beneficiaries, as well as health service delivery points on the ground.<sup>211</sup>





# Recommendations to Improve *the* Quality of Spending

A

*Policy reforms and adapted program design*

B

*Strengthened delivery systems*

# 7.3

**G**oing forward, SA spending quality can be further improved through continued policy reforms, adapted program designs, and strengthened delivery systems. While Indonesia's SA system has made significant and impressive progress during the past five years, as demonstrated

by the large coverage expansion of several core programs, as well as the implementation of electronic payment reform, additional policy reforms regarding under-covered risks, further adaptation of program design, and continued strengthening of program delivery systems, are needed to improve both the effectiveness and efficiency of SA spending.

A

## *Policy reforms & adapted program design*

**O**verall, the GoI should consider further reallocating spending away from untargeted subsidies toward SA.

While SA spending has been increasing, it remains low as a share of GDP compared with middle-income country and regional peers. To better address risks along the lifecycle and to progressively expand the coverage of social safety net beyond the poor and vulnerable, the GoI should consider ways to increase the allocation of the budget to targeted SA programs. This would be possible through the savings generated from reforming the remaining regressive energy and non-energy subsidies by improving their targeting performance. As displayed by global, as well as Indonesian, evidence,<sup>212</sup> spending on untargeted subsidies is far less efficient than targeted spending on SA programs, and induces overconsumption behavior, which further increases their fiscal cost.<sup>213</sup> The electricity subsidy reform, by limiting the subsidy to 450 volt-ampere (VA) and 900 VA users who are registered as welfare beneficiaries, paved the way for other subsidy programs to follow suit. The reform of 3kg LPG subsidy program for residential consumption should proceed without further delay. Three pilots of different LPG distribution models were implemented in 2019 to test the technology options for beneficiary identity authentication. The GoI will decide which operation model should be adopted in 2020 for the whole program. The use of DTKS, even if partial, would promise major increases in the efficient and pro-poor allocation of government spending on 3kg LPG.

**The GoI can spend additional resources on SA to mitigate neglected risks along the lifecycle, particularly related to the elderly and young children.** Poverty among the elderly (age over 65) is highest among age groups, while pension coverage is extremely low at 10 percent.<sup>214</sup> Without official social insurance or assistance programs in place to support the elderly, this part of the population is at significant risk of becoming poor. Similarly, with only 30 percent of

<sup>212</sup> World Bank (2016) The incidence of fiscal policy in Indonesia. World Bank Jakarta.

<sup>213</sup> Energy subsidies have a negative impact on the environment and lead to higher GHG emissions, weaken the current account through imports of petrol products, and do not provide incentives to energy companies to improve efficiency. Implicit energy subsidies also weaken the balance sheets of state-owned fuel and electricity companies and lead to increased fiscal risks from contingent liabilities.

<sup>214</sup> World Bank (2017). Indonesia Social Assistance Public Expenditure Review.

children in poor households accessing early childhood education (*Pendidikan Usia Dini*, or PAUD), these children are less able to maximize the potential for learning at an early age. The lack of reliable and affordable child-care services also prevents productive women from returning to the job market. Investments via new or existing programs that help poor and vulnerable households cover the risks of poverty in old age (via a social pension) and harness the opportunity of learning from a young age (by subsidizing access to PAUD) will promote further poverty reduction both in the short and longer term.

**Consolidating PIP and PKH and re-designing the “combined” program would improve spending efficiency.** One consolidation proposal<sup>215</sup> is to integrate PIP with PKH’s education component, given that the two programs have very similar objectives of keeping children in schools, and it would be more efficient to integrate the two programs. Indeed, PIP can benefit from PKH’s stronger systems in terms of outreach to the poorest and most vulnerable, M&E, grievance redressal, and family centered facilitation. In addition, PIP can be used to modify PKH’s education conditionality design to achieve more desired results. For example, to increase enrollment and the transition to senior secondary school (SMA) education among the children from the poor and vulnerable families, a “graduation bonus” can be created for those children who enroll in senior secondary school and can be disbursed after successful graduation. Another variation of this award approach can be used to incentivize learning outcomes. For example, if beneficiary children can achieve the top 10 percentile in the national standard exams, a special achievement benefit could be added to their PKH benefit. The Ministry of Education and Culture needs to be involved in the implementation of the modified PKH education component.

**In the longer term, the GoI should foster the integration of SA programs where possible.** In the longer term, the GoI should look to establish a singular framework for SA, with formalized roles and a better-defined purview of each of the executing agencies in health, education, social insurance, planning poverty, and crisis monitoring and response. In addition, the social registry should include stronger links to program-specific beneficiary operations management systems (such as PKH or PIP), the civil registry and tax databases, to name a few. Direct and two-way links to program beneficiary operation management systems would ensure better convergence outcomes at the household level.

B

## Strengthened delivery systems

**The central government should improve coordination with SNGs and encourage them to improve the implementation of SA programs.** While the core SA programs are centrally funded and managed, SNGs have an important role to ensure the effectiveness of these programs. This is due to three reasons:

**1. SNGs are uniquely placed to coordinate between the programs on the demand side and the supply side under their management.** For example, PKH is not going to function well if its beneficiaries cannot access local health, nutrition, and education services, or if these service providers do not cooperate with respect to compliance verification. The supply-side constraint in remote areas cannot be eliminated without significant and persistent efforts by SNGs. **It is critical that SNGs are encouraged to take strong ownership of core SA programs and are at least partially accountable for program implementation performance.**

**2. SNGs were directly involved in Rastra implementation and are responsible for selecting qualified e-Warong operators for Sembako.** While the central budget allocation for PKH covers the expense of human resources and their training, SNGs are expected to cover operational expenses related to transportation, office space and office supplies, and the tool kits used for structured life skills education, called Family Development Sessions. Not all districts allocate adequate local budget to support PKH implementation, which contributes to the variation in program implementation performance across locations. SNGs are directly involved in Rastra/Sembako implementation by distributing subsidized rice at the community level for Rastra or se-

lecting qualified e-Warong operators at the community level for Sembako. **The roles and responsibilities of SNGs in terms of SA program implementation need to be formulated by a government regulation rather than a MoSA regulation.**

**3. SNGs are responsible for updating DTKS via MoSA’s updating exercise via a social registry information system (SIKS NG) and to convey citizens’ demand and grievances via SLRT.** To provide appropriate incentives for SNGs to execute their functions, the central government can consider two instruments, namely minimum service standards (*Standar Pelayanan Minimal*, or SPM) and the DAK transfer from central to SNGs. The newly proposed Social DAK starting in 2020 could supplement SNGs’ own resources devoted for national priority programs, particularly if it is linked with performance or results.

**To be more effective and efficient, the GoI should improve the delivery systems of SA programs and regularly update DTKS.** All programs should adhere to the same common standards in beneficiary intake, registration, payments and grievance redressal systems. Indonesia’s social registry, DTKS, needs to ensure dynamic updating via the SNG updating exercise and the SLRT functionality, and hence serve as a common platform for beneficiary intake and registration. In turn, it needs a standard procedure to safeguard data quality in addition to ensuring that all SNGs are able, both fiscally and technically, to include the newly poor and vulnerable. The coverage of DTKS should be allowed to increase beyond the poorest 40 percent to help better address targeting errors in both directions—excluding families or individuals when they are eligible or including families

<sup>215</sup> TNP2K (2018) *The Future of the Social Protection System in Indonesia: Social Protection for All*.

or individuals when they are not eligible to receive a program. A DTKS with larger coverage would also help SA programs to expand more easily beyond the existing beneficiaries in the time of large-scale natural disasters, including the COVID-19 pandemic emergency.

**M&E of all SA programs, especially PIP and PBI-JKN, needs to be improved to identify implementation gaps.** Leakage to the middle and rich class is highest for PBI-JKN and so PBI-JKN implementers should ensure full use of DTKS and should strengthen M&E practices to study benefit take-up and health-care service utilization specifically for the poor and vulnerable recipients of the fee waiver. With stronger M&E practices, implementers can then address barriers to benefit take-up and the quality of health services received, together with health-service providers and SNGs.

**Despite progress in recent years, the government-to-person (G2P) payment scheme for SA programs can be improved.** Since the issuance of Presidential Regulation No. 63/2017 on Non-Cash Social Assistance Programs, PKH and Sembako have transformed their benefit payment methods. Having a transaction bank account is not sufficient for SA program beneficiaries to be financially included. Both financial literacy and appropriate financial products offered to the poor and vulnerable are equally important in achieving the financial inclusion objective. Furthermore, the current G2P approach limits the participation of many bank and non-bank financial service providers. As a result, some beneficiaries may not have easy access to Himbara banks and the benefits of digital transaction beyond receiving payment have not yet materialized. Going forward, it is essential to develop a shared payments delivery system to achieve greater effectiveness and efficiency. An inte-

grated G2P digital payments system would strengthen the performance of SA programs by moving away from single delivery channels coupled with specific service provider and access points. Furthermore, this integrated G2P platform should eventually empower beneficiaries to choose the service provider based on their preference and provide choice of cash-out/in transactions at any financial service point, irrespective of the service provider used.

**The GoI should also consider adapting core SA programs for a more timely and effective response to natural and health-related disasters.** Recent earthquake and tsunami shocks provide reminders of Indonesia's high-risk exposure to natural disasters. While multiple government agencies provide disaster response assistance to disaster-affected populations, these forms of assistance have been mostly designed and operated separately from core SA programs, and often not disbursed or executed in a timely manner due to the rigid process required for budget reallocation. In the aftermath of disaster shocks, a wide range of households face significant economic losses. Without a systematic and timely response, disaster-affected households face prolonged periods of destitution, and may not fully recover from the loss of their livelihoods. More timely response could be provided via SA programs to disaster victims for meeting their basic needs as well building back their livelihoods better, should SA programs and the relevant delivery systems be adapted. For example, a cash transfer program can be adapted relatively easily after a disaster to: (1) temporarily expand its coverage to include disaster victims that were not recipients before the disaster; and (2) increase its benefit level to compensate for additional needs due to the disaster. The current COVID-19 pandemic

has heightened the advantage of adapting social assistance program for better disaster response. To protect the poor and vulnerable as well as informal sector workers that are negatively affected by the COVID-19 pandemic, the GoI has swiftly introduced multiple temporary social assistance interventions, including leveraging both PKH and Sembako for quick implementation. Within weeks both programs are starting to provide top-up benefits while expanding the coverage to include more recipients. The MoF has developed a Disaster Risk Financing and Insurance Strategy, which aims to establish a dedicated pooling fund to more efficiently manage a budgetary allocation for disasters. Furthermore, the strategy calls for protecting households and the poor through SA programs that are directly linked to the pooling fund for predictable post-disaster assistance. Meanwhile, Bappenas is developing the strategy for adaptive social protection to establish a framework to enable SA programs adapt the design needs to become more flexible. In addition, the GoI needs to ensure that DTKS can be used for swift data collection on the disaster-affected population to undertake needs assessments. Furthermore, the strategy calls for protecting households and the poor through SA programs that are directly linked to the pooling fund for predictable post-disaster assistance. To ensure better disaster response, both SA program design and program delivery systems need to be adapted. For example, to top up the benefit level of existing SA program beneficiaries and temporarily expand programs to cover new beneficiaries, the program design needs to become more flexible. In addition, the GoI needs to ensure that DTKS can be used for swift data collection on the disaster-affected population to undertake needs assessments.

# Nutrition

**205–210**



## Key Messages

- A** Stunting rates in Indonesia are among the highest in the world but, fortunately, stunting interventions are among the most cost-effective investments for human capital.
- B** The GoI launched a new national strategy on stunting in August 2017, StraNas, involving 22 ministries across several sectors: health, water and sanitation, early childhood education, social protection, and food security.
- C** A forthcoming Public Expenditure Review on Nutrition (PER Nutrition) will assess: (i) the adequacy of current public spending on nutrition-related programs; (ii) the allocation of spending across interventions; and (iii) their overall effectiveness

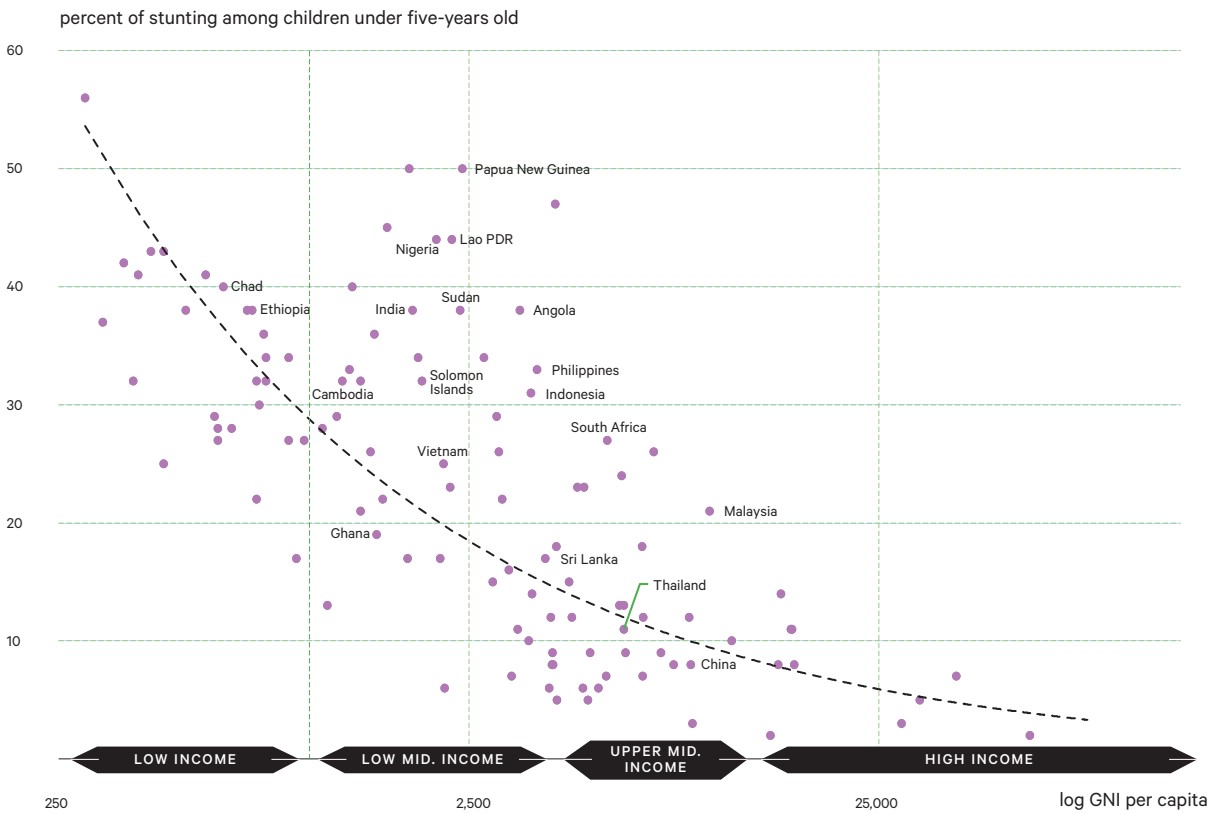
## Preliminary Findings

- A** The Nutrition PER faced considerable difficulty in collecting data, highlighting the critical need to invest in, and standardize, health information and accounting systems.
- B** The health sector is only responsible for 12 percent of nutrition spending. Most nutrition-related expenditures are allocated to nutrition-sensitive interventions delivered by other sectors, highlighting the need to establish processes for information exchange across all the relevant ministries.
- C** Based on preliminary estimates, it would seem that Indonesia's spending on nutrition is more than adequate to cover a full package of nutrition-related interventions.
- D** This suggests that tackling stunting in Indonesia may be less about spending more on nutrition, and more about improving the governance, accountability, and the allocation and use of resources.

### Further key reading

World Bank (2020). "Spending Better to Reduce Stunting in Indonesia" (Nutrition Public Expenditure Review), <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/207941593673280120/spending-better-to-reduce-stunting-in-indonesia-findings-from-a-public-expenditure-review>

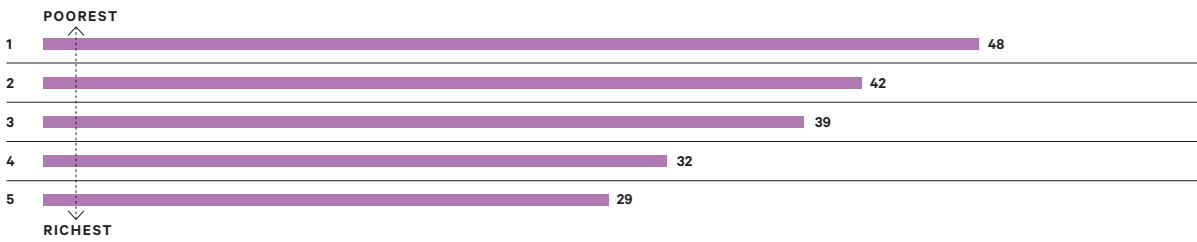
**FIGURE 8.1.** High stunting rates are found in both rich and poor households



Note: Indonesia's stunting figure using Riskesdas 2018  
Source: World Development Indicators, 2019

**FIGURE 8.2.** High stunting rates are found in both rich and poor households

Percent of stunting among children under five by consumption quintile



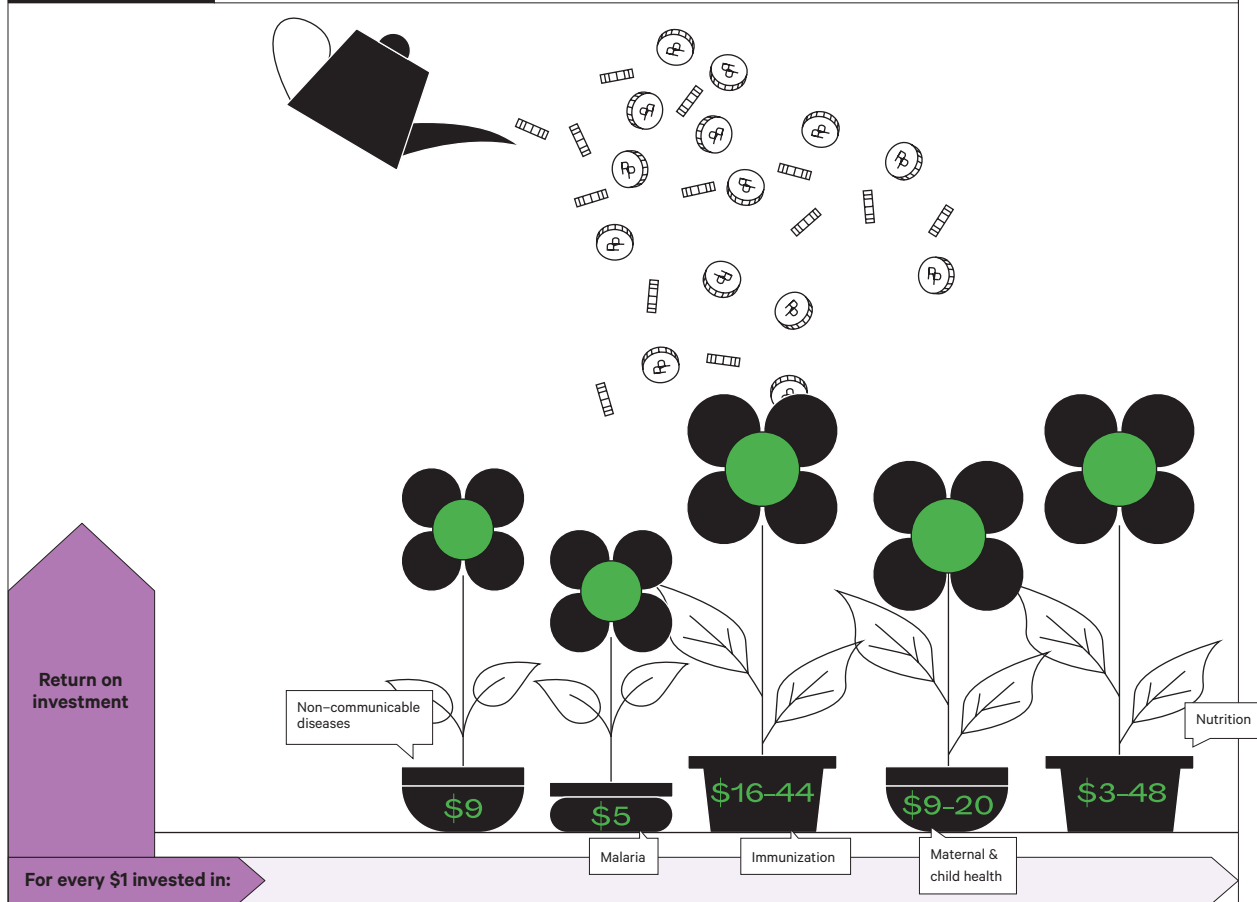
Source: World Bank staff calculations from Riskesdas, 2013

**S**tunting rates in Indonesia are among the highest in the world (see Figure 8.1). Nearly 9 million children under the age of five (or 31 percent) are stunted, that is, they are short for their age. This is higher than most regional and income-level peers, and on a par with many fragile Sub-Saharan African countries such as Sudan, Ethiopia, Chad and Angola. While the prevalence of stunting varies across Indonesia, it cuts across socioeconomic backgrounds, affecting boys and girls, rural and urban households, and the rich and poor alike—although children

from poorer families are 1.7 times more likely to be stunted than those from richer backgrounds (Figure 8.2).

Fortunately, stunting interventions are among the most cost-effective investments for human capital. First, they are highly affordable. A priority package of nutrition interventions<sup>216</sup> costs just US\$2.3 per child per year, while a full package costs US\$7 per child per year. Second, the returns on investment are significant. Every dollar invested on nutrition yields up to US\$48 in return (see Figure 8.2).

<sup>216</sup> Priority\* and full package of nutrition interventions includes: antenatal micronutrient supplementation\*; infant and young child nutrition counseling\*; balanced energy-protein supplementation for pregnant women; intermittent presumptive treatment of malaria in pregnancy in malaria-endemic regions\*; vitamin A supplementation for children\*; prophylactic zinc supplementation for children; public provision of complementary food for children; treatment of severe acute malnutrition among children\*; iron and folic acid supplementation for (i) non-pregnant women 15-19 years old in school only\* and (ii) all non-pregnant women; staple food fortification (i) wheat and maize flour\* and (ii) rice; pro-breastfeeding social policies\*; national breastfeeding promotion campaigns\*.

**FIGURE 8.3.** Investing in nutrition has high economic returns


Source: Authors' rendering of Yamey G, Beyeler N, Wadge H, Jamison D. Investing in Health: The Economic Case. Doha, Qatar: World Innovation Summit for Health, 2016

**I**n a renewed effort to improve its nutrition outcomes, the Government of Indonesia (GoI) launched a new national strategy (StraNas) on stunting in August 2017. Recognizing that tackling stunting in Indonesia will require a complex and multi-sectoral effort spanning all levels of government, the stunting StraNas committed 22 ministries and an estimated US\$3.9 billion per year to converge priority interventions across several sectors: health, water and sanitation, early childhood education, social protection, and food security. To assess the success of this effort, it is essential to monitor and evaluate nutrition outcomes and expenditures. The World Bank thus initiated a Public Expenditure Review (PER) on Nutrition to assess: (i) the level of current public spending on nutrition-related programs; (ii) the allocation of spending across interventions; and (iii) their overall effectiveness. While an in-depth report is forthcoming, preliminary findings are listed below:

**1. The GoI cannot assess what it cannot measure. The PER on Nutrition has faced several difficulties in collecting data.** First, nutrition-related activities are scattered across several ministries and agencies.<sup>217</sup> Between 2015 and 2018, an average of 92 percent of all stunting-related activities were captured by three sectors: social protection (45 percent); water and sanitation (35 percent); and health (12 percent). Second, expenditure and outcome data at the district level, where more than half of nutrition expenditures takes place, have been difficult to collect. Reporting protocols, budget formats, and information systems are not standardized across all 514 districts. This not only makes aggregation at the central level a monumental undertaking, but also limits the generalizability of any findings. *This highlights the critical need to: (i) invest and standardize health information and accounting systems; and (ii) establish processes for information exchange across the relevant ministries, as the MoH is responsible for just one-eighth of all nutrition-related expenditures.*

**2. While the central government's nutrition-related expenditure is likely underestimated, preliminary estimates from a few districts suggest that overall government spending on nutrition may be adequate, and the issue is more about efficiency in the allocation and use of resources.** Central government spending on stunting interventions amounted to IDR 73,684 per capita (US\$5.5) in 2017 and was expected to increase to IDR 78,090 (US\$5.8) per capita in 2018. However, these estimates do not include subnational expenditures, where the bulk of nutrition-related spending occurs. In the six districts where subnational data were collected as part of the PER on Nutrition exercise, local government stunting-related expenditures averaged IDR 647,378 per capita (US\$48), ranging from IDR 124,532 (US\$9) to IDR 1,601,442 per capita (US\$120). *Based on these estimates, it seems that Indonesia's spending on nutrition is adequate to cover a full package of nutrition interventions. However, it is unclear how representative these six districts are of the rest of Indonesia*

<sup>217</sup> The Ministries of Health; Social Affairs; Education; Agriculture; Public Works and Housing; Fisheries; and the Family Planning and Food and Drug Agencies.

*and there are likely wide variations in local government nutrition spending. Overall, the findings suggest that tackling stunting in Indonesia may be less about spending more on nutrition, and more about the allocation and use of resources.*

**3. Most nutrition-related expenditures are allocated to nutrition-sensitive interventions.** The GoI's approach comprises nutrition-specific and nutrition-sensitive interventions. Nutrition-specific interventions address the immediate causes of undernutrition (e.g., inadequate dietary intake and disease or poor health status), while nutrition-sensitive approaches address the underlying determinants of undernutrition (e.g., food insecurity, inadequate care and feeding practices, unhealthy living environments, poor health services). While most nutrition-specific interventions are long-standing, highly cost-effective nutrition interventions, there is significantly less information on the cost-effectiveness of nutrition-sensitive interventions. This is mainly because they address multiple objectives other than nutrition, such as food security, income generation and women's empowerment, and are hence difficult to capture in a single measure. Over the period 2015-18, nutrition-sensitive expenses made up 90 percent of total expenditures on stunting. Of this, the largest share of expenses went to: (i) *Program Keluarga Harapan* (PKH)—a conditional cash transfer program (17 percent); and (ii) *Beras Sejahtera* (Rastra/Sembako)—a subsidized rice program that is gradually being replaced by an e-voucher that enables families to purchase subsidized eggs and rice (29 percent).

**4. At the central level resources could be better targeted.** In 2018, nearly IDR 930 billion was spent on supplementary foods<sup>218</sup>—the second-highest share of nutrition-specific expenditure. The MoH procures the program's goods and distributes them to

frontline primary-care providers (i.e., Puskesmas) via the District Health Office warehouse. The program targets undernourished (weight/height) children aged 6-59 months, underweight primary school children, and pregnant women at risk of chronic energy deficiency.<sup>219</sup> However, the 2018 National Basic Health Survey (Riskesdas) showed that the supplementary feeding was not well targeted, as only 10 percent of the program beneficiaries were malnourished children and 41 percent of beneficiaries were normal children. The study also found that only about 25 percent of pregnant women at risk of energy deficiency received supplementary food. *This highlights the need to improve targeting mechanisms and provide clearer intervention guidance and regular re-training to frontline health workers so that they can properly identify at-risk households and reinforce the quality of service delivery.*

**5. Although community health centers (Puskesmas) are the backbone of the Indonesia public health system, many of the nutrition-related interventions are delivered at health service posts (Posyandu) at the community level.** Posyandu are run by a cadre (*kader*) of health volunteers recruited from the community and trained in basic disease prevention and primary care. At least five ministries and over 20 laws govern the management and operation of Posyandu. The MoH is responsible for providing guidelines and Standard Operating Procedures (SOPs) for health activities, and providing support for basic inputs such anthropometric tools, iron folic acid supplements, vitamin A and vaccines via the District Health Office. Midwives from nearby Puskesmas are meant to provide technical support and supervision. The Ministry of Religious Affairs, the Ministry of Home Affairs, the Ministry of Villages and the National Family Planning Coordination Board, as well as subnational governments (SNGs), support Posyandu functions by managing kader and ensuring

sufficient operational funds for Posyandu activities.

**However, the quality of nutrition-related service delivery needs to be improved.** In 2016, a comprehensive and nationally-representative survey of the Puskesmas and Posyandu service delivery system was conducted—the Quantitative Service Delivery Survey. The survey found a shortage of equipment, training and adequate supervision at Posyandu. While most had traditional hanging scales, only 59 percent had infant scales, half of which were properly calibrated. Length boards and measurement tapes were available at 30 and 67 percent of Posyandu, respectively. The survey found that, while most Posyandu opened every month and held an average of one session per month (85 percent), less than half were staffed by the required minimum of five kader (49 percent) and these volunteers worked less than five hours per month. Only 35 percent of kader reported conducting any kind of home visits; for those that did, they saw between one to five households in the past month for less than 10 minutes per household. On one hand, kader cited insufficient funds to do more outreach—typically receiving less than IDR 50,000 (US\$3.7) per village meeting, which is also meant to cover travel expenses. On the other hand, they reported difficulties in getting caregivers to understand and gain support for the message being delivered. This may be partly due to the lack of training and supervision received. Only a limited number of staffs in Puskesmas have received training in nutrition and are unable to provide adequate supervision at the community level. And just one in 10 kader received any training before starting work at their local Posyandu. Poor implementation of nutrition-related interventions directly impacts key nutrition-specific indicators (Table 8.1). *Improving quality will require a greater focus on developing SOPs and securing resources for more communication materials, training, and supervision of kader.*

<sup>218</sup> There is an ongoing debate about investing in food supplementation versus other more cost-effective interventions.

<sup>219</sup> Chronic Energy Deficiency showed by upper arm circumference (LLL) measurement smaller than 23.5 cm.



**FIGURE 8.4.**

**Most nutrition-related expenditures can be considered 'nutrition-sensitive' interventions that are not under the purview of MoH**

Unit: Share of total nutrition expenditure, 2018 (percent)

**Specific**

Exclusive breastfeeding promotion	0.0%
HIV for pregnant mother	0.0%
Immunization	10.0%
Calcium and Iodium	0.0%
Deworming	0.4%
Integrate Management Childhood Illnesses (MTBS)	0.0%
Malaria	0.6%
Malnourish management	0.0%
Infant Young Child Feeding (PMBA)	0.0%
Supplemetary feeding (PMT)	4.3%
Growth monitoring	0.2%
Antenatal care	0.2%
Diarrhea treatment	0.0%
Iron Folic Acid	0.0%
Vitamin A	0.0%

**Sensitive**

Access to clean water	18.7%
Access to sanitation	13.0%
Access to hygiene facilities	0.0%
Access to materials to pen animals	0.0%
Access to family planning services	0.0%
Delivery of JKN	1.2%
Delivery of Jampersal	0.0%
Provision of parent counselling	0.1%
PIS melalui Pendekatan Keluarga (PIS-PK)	0.0%
Promosi kesehatan masyarakat	0.0%
Provision of universal ECED services	2.3%
Provision of youth sexual and reproductive counselling	0.0%
PKH dan Bantuan pangan non-tunai Total	24.5%
Rastra/BPNT	19.4%
Increase nutritious food security	4.9%
Pendidikan gizi masyarakat	0.0%

**TABLE 8.1.**

**Key nutrition-specific service and behavior indicators**

Priority service packages / Intervention indicators	Riskesdas 2013	Riskesdas 2018
<b>Maternal and child health indicators:</b>		
Antenatal Care visit K4 (at least four)	70.0%	74.1%
Took 90+ Iron Folic Acid tablets during pregnancy	32.7%	38.1%
Supplementary feeding for pregnant women	14.7%*	25.2%
Children weighed at least 8x at in past 12 months	44.6*	54.6%
Children (6-59 months) received complete Vitamin A supplements in past 12 months	n.a	53.5%
Complete immunization (up to one year)	59.2%	57.9%
Children (12-59 months) received deworming tablets in past 12 months	n.a	26%**
<b>Nutrition, hygiene and stimulation counseling</b>		
Early initiation of breastfeeding	34.5%	58.2%
Exclusive breastfeeding	41.5%	37.3%
% infants (6-23 months) fed diverse diet (>4 types of food from 7 food groups in past 24 hours)	n.a	46.6%
Supplementary feeding for children 6-59 months	28.8%*	41%

Source: Riskesdas, except those marked with \*(Sirkesnas, 2016) and \*\* (IDHS, 2012)

# Part 03

# Infrastructure



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- ① National Roads
- ② Housing
- ③ Water Resources Management
- ④ Water Supply & Sanitation



# National Roads

9.1

Context

9.2

Assessing the Quality of Spending

9.3

Recommendations to Improve the Quality of Spending

**213–228**



## Key Messages

- A** National roads and expressways (i.e., roads managed by the central government) are strategically important to Indonesia's productivity and competitiveness, carrying 40 percent of all traffic.
- B** Although public spending on national roads has increased over the past decade, growth in the national road network has not kept pace with growing demand. Nearly two-thirds of vehicle-km travelled on national roads is under slow or congested flow conditions.
- C** The increase in public spending has mostly financed the use of more expensive treatments, leading to higher road development and preservation costs. However, the quality of national roads has not improved in a meaningful way if measured by international standards.
- D** Poor data collection and management systems have led to fragmented and ineffective program prioritization. Moreover, the highly decentralized nature of the Directorate General of Highways (DGH) has hampered the quality and speed of implementation of national road projects.
- E** The Expressway Development Program (EDP) is on track, but the Gol relies heavily on state-owned enterprises (SOEs) to execute new projects. This model risks creating contingent liabilities and crowding out of the private sector.

## Summary of Recommendations

*Some improvements have recently taken place: the share of work with large contract sizes has increased; recently-launched legislation is expected to encourage the implementation of performance-based contracts; and Balai/regional offices are starting to use more modern expenditure planning tools. The remaining agenda of reforms includes:*

- A** Focus on efficiency and effectiveness rather than quantity:
- Redefine strategic transport indicators to include efficiency and road safety indicators;
  - Revisit the current condition rating and establish new, internationally-aligned roughness thresholds, as well as strengthening project design/supervision, quality control and compliance with vehicle load capacity restrictions; and
  - Monitor expenses more closely to ensure the higher costs of road treatments and lifecycle costs are justified.
- B** Develop longer-term strategies to address the backlog in road network capacity, such as by refocusing the current short-term widening program on longer-term objectives (e.g., higher geometric standards, safer infrastructure) and by developing a long-term (about 50-year) funding strategy for expressways to account for the anticipated need of greater public investment.
- C** Increase the pool of funding for national roads and expressways, including by leveraging private sector investment; however, when insufficient fiscal resources are available, it is recommended that the Gol prioritizes asset preservation over new investment.
- D** Address institutional challenges to implementing reforms, specifically by revisiting the structure of the DGH to improve the concentration of technical skills and better focus the responsibilities of staff on asset management.

### Further key reading

Infrastructure Sector Assessment Program (World Bank, publication forthcoming), Chapter 3 "Transport".

Road Sector Public Expenditure Review (World Bank, 2012). <https://www.worldbank.org/en/news/feature/2013/02/12/investing-in-indonesia-roads-improving-efficiency-and-closing-the-financing-gap-road-sector-public-expenditure-review-2012>

# 9.1

## Context

**I**ndonesia's road infrastructure is critical to its economic growth, competitiveness and productivity. In 2017, the total length of the classified road network in Indonesia was reported to be 532,837.9 km, the bulk of which is managed at the district (80.5 percent) and the provincial levels (10.5 percent). Only 60 percent of these subnational roads are paved, and a significant share are not deemed to be in good condition (Table 9.1). Roads managed by the central government—national roads and expressways—are generally in better condition, with over 90 percent of them being paved and in stable condition. While all segments of the road network deserve attention, this chapter focuses on the efficiency and effectiveness of public spending on national roads and expressways, given their extensive utilization and strategic importance. Although these roads only account for 9 percent of the total network, they carry nearly 40 percent of the traffic.

**Over the past decade, demand for road transport in Indonesia has outpaced economic growth.** Between 2012 and 2017, national road transport demand grew by 8.7 percent per year to 134.9 billion vehicle-km per year (Figure 9.1). This outpaced average GDP growth of 5.3 percent per year during the period. As the Indonesian economy and the emerging middle class continue to

expand, the trend of increasing road transport is expected to continue. In addition, the current level of motorization measured as motor vehicles per 1,000 people (excluding motorcycles) is still relatively low in Indonesia (87) compared with neighboring countries such as Thailand (206) or Malaysia (361).<sup>220</sup>

**The national road network has not kept pace with growing demand, leading to a backlog of road network capacity.** Although the length of the national road network has been extended by 3.7 percent annually over recent years (Figure 9.1), this is mostly due to the reclassification of existing roads, rather than the construction of new roads. In 2014, only 3 percent of additional national roads had been newly built, while 86 percent came from the reclassification of provincial roads. As a result, the current backlog of network capacity is estimated at about 17,000 lane-km of road space.<sup>221</sup> It is estimated that 4,000-7,000 lane-km needs to be added annually to cater for the above-mentioned increase in traffic demand.

**Poor connectivity and high transport costs have negatively affected Indonesia's productivity and competitiveness.** As Figure 9.2 indicates, Indonesia lags regional peers on international indices of transport infrastructure and logistics performance. Indonesia is ranked 75 out of 140 countries in terms of the quality of roads on the 2018 Global Competitiveness Index, behind Malaysia (20), China (42), India (51) and Thailand (55). Indonesia ranks 46 out of 163 countries on the World Bank's Logistics Performance Index (LPI) in 2018, behind the same set of countries and even Vietnam (39). About 16 percent of firms identify transport as a major constraint, 1.0 percentage point higher than the regional average.<sup>222</sup>

**The GoI has outlined ambitious targets to improve national roads and expressways.** These include accelerating the construction of a Multimodal Transport System and a National Logistics System that integrate not only the main economic corridors, but also newly growing areas. To achieve these objectives, the Directorate General of Highways (DGH), part of the Ministry of Public Works and Housing (MoPWH) (see Box 9.1), envisages constructing 4,185 km of national roads and expanding the toll-road network by 30.4 percent over the period 2014-19. The DGH also aims to decrease the travel time on main corridors and halve the number of road traffic accidents between 2010 and 2019.<sup>223</sup> As of 2018, the GoI had nearly achieved most of its output targets, but remained far from its targets for better outcomes in the sector (Table 9.2).

**Tackling inefficiencies in public spending on national roads and expressways could help the GoI to meet these targets, including by attracting more private investment in the sector.** Reducing the backlog and keeping up with demand for national road transport will require improving the quality of spending and possibly increasing the overall investment in the sector. Since it is not possible for public resources to finance all the necessary investments, it is critical to leverage more private investment. The subsequent sections discuss how the quality of public spending on national roads and expressways can be improved to achieve this objective.

**TABLE 9.1.** Most roads are managed by SNGs, but national roads carry 40 percent of traffic

Administrative status	Length (km)	Share of total by length (percent)	Percent of roads paved	Good & fair condition (percent of all roads in category)	Bad & poor condition (percent of all roads in category)
National	47,017.3	8.8	96	92	8
Provincial	55,841.3	10.5	79	68	32
District	428,786.3	80.5	60	57	43
Expressways*	1,475.0	0.2	100	100	0
Total/average	533,119.9	100.0	65	62	38

\*Expressways refer to toll roads that are also managed by the central government  
Source: Directorate General of Highways (DGH) and Ministry of Public Works and Housing (MoPWH).

<sup>220</sup> Footnote: World Road Statistics, 2017. Data refer to 2015. The motorization level including motorcycles is much higher at 495 vehicles per 1,000 people.

<sup>221</sup> See Annex for more details on how these numbers were derived.

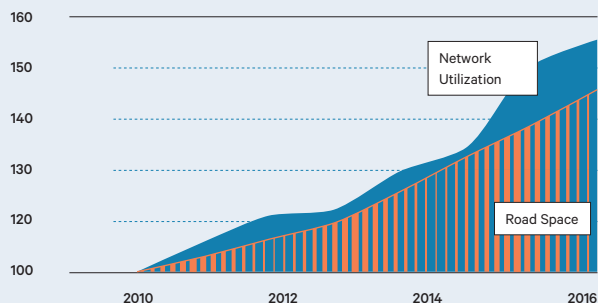
<sup>222</sup> World Business Environment Survey (WBES) 2015.

<sup>223</sup> This safety target was envisaged in the Ministry of Transport Renstra 2015-2019.

**FIGURE 9.1.**

**Road transport demand has outstripped network capacity, creating a backlog...**

Indices of road space and network utilization (2010=100)

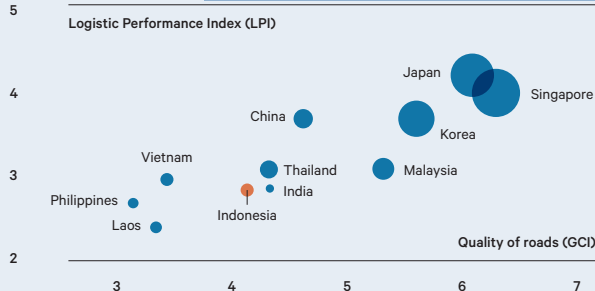


Source: World Bank staff calculations from DGH Annual report (LAKIP), 2009-17, and *Pagu Anggaran TA* and DGH IRMS database.

**FIGURE 9.2.**

**...that has led Indonesia to fall behind on indices of competitiveness**

LPI (infrastructure) vs. GCI (road infrastructure quality) in 2018 and GDP per capita (2017)



Source: World Economic Forum Global Competitiveness Report and the World Bank's Logistics Performance Index.

Note: Bubble's size is proportional to GDP per capita.

**TABLE 9.2.**

**The GoI is close to achieving most of its targets for outputs, but not for outcomes**

		Baseline (2014)	Achieved (2018)	Target (2019)
Outputs	National roads (km)	47,017.3	50,404.0	51,202.3
	Expressways/toll roads (km)	813	1,193	1,060
	Preserving/maintaining existing roads (km)	60	57	43
Outcomes	Connectivity/travel time on main corridors (hour/100 km)	2.7	2.6 <sup>224</sup>	2.2
	Road in stable condition (percent)	94.0	91.9	98.0

Source: DGH Strategic Plan (Renstra) and LAKIPs 2015-18.

**BOX 9.1.**

**Who manages national roads and expressways?**

The MoPWH is responsible for the development and management of national roads and expressways. National roads are under the Directorate General of Highways (DGH, or Bina Marga), while expressways are under the Indonesia Toll Road Regulatory Authority (BPJT).<sup>225</sup> The DGH comprises five directorates, 18 Balai offices, and an additional office to support bridges and tunnels (BJKT). BPJT is responsible for implementing the Expressway Development Program (EDP)—recommending tariffs, conducting toll-road investments under PPP schemes, and monitoring the construction and operation of toll roads (Figure 9.3). While

BPJT has some budget for its daily activities, it does not manage the budget related to project development and operations.

Organization of the DGH is highly decentralized, with only 10 percent of employees located centrally and the remaining 90 percent distributed among the Balai offices. The 2015 reorganization of the DGH structured the central office around output sub-programs, instead of business processes, and delegated primary responsibility for program preparation and project delivery to the local Balai offices. Such offices are relatively autonomous, reporting directly to the Directorate General. They are responsible for project identification, design and implemen-

tation. Responsibility for budget execution is assigned through a parallel structure of Satker (work units) and PPK appointed by the minister. Technical policies and coordination for each sub-program are directed by the central “competency” directorate.

In early 2019, the GoI created the new Directorate General of Infrastructure Financing (DGIF) under the MoPWH. The DGIF will be responsible for securing adequate and optimum financing arrangements for all roads being/going to be developed as PPPs, either as part of the EDP or the national road network.

Source: Authors based on various Presidential and Ministerial Regulations and LAKIP 2017 (DGH).

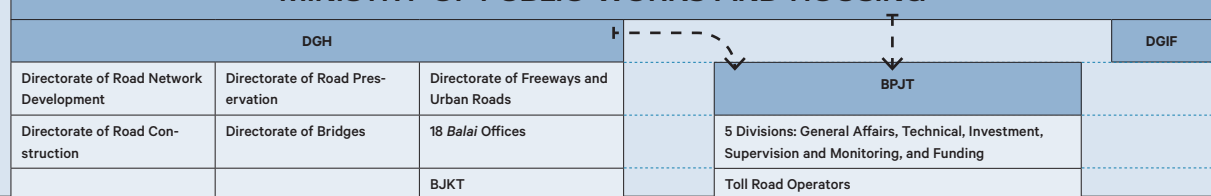
<sup>224</sup> This value refers to 2017. In the reviewed Renstra, issued in August 2018, connectivity is no longer measured as the travel time on main corridors, but as the percentage of connected nodes due to road development and preservation activities (89.7 percent in 2018).

<sup>225</sup> The DGH's functions and organization are regulated by Presidential Regulation No. 15/2015, and Ministerial Regulations No.15/PRT/M/2015 and No.34/PRT/M/2015. BPJT was established by Ministerial Regulation No.29/5/PRT/M/2005 and amended by MPWH Regulation No.15/2014.

**FIGURE 9.3.**

**Institutional arrangements for the national road and expressway subsectors in Indonesia**

## MINISTRY OF PUBLIC WORKS AND HOUSING



# 9.2

A

## Overall Trends: Is Spending Adequate?

The roads sector in Indonesia has suffered from years of underinvestment. From 1996 to 2017, total public and private investment in all types of roads<sup>226</sup> averaged 1.1 percent of GDP (Figure 9.4). SNGs have historically accounted for the bulk of total spending since decentralization (about 60 percent), followed by the central government (30 percent), state-owned enterprises (SOEs), and the private sector.

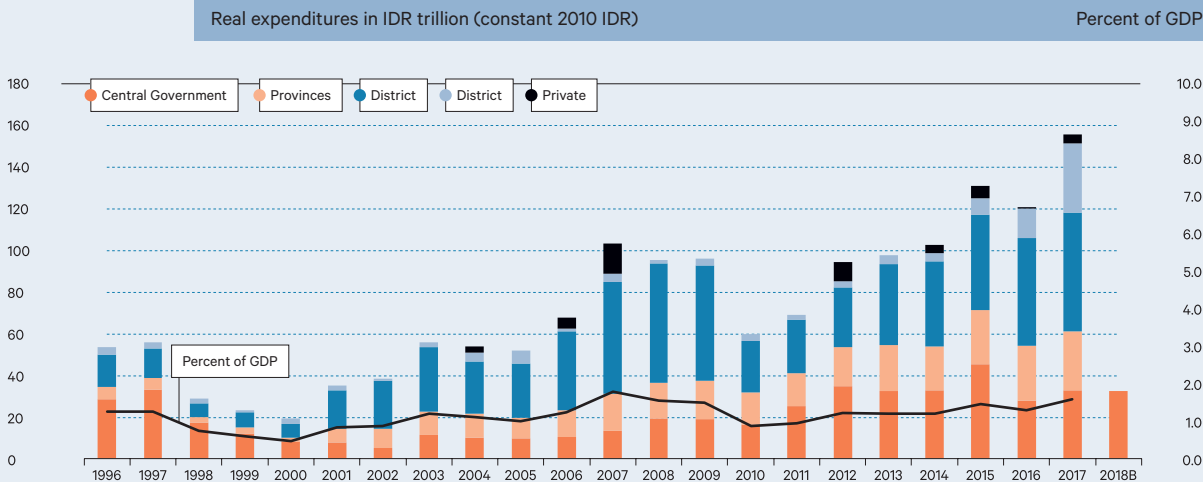
However, central government spending on national roads and expressways has risen substantially over the past decade. Central government spending on national roads fell after the Asian financial crisis and remained low until the mid-2000s, but it increased 8.4 percent per year in nominal terms since 2007 to IDR 44.8 trillion in 2017.<sup>227</sup> In recent years, spending on preservation<sup>228</sup> has received greater attention

# Assessing the Quality of Spending

- A Overall Trends: Is Spending Adequate?
- B How Efficient Is Public Spending in the Sector?
- C How Effective Is Public Spending in the Sector?

FIGURE 9.4.

Total investment in roads has been low as a share of GDP, but central government spending has increased over the past decade



Note: 2018 refers to budget allocation from the central government; other data are not available. Subnational data for 2015-17 should be interpreted with caution: data for 2015 and 2016 are estimates of the total budget for infrastructure at the subnational level, (footnote 229) whereas data for 2017 are extrapolated using 2013-16 compound annual average growth. Source: Ministry of Finance (MoF) for central and subnational governments, annual reports for SOEs, World Bank PPI database for private investment; World Bank and PROSPERA staff calculations.

226 Refers to all roads since there is no detailed breakdown by type of road network for subnational, private and SOE investment.

227 Last year of available audited, actual spending data. In 2018, the central government budgeted IDR 46.8 trillion for national roads (IDR 32.2 trillion in real terms).

228 Road preservation refers to routine and periodic maintenance, minor and major rehabilitation and reconstruction works.

229 Specifically, it is assumed that spending on roads is equivalent to 74 and 50 percent of total province and district infrastructure spending, respectively. This is based on a sample of 10 SNGs used for case studies in the World Bank Road Sector Public Expenditure Review (2012).



to sustain more extensive road and bridge networks (Figure 9.5). Spending on preservation increased from 37 percent in 2015 to 49 percent of total expenditure on national roads in 2018. Meanwhile, spending on the development of roads,<sup>230</sup> bridges, strategic roads and expressways fell from levels of 57 percent between 2005 and 2015 to 34 percent in 2018.

Despite increases in spending, central government spending on national roads and expressways is still slightly below the needed amount to meet demand growth and GoI targets.<sup>231</sup> The central government budgeted IDR 45.8 trillion for national roads in 2018 and IDR 44.1 trillion in 2019. However, annual public investment needs for the national road sector are estimated at IDR 47.5-51 trillion.<sup>232</sup> This encompasses IDR 19-20 trillion for road development, IDR 16.5-19 trillion for asset preservation, and IDR 12 trillion for the expressway program (excluding IDR 20 trillion of private sector and SOE investment). Hence, the budget allocation for national<sup>233</sup> roads is still about IDR 2-6 trillion below the needed public investment level.

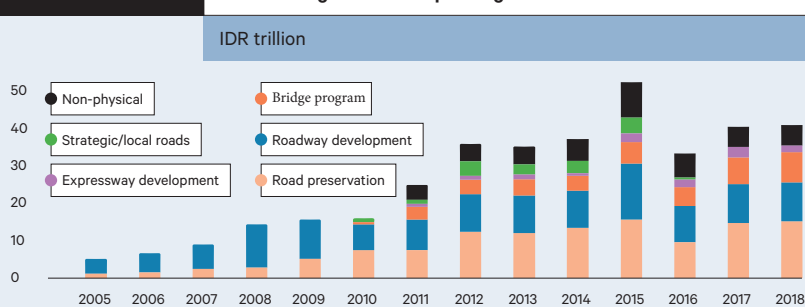
Development of the next phase of the Expressway Development Program (EDP) will require substantial funding from the central government. Since the Asian financial crisis, the toll-road network has increased by only 3 percent per year. As a result, Indonesia has fewer kilometers of expressways per million inhabitants than most of its neighbors (Table 9.3). The EDP, developed by BPJT, aims to build around 6,486 km of expressways by 2034. More than one-third of this target, or 2,349 km of toll roads, is either already in operation or under construction. As for the remainder, BPJT intends to build km in the upcoming National Medium-Term Development Plan (2020-2024), and subsequently the balance in two phases (2,370 km from 2025-29 and 133 km from 2030-34). In contrast to the first 2,349 km tranche of roads, which was mostly financed through user fees, most of these upcoming expressway projects will require some form of government support (in the form of Viability Gap Financing, guarantees, annuities or availability-based payment methods). This is because they are expected to carry less traffic and thus be less profitable for toll-road concessionaires.

Annual public investment needs for the national road sector are estimated at IDR 47.5-51 trillion

Annual public investment needs for the national road sector are estimated at IDR 47.5-51 trillion

FIGURE 9.5.

In recent years, road preservation has received a greater portion of the central government spending



Note: Non-physical outputs include data collection; technical planning and programming; RPJMN and Renstra preparation; project M&E; land acquisition support; preparation and revision of environmental and social documentation; regional road support; quality testing; capacity building programs; maintaining e-monitoring systems; and other office services.

Source: MoF and DGH. Based on audited expenditures except for 2018, which refers to planned budget expenditures.

TABLE 9.3.

Indonesia has lower expressway density than most of its neighbors

	Indonesia	Malaysia	China	India	Vietnam	Philippines
Length (km)	1,745	2,021	136,500	24,000	2,150	286
Density (km/million inhabitants)	6.75	63.75	98.72	18.33	23.22	2.74

Source: Indonesia – BPJT, 2018; Malaysia – ASEAN Statistics, 2016; China – Transport Transformation and Innovation Knowledge Platform (TransFORM), 2017; India and Vietnam – World Bank Country Offices, 2017; Philippines – Department of Public Works and Highways (DPWH), 2018; Population: World Economic Forum (2017-18).



<sup>230</sup> Road/bridge development refers to construction of new assets and widening works.

<sup>231</sup> As stated in the 2025 RPJPN (Rencana Pembangunan Jangka Panjang Nasional) and the draft 2034 Long-Term Master Plan of the National Road Network.

<sup>232</sup> See annex for description of how these costs were calculated.

<sup>233</sup> According to the draft 2034 Long-Term Master Plan of the National Road Network.

B

# How Efficient Is Public Spending in the Sector?

**D**espite increased central government spending on national roads, physical output has not increased commensurately with expenditure. Road development has stayed relatively constant at around 2,000 to 3,000 km per year. Effective preservation<sup>234</sup> output surged from about 1,400 km in 2010 to over 4,000 km in 2012 but has also mostly declined since then (Figure 9.6). Instead, higher spending appears to have financed an increase in road development and preservation costs, which rose by 40 percent in 2015 (Figure 9.7). This is partly due to more expensive treatments due to the use of higher design standards<sup>235</sup> and concrete pavements on trunk corridors. While such expenses may be justified in reducing long-term lifecycle costs, there may be other factors driving cost increases that warrant further examination.

Even where road development has occurred, the network has been unevenly distributed throughout the country's main islands. Java and Bali are the most accessible islands, with 0.053 km of roads for every kilometer squared (km<sup>2</sup>) of land, but they also have the greatest demand for arterial capacity (Figure 9.8).<sup>236</sup> The latter can be seen in the fact that they have the lowest national road-to-population and road-to-gross regional domestic product (GRDP) ratios: 0.005 km per 10,000 habitants and 0.001 km per IDR billion, respectively. Meanwhile, eastern Indonesia (the islands of Papua, Maluku, East and West Nusa Tenggara) is less accessible, with only 0.017 km of roads per km<sup>2</sup> of land, but density is high relative to demand and population (0.023 km per IDR billion and 0.058 km per 10,000 people, respectively).

The GoI has mostly relied on SOEs to expedite implementation of the EDP, but this may not be the most efficient strategy. While there has been some progress in recent years using PPP schemes for expressway development, the SOE PT Jasa Marga continues as the dominant player, operating more than half of all toll roads. While relying on SOEs has contributed to BPJT's ability

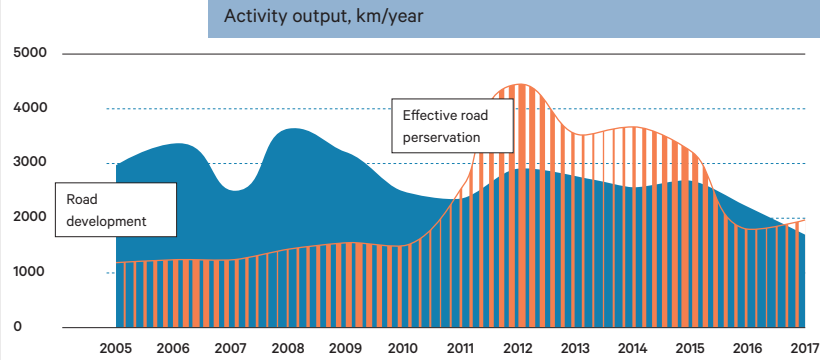
<sup>234</sup> Effective preservation includes the treatments which are applied to road sections for which the DGH defines an "effective length". These include all the preservation treatments except routine maintenance.

<sup>235</sup> In 2012, the DGH upgraded the design standard, doubling the rehabilitation life from 5 to 10 years and pavement life to 20 years. This implies a rehabilitation and reconstruction coverage of 10 percent annually to keep pace with deterioration.

<sup>236</sup> The national road network comprises 38.6 percent of arterial roads and 61.4 percent of collector roads. While arterial roads serve long-distance transport movements with high average speeds and restricted side access, collector roads serve collection/distribution movements over medium distances with intermediate speeds and with some restriction on side access.

FIGURE 9.6.

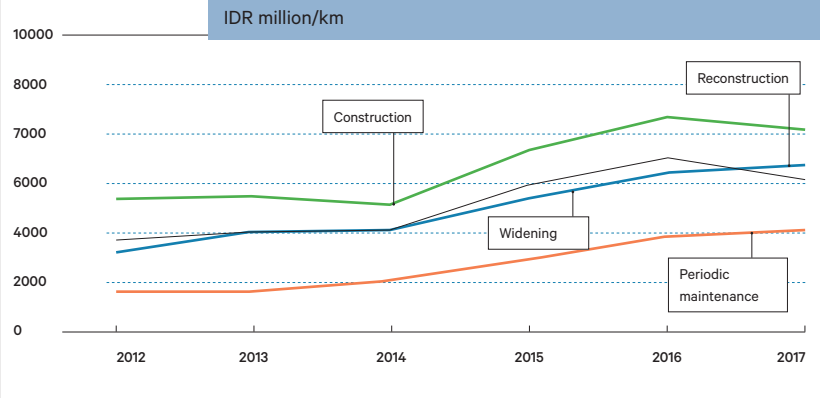
Real increases in spending have not financed increases in physical road output...



Source: DGH, World Bank staff calculations.

FIGURE 9.7.

...but instead financed more expensive treatments

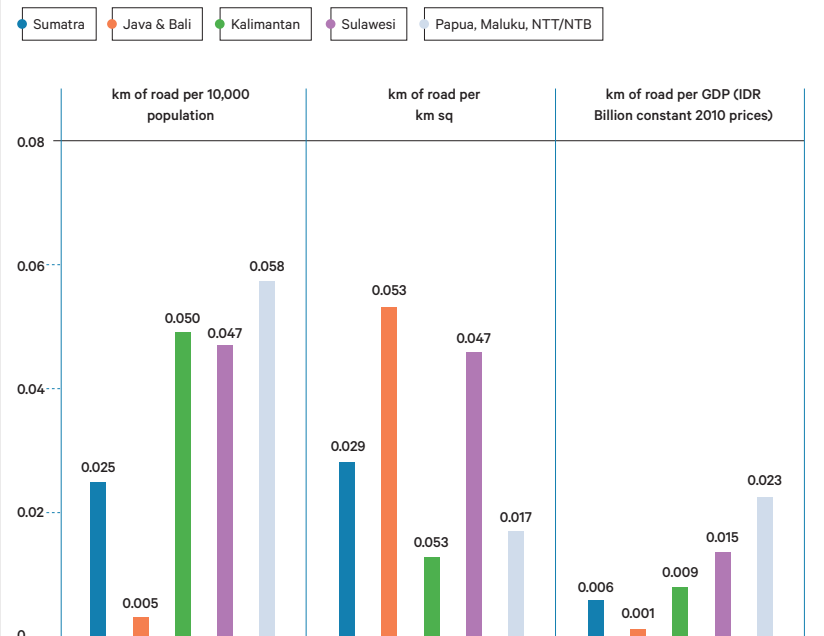


Source: DGH, World Bank staff calculations.

Note: Road development refers to road construction and widening, while road preservation refers to periodic maintenance and road reconstruction.

FIGURE 9.8.

More arterial roads are needed in Java and Bali, but more roads per land area are needed to improve accessibility in outer islands



Source: DGH and Bureau of Statistics of Indonesia (BPS), 2017.

to exceed the target for building toll roads (Table 9.2), it may not be the most sustainable or efficient option for developing 4,218 km of expressways that have not yet been awarded or assigned. This is because, in numerous cases, projects assigned to SOEs require GoI support to reach viability at entry or sustain viability during the operation of the concession, or both. Moreover, the majority of SOEs capable of taking new road concessions are already highly leveraged and may not have capacity to raise more equity or debt without more explicit government subsidies, which would increase the fiscal risks from contingent liabilities. Indeed, the liability-to-equity (LE) ratio for major SOEs involved in the sector has been increasing (Table 9.4) and is more than twice as high as the average LE ratio for comparable private firms in emerging markets.<sup>237</sup> Inadequate project planning, preparation and packaging, the lack of a comprehensive, reliable funding envelope and other uncertainties may have dampened interest from prospective private sector bidders.<sup>238</sup>

## C How Effective Is Public Spending in the Sector?

**G**iven the backlog on the national road network, travel speeds are unsurprisingly slow throughout Indonesia.

Road travel speeds are relatively low on the national road network, at about 40km/hr. This is attributable to low geometric standards,<sup>239</sup> a high “volume-to-capacity ratio” (VCR)<sup>240</sup> on main corridors, fair road conditions, extensive ribbon development,<sup>241</sup> and other land use issues along the road rights of way. Moreover, the lack of direct road connections between areas of economic activity translate into excessively long journey times. Traveling a mere 100 km can take nearly 3

hours in the six main economic corridors (Figure 9.9).

In addition, nearly two-thirds (63 percent) of vehicle-km traveled on national roads in Indonesia are under slow or congested flow conditions, i.e., less than 50 percent of free-flow speeds. Thirty-eight percent of all travel on Indonesia’s roads occurs in ‘very congested’ or ‘highly congested’ flow conditions (VCR > 1.0). This issue is particularly prevalent on major roads in arterial corridors: traveling on over 50 percent of multi-lane highways (1,300 km) occurs in ‘slow’ or ‘congested’ flow conditions (Figure 9.10).

<sup>237</sup> The book debt-to-equity ratio for firms operating in “Engineering and construction” in emerging markets in 2016 was 0.96. Source: Aswath Damodaran (<http://pages.stern.nyu.edu/~adamodar/>) based on company filings).

<sup>238</sup> See World Bank Infrastructure Sector Assessment Program (forthcoming) for a more comprehensive discussion.

<sup>239</sup> The majority of the arterial road network has been designed to 60km/h speeds, with only trunk roads and multi-lane facilities designed to 80 km/h speeds (compared to modern standards in the range of 80-100km/h) and collector roads have been designed to 40-60km/hr standards (compared to 60-80km/hr for normal national standards).

<sup>240</sup> Volume to capacity ratio (VCR) is one of the most used indexes to assess traffic status, in which V is the total number of vehicles passing a point in one hour (volume) and C is the maximum number of cars that can pass a certain point at the reasonable traffic condition (capacity).

<sup>241</sup> Ribbon development consists in building houses along the routes of communications. This is prevalent along national roads in Indonesia. Part of these houses are frequently constructed within the road right of way leading to narrower sections and consequently lower speeds.

TABLE 9.4.

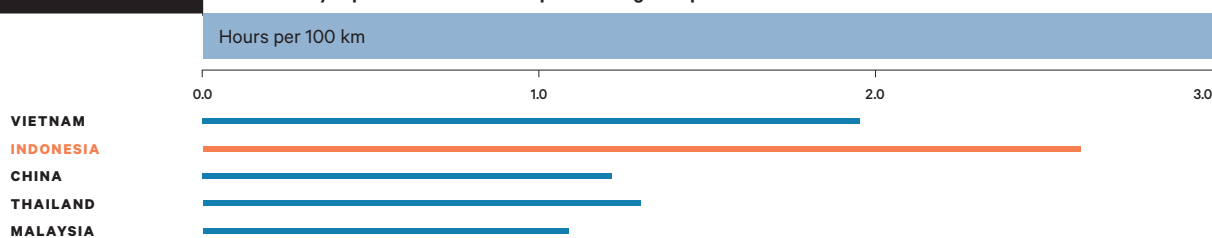
The liability-to-equity ratio of SOEs involved in expressway development has risen in recent years

	2014	2015	2016	2017
PT Jasa Marga	1.8	2.3	2.3	3.3
PT Waskita Karya	3.4	2.2	2.7	3.3
PT Hutama Karya	5.0	1.3	2.2	4.7
Average	3.4	1.9	2.4	3.8

Source: Audited accounts of the central government in 2017, MoF (2018).

FIGURE 9.9.

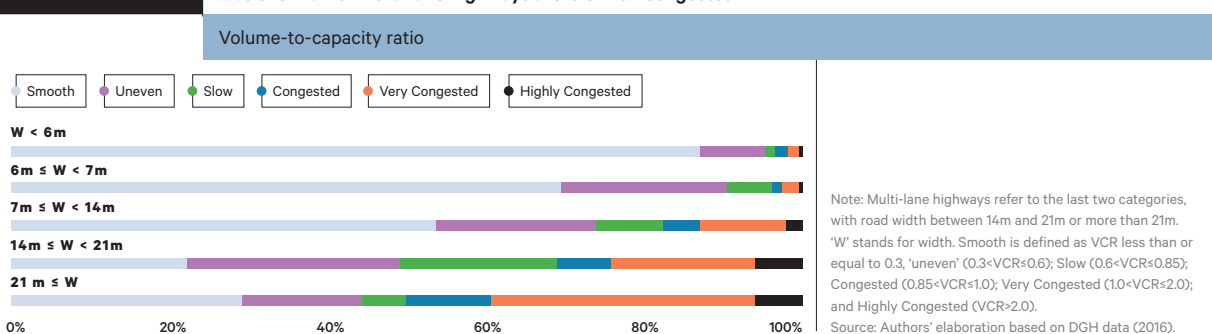
Connectivity is poor in Indonesia compared to regional peers...



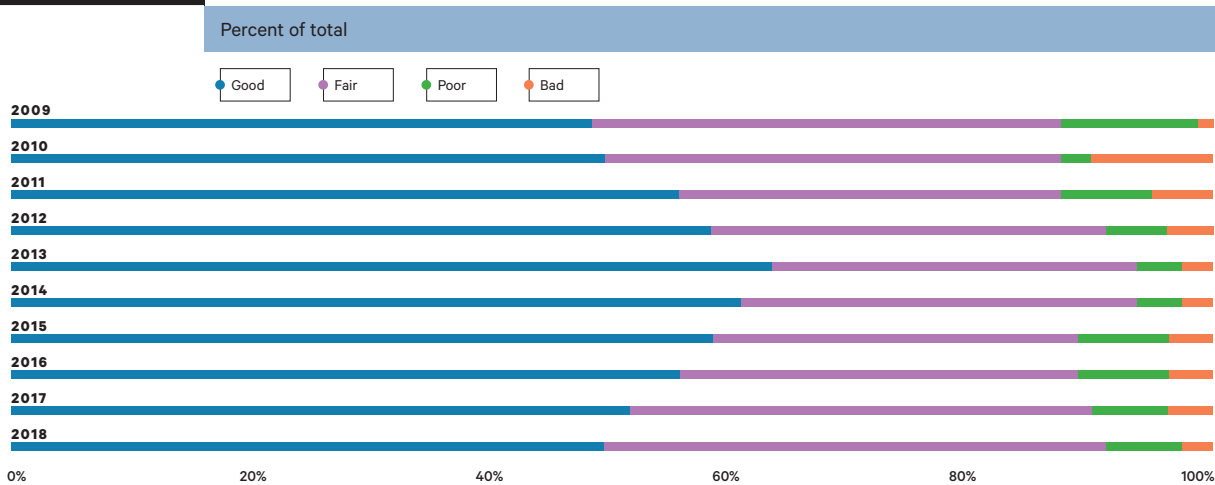
Source: Modernizing the National Road Network: A Planning Framework to Improve Connectivity and Development, Indonesia Infrastructure Initiative (IndII), 2012.

FIGURE 9.10.

...as over half of multi-lane highways are ‘slow’ or ‘congested’



Note: Multi-lane highways refer to the last two categories, with road width between 14m and 21m or more than 21m. ‘W’ stands for width. Smooth is defined as VCR less than or equal to 0.3, ‘uneven’ (0.3 < VCR ≤ 0.6); Slow (0.6 < VCR ≤ 0.85); Congested (0.85 < VCR ≤ 1.0); Very Congested (1.0 < VCR ≤ 2.0); and Highly Congested (VCR > 2.0). Source: Authors’ elaboration based on DGH data (2016).

**FIGURE 9.11.** DGH defined 92 percent of the national road network as 'stable' in 2018...**TABLE 9.5.** ...but Indonesia uses lower standards to define road condition than other emerging market countries

Road Condition	Indonesia	Georgia	Philippines	Vietnam	Peru	
					Paved	Unpaved
Good	<4	<4	1-3	<4	<2.8	<6
Fair	4-8	4-6	3-5	4-6	2.8-4	6-8
Poor	8-12	6-8	5-7	6-8	4-5	8-10
Bad	>12	100.0	*65	*62	>5	>10

Sources: Indonesia – DGH; Georgia, Vietnam, and Peru – World Bank Country Offices; The Philippines – DPWH.

### Despite spending on more expensive road treatments, the quality of national roads has not improved meaningfully.

The DGH rates physical condition in terms of road roughness, measured by the International Roughness Index (m/km IRI). By this measure, 91.9 percent of the national road network was defined as 'stable' (*mantap*), combining 'good' and 'fair' ratings (Figure 9.11). However, Indonesia defines the threshold for stable roads as being up to 8 m/km IRI, versus 3-4 m/km IRI for 'good' condition and 5-6 m/km IRI for 'fair' condition in other countries (Table 9.5). At 8 m/km IRI, traffic speeds are greatly reduced, and reconstruction is required to reinstate the serviceability and life of the road pavement. If the threshold for stable condition were to be reduced to 5-6 m/km IRI, as per international standards, only 60 percent of Indonesia's national road network would be considered in stable condition.

Similarly, despite the increase in spending on road preservation, the actual life and performance of roads appear relatively short and the quality is suboptimal. Ineffective supervision and poor-quality con-

trol,<sup>242</sup> inadequate pavement design,<sup>243</sup> and weak enforcement of vehicle load capacity restrictions have resulted in the actual life of national roads being suboptimal. The low survival rate, i.e., less than five years for surfacing treatments and less than 10 years for major rehabilitation/reconstruction (for a design life of 10 years),<sup>244</sup> increases budget needs to maintain serviceability. Independent technical audits to verify compliance with specifications and good practice are not systematically performed during and after contracts (see Box 9.2).

**These problems with road performance are in part due to poor data collection<sup>245</sup> and management systems, which have led to fragmented and ineffective program prioritization.** The Indonesian Road Management System (IRMS) acts only as a database. Manual screening of pavement condition using spreadsheets is the basis to formulate the expenditure program, taking into account the historical budgets and local decisions. However, in 2016-17, the DGH and IndII developed and piloted a modern web-based Road Asset Management System (RAMS) in South Sumatra (*Balai V*), Jakar-

ta (*Balai VI*), Central Java (*Balai VII*) and East Java (*Balai VIII*). These trials showed that substantial resource savings could be obtained if such a modern system is used to formulate expenditures.

**Moreover, the highly decentralized nature of the DGH has hampered the quality and speed of implementation of national roads projects.** The quality assurance process has been weakened, with dispersal of technical skills and reduced review of design quality, project readiness, safeguards and implementation quality. This is acute for major projects such as expressways and road development, which warrant expert skills and tools to achieve effective designs and quality. In addition, job rotation is high (1 year 8 months per position),<sup>246</sup> which is mainly intended to broad staff experience, but hinders building stable technical skills. With 17,151 employees in 2018, the staffing-to-road ratio of the DGH is among the highest in the region, reflecting an employment-intensive structure. There is a high variance between the different *Balai* offices, with the highest ratios reached in the densely populated island of Java (Figure 9.12).

**242** The DGH's project management and technical supervision model, which gives responsibility to the project manager (PPK) to control both the contractor and the supervision consultant, lead to serious shortcomings in civil works supervision with supervision consultants frequently certifying substandard work.

**243** The DGH's 2012 design standard is not systematically applied and, consequently, inadequate pavement design is persistent in many of the national road investment projects.

**244** Surfacing treatments are usually performed every five years in most countries. However, in Indonesia, it needs to be carried out every two to three years. In terms of road reconstruction, it is performed every 10 to 20 years depending on the countries.

**245** These data inform decisions about both road preservation and development.

**246** Based on a sample of 30 permanent staff.

**BOX 9.2.**

**Western Indonesian Road Improvement Project (WINRIP)**

The World Bank-financed project WINRIP envisages the increase of the effective use of selected sections of national roads along the Western Sumatra Corridor by reducing road-user costs. Under this project, initiated in 2011, the civil works to expand the capacity of nearly 600 km of national roads are being financed.

The site visits performed by the World Bank team revealed frequent quality shortcomings in ongoing and completed road packages. Bad quality engineering designs prepared without systematically applying the relevant design standards and with insufficient attention to the actual road condition have led to frequent civil

works contract modifications, delays in work implementation and additional costs. There are serious quality shortcomings in civil works such as cracks and potholes in the wearing course or broken concrete U-ditches after less than two years since the project completion.

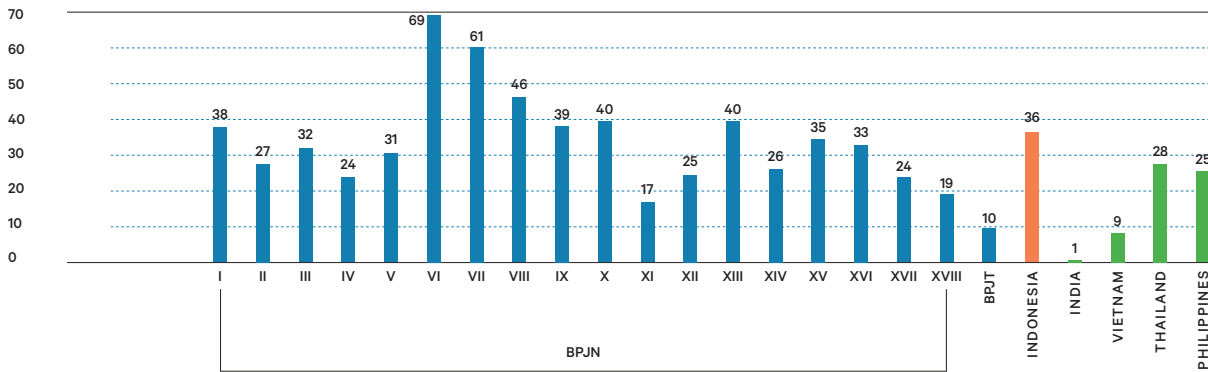
Moreover, limited attention has systematically been paid to road maintenance, road safety, environment, and worker health and safety aspects during road works execution. Independent technical audits demonstrated good results, at cost of only 0.2 percent of the civil works cost, but complete and timely follow-up of audit findings is still a major challenge.

Source: World Bank team.

**FIGURE 9.12.**

**DGH has an employment intensive structure across its 18 Balai offices**

Staff/100 km of national roads, 2018



Note: The DPWH's staff are not only responsible for national roads, but also for flood management and other infrastructures. BBPJJN stands for Balai Besar Pelaksanaan Jalan Nasional and BPJJN stands for Balai Pelaksanaan Jalan Nasional. BPJJN I-XVII corresponds to the following cities: Banda Aceh, Medan, Padang, Palembang, Jakarta, Semarang, Surabaya, Mataram, Kupang, Banjarmasin, Balikpapan, Makassar, Palu, Manado, Ambon, Manokwari and Jayapura. BPJT is located in Jakarta.

Source: Indonesia – DGH (HR Division); India, Vietnam and Thailand – World Bank Country Offices; and the Philippines – DPWH.



# 9.3

## Recommendations to Improve the Quality of Spending

- A** *Ensure that there is a focus on efficiency and effectiveness, rather than just quantity*
- B** *Develop longer-term strategies to address the backlog in road network capacity*
- C** *Increase the pool of funding available for national roads and expressways, including by leveraging the private sector*
- D** *Address institutional challenges to implementing reforms*

**S**ome improvements have recently taken place in the national roads sector. First, the share of work with large contract sizes has increased, which could lead to gains in efficiency and effectiveness of spending. The consolidation of contracts has been mainly precipitated by the implementation of more advanced procurement policies. In the period 2013-17, the size of preservation contracts was increased, as the number of contracts was reduced from about 1,100 to 517, with the largest packages (i.e., those above IDR 30 billion) comprising 72 percent of spending in 2017 compared with 31 percent in 2013 (Figure 9.13). Nonetheless,

the average preservation contract remained smaller than IDR 20 billion in 2017, while the majority of the national road development contracts were above IDR 50 billion<sup>247</sup> (Figure 9.14).

**The GoI is encouraged to continue with the consolidation of small contracts into larger sizes of over IDR 30 billion.** Such measures would increase efficiency in procurement and attract new, larger players into the market, with economies of scale and stronger quality assurance systems, which will hopefully lead to improved execution performance. Ongoing efforts should be made to assess the impact of increased contract sizes in terms of road work quality and cost.

**Second, the recently launched legislation (Government Regulation (PP) No. 16/2018) enabling lump-sum remuneration schemes for a broader range of services is expected to encourage the implementation of performance-based contracts (PBCs).**<sup>248</sup> Previously, under regulation G.R. No. 54/2010,<sup>249</sup> lump-sum remuneration schemes were only allowed for certain simple works and goods. This constrained the implementation of outcome-based payments. In the period 2010-14, the DGH piloted PBCs involving payments based on outputs and outcomes, with mixed results. In 2016, the DGH introduced long segment contracts, which are single-year contracts that combine several types of road interventions on a network of about 100 km. Several items, such as routine maintenance, were paid on the basis of outcomes.

**Continuing to implement the advance procurement policy and gradually moving toward contracts with a greater outcome-based focus would improve efficiency in spending.** The DGH needs to enhance the long-segment contracts, initially by including density-based performance (instead of response times), increase related penalties, and subsequently move to multi-year long-segment contracts, or some form of renewable single-year contracts. Prior experiences in Latin American and Caribbean countries has shown that contracts that are more outcome-based can lead to substantial cost savings for road agencies (of between 25 and 35 percent).<sup>250</sup>

**Third, more modern expenditure planning tools are beginning to be utilized.** The DGH is currently implementing the RAMS in all the Balai offices together with an updated version of the IRMS (IRMS v.3) at the central level. These systems will enable the DGH to evaluate and prioritize programs in each area, adjusting to changing budget scenarios, and forecasting road needs and performance for multi-year periods. The 2019 budget was formulated using these modern systems. In addition, capacity-building programs are being carried out by the DGH across all the archipelago.

**The DGH is encouraged to complete the implementation of central network planning tools to replace the current ad hoc spreadsheet method.** This needs to be supported by enhanced and automated data collection to improve data quality and coverage. Once these planning tools are installed, the DGH should systematically use them to formulate programs within current budget resources. Overall, the responsibility for monitoring and planning road network capacity improvements on the national road network should be assigned to the central

**247** It should be noted that there are substantial differences among contractor's capacity across Indonesian provinces. Overall, contractors in Java, Bali or Sumatra are able to assume larger development or preservation works than the ones in eastern Indonesia.

**248** This legislation enables lump-sum remuneration schemes for design and construction works. For more detail, please see section 2.3.2.1. a.1. of the LKPP regulation No. 9/2018 linked to the PPI6/2018.

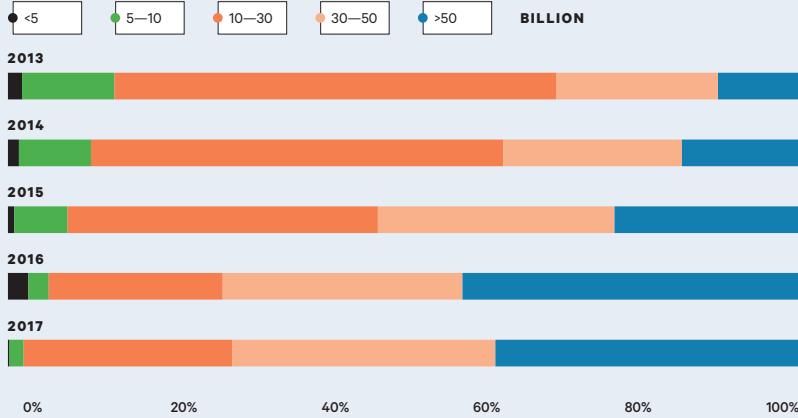
**249** Presidential Regulation No 54/2010 (Chapter 51) issued by President Office, proposed by the National Public Procurement Agency (NPPA) or Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP).

**250** The World Bank has had a highly positive experience with performance-based road contracts in Brazil with the execution of CREMA—*contratos de rehabilitacao e manutencao* (rehabilitation and maintenance contracts). Brazil's CREMA includes the use of performance indicators for rehabilitation and maintenance. Contractors are accountable for the road condition. Payments are linked to performance, as measured by specifically designed indicators. The evidence suggests that CREMA rehabilitation unit costs of works were 25-35 percent lower than traditional rehabilitation costs for contracts signed during the same period.

**FIGURE 9.13.**

The share of higher value preservation contracts has increased in recent years...

Share of preservation contracts by value, percent

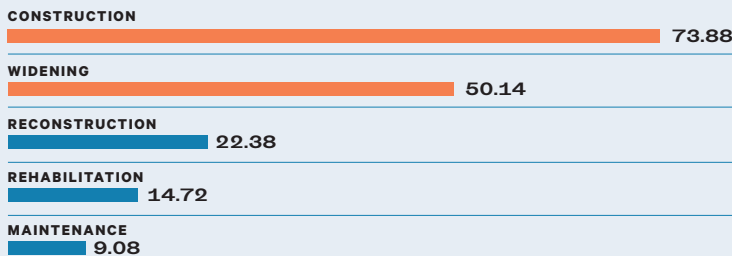


Source: DGH 2017 national road development and contract data and World Bank staff calculations.

**FIGURE 9.14.**

...but the average preservation contract size still remains below IDR 20 billion

Average contract size value, IDR billion, 2017

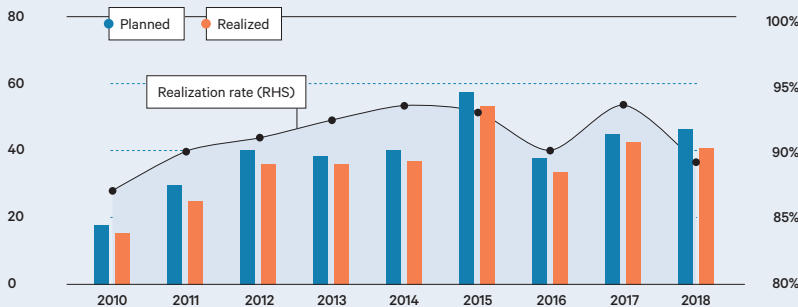


Source: DGH 2013-17 national road preservation contract data and World Bank staff calculations.

**FIGURE 9.15.**

DGH's budget execution mostly improved over the period 2010-17

Planned vs realized spending, IDR trillion (LHS), Percent of total (RHS)



Source: World Bank elaboration based on data from the MoF and DGH.

Directorate General of Road Network and Systems Planning.<sup>251</sup>

Fourth, execution of the budget for national roads has improved (Figure 9.15). The DGH's budget execution rate improved from 87.4 percent in 2010 to 93.5 percent in 2017, barring a dip in execution in 2016 due to budget cuts.<sup>252</sup> The improvement is likely due to implementation of a policy for advance procurement and earlier approval of the Budget Warrant (DIPA). However, budget execution rates deteriorated to 89.3 percent in 2018, due to significant delays in the bidding process for several multi-year contracts. Moving forward, the DGH should aim to maintain high levels of budget execution.

The remaining reform agenda is as follows:

*A*

*Ensure that there is a focus on efficiency & effectiveness, rather than just quantity*

The DGH should redefine its strategic transport indicators to focus on efficiency and effectiveness, rather than quantity per se. Currently, strategic plans of the DGH do not include transport efficiency indicators, such as energy used per ton/person-km traveled by road transport, reliability of travel time (congestion index), social connectivity (mean time that people travel to access to essential services, such as health or educational facilities), air quality (emissions of air pollutants from road transport) and road traffic noise. They also do not include road safety indicators, such as road mortality (i.e., the number of road deaths per million inhabitants), road deaths per vehicle-distance traveled, road deaths by type of vehicle (heavy, light, motorcycle, bus, coach or bicycle) and by type of road user killed (driver, passenger, pedestrian or

<sup>251</sup> Since 2015, the DGH's reorganization, local Balai offices are in charge of project identification, preparation, implementation and monitoring.

<sup>252</sup> In mid-2016, the cut in the DGH's budget led to a cancellation/postponement of a significant number of works and, consequently a substantial budget execution deterioration (90.1 percent)

cyclist). Road space, in terms of lane-km, should be included in annual road statistics and in program preparation. Journey times between super nodes need to be surveyed using a standard methodology every five years.

**More efforts are needed to ensure good quality and performance of the national road network.** The DGH should revisit the current condition rating and establish new roughness thresholds within the range of the 'stable condition' parameter (e.g., 4-6 m/km IRI). Strengthening project design and supervision, civil works quality control/audits and the compliance with vehicle load capacity restrictions might also help to increase the actual life and performance of roads. The DGH should systematically follow the 2012 pavement design guide for new road construction and apply adequate design tools in the investigation and design of pavement preservation treatments. The quality of engineering designs needs to be enhanced by including an efficient design review mechanism and creating a Major Projects Unit under the MoPWH to be a center of technical expertise for preparation of major projects (>IDR 100 billion) to international standards, using advanced survey and design tools. The DGH's project supervision needs to be improved by shifting to vertical FIDIC-style contract,<sup>253</sup> in which the supervision consultant acts as the employer's representative and is responsible for ensuring compliance by the contractor with all specifications and good practices. The DGH should introduce and ensure compliance with independent technical audits, at least for major asset preservation and road development projects, to enhance the quality of implementation. The current regulation on vehicle load capacity restrictions needs to be properly enforced by police and road traffic controls and related penalties should be increased.

**Closer monitoring of expenses is needed to ensure that the higher costs of road treatments and lifecycle costs are justified.** The DGH needs to closely monitor the impact of more expensive treatments and concrete pavements on lifecycle costs to justify the higher investment cost. The high costs for delivery of the preservation and development programs should be further examined. Other ways to improve efficiency in these programs should also be identified by the DGH to ensure that optimal value for money is derived from government spending. It is recommended that the MoF increases its active cooperation with the MoPWH in defining and approving road preservation and development unit costs across the country.

<sup>253</sup> FIDIC, the International Federation of Consulting Engineers, defines international standard forms of contracts for the construction industry worldwide. As part of their standard bidding documents the Multilateral Development Banks have for a number of years required their borrowers or aid recipients to adopt the FIDIC conditions of contract. This contract defines that the supervision of the works should be carried out by an engineer who is employed by the employer. The engineer is responsible, among other things, for issuing instructions, certifying payments and determining completion.







*B*

## *Develop longer-term strategies to address the backlog in road network capacity*

**T**he GoI has already taken steps to address the backlog in road network capacity by extending the network and expanding lane capacity. However, the DGH should refocus the current short-term widening program,<sup>254</sup> which comes at a very high cost, on longer-term objectives such as achieving higher geometric standards and safer infrastructure. Moreover, extension of the national road network needs to be balanced between arterial and accessibility objectives. The capacity of congested roads in highly populated Java and Bali needs to be expanded without neglecting accessibility in eastern Indonesia. On widening lane capacity, the DGH should also work closely with local authorities to control road-side activities that impede this objective and to provide pedestrian facilities and drainage in urban areas.

**The GoI needs to develop a robust, fully-funded and phased EDP strategy for the long term (about 50 years) to ensure that implementation of the EDP continues to be on track, while spending on national**

**roads does not fall behind.** It is important to recognize that the national road network and expressways are two distinct categories that serve separate purposes. They also have very different requirements for capital and O&M expenditure. Accordingly, it would be advisable to have separate funding and financing plans for these two networks, rather than one big ‘pot’ to finance both national roads and expressways. Such an arrangement would ensure that there is sufficient funding for national roads and for expressways which, in turn, would give the agencies tasked with the implementation of these programs the requisite headroom to plan and execute their strategies with full confidence and greater certainty. It is recommended that the GoI commences a working group consisting of BPJT, the DGH, the DGIF and the MoF to review the funding requirements for the EDP and policy options to bridge the funding gap. The working group could also design a financing strategy, examining optimal financing instruments and developing a funding plan that can help to mobilize the required financing.

<sup>254</sup> The DGH has a program for widening narrow national road sections from an average width of 4 - 4.5 meters to a standard of 6 - 7 meters. This program has a short-term vision that exclusively addresses immediate capacity expansion needs.

## C

## *Increase the pool of funding available for national roads & expressways, including by leveraging the private sector*

**W**hile increasing the efficiency and effectiveness of spending is key, the GoI also needs to increase its funding for national roads and expressways to meet demand growth and GoI targets. With the estimated annual public investment need at IDR 47.5 to IDR 51 trillion, this would require about IDR 2-IDR 6 trillion more of budgetary resources than the central government currently spends. However, when insufficient fiscal resources are available, it is recommended that the GoI prioritizes asset preservation over new investment. In terms of road development, expressways should be prioritized to address the capacity backlog on main corridors.

**The GoI needs to identify other potential sources of revenue within the road sector to offset costs and to ensure that the EDP is fiscally sustainable.** Such sources could include toll tariff optimization and rationalization, asset recycling, land value capture, concession fees (from projects with excess returns), and collecting tolls from availability payment-based roads. The MoF should explore mechanisms in the medium-term to ensure that the support from such instruments is reliable and credible over the entire period of implementation of the EDP. The MoF, working with the MoPWH, could likewise explore options for hypothecating funds to the EDP coming from various revenue sources. One option for hypothe-

cating revenues to the EDP is to establish a Revolving Fund.<sup>255</sup> As the Revolving Fund starts to operate and fully develops other revenue sources, the EDP will rely less and less on the national budget (APBN) and not encroach on other funding priorities of the MoPWH, particularly road preservation.

**Measures should be taken to leverage private sector investment for expressway development.** More space for private sector participation should be created by the BPJT in coordination with the DGIF through continuing ongoing efforts to refine the Concession/Guarantee Framework to conform with good industry practice. Moreover, the MoF and the Ministry of SOEs (MSOE) should establish a governance structure to provide incentives for a commercially prudent behavior by SOEs in bidding for and implementing toll-road projects. Once the GoI and BPJT have created a robust and credible enabling environment for private sector participation, there still remains a notable risk of SOEs undercutting private sector bidders, mainly on the strength of any unfair advantage they may continue to enjoy in terms of direct and/or indirect subsidies. If SOEs are not able to act prudently, the GoI may consider excluding them from at least a few projects. Moreover, BPJT should publish an annual monitoring report on the operational performance, asset condition and development status of the expressway network.

## D

## *Address institutional challenges to implementing reforms*

**C**onstraints to the implementation of the above recommendations are mostly institutional in nature. Specifically, there is a clear need to revisit the structure of the DGH to ensure that it is set up to target greater efficiency and effectiveness of spending on national roads and expressways. Consolidating the *Balai* structure—i.e., recentralizing scattered technical skills through the creation of a Major Central Projects Unit—may support more efficient programming, selection and sizing of projects, and better focus the responsibility for asset management. The DGH's staff should progressively change their focus from project implementation to program management and delivery of network performance, while assigning responsibility for project supervision to the private sector. This would imply a progressive reduction of staff in implementation activities at the *Balai* level and a greater use of management systems to improve the efficiency and effectiveness of programs. In addition, the DGH should collect information on the job rotation and development of expert skills and core competencies on a regular basis for further research. It could also strengthen the application of merit-based factors in staff employment and promotion processes by using the *Sasaran Kerja Pegawai* (SKP) performance indicators more effectively.

<sup>255</sup> A Revolving Fund is proposed to be used by the GoI for more effective portfolio delivery planning and financial management of the EDP, by providing predictability and sustainability of funding flows on a multi-year basis. For a more comprehensive discussion, see the World Bank report on "Business Process Reengineering for BPJT" founded by the Indonesia's Infrastructure Finance Development (IIFD) project.



## Annex 9.1

### 1

#### Calculation of the backlog

The national road capacity backlog is calculated based on the traffic flow condition observed along the national roads as follows:

Traffic flow condition	Road space (lane-km)
Congested	2,935
Very congested	6,341
Highly congested	1,564
<b>Total</b>	<b>17,117</b>

Source: DGH 2017 and World Bank staff analysis.

### 2

Estimated annual investment needs for national road development and preservation are calculated as follows:

#### A

IDR 19-IDR 20 trillion for road development. This would mostly finance the renewal of arterial roads (IDR 13.2 trillion), with the remainder for other projects such as bridges, strategic road development, and improvement of accessibility standards.

#### B

**IDR 16.5-IDR 19 trillion for road preservation, including:**

**1. IDR 2.4 trillion** per year for routine maintenance of the whole network. This is the average road routine maintenance cost of IDR 49.3 million/km multiplied by 47,017km = IDR 2.4 trillion/year.

**2. IDR 4.7-IDR 7.2 trillion** per year for road rehabilitation of 5 percent of the network. The average road rehabilitation cost is IDR 2-3 billion/km. So, IDR 2-IDR 3 million/km x 5 percent x 47,017 km = IDR 4.7-IDR 7.2 trillion/year;

**3. IDR 9.4 trillion/year** for road reconstruction of 5 percent of the network. The average road reconstruction cost is IDR 4,009 million/km based on the data from DGH 2011-15. So, IDR 4,009 million/km x 5 percent x 47,017 km = IDR 9.4 trillion/year.

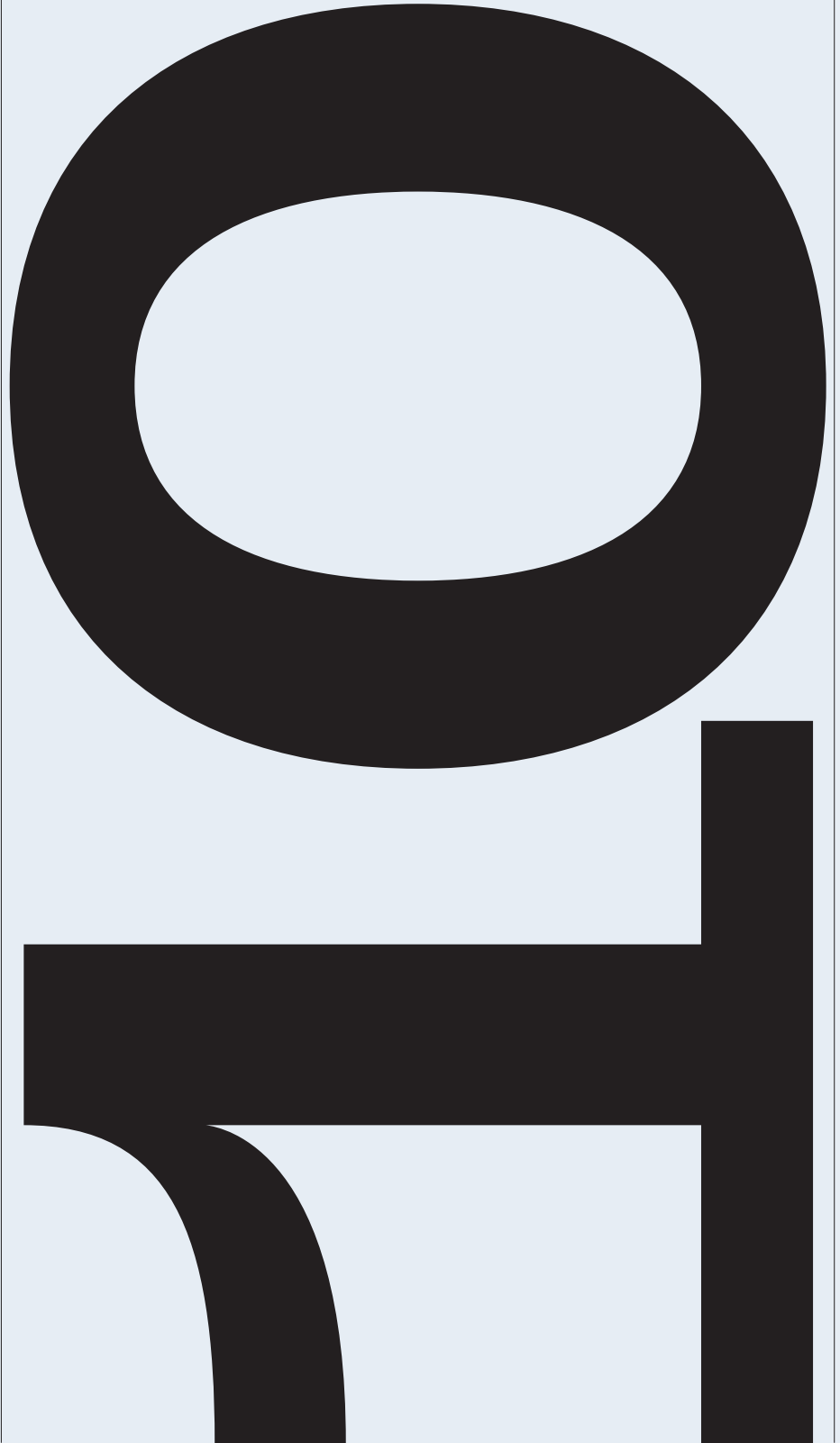
#### C

IDR 32 trillion for the EDP (IDR 474 billion over 15 years), including IDR 20 trillion from the private sector and SOEs.

# 229–248

10.1	Context
10.2	Assessing the Quality of Spending
10.3	Recommendations to Improve the Quality of Spending

# Housing



## Key Messages

- A** Indonesia's housing needs are vast. Projections of urban population growth highlight the housing need for 780,000 new household formations per year until 2045, while tackling an existing ownership backlog of 12.1 million units and improving millions of substandard homes.
- B** Indonesia has made progress toward its 2019 targets to deliver new houses and reduce the number of substandard houses, but progress toward the occupancy backlog is not on track.
- C** The main housing subsidy schemes used to meet the home ownership and occupancy targets—FLPP and SSB—are not efficient: the subsidies used are fiscally expensive (in terms of upfront fiscal costs and future liabilities), they benefit banks and developers rather than consumers, and crowd out the private sector.
- D** The BSPS scheme has delivered grants to the poorest 40 percent of households to improve substandard housing, but the design of the FLPP and SSB scheme are regressive, poorly targeted and prone to leakage.
- E** Housing subsidies are also not effective in meeting the SDG goal of providing inclusive, safe and adequate housing for all due to weaknesses in the quality of construction, program design and poor enforcement of program guidelines.

## Summary of Recommendations

### *Short Term*

- A** Shift funding toward more efficient, progressive, and better-targeted subsidies, while optimizing existing subsidy programs to enhance efficiency and equity;
- B** Ensure subsidized homes are of good construction quality and built in well-located areas and with access to basic services;
- C** Develop a housing micro-finance subsidy program to finance home improvements and incremental home extensions; and
- D** Develop a Housing and Real Estate Information System (HREIS) to improve the planning processes for managing affordable housing development.

### *Medium Term*

- A** Develop alternative housing typologies that are cost-effective and meet the heterogeneous needs of consumers in urban areas;
- B** Support the development of affordable housing through a public-private partnership (PPP) framework to support access to affordable and well-located housing in urban centers;
- C** Develop rental policies as an alternative and pragmatic housing solution to home ownership; and
- D** Review and revise the regulatory framework to clearly assign a role for SNGs in providing affordable housing, while building their capacity to do so.

### Further key reading

Housing Program (Part 2, chapter 2), "Indonesia Sector Infrastructure Assessment Program", World Bank, June 2018. Forthcoming

World Bank. 2019. "Time to ACT: Realizing Indonesia's Urban Potential", Part 2, Chapter 7: "Connecting and Integrating Cities: A Focus on Housing and Transport". <https://blogs.worldbank.org/eastasiapacific/time-act-realizing-indonesias-urban-potential>

World Bank and Government of Indonesia, 2015. Report: "Indonesia: A Roadmap for Housing Policy Reform." National Development Planning Agency (Bappenas).



**A**ccess to housing for all” is a key priority for the GoI. Through laws and programs, the GoI has ratified access to housing for all as a national mandate. The right to adequate housing is enshrined in the 1945 Constitution and Law No. 1/2011 on Housing and Settlements, which proclaims: “every Indonesian citizen should live in a decent and affordable settlement within a healthy, safe, harmonious, organized, integrated and sustainable environment.” The GoI has also endorsed Sustainable Development Goal (SDG) #11 to “make cities and human settlements inclusive, safe, resilient and sustainable”.

**Urbanization has driven up the demand for housing.** Between 2010 and 2018, Indonesia’s urban population grew by 27 million, equivalent to more than the entire population of Australia. While the pace of Indonesia’s urbanization can be considered normal over the past decade, this trend has driven up the need for housing in urban areas. With the share of the urban population expected to rise from almost 55 percent to over 70 percent by 2045, there is a need for

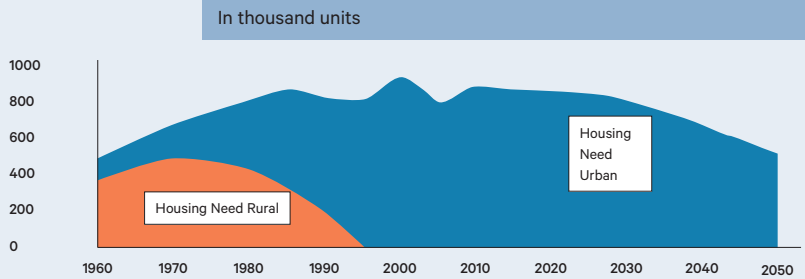
housing to meet the average 780,000 new household formations per year (Figure 10.1).<sup>256</sup>

**Indonesia faces substantial housing needs, not just in terms of the quantity of housing units needed but especially in terms of the quality of housing stock.** In 2017, 12.1 million households did not own a home (the ‘ownership backlog’)—about 1 million fewer than in 2014, but still far from the GoI’s target of 6.8 million in 2019. Of these, 6.7 million do not own, rent or lease a home (the ‘occupancy backlog’).<sup>257</sup> Of greater concern, however, is the number of housing units that are considered unfit or substandard: 22 million households,<sup>258</sup> or close to one-third of the population, live in housing with at least one substandard feature (e.g., housing made of mediocre building materials, a lack access to basic services, or are overcrowded).<sup>259</sup> Assessed against even more stringent SDG criteria for ‘inclusive, safe, resilient and sustainable housing’, the number of houses considered substandard in Indonesia reaches 43 million households (Figure 10.2).

**Housing affordability is also a key constraint in Indonesia.** Only the wealthiest 20 percent of households can afford

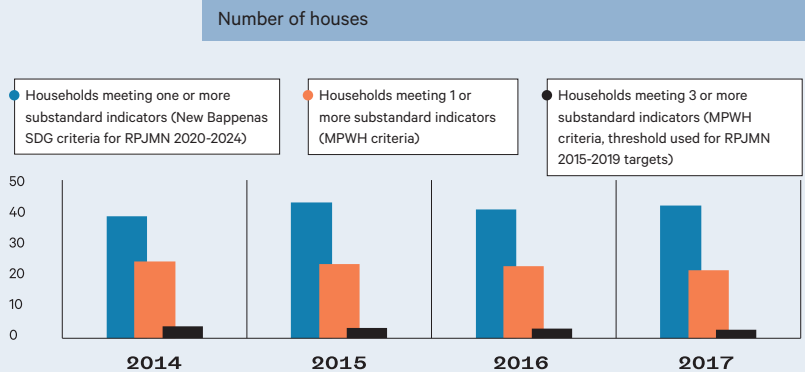
# Context

**FIGURE 10.1.** Urban and rural new household formation, 1950-2050



Source: World Bank staff estimates based on United Nations World Population Prospects, 2018 revision.

**FIGURE 10.2.** Estimates of substandard housing vary, depending on the definition used



Note: According to MoPWH criteria, houses are ‘substandard’ if they meet one or more of the following criteria: unsuitable building materials for roof, walls and flooring, lack access to clean water and/or safe sanitation, have insufficient floor per capita area, and/or do not have electric lighting. In the SDG criteria which will be used by Bappenas starting 2020, more building materials are considered substandard (e.g., asbestos roofing, bamboo flooring) and higher standards for clean water and safe sanitation are used. Source: For MoPWH criteria, World Bank staff calculations from Susenas 2015-17. For SDG criteria, Bappenas data from October 2018.

<sup>256</sup> Estimates based on urban and rural population projections from UN World Population Prospects data. Assumes an average household size of 3.8 persons for urban households and 4.4 persons for rural households.

<sup>257</sup> This is the total number of households that do not own their home and do not rent/lease a home. It is a more realistic estimate of the number of new housing units needed compared to the ownership backlog (12.1 million as of end-2017), which does not account for preferences to rent rather than own a home.

<sup>258</sup> Source: World Bank staff calculations from Susenas, March 2017.

<sup>259</sup> According to World Bank calculations from Susenas (March 2017), about 5.9 million households, mostly low- and middle-income dwellers, live in overcrowded conditions. Following Health Ministerial Decree (Kepmenkes) No. 829/1999, a household is considered overcrowded if the floor area per person is less than 7.2 square meters.

housing in the formal commercial market, based on the estimated average housing cost of IDR 440 million (US\$33,000).<sup>260</sup> The middle 40 percent of households can afford the same formal housing only with a government subsidy, while such housing is inaccessible to the bottom 40 percent of households.

The GoI has attempted to address these three challenges of housing quantity, quality and affordability. The National Medium-Term Development Plan (*Rencana Pembangunan Jangka Panjang Nasional*, or RPJMN) 2015-2019 envisioned the construction of adequate, safe, and affordable houses and basic infrastructure to improve the living standards of the bottom 40 percent of the population.<sup>261</sup> Specifically, the GoI intended to reduce the occupancy backlog from 7.6 to 5.0 million units, and reduce the number of substandard homes from 3.4 to 1.9 million in the period 2015-19. Table 10.1 summarizes these RPJMN housing targets.

Separately, the GoI launched its “One Million Houses”, or *Satu Juta Rumah*, initiative in 2015 to provide 1 million newly-constructed homes per year through public and private financing.<sup>262</sup> While the initiative primarily targets low-in-

come households or *Masyarakat Berpenghasilan Rendah* (MBR), other income groups are also eligible for government subsidies. *Satu Juta Rumah* spans the following:

**1 Regulations relating to taxation, financing schemes, and land use** to facilitate housing development;

**2 Provision of housing for low-income households.** These include simple rental flats (*Rusunawa*), special purpose houses (*Rusus*), and home improvement subsidies (*Bantuan Stimulan Perumahan Swadaya*, BSPS); and

**3 Access to housing finance through credit-linked programs.** The main programs (and hence the focus of this chapter) are mortgage-linked subsidies, also known as KPR (*Kredit Perumahan Rakyat*, KPR) subsidies:

**Housing Loan Liquidity Facility** (*Fasilitas Likuiditas Pembiayaan Perumahan*, FLPP),

**Interest rate subsidy** (*Subsidi Selisih Bunga*, SSB), and

**Down-payment assistance** (*Bantuan Pembiayaan Perumahan Berbasis Tabungan*, BP2BT).

The GoI also provides down-payment assistance in the form of grants (**Subsidi Bantuan Uang Muka, SBUM**), which can be used in combination with FLPP and SSB. Table 10.2 describes the main housing subsidy programs managed by the central government.

To reduce the fiscal burden of housing subsidies and promote home ownership, the GoI also passed Law No. 2/2016 on the Housing Provident Fund (*Tabungan Perumahan Rakyat*, or *Tapera*). *Tapera* aims to provide long-term housing finance for low-income households through mandatory payroll deductions and is thus expected to reduce the burden on public finance over time. Before *Tapera* can be implemented, however, the product design and income target segmentation need to be developed and agreed upon, while avoiding overlap with other housing finance products. Getting these aspects right is crucial to *Tapera*'s success (see Box 10.1).

**TABLE 10.1.** Progress on RPJMN housing targets has been slow but steady

Numbers denote millions of households	2014 Baseline	2015	2016	2017	2019 WB Projection	2019 Target
Ownership ( <i>kepemilikan</i> ) backlog	13.5**	11.7	11.9	12.1	12.5	6.8
Occupancy ( <i>penghunian</i> ) backlog (total number of households less(i) households that own their home and less (ii) households that rent/lease a home)	7.6**	6.2	6.1	5.9	5.7	5
Substandard homes: Households in 3 or more of seven substandard categories	3.4*	3.3	3.3	2.8	2.2	1.9

Note: Numbers marked with \* have been cited from RPJMN 2015-2019 Mid-Term Review; however, World Bank calculations from Susenas data show 3.9 million households were substandard in 2014. Numbers marked with \*\* indicates data from secondary MoPWH sources. Other indicators have been calculated using MoPWH method for RPJMN 2015-2019 targets.

Source: Data from Susenas 2015-17, World Bank staff analysis using criteria outlined in Technical Guidance for Substandard Housing Data Collection 2016, the MoPWH Directorate of Self-Built Housing.

**TABLE 10.2.** Main GoI housing subsidy programs

Program & Year Started	Description
BSPS (2006)	Grants for home improvement or self-construction for eligible low-income (MBR) households. Grants are in the amount of IDR 15 to 30 million per household. BSPS mostly operates in rural, rather than in urban areas, and operates a community-driven development model using facilitators.
*FLPP (2011)	Provides concessional funding to lenders who provide mortgages at fixed interest rates to consumers at 5 percent per annum for 20 years. Liquidity is 90 percent funded by the GoI (at 0.5 percent cost of fund) and 10 percent by participating banks. The 90 percent capital funding ratio was reduced to 75 percent in August 2018.
*SSB (2015)	Interest rate subsidy that buys down the mortgage market rate to 5 percent, which is fixed for the life of the loan. Unlike FLPP, capital funding for SSB is the responsibility of participating lenders.
SBUM (2015)	Down payment assistance program (of IDR 4 million) used in conjunction with FLPP and SSB to lower the down payment.
*BP2BT (2018)	Mortgage-linked down payment assistance with progressive assistance amount of a maximum of IDR 40 million. Unlike FLPP and SSB where the interest rate is fixed at 5 percent, participating banks in BP2BT have the flexibility to set the interest rate and must use 100 percent own capital to fund the mortgage.

Note: \*) Denotes mortgage-linked (KPR) subsidy.

Source: MoPWH

<sup>260</sup> World Bank and Government of Indonesia, 2015. Report: “Indonesia: A Roadmap for Housing Policy Reform.” National Development Planning Agency (Bappenas).

<sup>261</sup> Republic of Indonesia. RPJMN 2015-2019, 2014. Page 6-96. <https://www.bappenas.go.id/id/data-dan-informasi-utama/dokumen-perencanaan-dan-pelaksanaan/dokumen-rencana-pembangunan-nasional/rpjm-2015-2019/>

<sup>262</sup> This target is not directly linked to the RPJMN targets concerning quantitative housing need. In theory, if all newly-constructed homes reached their intended recipients (low-income households), then adding 1 million homes per year would exceed the estimated new household formation rate by around 25 percent and reduce the occupancy backlog.

“Only the wealthiest 20 percent of households can afford housing in the formal commercial market, based on the estimated average housing cost of IDR 440 million (US\$33,000)”



#### BOX 10.1. Tapera – From Big vision to Implementation

Law No. 2/2016 on the Housing Provident Fund (Tapera) will institute mandatory payroll deductions from all salaried workers with the objective of providing long-term financing for housing, with the intention to serve low-income households. The proposed contribution is 2.5 percent of monthly payroll for employers and 0.5 percent for employees. Non-salaried workers earning more than the minimum wage will also be able to contribute, on a voluntary basis.

In its initial seven years of operation, Tapera will be focused on civil servants and employees of SOEs due in part to opposition from employers' associations. This will limit Tapera housing finance funding and reach and will likely cause APBN funding to continue for the housing subsidy, albeit at a reduced level, in the short to medium term. On the other hand, given that the FLPP program will be merged with Tapera in 2021 (as both have the same

objective of expanding access to affordable housing through liquidity funding), Tapera will benefit from FLPP recycled liquidity funding of approximately IDR 2 trillion per year.

For implementation of Tapera, the housing finance product design will need to take the following into consideration:

**1. Targeting:** Focus on serving income segments that are not served by the private sector (income at 70th percentile and below).

**2. Product Design:** Develop progressive, economically-efficient, market-friendly products that avoid crowding out the private sector.

**3. Potential Overlap:** Avoid overlap and develop clear segmentation between Tapera and potential housing products offered by existing pension systems, especially BPJS Employment (Perumahan) (Table 10.3).

**TABLE 10.3.** Target segments served by Tapera and other pension systems

	Tapera	BPJS Employment (Perumahan)	PT Taspen	PT Asabri
Civil servants	X	Should join latest by 2029 per SJSN law	X	Not Applicable
Military/police	X			X
SOE employees	X	X	Not Applicable	Not Applicable
Private employees	Expected to join in year 7 of operation	X		
Informal workers	Not Applicable	X		



# Assessing the Quality of Spending

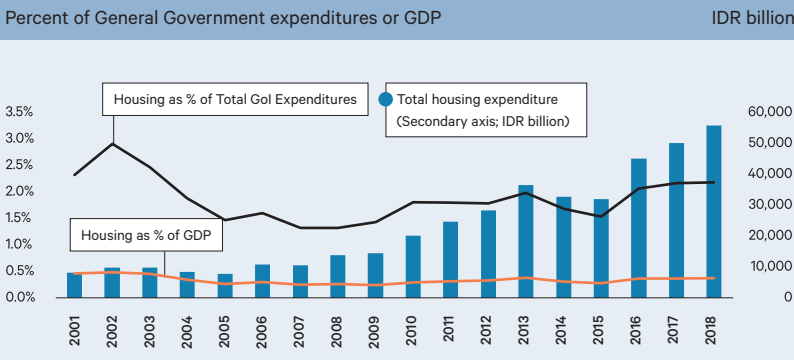
# 10.2

## A

### Overall Trends: Is Spending Adequate?

- A Overall Trends: Is Spending Adequate?
- B How Efficient Is Public Spending in the Sector?
- C How Effective Is Public Spending in the Sector?

**FIGURE 10.3.** Public spending on housing has increased significantly since 2011



Note: Total housing expenditure is defined as the net present value of Central Government expenditures on the main subsidy programs (FLPP and SSB), as well as spending on housing and public facilities (including BSPS). At the subnational level, only spending on housing construction is included. Due to limitations in data availability, subnational data for 2015-16 use budgeted expenditures, whereas 2017-18 subnational data are estimates. Source: World Bank staff calculations using data from the MoF and the MoPWH.

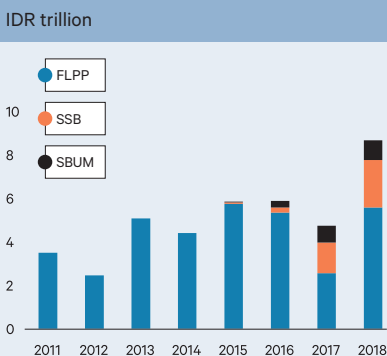
Total public spending on housing has increased in absolute terms over the past decade. Overall housing expenditure of the central and SNGs was estimated at IDR 55.8 trillion in 2018, equivalent to 2.2 percent of total expenditures (Figure 10.3). This represents an increase of 12.4 percent annually on average in nominal terms since 2011, in large part due to the introduction and expansion of several housing subsidy programs (see discussion below). Nonetheless, total public expenditures on housing have remained constant as a share of GDP (0.4 percent) over the past two decades.

The increase in overall housing expenditures is largely due to the introduction and expansion of housing subsidy programs in recent years. Looking at the upfront fiscal costs alone, government expenditure on the main housing subsidy programs—FLPP, SSB and SBUM—totaled IDR 9.1 trillion in nominal terms in 2018,<sup>263</sup> which is nearly triple the amount spent since the first full year of FLPP operations in 2011 (Figure 10.4). Although FLPP accounts for over half of these expenditures, the increase in spending on housing subsidies is primarily due to the rapid expansion of SSB and SBUM since their inception in 2015. With the introduction of SSB in 2015, the average volume of mortgage subsidies more than doubled from an average of 90,000 units per year over 2011-15 to 230,000 units per year over 2016-18 (Figure 10.5).

Indonesia's housing needs cannot be met by public finances alone. Addressing the quantitative housing need alone would

**FIGURE 10.4.**

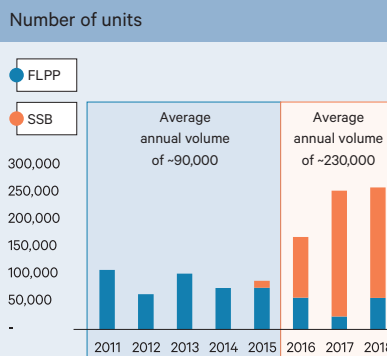
Spending on housing subsidies has increased since 2015...



Source: MoPWH, World Bank staff calculations.

**FIGURE 10.5.**

...in line with expansion in the annual average volume of mortgage subsidies, which more than doubled in recent years



Source: MoPWH, World Bank staff calculations.

263 Source: World Bank staff calculations from MPWH data.

require an estimated IDR 1,005 trillion (US\$71 billion),<sup>264</sup> or nearly half of total public spending. If the GoI maintains its current level of spending on housing and does not involve the private sector, it would take 26 years to close the gap,<sup>265</sup> notwithstanding the additional investments needed to upgrade substandard homes. Rather than increase the amount of public finances spent on housing, efforts should be made to increase the efficiency and effectiveness of public spending to better leverage private sector investment. As the next few sections show, creating more space for private sector players would help the GoI to achieve its goal of providing housing for all.

B

## How Efficient Is Public Spending in the Sector?

**H**igher public spending on housing has been accompanied by an increase in publicly-funded subsidized housing units. In the period 2015-17, the GoI increasingly delivered close to 1 million houses per year to fulfil the promise of *Satu Juta Rumah*. However, this achievement was largely due to a shift from private to public funding for subsidized housing. While the private sector financed 70 percent of nearly 700,000 new houses built in 2015, it only financed 35 percent of about 905,000 units built in 2017.<sup>266</sup> Preliminary data suggest that the balance between private and public funding was more equal in 2018, when the GoI exceeded its target by delivering 1.1 million homes,<sup>267</sup> but the data on commercially-built units have yet to be verified.

Similarly, most of the main housing subsidy programs have achieved their targets in terms of volume, except BSPS. In 2017 and 2018, the GoI delivered about 260,000 units of FLPP or SSB-subsidized housing, exceeding the respective program targets (Figure 10.6). SBUM similarly has achieved its target since 2016. In contrast, BSPS only achieved about half of its targeted volume in 2017 and 2018, but this is in part due to significantly ambitious targets in these years (Figure 10.7). It is also partly due

<sup>264</sup> Assuming each new home costs an average of IDR 150 million (US\$11,200) per unit.

<sup>265</sup> The GoI spends about IDR 38 trillion each year on housing and public facilities, including construction of new homes.

<sup>266</sup> As reported to the press by MPWH Director General of Housing Provision Khalawi Abdul Hamid. Detikcom, Oct 22. Accessed Dec 15, 2018. <https://finance.detik.com/properti/d-4267636/ini-biang-kerok-program-sejuta-rumah-tak-pernah-capai-target>

<sup>267</sup> As reported to the press by Public Works Minister Basuki Hadimuljono. Tempo Dec 8. Accessed Dec 17, 2018. <https://bisnis.tempo.co/read/1153510/menteri-pupr-program-sejuta-rumah-capai-target-bulan-lalu/full&view=ok>.

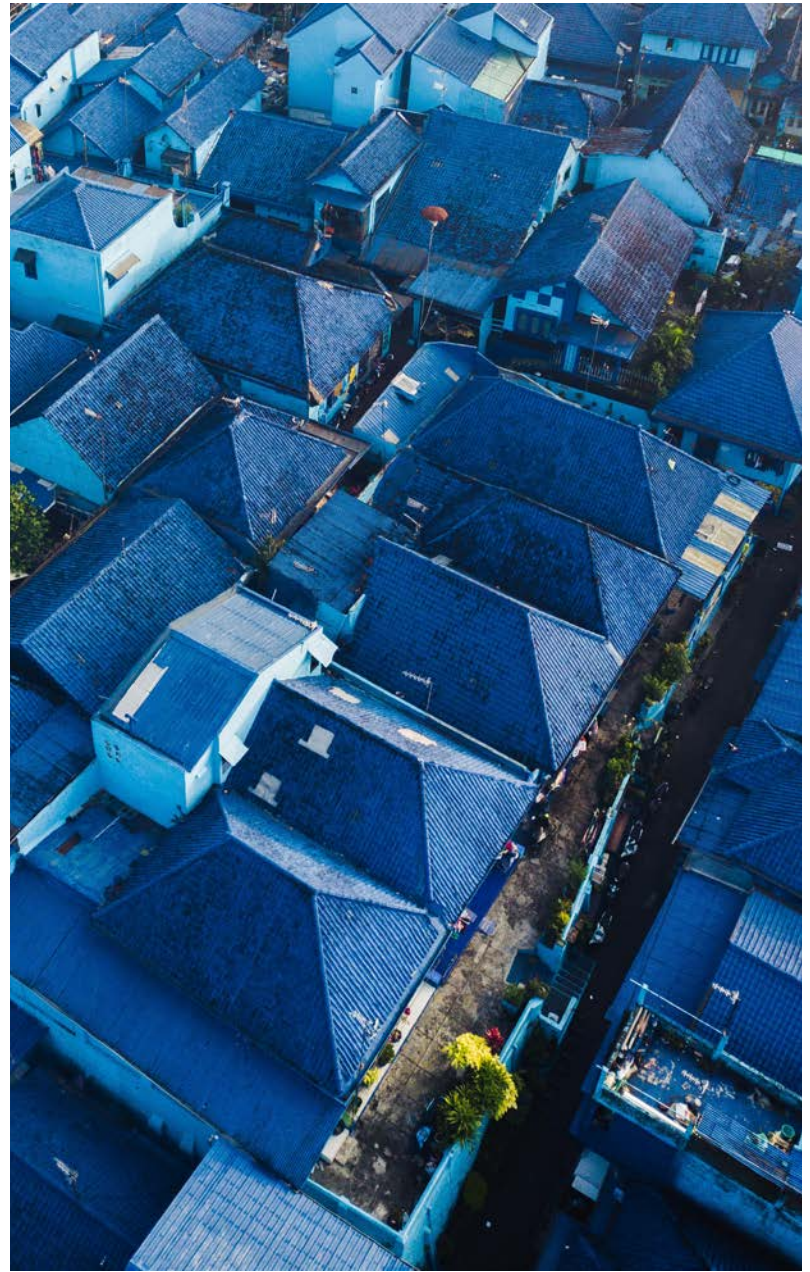


FIGURE 10.6.

FLPP and SSB programs exceeded the target volume in 2017-18...

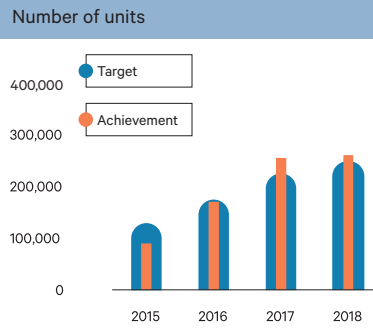
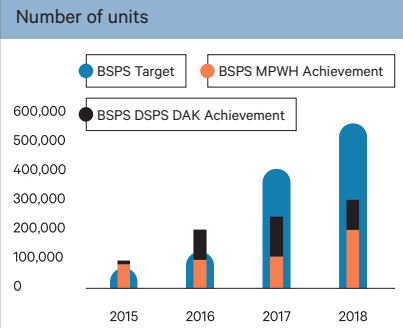


FIGURE 10.7.

...but not BSPS, which only met half of the targeted volume



Source: MoPWH Housing Provision Planning Directorate, World Bank staff analysis.

to the fact that BSPS mostly operates in rural areas, whereas most substandard homes are located in urban areas, particularly in slums. However, it is a positive development that since 2015 the central government has started to decentralize the implementation of BSPS through the Specific Purpose Fund (*Dana Alokasi Khusus*, or DAK) for housing, thus helping volumes move closer to the program target.

**While these mortgage subsidies have helped the GoI to achieve its quantitative targets, they are expensive and unsustainable in the longer term, creating long-term liabilities and interest rate risks.** Both FLPP and SSB have high per unit costs of IDR 59 to 61 million (in net present value

terms) per subsidized unit (Figure 10.10, see Annex 10.1 for calculations). Multiplied by the average number of subsidized units per year (about 230,000), this amounts to about IDR 14 trillion, or IDR 1.3 trillion per year over the life of a 20-year loan. As a result, while the direct fiscal costs have increased only moderately over the years (Figure 10.4), the resulting total present value of subsidy costs in 2018 reached an estimated IDR 17 trillion—double the upfront fiscal cost and a tenfold increase from 2011 (Figure 10.5).

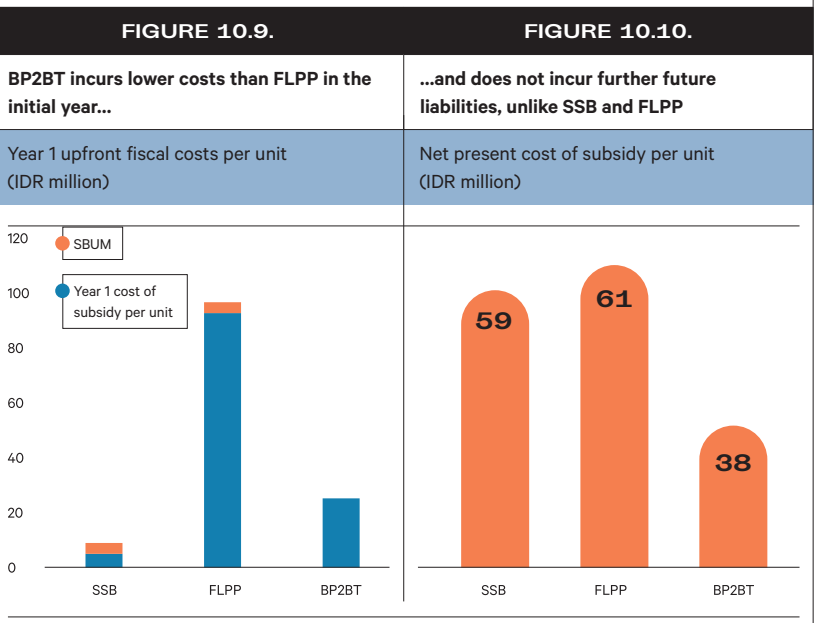
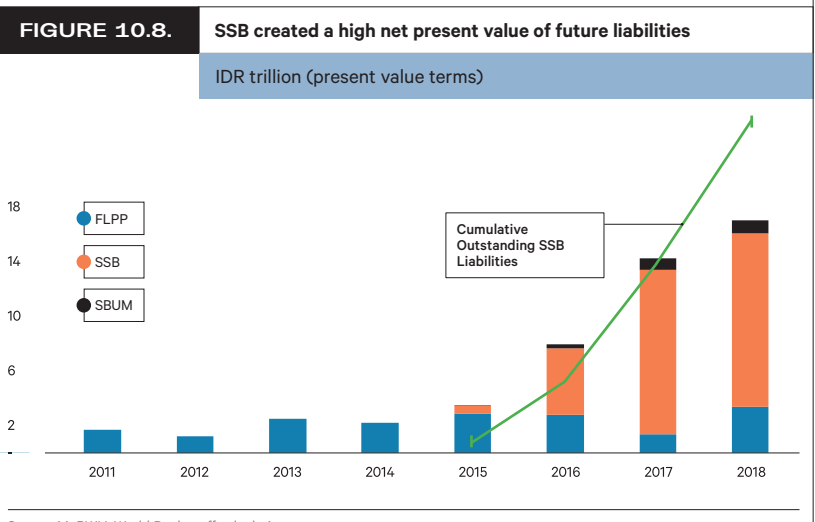
**This significant increase is due to a combination of two developments related to SSB.** First, as mentioned earlier, the introduction of SSB in 2015 led the average annual volume of mortgage subsidies to more than

double. Second, SSB generates large future liabilities for the GoI throughout the life of the loan (up to a maximum of 20 years). It is estimated that SSB loan origination over 2015-19 has created about IDR 30 trillion in future liabilities for the GoI (see last paragraph of Annex 10-1 for calculations), not including infrastructure costs. Furthermore, the GoI is also exposed to interest rate volatility risk, which is caused by the fact that the GoI bears the risk of the differential between the market interest rate and the 5 percent fixed interest rate.

**A more efficient subsidy product would help to assist low-income households, while lowering the risk to public finances.** BP2BT, the GoI's newest housing subsidy scheme launched in September 2018 in partnership with the World Bank, is one such alternative. Contrary to FLPP and SSB, BP2BT provides one-time down-payment assistance to low-income households, future economic liabilities and long-term administrative costs. On average, commercial lenders would finance 70 percent of the property value, while the GoI would cover about 28 percent in down-payment assistance and beneficiaries would cover about 2 percent. The product targets lower-income consumers and has a progressive design, with higher assistance for lower-income consumers.

**Figure 10.9 and Figure 10.10 illustrate how BP2BT is a more efficient subsidy than FLPP and SSB.** For a property valued at IDR 150 million, BP2BT would provide consumers with an average down-payment assistance of IDR 38 million<sup>268</sup> in the initial year. Since BP2BT does not incur future liabilities, the total cost to the GoI is the same in net present value terms (IDR 38 million). In contrast, FLPP is an expensive program, incurring IDR 111 million in the initial year of loan origination, and about IDR 61 million in net present value (NPV) terms throughout the life of the loan, including SBUM (see Annex 10.1 for more detailed calculations). SSB incurs lower costs to the GoI than FLPP and BP2BT in Year 1 since it only covers the difference between the market and subsidized interest rate, but then incurs annual liabilities that amount to about IDR 59 million in NPV terms. These numbers are sensitive to fluctuations in the benchmark market rate (for SSB) and costs of funds (for FLPP and SBB).

**Aside from their high per unit costs, FLPP and SSB crowd out the private sector, while also failing to offer a clear exit strategy for the GoI.** Both FLPP and SSB offer a subsidized interest rate of 5 percent for eligible households—far lower than private banks' interest rates, which start at around 7-9 percent for the first 3 to 5 years



Note: SBUM is offered as additional down payment assistance (IDR 4 million) for SSB and FLPP. NPV refers to net costs of subsidy to the government accounting for all future cash flows at a discount rate of 8.17 percent. These estimates assume a Loan to Value ratio of 95 percent, property value of IDR 150 million, SBUM assistance of IDR 4 million, customer monthly payment of IDR 0.83 million, loan tenor of 240 months, SSB market benchmark mortgage rate of 10.3 percent as per assumptions shown in the Annex 10-1, GoI-provided capital of 75 percent of loan principal  
Source: Authors' estimates based on MoPWH data.

<sup>268</sup> Assistance amount for BP2BT varies depending on income.

before converting to a floating rate of 12 to 14 percent (Figure 10.11). This makes it impossible for commercial banks to compete and crowds them out of the market for middle-income salaried workers. In addition, the low fixed interest rate obligates the GoI to continue subsidizing the loan for its entire life (up to a maximum of 20 years) and offers no clear exit strategy for disengaging.

In contrast, BP2BT has a market interest rate, crowding in the private mortgage sector through increased lender profitability and securitization. The BP2BT credit-linked subsidy product being developed by the GoI and the World Bank capitalizes on the private mortgage market to deliver more loans at a lower cost to the GoI. For IDR 1 trillion of funding, the BP2BT program has the capacity to dispense about 26,000 units. This is 50 percent more than the amount that can be served by either the FLPP and SSB programs at about 17,000 units on a comparative economic basis (Figure 10.12).

**“Aside from their high per unit costs, FLPP and SSB crowd out the private sector, while also failing to offer a clear exit strategy for the GoI”**

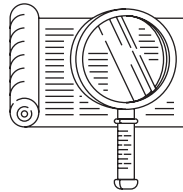
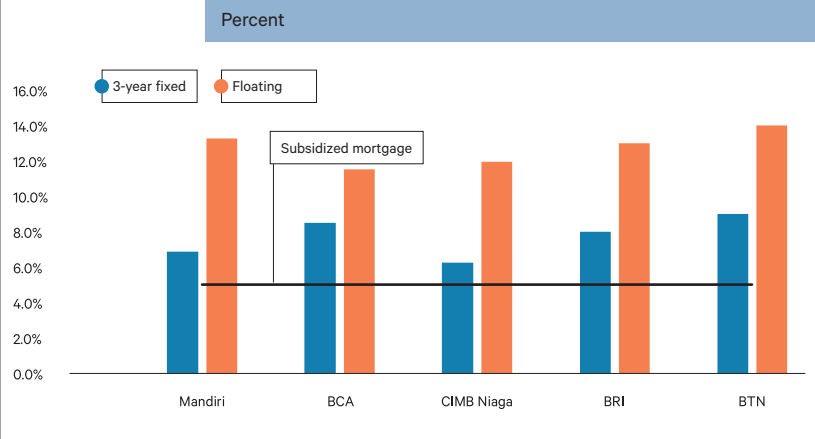


FIGURE 10.11.

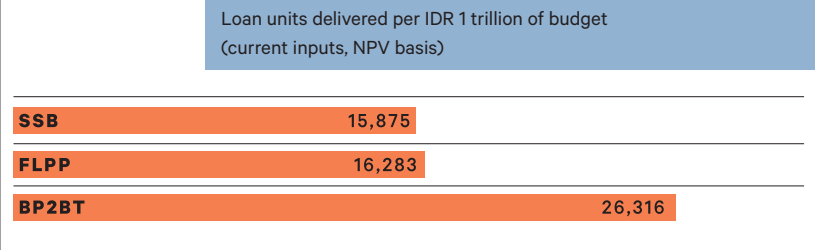
Both FLPP and SSB crowd out the private sector by offering a lower interest rate



Source: Information collected from various banks by World Bank staff, Nov 2018.

FIGURE 10.12.

BP2BT has the potential to deliver more units for every IDR 1 trillion



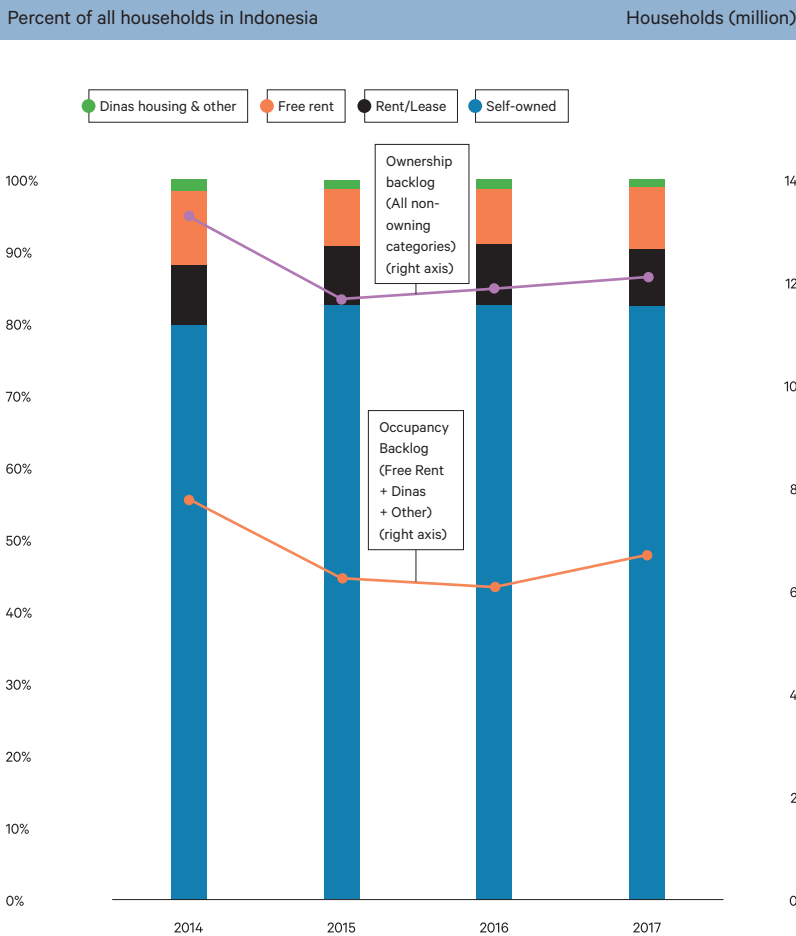
Source: World Bank staff estimates based on MoPWH data.

## C How Effective Is Public Spending in the Sector?

*To what extent has public spending contributed toward the GoI’s goal of housing for all Indonesians? This section evaluates the effectiveness of public spending on housing, focusing on KPR subsidy programs. Critical issues related to leveraging, livability, equity and affordability are considered*



**FIGURE 10.13.** Progress in reducing the occupancy backlog and the number of substandard homes has been slow



Source: Susenas 2014-17. Note: The occupancy backlog is the sum of households who 'free-rent' their residence or reside in Dinas/other' housing.



## C.1

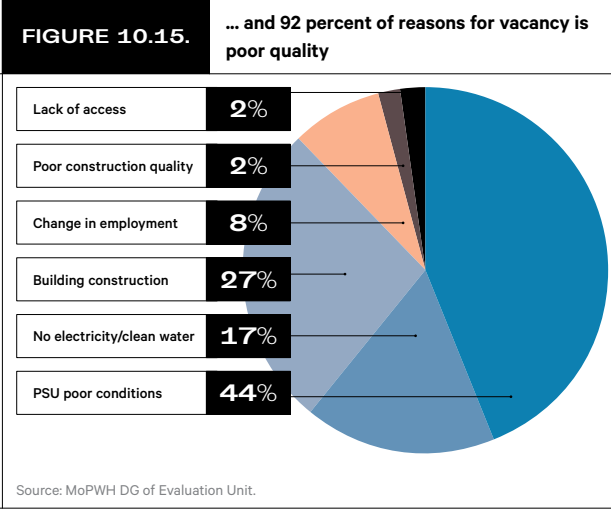
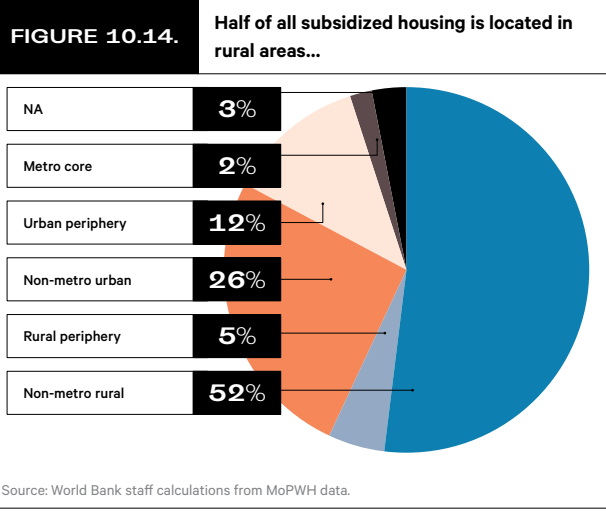
### Has public spending helped the GoI to achieve the RPJMN targets?

**Despite mostly meeting these targets for public housing construction and subsidies, progress in reducing the occupancy backlog and the number of substandard homes has been slow.** Although the number of households that live in homes that are classified as 'free-rent', Dinas housing, and 'other' declined from 7.6 million in 2014 to 6.1 million in 2016,<sup>269</sup> it increased again to 6.7 million households as of end-2017 as the share of 'free-renting' households increased. The number of substandard homes has declined from 3.4 million to 2.8 million, but this is according to the broader definition of households meeting three or more substandard indicators. As shown in Figure 10.2, 22 to 43 million homes can still be considered inadequate if assessed against higher standards.

**Progress on reducing the housing backlog can be accelerated if government program design can be extended to include different housing typologies, and if rentals can be an acceptable form of affordable housing rather than focusing narrowly on the goal of home ownership.** Currently, both FLPP and SSB finance new developer-built units exclusively, leaving out other forms of home ownership, such as the purchase of existing properties and owner-driven construction. Ninety-nine percent of FLPP and SSB subsidies are for new landed houses, neglecting purchase or rent of existing houses, low-rise vertical housing types such as duplexes and townhouses, and rental flats. Moreover, landed house prices are at a lower price point than consumer aspirations, are too small for many families, and are usually built far away from city centers. In the longer term, it is unclear if this type of subsidized house will achieve the same level of home price appreciation for homeowners, given their lower quality and distant location compared with the market home price appreciation norm.

<sup>269</sup> These are responses to the National Socioeconomic Survey (Susenas) question on ownership status. 'Free-rent' could include both squatters and households who are living rent-free with the permission of the owner. 'Dinas' refers to civil servants living in housing provided by the government as a benefit of holding office.

**C.2** **Has public spending helped the GoI to achieve the RPJMN targets?**



**Subsidized housing units tend to be poorly located and fail to meet the demand for housing in urban areas.** Although urban areas have the greatest housing need, 57 percent of FLPP-subsidized housing units were located in rural areas in 2017 (Figure 10.6),<sup>270</sup> an increase from 36 percent in 2016. In Medan, 88 percent of subsidized units for 2016 and 2017 were located 10 kilometers or more from the city center and in Subaraya and Bandung, the percentage was as high as 99 and 98 percent, respectively.

**While land may be more affordable further from urban centers, poorly located housing may result in higher long-term expenses for beneficiaries and for the GoI.** This is due to associated costs from trunk infrastructure, distance to economic centers, increases in commuting time, congestion, and a lack of home price appreciation. In

addition, studies have shown that poorly located housing, with relatively low access to public services and jobs, is associated with lower inter-generational economic mobility.<sup>271</sup>

**Moreover, the inferior quality of subsidized housing units leads to high vacancy rates, perpetuating the already high number of homes that are considered substandard.** The primary reason for vacancy was poor basic infrastructure conditions (44 percent), followed by faulty building construction (27 percent), and a lack of electricity and clean water (17 percent) (Figure 10.7). This is further confirmed by an assessment undertaken in 2018 by the Evaluation Directorate of the Directorate General of Housing Finance, which shows that 55.4 percent of developer-built subsidized units do not meet the minimum construction

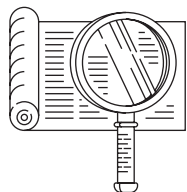
standards and infrastructure requirements as stipulated in the KPR subsidy regulations.

**In short, the poor quality of subsidized homes does not help the GoI to meet its goal of ensuring “housing for all”.** Government funds are being spent on housing units that do not provide beneficiaries with a long-term solution to their housing needs. Households that live in inadequate units will contribute to an increase in the qualitative housing deficit, while the distant location from urban areas and poor infrastructure may depreciate their home value. Increased household spending on upgrades and repairs to correct poor construction quality reduces the product’s affordability and creates a liability for the beneficiaries. These factors lower overall livability, and result in homes that are not safe, adequate, or affordable.

<sup>270</sup> Ministry of Public Works and Housing FLPP data for 2016 and 2017. World Bank analysis.

<sup>271</sup> Chetty et al., 2015.

“The poor quality of subsidized homes does not help the GoI to meet its goal of ensuring “housing for all””



### C.3 To what extent are subsidy schemes effectively leveraging private sector finance to deliver affordable and livable housing?

**The poor quality of housing is, in part, exacerbated by the fact that subsidized housing developers are generally fragmented, localized and small in scale.** In 2016, about 80 percent of developers participating in FLPP built 30 percent of the FLPP units, at an average of about six units per developer. These small developers do not have the economies of scale necessary to produce good quality housing, as they lack access to skilled construction workers and project managers, good quality construction materials, and technology and finance. In addition, they may not be as concerned with reputational risk as larger-scale developers.

**In addition, lenders and developers that participate in FLPP and SSB face limited risks, contributing to moral hazard.** Lenders participating in FLPP receive a minimum net interest margin (NIM) of

about 1.5 percent and an internal rate of return of 8.2 percent.<sup>272</sup> Furthermore, they are generally protected against borrower default through buy-back guarantees (during the first one to three years of the loan), and with a mortgage guarantee (after the buy-back guarantee period). Likewise, developers receive a 20 to 30 percent margin on subsidized housing projects. In the case of beneficiary default during the buy-back guarantee period, units can be refurbished and resold, sometimes at a higher price. Lenders and developers therefore do not have much ‘skin in the game’, which contributes to issues of poor housing construction quality, non-compliance of residency requirements, and targeting. In short, FLPP and SSB appear to benefit lenders and developers rather than consumers.



## C.4 To what extent does public spending promote equality in access to housing subsidies and grants?

BSPS home improvement grants are relatively effective in targeting low-income (MBR) Indonesian households, as per its stated intention. Sixty-five percent of BSPS beneficiaries are from the poorest 4 deciles of household consumption, i.e., the poorest 40 percent of households.<sup>273</sup>

Contrary to their objective of promoting equal access to housing, FLPP and SSB are regressive schemes that benefit higher-income earners more than the targeted low-income group (MBR). This is due to two reasons:

1

### There is significant vertical inequality across the subsidy programs.

Beneficiaries of the BSPS program at the bottom 2 deciles receive a subsidy of IDR 15-30 million, while beneficiaries of the FLPP and SSB in income deciles of 3-9 receive a subsidy of IDR 40-100 million. The majority of FLPP and SSB beneficiaries received subsidies at an NPV of up to IDR 61 million, which is two to four times that of BSPS beneficiaries (Figure 10.16, right panel). Moreover, the GoI is currently preparing the launch of FLPP ASN—an extended FLPP program designed for civil servants (the ASN segment)—who are in income deciles 7-9. The subsidy would range from IDR 80-160 million on a NPV basis, thus further exacerbating vertical inequality.

2

### More subsidies go to those who purchase more highly-valued properties, thus benefiting higher-income earners.

The per unit subsidy cost for a landed house peaks at around IDR 60 million, while multi-story units with higher property value peak around IDR 135 million. In other words, higher-income earners who buy more expensive properties receive larger subsidies from FLPP and SSB.

In summary, using the “Basic Income” eligibility criterion masks the actual household income of beneficiaries, allowing for the highest-income earners to benefit from government subsidies that are intended for the MBR. The GoI needs to clearly define the MBR segment and provide housing subsidies only to that segment.

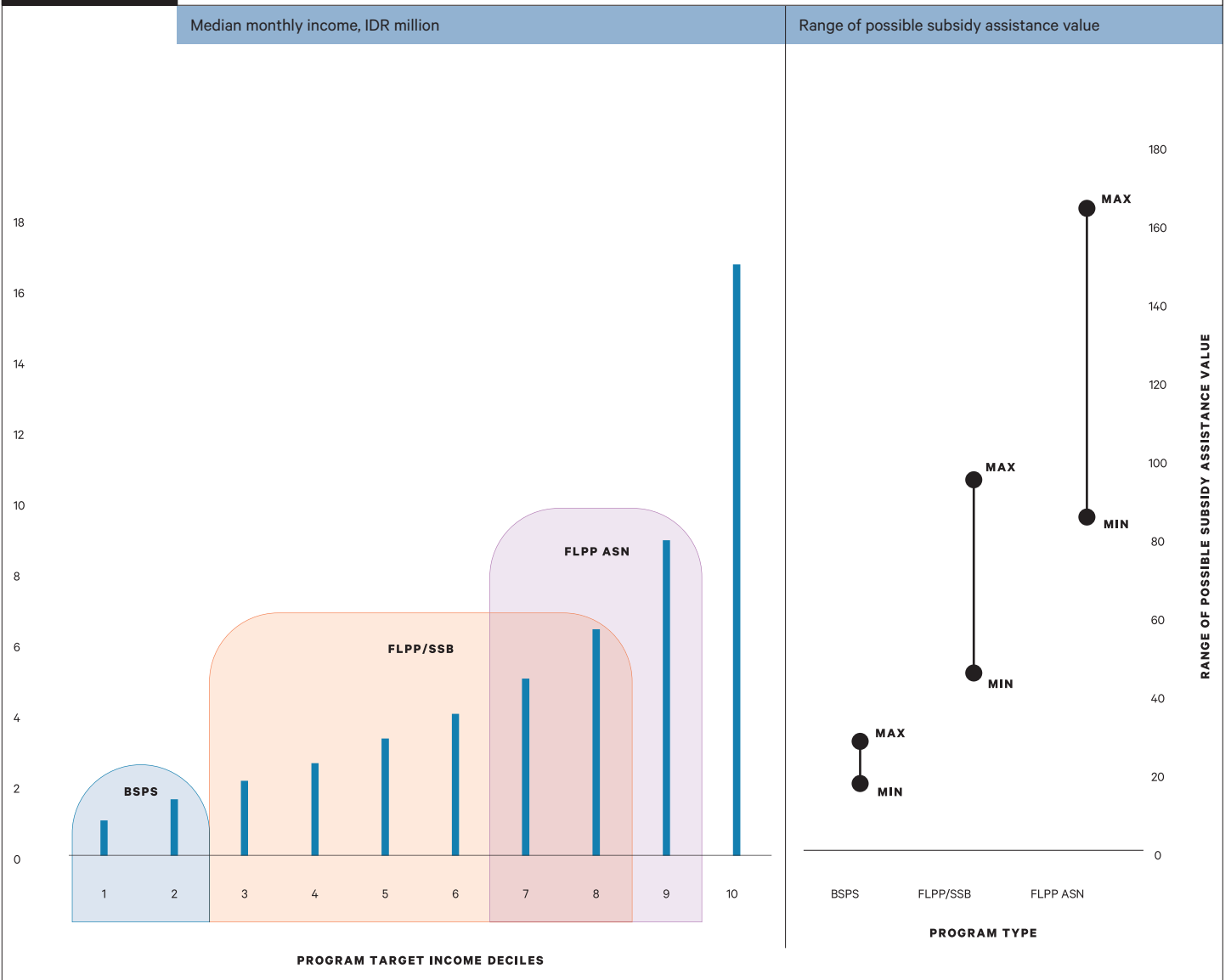
<sup>273</sup> Source: MPWH Laporan Pemantauan dan Evaluasi Rumah Swadaya, 2018.





**FIGURE 10.16.**

Although FLPP and SSB are supposed to target low-income households, in practice middle- and higher-income groups receive more benefits due to poor targeting and the regressive design of the subsidy



Source: Susenas 2017, MoPWH, World Bank staff calculations.

Source: Susenas 2017, MoPWH, World Bank staff calculations.

# Recommendations to Improve *the* Quality of Spending

- A *Short Term*
- B *Medium Term*



**A**s a principle, government subsidies should be used to intervene where the market is unable to reach, ideally focusing on lower-income households and where risk is higher than what can be borne by the private sector. Current trends work in the opposite direction, providing larger and deeper subsidies for higher-income segments, and crowding out the private sector. The upcoming RPJMN 2020-2024 is an opportunity to strengthen the sustainability of public spending on housing, better leverage private sector resources to meet housing gaps, and ultimately fulfill SDG goals, while supporting housing provisioning for all Indonesians.

**This section provides short- and medium-term recommendations to help the GoI to meet its goal of providing housing for all Indonesians efficiently and effectively.** Ideally, housing policy should promote efficiency, equity, transparency, and help to leverage private/household resources to promote innovation and competition.



## *Short Term*

**F**irst, the GoI should shift public funding toward more efficient, progressive, and better-targeted subsidies. As illustrated earlier, shifting public funding toward more progressive subsidy schemes such as BP2BT would help to improve the efficiency and effectiveness of spending.

Existing subsidy programs can be further optimized to ensure per-unit cost efficiency and equity. The GoI has already committed to phase out of SSB in 2020, while reducing its FLPP liquidity contribution from 90 to 75 percent of the loan has begun in 2019. To further optimize FLPP, one or a combination of the following measures could be considered:

- 1 Further reduce the GoI’s liquidity contribution (from the current 75 percent of the loan);
- 2 Increase the interest rate at loan origination or on a step-up basis in line with beneficiaries’ capacity-to-pay; and
- 3 Leverage SMF capacity to tap capital market funding for blended liquidity support.

**One major constraint to implementing these recommendations is the political nature of affordable housing provision in Indonesia, as in many other countries.** The provision of affordable housing can become highly politicized, leading targeting and budgeting decisions to move with election cycles, and negatively impacting the executing agencies’ ability to implement housing programs. Associating housing programs with election cycles also hinders their ability to achieve long-term efficiency through monitoring and evaluation (M&E), and improvement. Politics can also influence the measurement of a program’s success, as performance indicators place more weight on a numeric achievement in lieu of SDG measures such as construction quality, safety, adequacy, or livability. However, several countries have managed to establish long-term national affordable housing policies and strategies and implement them in a consistent manner. Singapore’s public housing pro-



gram, for instance, has been lauded as one of the world’s best practices and the long-term planning nature of the program is among the key drivers of success.

**Second, the GoI should also ensure that subsidized homes are of good construction quality and are built in well-located areas.** To do so, the MoPWH should consider:

- 1 developing spatial suitability tools and guidelines for subsidized housing, including location screening with hazard mapping, to ensure well-located housing development and to protect beneficiaries from investing in poorly located projects that can strain their social and economic livelihoods;
- 2 developing a robust M&E system using geo-tagging technologies to track quality and take actions to address non-compliance of quality standards; and
- 3 promoting the development of a nationwide developer certification and scoring system in partnership with real estate associations and the MoPWH’s Directorate General of Construction Development (Bina Konstruksi) to disengage poorly performing developers, while incentivizing quality developers.

**Currently, the lack of a strong M&E system limits the implementation and long-term sustainability of housing programs.** Audits are conducted by BPKP and BPK, the internal GoI and external auditors, respectively, but do not focus on the quality, effectiveness, and efficiency of spending. This limits accountability beyond volume of developers and mortgage providers. Compliance enforcement is not systematized, increasing the likelihood of poor construction

and infrastructure from developers and lenders, as well as the voiding of residency compliance requirements of consumers. Finally, a strong consumer complaints system is also lacking, limiting consumers’ ability to voice issues related to their subsidized homes.

**Third, in the short term, the GoI can also develop a Housing Micro-Finance (HMF) subsidy program to finance home improvements and incremental home extensions.** HMF consists of small, unsecured loans offered for relatively short terms and in succession to support the “incremental building practices” of low-income populations.<sup>274</sup> There is currently no formal HMF market in Indonesia, despite a sizeable need for home improvement reflected by the urban qualitative housing deficit: about 22 million households in income deciles 1 to 8 live in substandard housing. The plethora of microfinance providers notwithstanding, the market for home improvement financing is currently underserved (Figure 10.18). Furthermore, grants received from the BSPS home improvement program are generally only adequate to complete the minimum upgrade or re-construction work, and additional HMF funding would help to fully complete the home upgrade/construction in an adequate manner. Meeting this need could have a significant impact on the well-being of households in this target segment.

**To build and scale an HMF product, lender commitment combined with a well-designed government support program comprising financial and non-financial assistance are key.** To achieve scale, the product design and operational process should be well structured, while necessary checks and balances must also be in place. Finally, in the short term, the GoI can improve the planning processes for affordable

housing development by developing and maintaining a Housing and Real Estate Information System.

**Planning for affordable housing is a key step in producing safe, adequate and affordable housing.** The RPJMN 2020-2024 can take two main actions to improve the planning process for affordable housing development at the national and local levels. Specifically, the GoI can: (i) use the Housing and Real Estate Information System (HREIS) to expand access to housing data; and (ii) leverage spatial planning tools to plan for affordable housing.

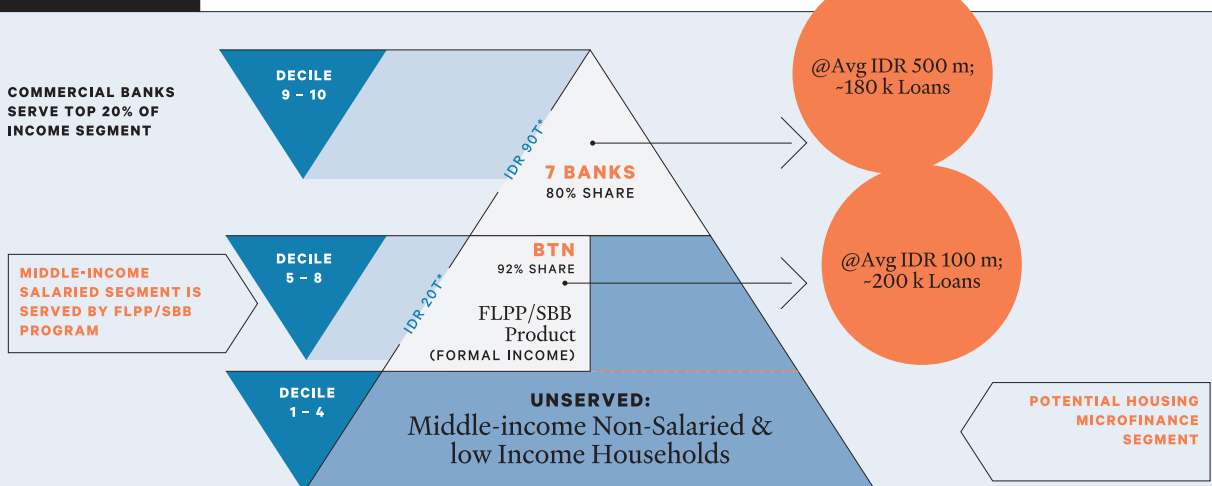
**1 Use the Housing and Real Estate Information System (HREIS) to expand access to housing data.**

The GoI can accelerate evidence-based housing policy reform, planning and development, while actively engaging private investment in affordable housing, by using the Housing and Real Estate Information System (HREIS) platform (see Box 10.2).

**2 Leverage spatial planning tools to plan for affordable housing.**

A myriad of technologies can also be leveraged to enhance spatial planning and develop subsidized housing in well-located urban areas. The MoPWH should empower SNGs to make use of the appropriate spatial planning tools throughout the housing development process. One example is the Suitability Tool recently developed by the World Bank City Planning Labs project in collaboration with the Ministry of Agrarian Affairs and Spatial Planning (*Agraria dan Tata Ruang*, “ATR”), which has been tested in the municipalities of Semarang and Denpasar. The tool could evaluate the potential of undeveloped land and identify optimal locations for afford-

**FIGURE 10.17.** Gaps in housing provision options for the bottom of the pyramid



Source: World Bank team.

\*Mortgage Loan Origination of ~IDR 110 trillion

able housing based on proximity to services, population density, and land price and availability. The housing tool would also provide SNGs with a more precise ability to approve construction permits based on location guidelines, including proximity to basic services and natural risk areas.

**BOX 10.2.**

**The Housing and Real Estate Information System (HREIS)**

**T**he Housing and Real Estate Information System (HREIS), which will soon be developed as part of the World Bank’s National Affordable Housing Program, can serve as a depository of reliable, up-to-date data and analyses. Through the HREIS, the definition of key metrics such as housing backlog, sub-standard housing, and affordability can be fine-tuned. The platform can also include a geographic information system (GIS) for analyses of housing backlog, need, and supply gaps by geographical locations and consumer income segmentation. The following indicators can be considered as part of the HREIS platform:

- 1 Housing Quantitative Deficit.
- 2 Housing Sub-standard/Qualitative Deficit.
- 3 Housing Over-crowded Ratio.
- 4 Housing Affordability Index: Housing cost (benchmarked as installment amount or rental) plus other housing related expenditures as a percentage of total household expenditures) to assess housing affordability by micro-markets.
- 5 Housing and Transportation Affordability index: Similar to the above but including transportation cost. Example: <https://htaindex.cnt.org/>

6 Housing Location: Precise geo-coded location of subsidized units to assess their proximity to urban areas. Trend analysis of average/median distance of subsidized housing to urban centers.

7 Housing Quality: Percentage of subsidized units that meet minimum construction quality standards.

8 Subsidy Cost Efficiency: Per-unit cost of different housing subsidy programs.

9 Targeting: Demographic and financial information of consumers to ensure efficient subsidy targeting.

10 Housing need gap: Housing demand vs. housing supply.

A more exact understanding of housing need and supply gaps would enable the GoI to significantly improve planning and decision-making for policy and program development, as well as fiscal budget allocation. It can strengthen SNGs’ land-use planning and permitting processes, increase the efficiency of affordable housing policies, and expedite private sector investment in proper locations. It would also assist the private sector in its process of identifying and planning for investment in the housing sector in real time. Finally, the greater public will be able to access housing and real estate-related data, analyses, and sector indicators.

*A  
Medium  
Term*

**I**n the medium term, the GoI should consider developing alternative housing typologies that are cost-effective and meet the heterogeneous needs of consumers.

Currently, nearly 100 percent of FLPP/SSB subsidies are landed houses located away from city centers and fail to fulfill consumers’ needs and aspirations. Expanding the range of housing types eligible for subsidy would enable households to find a home that fulfills their needs, decrease land cost per unit, and encourage the creation of sustainable communities as per SDG 11. Increasing the variety of housing types to include me-

dium- and large-scale multifamily options, such as duplexes, townhouses, fourplexes, and high-rises, as well as in mixed-income, mixed-use complexes, would lower land costs per unit and lead to more compact and inclusive urban development.

**Specifically,** the MoPWH should:

- 1 Test and pilot new low-cost, innovative housing typologies and construction methodologies that meet consumer demand with key developers;
- 2 Consider alternative pricing methodologies based on alternative housing typologies; and
- 3 Integrate learnings into KPR subsidy regulations for implementation.

**The GoI could also support the development of a public-private partnerships (PPPs) for affordable housing framework to support access to affordable housing in urban centers.** One of the main drivers of poorly-located subsidized housing is the high cost of land in well-located ur-

ban areas. PPPs could leverage underutilized urban land to create affordable housing. A systematic process of identifying affordable land in well-located areas that may belong to SOEs, SNGs, and/or *waqf*<sup>275</sup> is a good starting point for PPP pilot projects. Technical assistance should be provided by central to SNGs to develop feasible PPP models for mixed-income, affordable-housing projects, while the MoF-led PPP unit and/or a MoP-WH-led grant system could provide funding to SNGs for project implementation. Integrating affordable housing as a part of the GoI’s current infrastructure strategic planning and land development by crowding in affordable housing in Transit-Oriented Development (TOD) projects is another option for producing well-located housing. Affordable housing can be required as part of TOD projects in return for incentives, such as lower land and tax costs, reduced parking, expedited permitting, and/or density bonuses. Without affordable housing as a component of infrastructure development, low-income housing would certainly be segregated and the opportunity for shared prosperity and inclusivity would go unrealized.

<sup>275</sup> *Waqf* is a charitable endowment made under Islamic law

**The MoPWH should develop rental policies as an alternative and pragmatic housing solution to home ownership.** Rental housing meets the critical needs of specific consumer segments, providing flexibility and mobility to migrant workers, addressing housing affordability for young families and low-income households, and meeting the needs of elderly individuals who no longer have a need for large homes. Having a mix of housing tenure options not only creates a more stable housing market but also supports a more flexible and dynamic workforce. In addition, it can help create balance in a housing market given the risk of speculative bubbles if there are no alternatives to home ownership.

**Specifically,** the MoPWH should consider ways to:

- 1 Conduct a comprehensive rental study and develop a rental roadmap to assess rental market demand, supply, challenges and opportunities, as well as institutional, financial, and fiscal capabilities;
- 2 Develop a set of recommendations to expand the rental sector; and
- 3 Assess feasibility and opportunities to subsidize the demand and supply sides for the rental sector by the GoI, such as rental vouchers for consumers and carefully designed tax incentives for developers.

**Improving coordination and collaboration across different housing stakeholders at the central and subnational government levels is crucial in implementing all of these recommendations successfully.** Currently, institutional coordination among national housing stakeholders (Bappenas, the MoF, the MoHA, and the MoPWH) lacks efficient arrangements, contributing to delays in program planning, funding and implementation. Moreover, despite decentralization efforts, the division of authority for housing development between

central and SNGs remains unclear.<sup>276</sup> Even after the enactment of a new regulation clarifying housing provision as a responsibility of SNGs,<sup>277</sup> many SNGs do not perceive this goal as a development priority, and hence do not allocate sufficient budget for this purpose. The central government continues to implement most housing policies and programs. The role of SNGs in housing provision has been contained to the issuance of construction permits (*Izin Mendirikan Bangunan*, IMB) and occupancy certificates (*Sertifikat Lain Fungsi*, SLF), but significant improvements are much needed to enhance the speed, technical effectiveness and coverage of these services. Delays in issuing permits for constructing affordable housing are common,<sup>278</sup> and only 10 percent of SNGs have the capacity (resources and know-how) to issue SLFs. In addition, SNGs have widely varying levels of fiscal capacity and are dependent on national line ministries such as the MoPWH for 70 to 85 percent of funding for affordable housing. SNGs also have insufficient institutional capacity to develop and implement urban plans, housing programs, and data management.

**Central government could therefore review and revise regulations to assign a clear role to SNGs in providing affordable housing, while building their capacity to do so.** An in-depth review of the adequacy and effectiveness of relevant decentralization regulations and fiscal transfers needs to take place so that SNGs can have a stronger role in addressing housing needs in their respective regions. Through Law No. 23/2014, SNGs are currently only mandated to manage the housing for post-disaster and relocation, while the responsibility to manage housing for low-income households is fully held by the central government. It is important to shift the mandate of affordable housing more toward SNGs in line with the principles of decentralization, while building their capacity. The central government should, in parallel, come up with a structured capacity-building plan for SNGs that includes hands-on train-

ing and working mechanisms for land-use planning and development and data management. The central government could build in a capacity-building program in the housing DAK, which already uses the BSPS guidelines, to enhance program long-term sustainability and minimize dependency on community facilitators, who currently play a role in ensuring that the guidelines are met. Once SNGs have better technical capacity and a robust M&E system, more DAK funding can be used to implement the BSPS program in the future. In addition, SNGs should develop city-specific programs to increase affordable housing, such as developing an affordable housing plan, reserving public or foreclosed properties for affordable and mixed-income housing development, analyzing the existing plot size and floor-area ratio regulations, accelerating effectiveness of construction permit and occupancy certificate issuance for affordable housing developments, and designating inclusionary zoning areas following the necessary economic analyses.

**In summary, the GoI's consistent commitment to the "Housing for All" policy is commendable.** However, more efforts need to be made to ensure that the majority of subsidized housing is built to serve the more critical and burgeoning need in urban areas. Furthermore, the design and targeting of housing subsidy programs needs to be optimized to enhance efficiency and to support households with the most need, rather than benefiting banks and developers. Overlaps between existing housing support programs should also be addressed. More stringent monitoring of the construction quality of subsidized housing is critical in ensuring that the GoI can provide safe, inclusive and adequate homes to all Indonesians. Finally, encouraging more collaboration across the housing stakeholders' value chain and, in particular, paying attention to not crowding out the private sector, will be critical in ensuring that the "Housing for All" target can be achieved in Indonesia.

<sup>276</sup> RPJMN 2004-2009 Evaluation Report. Bappenas, 2009.

<sup>277</sup> Government Regulation No. 38/2007 on Division of Government Affairs between the Government, Provincial, and Local Government of Regency and Municipality.

<sup>278</sup> These delays can cost developers as much as 20 percent of the total building cost over 12 months (Bank Indonesia 2017), discouraging private investment in the development of affordable housing. The GoI's 13th economic policy package, launched in 2016, planned to reduce the number of permits required for constructing affordable housing and lower the costs, but implementation has been slow and has not yet yielded the desired results. See Chapter 7 of "Time to ACT: Leveraging Indonesia's Urban Potential" (World Bank, forthcoming, 2019) for a more detailed discussion.

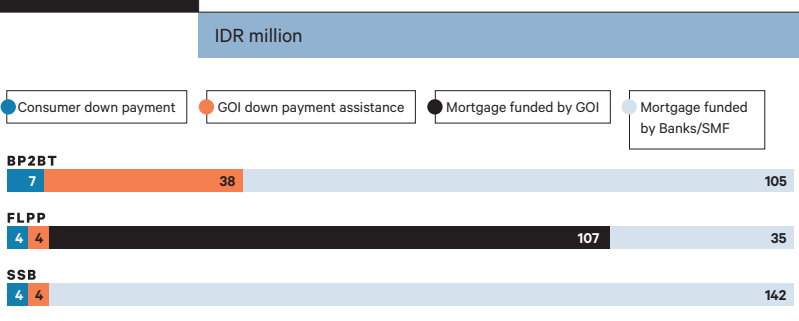
Annex 10-1

# Summary of main mortgage subsidy mechanisms, FLPP & SSB

The FLPP subsidy covers 75 percent of loan capital at a cost of fund of 0.5 percent for the participating bank. The consumer interest rate is fixed at 5 percent for the life of the loan. This means that, for a subsidized property of IDR 150 million, FLPP costs the GoI IDR 111 million in Year 1.<sup>279</sup> In net present value terms, this amounts to IDR 57 million. Adding the down payment assistance of IDR 4 million, FLPP costs the GoI about IDR 61 million per subsidized unit, or about 41 percent of the initial home price.

For SSB, the GoI subsidizes the difference between an agreed-upon market rate and the subsidized rate of 5 percent. Assuming a market rate of 10.3 percent,<sup>280</sup> the initial fiscal cost to the GoI in Year 1 is IDR 5.6 million for a similar property valued at IDR 150 million. However, the GoI must continue to pay an additional IDR 5.6 million annually throughout the remaining life of the loan. With a maximum loan tenure of 20 years, this means that the total cost is about IDR 112 million. In net present value terms, this amounts to IDR 59 million per subsidized unit including the SBUM down-payment assistance of IDR 4 million.<sup>281</sup>

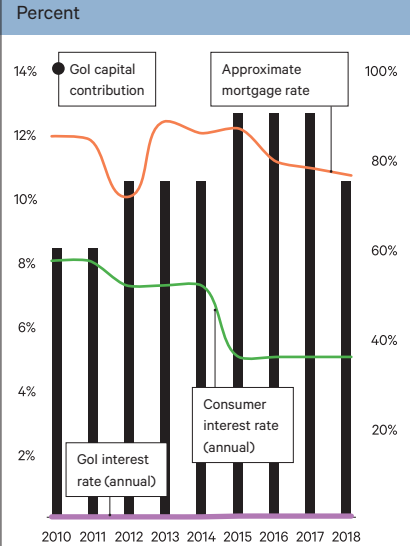
**FIGURE 10.18. Breakdown of funds for home purchase by subsidy product**



Note: NPV refers to the net costs of subsidy to the government accounting for all future cash flows at a discount rate of 8.17 percent. Key assumptions: Gross household income of IDR 5 million, 20-year loan tenure, SBI 1-year rate plus 5 percent. Source: Authors.

**FIGURE 10.19.**

**FLPP historical subsidy policy rates**



Note: Market mortgage rate estimated based on the SSB benchmarking model: Bank Indonesia Certificate (12-month) rate plus 5 percentage points. In years where the 12-month rate was not available, it was estimated based on average historical spread between the 12 month and the closest available rate. Source: MoPWH, Bank Indonesia.

## Calculation of historical future liabilities for FLPP and SSB

### A FLPP

The FLPP scheme provides homebuyers with a 5 percent interest rate for a mortgage of up to 20 years and allows a down payment as low as zero. With the availability of down-payment assistance from SBUM, typical down payments have been around 5 percent of the property value including assistance. As of April 2019, the MoPWH lends 75 percent of the loan capital to the implementing bank at 0.5 percent interest, with the remaining 25 percent provided at 4.45 percent by PT. Sarana Multigriya Finansial (PT SMF), the state-owned housing finance lender.<sup>282</sup> The implementing bank then on-lends to the customer, taking a spread over the weighted average cost of funds. These parameters have been adjusted several times since the launch of the program in 2010. Figure 10.20 summarizes the changes in key lending parameters over the life of the program.

The 75 percent of loan principal provided by the MoPWH is not considered a direct budget expenditure, as it is eventual-

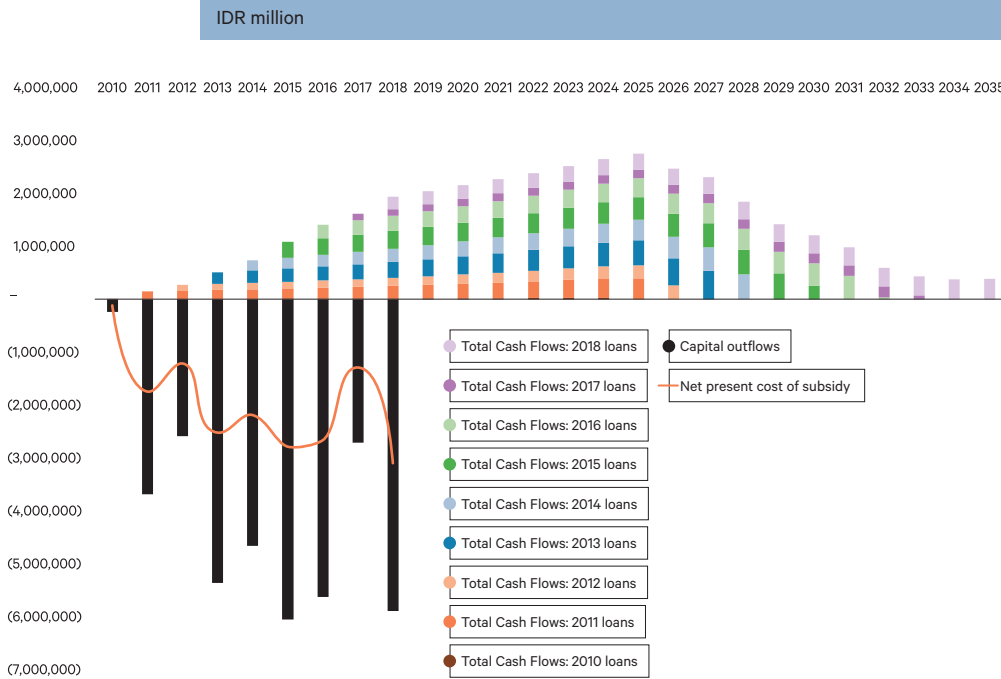
<sup>279</sup> Key assumptions: Property value of IDR 130 million; consumer down-payment of IDR 2 million, SBUM down payment assistance of IDR 4 million, loan of IDR 123 million. Discount rate is assumed to be the 20-year SUN rate, i.e., 8.17 percent, and the loan tenure is 20 years.

<sup>280</sup> This is the sum of the SBI one-year benchmark rate of 5.3 percent plus a lender margin of 5 percent.

<sup>281</sup> The present value of 112 million, discounted at 8.2 percent over the 20-year life of the loan.

<sup>282</sup> MoPWH.

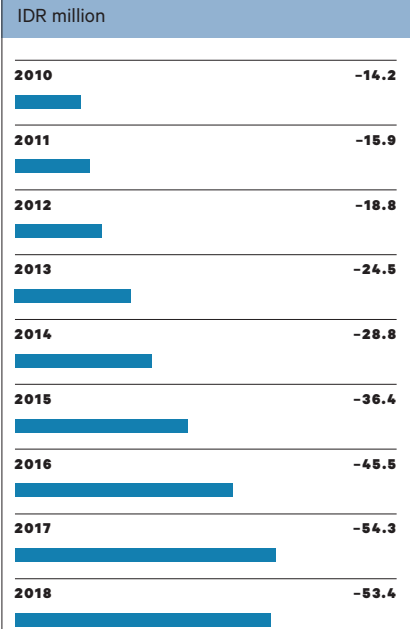
**FIGURE 10.20.** Breakdown of funds for home purchase by subsidy product



Source: Estimates based on historical program parameters and loan volume.

**FIGURE 10.21.**

FLPP net present cost per unit (2010-18)



Source: World Bank staff calculations based on MoPWH data.

ly returned in full to a revolving fund to be re-lent. However, the 0.5 percent interest earned is a fraction of what it would cost the GoI to raise the same amount through other means. In present value terms, the cost to the MoPWH amounts to about 50 percent of the principal for a 20-year loan under current conditions excluding SBUM expenditures.

Accounting for these costs in fiscal terms involves projecting the cash flows of loans issued in each year and discounting them to their present value equivalent in that year. Estimated cash flows for the loans issued under the FLPP program from 2010 to 2018 are illustrated in Figure 10.20.

Using this present value in year-of-issue method, the net fiscal cost of FLPP loans issued from 2010 to 2018 is over IDR 17.6 trillion, or an average of about IDR 2 trillion for 64,000 units per year. The resulting implication for cost efficiency by year is summarized in Figure 10.21.

**B SSB**

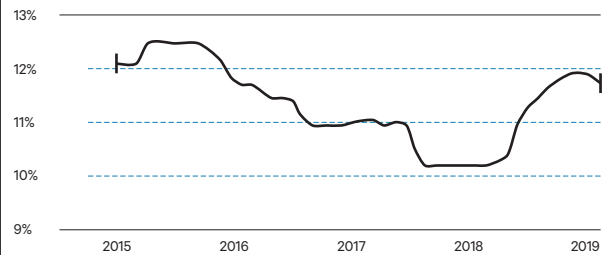
As described above, the SSB mechanism requires the implementing bank to put forward 100 percent of loan capital but pays the difference between: (i) the consumer's payments of an amortization at 5 percent; and (ii) a second amortization of the same loan at a benchmark market rate (currently

the Bank Indonesia 12-month Certificate rate plus 5 percent). This payment gap is recalculated and paid on a monthly basis throughout the loan period. Figure 10.22 shows the fluctuations in the benchmark rate used to calculate these payments to the implementing bank since the program launched in 2015.

Using these historical rates and an assumption of an 11.5 percent benchmark for payments made after February 2019, we project monthly payments for the life of each loan and discount them to the year of issue to arrive at the net present cost of the subsidy for each year (Figure 10.24).

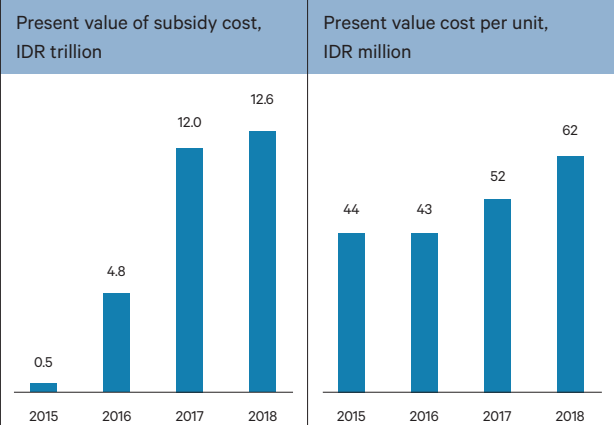
The net fiscal cost for the period 2015-18 using the present value in year-of-issue method amounts to nearly IDR 30 trillion, or an average of IDR 7.5 trillion for 140,000 units per year. These numbers are sensitive to fluctuations in the benchmark rate going forward. For example, an increase in the average monthly benchmark from 11.5 to 12.5 percent results in a cost increase of IDR 3.8 trillion over the repayment period of the same existing loans. Conversely, a decrease of 1 percent would save the GoI about IDR 3.7 trillion. This exposure to future interest rate fluctuations is a significant contingent liability for the GoI, considering the benchmark has been as low as 10.26 and as high as 12.5 percent during the four years of the program's life to date (a period of relative economic stability).

**FIGURE 10.22.** Historical SSB market benchmark used for payment calculation (monthly)



Note: These are actual historical figures.  
Source: MoPWH, SSB working unit (Satker).

**FIGURE 10.23.** Net present cost of interest gap payments for SSB loans issued in 2015-18



Source: World Bank staff calculations based on MoPWH data.

# 249–266

11.1	Context
11.2	Assessing the Quality of Spending
11.3	How Effective Is Public Spending in the Sector?
11.4	Recommendations to Improve the Quality of Spending

# Water Resources Management





## Key Messages

- A** Indonesia has set output targets on the construction and rehabilitation of irrigation systems, and the construction of new dams to achieve its outcomes for food security.
- B** However, it is unlikely to meet its 2019 targets.
- C** Spending is focused in general too much on new construction, compared with operations and especially maintenance. This is especially a problem for district-level irrigation systems.
- D** Coordination and technical (terrain geography) problems are an obstacle to effectiveness.

## Summary of Recommendations

### IMPROVE OPERATION & MAINTENANCE (O&M)

- A** Create incentives for subnational governments (SNGs) to increase budget for O&M.
- B** Apply asset management/full lifecycle cost planning (medium term).
- C** Introduce SOE-public-partnerships (SPPs) to identify revenue mechanisms to provide alternative long-term financing mechanisms.
- D** Build capacity of technical staff in river basin organizations and in SNGs for O&M.
- E** Introduce clear service agreements describing the roles, responsibilities, rights and obligations of service providers, and the recipients of the service.

### SCALE UP AND INSTITUTIONALIZE PARTICIPATORY IRRIGATION AT SUBNATIONAL LEVEL

- A** Ensure local commitment in rice-growing provinces and districts to support the agenda on food security.
- B** Strengthen the role of irrigation commission and water resource boards as local/multi-stakeholder platforms.
- C** Revise DAK to include the procurement of technical assistance.
- D** Improve clarity on the mechanism for irrigation scheme above 3,000 hectares (ha) under central government control.

### IMPROVE CONVERGENCE IN PLANNING, BUDGETING, TARGETING AND RESULT MONITORING

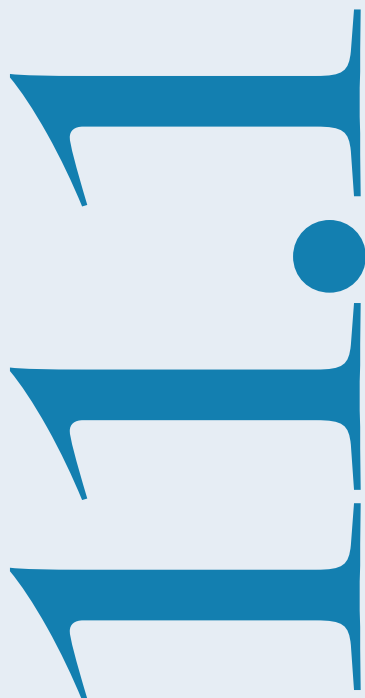
- A** Disseminate best practices on integrated sector planning and incentivizing coordination.
- B** Endorse an integrated, outcome-driven planning framework to enable stronger coordination and convergence of planning among related sectors.

#### Further key reading

"Indonesia Towards A Policy for Irrigation Management Modernization Country Assessment", World Bank, Ministry of Public Works and Housing, AusAID, November 2013 [link to be added]

"Maturity Matrices for Institutional Benchmarking of Dam Safety in Indonesia", World Bank, 2018. <https://openknowledge.worldbank.org/handle/10986/30067>

"Indonesia Country Water Assessment Report", ADB, 2016. <https://www.adb.org/documents/indonesia-country-water-assessment>



## Context

**I**ndonesia faces an extraordinary water management challenge. A vast archipelagic nation with 8,000 watersheds, 128 main river basins and over 5,700 rivers, water is generally abundant in Indonesia. However, demographic changes and urbanization are rapidly reducing water security. Per capita water availability is expected to remain ample overall in the longer term, but not in certain locations, especially on Java. The uneven distribution of the population across islands places more pressure on the Government of Indonesia (GoI) to improve the management of water resources across the country. Nearly 60 percent of the population lives on Java, the major center of economic activity, but the total water available in the island is only 4 percent, mainly due to the country's precipitation patterns.

**Water resources management (WRM) is essential for Indonesia's economic growth and social development through its role in providing food security,<sup>283</sup> water security and, indirectly, employment.** While Indonesia is a water-rich country, significant spatial and seasonal variations in water availability influence the management of water resources and irrigation essential to agriculture. The resource allocation framework at the central level for water resources and irrigation is based on a unique combination of the island archipelago, the uneven population distribution, and the nation's precipitation patterns. Moreover, agriculture is the main source of employment in rural areas and employs nearly 40 million people, or about one-third of the labor force. Ensuring the availability of bulk

water for irrigation through water resources infrastructure, such as dams and reservoirs, is therefore a key element in ensuring national food security (Table 11.1), which is critical to shared prosperity.

**Proper management of water resources is particularly important for rice production, which is by far the most important food crop grown in Indonesia.<sup>284</sup>** In 2011, Indonesia produced around 65 million metric tons, of which more than 95 percent was derived from irrigated rice fields.<sup>285</sup> However, the costs of irrigated rice production in Indonesia are high, while farm household profits are low. The development of water infrastructure, especially for food security, to support growth is a priority of the current National Medium-Term Development Plan (RPJMN 2015-2019).

**Efforts to achieve food security cascade from high-level policy directions to the creation of an enabling environment, including the provision of budget, infrastructure such as irrigation, dams, markets, reward and punishment mechanisms, knowledge-sharing, research and capacity building.** It also requires the provision of supplies such as land tenure, seeds, fertilizer, equipment, loan or credit; and demand creation such as for safe and nutritious food, preference for local products and variety food; and to conduct good agriculture and aquaculture practices, etc. The multi-sector collaboration applied in Indonesia is presented in Figure 11.1. The Ministry of Public Works and Public Housing (MoPWH), the Ministry of Agriculture (MoA), the Ministry of Trade (MoT) and subnational governments (SNGs) all share

**TABLE 11.1.** Concept of irrigation policy to achieve food security

	Policy	Strategy	Target
<b>Supply</b>	Increase irrigation resilience	Construction of water storage including reservoirs, dams and pumps	Construction of 65 dams
<b>Distribution</b>	Increase irrigation infrastructure resilience	Rehabilitation of the existing irrigation network  Construction of new irrigation network	Rehabilitation of 3 million ha  New construction of 1 million ha
<b>Accessibility</b>	Increase performance of O&M	Provision of O&M workers, O&M mechanism, activating local wisdom	O&M central 3,417,201 ha  O&M subnational 5,718,827 ha

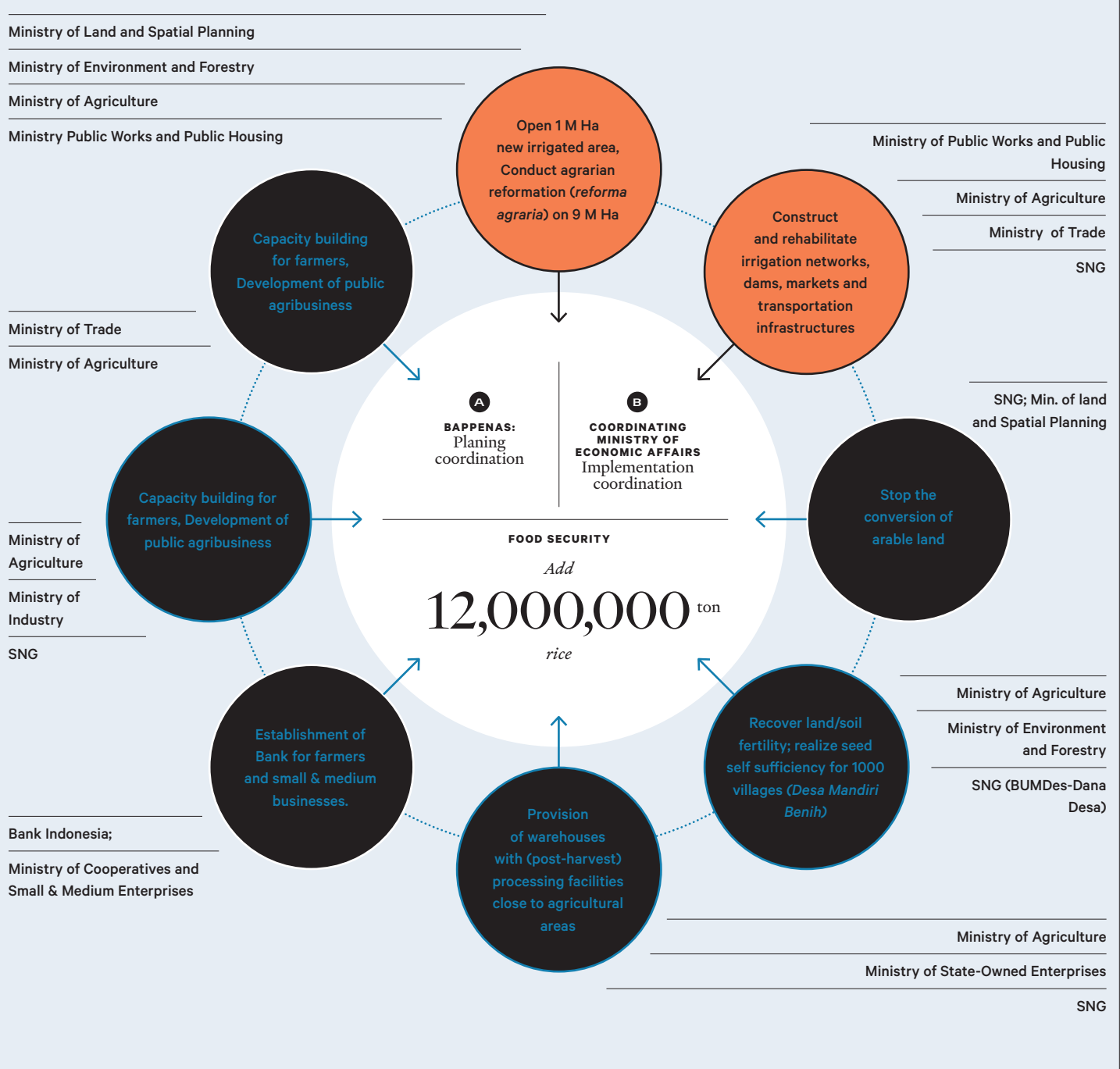
Source: Hadimoeliono, M.B. 2015. *Peningkatan ketahanan air sebagai dukungan terhadap pencapaian kedaulatan pangan* (translation: Increased water security as support for achieving food sovereignty).

<sup>283</sup> Food security is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs, customs and food preferences for an active and healthy life. Combined food security definition FAO.

<sup>284</sup> The GoI has targeted an additional 12 million tons of rice to reach the food security objectives under RPJMN 2015-2019.

<sup>285</sup> Indonesia Towards A Policy for Irrigation Management Modernization Country Assessment. World Bank, Ministry of Public Works and Housing, AusAID, November 2013.

**FIGURE 11.1.** Multi-sector collaboration to achieve food security in Indonesia



Note: BUMDes: village-owned enterprise. Source: Bappenas presentation at Musrenbang for Palu, December 2014. (Footnote 286)

responsibility with regards to water resources infrastructure, such as dams and irrigation, markets and transportation.

The GoI has adopted a well-defined sector plan for irrigation and water resources (Table 11.2). The GoI targets the production of additional 12 million metric tons of rice to reach the food security objectives under the RPJMN 2015-2019. Policy measures and priority investments in the

RPJMN 2015-2019 include: (i) the rehabilitation of 3.0 million ha of existing irrigation systems; (ii) the development of 1.0 million ha of new irrigation systems; (iii) the adoption of sustainable approaches for farming on rehabilitated upland areas; (iv) the development of farm roads; and (v) increased adoption of environmentally friendly technologies for food crops. The GoI is also investing in the construction of 65 new dams

under the *Nawacita* program to enhance water security for agriculture. Most of the irrigation schemes in Indonesia are run off the river systems and only about 11 percent of the total irrigation command areas are currently served by reservoirs. It is expected that the new dams will increase the share of command areas served by reservoirs to 19 percent by the end of this RPJMN.

286 Musyawah Perencanaan dan Pembangunan (Community discussion on local development needs). <https://www.slideshare.net/lilikwbs/paparan-men-pnmsusrenbangregionalpalusulawesi>

**TABLE 11.2.** Concept of irrigation policy to achieve food security

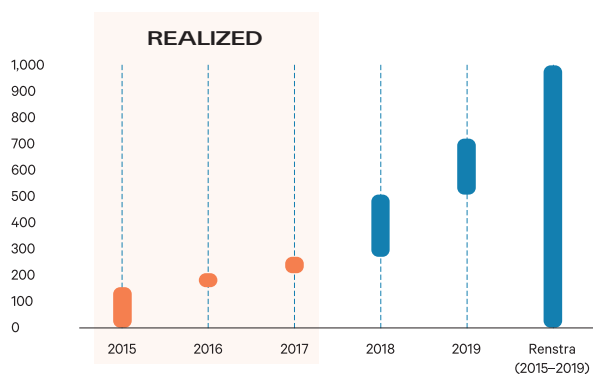
Outcome	Intermediate outcomes	Outputs	Covered in chapter
Additional annual rice production: 12 million metric tons of rice	Improved irrigation efficiency and agricultural productivity (“more crop per drop”).	Rehabilitation of 3.0 million ha of irrigation systems <ul style="list-style-type: none"> <li>• Baseline (2014): 0</li> <li>• Progress (2017): 1.1 million ha</li> <li>• Target (2019): 3 million ha</li> </ul>	Yes
		Development of 1 million ha of new irrigation systems; <ul style="list-style-type: none"> <li>• Baseline (2014): 0</li> <li>• Progress (2017): 0.3 million ha</li> <li>• Target (2019): 1 million ha</li> </ul>	Yes
		Adoption of sustainable approaches to farming on rehabilitated upland areas	
		Development of farm roads	
		Increased adoption of environmentally friendly technologies for food crops.	
		65 new dams constructed in the period 2015-23, of which 29 dams completed to enhance water security for agriculture in the period 2015-19 <ul style="list-style-type: none"> <li>• Baseline (2014): 0</li> <li>• Progress (2018): 12 completed out of 29</li> <li>• Target (2019): 29 completed</li> </ul>	Yes

Source: RPJMN, Renstra and e-Monitoring database (April 2017).

**FIGURE 11.2.**

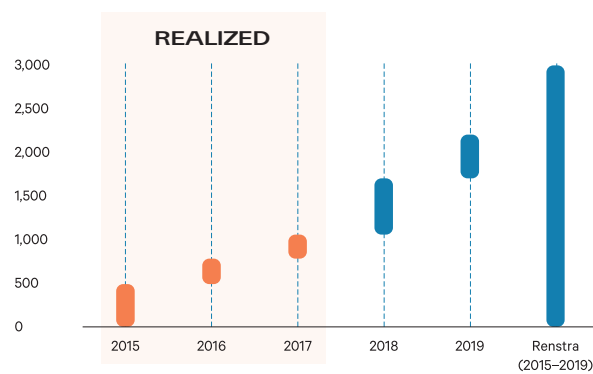
**Development of new irrigation area: progress to date and projection**

Thousand ha

**FIGURE 11.3.**

**Development of rehabilitated irrigation area: progress to date and projection**

Thousand ha



Source: MoPWH Strategic Plan 2014-2019 (PUPR 2014-2019) and MoPWH e-Monitoring database (April 2017).

**There has been progress toward the irrigation targets.** As of 2017, about 287,490 ha, or 29 percent of the new irrigation targets of 1 million ha of the MoPWH strategic plan, had been completed (Figure 11.2), and about 1.1 million ha out of 3 million ha had been rehabilitated.

**In order to achieve the broader vision of water security, food security and energy security, the GoI initiated an ambitious program of new dam construction**

**between 2014 and 2019.** This includes 65 new dams, the majority of which are located in Java (24), followed by Sumatra (11), Sulawesi (9), East Nusa Tenggara (7), Kalimantan (5), West Nusa Tenggara (4), Bali (3) and Maluku (1) and Papua (1). The overall cost of this program is estimated at more than IDR 72 trillion (around US\$5.5 billion). Once completed, this will increase the total storage volume by 7 billion cubic meters and provide water for an estimated 484,781 ha

of irrigated land (Table 11.3). These 65 dams cover about 46 percent of the targeted increase in irrigation system area. There is also a program for 140 existing dams in Indonesia with the aim of: (i) increasing the safety and functionality with respect to bulk water supply of large MoPWH-owned reservoirs; and (ii) strengthening the safety and operational management policies, regulations, and administrative capacity of the MoPWH.<sup>287</sup>

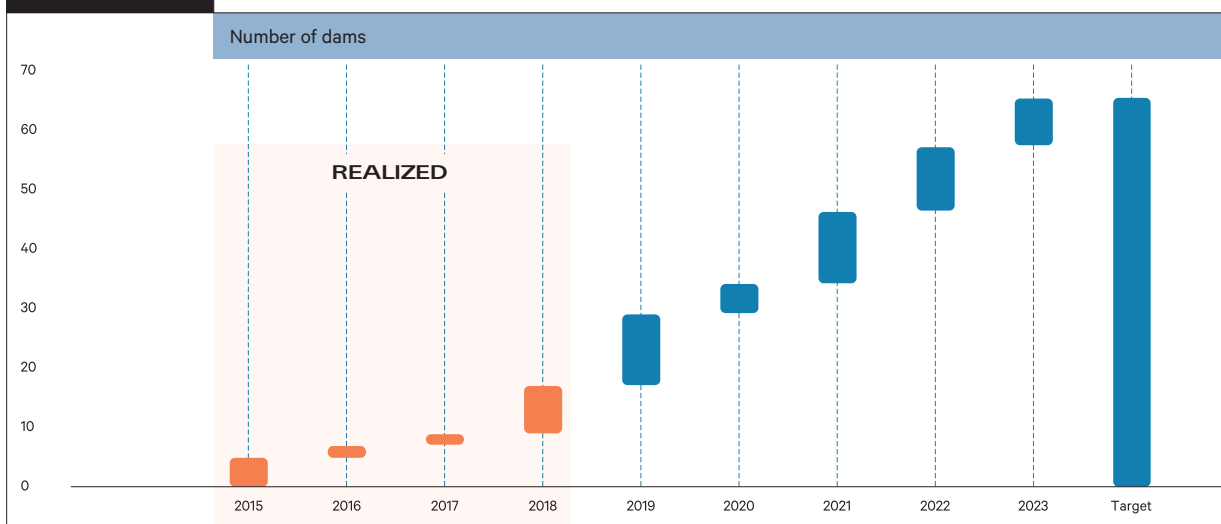
<sup>287</sup> This is a World Bank-supported Dam Operational Improvement and Safety Project: <http://projects.worldbank.org/P096532/dam-operational-improvement-safety?lang=en>

**TABLE 11.3.** Overview of new dam development in Indonesia

Island	Number of dams	Total volume (1,000 m <sup>3</sup> )	Irrigation area (ha)	Estimated (IDR trillion)	Estimated (US\$ million)
Sumatra	11	988,190	108,002	12	894
Java	24	2,668,220	221,641	25	1,929
Kalimantan	5	1,632,140	33,472	9	663
Bali	3	29,600	7,586	2	163
West Nusa Tenggara	4	99,920	12,134	2	171
East Nusa Tenggara	7	56,060	7,666	3	252
Sulawesi	9	1,474,030	91,380	13	968
Maluku	1	15,000	2,900	2	128
Papua	1	200,000		5	361
<b>Total</b>	<b>65</b>	<b>7,163,160</b>	<b>484,781</b>	<b>72</b>	<b>5,529</b>

Source: Database Pembangunan Bendungan DG Water Resources, MoPWH. <http://sda.pu.go.id/pusben/65bendungan.php>

**FIGURE 11.4.** New dam development: progress to date and projection



Source: Dam development and other water collection mechanism 2014-19 and policy direction 2020-24, presentation MoPWH.

While dam projects in Java, Sumatra and Sulawesi have been initiated and are underway, the construction of dams in Papua and Maluku has yet to commence (Figure 11.4). Implementation capacity in the extreme eastern parts of the country is complicated given the remoteness of the locations, the distance from the main economic centers of the country, and logistics constraints associated with construction in difficult terrain, hence implementation capacity of this con-

struction can be challenging.

**The management of Indonesia's water resources sector faces increasingly complex long-term investment and management challenges.** The GoI's strategy toward decentralization has adopted: (i) a basin-based integrated WRM approach; (ii) the improvement of governance for accountability; and (iii) effective service delivery of river and irrigation infrastructure, dam construction and other services.

However, fragmented mandates between the central government and SNGs, and between ministries, require strong coordination, incentives schemes, and more comprehensive regulations.

**The irrigation sector has been subject to a transformation since the process of decentralization and democratization started in 1998.** In 1998, the GoI assigned new authority and mandates (command areas) for the management and governance

of 7.4 million ha of government irrigation systems to national, provincial and district governments:

**1. National irrigation systems** account for 2,357,904 ha or 33 percent of the total in the country and each scheme is larger than 3,000 ha or crosses provincial borders. The jurisdiction and management responsibility of the national schemes is under the national River Basin Organizations (RBOs, see below) of the MoPWH. Operation and maintenance (O&M) is financed by the MoPWH.

**2. Provincial irrigation systems** account for 1,143,227 ha or 16 percent of the total schemes and have a size between 1,000 to 3,000 ha, or cross district boundaries. They fall under the jurisdiction of the provincial water resources service. O&M is financed from the provincial government's budget.

**3. District irrigation schemes** have a size of less than 1,000 ha. They account for 3,646,588 ha or 51 percent of the country's irrigation area. They are managed by the district agency responsible for water resources and irrigation. O&M is financed from district governments' budgets.

**The management of irrigation systems in Indonesia is typically done in three tiers (Table 11.4).** For National Irrigation Systems they are: (i) primary basin water supply systems managed by the 34 River Basin Organizations (RBOs) under the MoPWH and two River Basin Corporations (RBCs), namely Perum Jasa Tirta-1 and Perum Jasa Tirta-2<sup>288</sup> under the Ministry of State-Owned Enterprise (MSOE); (ii) the secondary system managed by the provincial/district irrigation agencies; and (iii) the tertiary units are the responsibility of the farmers, organized in Water Users' Associations (WUAs), as well as their Federations (WUAFs). However, clear service agreements that describe the roles, responsibilities, rights and obligations of the service provider and the recipient of the service are absent. These would be: (i) between the RBO and provincial/ district irrigation agency; and (ii) between the provincial/ district irrigation agency and the WUAFs. The absence of these agreements makes the provision of services to the farmer unreliable. The situation is aggravated by shortages of field-level staff at all three levels, and a lack of systematic information on actual amounts of water needed, available, and allocated.

**As part of its endeavors to improve cost recovery and to ensure the fiscal sustainability of river basin management systems, the GoI has established two self-financing state-owned enterprises, or River Basin Corporations, (PJT-1 Brantas and PJT-2 Jatiluhur), under the MSOE.** These entities are responsible for the O&M of river and bulk water supply infrastructure, with funding derived from sales of raw water, hydropower, water quality laboratory fees, and recreation fees, etc. PJTs' O&M activities are considered successful with financial support derived from their own revenues. However, all infrastructure development and rehabilitation investments continue to be funded through the national budget via the MoPWH, and the 128 river basins have no revenue-generating capacity.

**In addition, the GoI has adopted a policy of participatory irrigation management (PIM).** In this system the participation of water users in all aspects of development and management of irrigation systems, and the establishment of Irrigation Commissions as multi-stakeholder coordination and decision-making platforms, became mandatory at each district and province. The introduction of this reform agenda has been rolled out over the country since 2004. Following its introduction, the harvested rice area grew from 11.9 million ha in 2004<sup>289</sup> to 14.1 million ha in 2015. In the same period, production of dry husked rice increased from 54.1 million tons/ha to 75.4 million tons/ha, and average yields increased from 4.53 tons/ha to 5.34 tons/ha, or 18 percent over 12 years.<sup>290</sup> These results were achieved due to the increased participation and commitment of subnational governments (SNGs) in the management of irrigation services. Until recently, the focus had been completely on provincial and district systems.

<sup>288</sup> RBOs are government institutions that rely on government budget and not revenue generating entity. RBOs are established by and are responsible to all levels of government: central, province and districts, under supervision of the Ministry of Public Works and Housing. RBCs (PJT-1 and PJT-2) are SOEs, corporations under the Ministry of State-Owned Enterprises that manage water resources infrastructures (dams and irrigation networks) with revenue-generating capacity. The seven river basins covered by PJT-1 and PJT-2 are also the river basins under RBOs. The PJTs support some RBOs in the O&M of some river basins, especially dealing with hydropower dams.

<sup>289</sup> 2004 was the start of the implementation of the irrigation sector reform and introduction of the participatory irrigation management policy with the promulgation of Law No. 7/2004 on Water.

<sup>290</sup> Badan Pusat Statistik (BPS) 2018.

**TABLE 11.4.** The distribution of responsibilities for River Basin Organizations

Management responsibility	River Basin Organization	River basin
Central Government	34 (32%)	64 (50%)
Provincial Government	57 (54%)	52 (41%)
District/city Government	15 (14%)	12 (9%)
Total	106	128

Source: Permen PUPR No. 04/PRT/M/2015, <http://sda.pu.go.id>

**TABLE 11.5.** The distribution of responsibilities for River Basin Corporations

Management responsibility	River Basin Corporations	River basin
Perum Jasa Tirta-1 Brantas	1	5 (71%)
Perum Jasa Tirta-2 Jatiluhur	1	2 (29%)

Source: [www.jasatirta1.co.id](http://www.jasatirta1.co.id), [www.jasatirta2.co.id](http://www.jasatirta2.co.id)

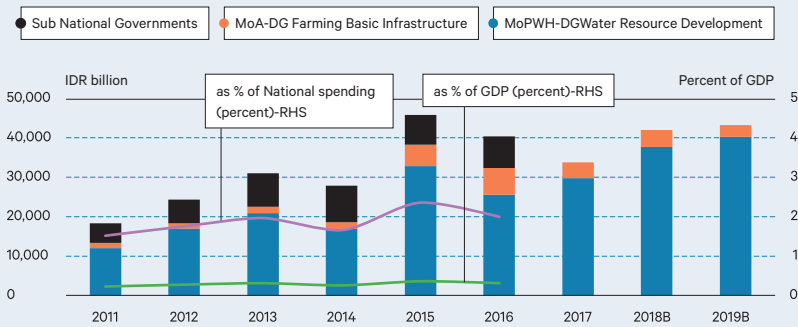


# 11.2

## Assessing the Quality of Spending

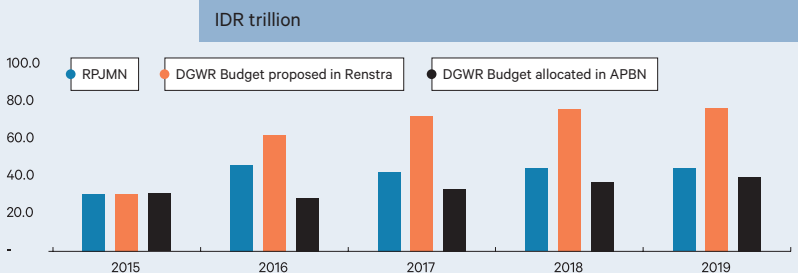
- A** Overall Trends: Is Spending Adequate?
- B** How Efficient Is Public Spending in the Sector?
- C** How Effective Is Public Spending in the Sector?

**FIGURE 11.5.** National spending on Water Resource Development, 2011-17



Note: Public expenditure on water resources comprises: (i) CG spending, including subsidies and interest payments, but excluding transfers; (ii) provincial-level spending; and (iii) district-level spending. Presented SNGs' spending in 2011-16 was estimated based on the ratio of SNG spending in water resources over infrastructure sector in 2007. Source: World Bank staff calculations using Ministry of Finance data.

**FIGURE 11.6.** Comparison between DG Water Resources budget proposed in the Renstra versus budget allocated in APBN



Source: MoPWH data and Financial Note of MoF.

291 2015 and 2016 budget increased by 63 percent compared with 2014.

*A*

### Overall Trends: Is Spending Adequate?

Public spending on the water resources sector only accounts for 1.7 percent of total national spending and around 65 percent of this spending is undertaken by the central government (Figure 11.5). The bulk of spending is from DG Water Resources (DGWR) under the MoPWH. The MoA is the other ministry that has budget for water resources through its Directorate General of Farming Basic Infrastructure and provides support for rehabilitation and construction of irrigation facilities at the farmers' level (tertiary). It also acts as a facilitator and regulator in activities including coaching, facilitating, coordinating and M&E in all provinces. WUAs are engaged through the MoA to maintain tertiary irrigation networks through grants provided to the WUAs.

Despite significant increases in 2015,<sup>291</sup> central government spending on water resources remains well below the MoPWH's Strategic Plan (Renstra) target (Figure 11.6). After the energy subsidy reform freed up fiscal space, the infrastructure budget increased by 40 percent (see Overview chapter). This mainly benefited the MoPWH, and the DGWR's budget increased by 47 percent, along with the budgets of other departments, such as DG Highways (see National Roads chapter). This coincided with the start of the Nawacita dam construction program.

For irrigation development, the other funding channel is through Special Allocation Fund (DAK), which represents a significant proportion of the funds managed by SNGs. Starting in 2016, the DAK for irrigation was part of DAK *Penugasan*

(special allocation fund to achieve national priorities). Since then, the DAK allocation for irrigation increased significantly, from IDR 1.9 trillion in 2015 to average IDR 3.8 trillion in 2016-19, a 200 percent increase. DAK *Penugasan* is eligible only for provinces and districts determined by the central government (Bappenas and sectoral ministry), and local government requires the submission of proposals to qualify to receive DAK funds.

**The DGWR provides technical data such as the unit cost and technical index (e.g., the condition of existing infrastructure, irrigation network maps, etc.) and, in a trilateral meeting, the MoF, Bappenas and the MoPWH will discuss allocations.** This practice has improved the targeting mechanism thanks to the DAK Irrigation Guidelines 2019 and, on average, districts in paddy growing provinces will receive more DAK in 2019. Utilization of DAK is mainly for construction, rehabilitation and improvement of provinces' and districts' irrigation command areas. Meanwhile, O&M of the infrastructure has to be financed by SNGs. No funds from the DGWR are allocated to the WUAs.

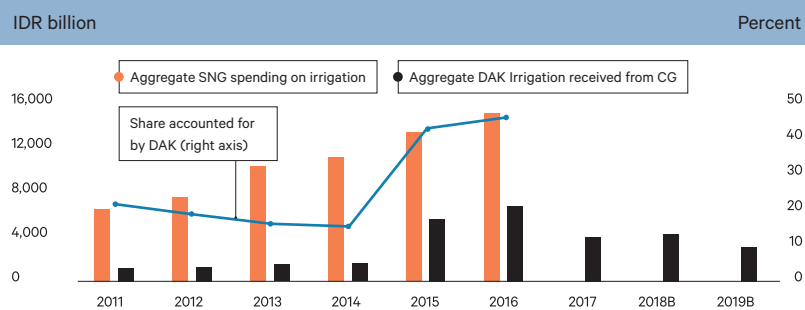
**Under the DAK Irrigation Guidelines 2019, the eligibility criteria to receive DAK funds are based on Bappenas's locus/priority location to support the achievement of national development targets in the RPJMN and *Nawacita*.** There are two criteria: (i) criteria for the construction of new irrigation networks, including: (a) to support food security: 15 provinces with the largest rice production<sup>292</sup> and 284 paddy growing centre districts;<sup>293</sup> (b) lagging regions (President Regulation No. 131/2015); (c) island regions;<sup>294</sup> and (d) poverty: districts with poverty rate above national average;<sup>295</sup> and (ii) criteria for rehabilitation.<sup>296</sup>

**The contribution of DAK Irrigation to SNG spending on irrigation in substantial.** After 2015, when DAK Irrigation transfers increased significantly, the share in aggregate SNG spending on irrigation funded by DAK Irrigation increased from 15 percent in 2014 to 45 percent in 2016 (Figure 11.7).

**The irrigation targets are unlikely to be met.** In the absence of strong growth in the budget allocations of the DGWR

FIGURE 11.7.

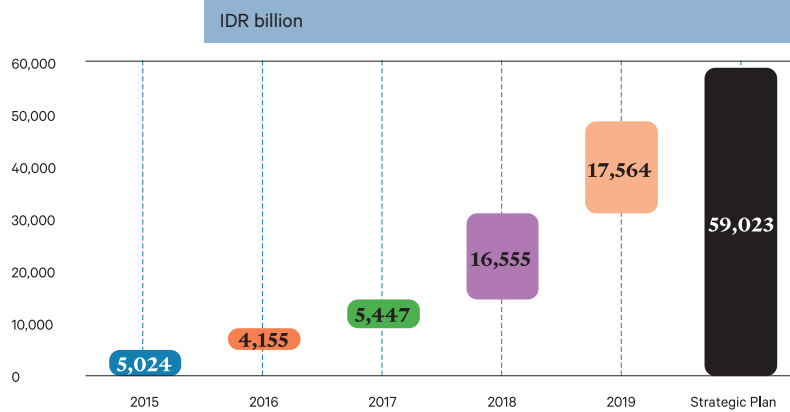
**Total SNG spending on irrigation, and share accounted for by DAK Irrigation**



Note: DAK Irrigation from CG fiscal data; data on total SNG spending on irrigation after 2016 are not available.  
Source: World Bank staff calculation using MoF data.

FIGURE 11.8.

**Budget allocation for development of new dams**



Note: (i) budget between 2015 and 2017 are actual budget, (ii) budget of 2018 and 2019 are proposed budget by the MoPWH strategic plan, and (iii) the strategic plan budget is the required budget to realize the construction of 65 new dams.  
Source: MoPWH.

for irrigation and dams, and assuming the budget share for irrigation remains similar to 2018 and 2019, it is estimated that only 68 percent of the new irrigation targets of 1 million ha in the MoPWH strategic plan will be met by 2019, through central government financing (Figure 11.6). While SNGs' contributions should also be considered, it is unclear if any measurement of new irrigation development through SNG financing is available (Figure 11.7).

**Furthermore, targets for dams are also unlikely to be met.** While the targeted spending on dams is a budget requirement of

IDR 59.0 trillion (roughly US\$4.5 billion) to construct 65 dams, to date, the total budget allocation has been equivalent to only about 50 percent (IDR 31.1 trillion) of the total required (Figure 11.8).

**The GoI continues to look at development financing and foreign loans.** The intention is more to work together with development partners to introduce new, alternative ideas and pilot innovations, and to leverage these to improve the outcomes of the APBN, such as through service agreements and converting RBOs into revenue-generating entities.

<sup>292</sup> According to BPS 2015 data.

<sup>293</sup> Ministry of Agriculture Decree 2016.

<sup>294</sup> President Regulation No. 78/2005 and President Decree No. 6/2017.

<sup>295</sup> Above 10.64 percent, as measured in the Susenas 2017.

<sup>296</sup> MPWH Regulation No. 14/2015 on Criteria and Determination of Irrigation Area Status.



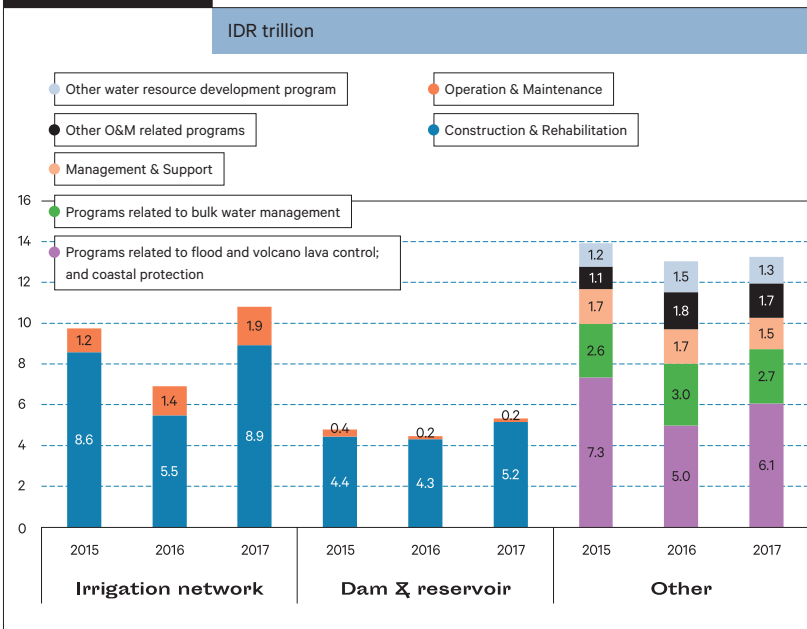
B

# How Efficient Is Public Spending in the Sector?

## B.1 Allocative efficiency (composition of spending)

FIGURE 11.9.

DGWR spending by activities, including construction and rehabilitation and O&M, 2015-17



Source: World Bank staff calculations using MoF data.

Public spending on irrigation networks and dams consists of construction, rehabilitation and O&M, with the majority of spending on construction and rehabilitation for both irrigation and dams (Figure 11.9).

In order to manage water resource infrastructure across the country, the DGWR relies on the river basin organizations (RBOs) and local offices, as the operational units for the development and O&M of dams and river infrastructure to deliver water resources development. These responsibilities are reflected in the budget allocations within the DGWR,

with the RBOs accounting for roughly 90 percent of the total budget. This is used to finance a wide range of activities relating to the development and management of water resources, including: technical assessments, water allocation, construction of new dams and irrigation systems, and the rehabilitation of existing dams and irrigation systems, as well as regular O&M of dams, irrigation schemes and river infrastructure. The remaining portion of the budget is allocated for among different directorates at the central and provincial (Dinas) levels, mainly to support the O&M of state-owned water infrastructure.<sup>297</sup>

### Irrigation systems

There are many transfers for O&M across levels of government, so coordination between levels of government is important. The central level of government finances O&M through the national budget and utilizes transfers to the provincial irrigation services, which often delegate implementation to district-level agencies. At the provincial level, the water resources irrigation agencies fund O&M of the systems under their management through the provincial budget, with budget funds deriving from their own revenues and from the central government through TP-OP transfers<sup>298</sup> (assistance task funding). At the district level, funding for O&M comes from district budgets.

O&M allocation by the central government is too low but has been getting closer to the estimated requirement of IDR 630,000 per ha. Under the new policies for rice self-sufficiency the allocations for O&M budget for the national irrigation system have been increased significantly to IDR 310,000/ha in 2015 and to IDR 500,000/ha in 2018, which is approaching the estimated amount needed for O&M of IDR 630,000/ha for systems to be in good condition.

The organizational structure of RBOs versus RBCs explains part of the reason for low O&M spending. The RBOs receive budget funding,<sup>299</sup> and need to share it with 131 entities, and are not allowed to collect revenue. This constrains their budget for O&M. The two RBCs, on the other hand, are state-owned self-financed corporations, and are managed by a different ministry (MSOE) and, as mentioned above, collect revenue from funding derived from sales of raw water, hydropower, water quality laboratory fees, and recreation fees, etc. This means they have sufficient funds for O&M.

<sup>297</sup> O&M of irrigation schemes > 3,000 ha, which are under the responsibility of the central government, but where O&M is transferred to the provinces, so that the central government transfers a certain amount of budget to the provincial level.

<sup>298</sup> Tugas Pembantuan – Operasi dan Pemeliharaan (TP-OP) is an annual APBN allocation to the Provincial Service that manages irrigation systems.

<sup>299</sup> From the central government budget (APBN) for command areas belonging to the central government, or province and district budgets (APBD) for command areas belonging to provinces and districts.

**At the provincial level, however, the fiscal framework for river and irrigation infrastructure is constrained by inadequate financing, particularly for O&M.** Irrigation spending is still focused on construction and rehabilitation, with relatively low allocations for O&M (TP-OP). The funds for TP-OP used for Operation, Routine Maintenance, Periodic Maintenance and others, such as AKNOP surveys and budget preparation, are presented in Table 11.6. Though the central government's guidance is to allocate budget evenly between the three expenditure items above, given the shortfall in budget, some provincial services give priority to meeting operation requirements first, i.e., getting the necessary field staff in place, hence causing neglect to maintenance of the infrastructure (Table 11.6).

**At the district level, under-spending and a lack of attention to O&M have been highlighted as two of the main drivers behind the deterioration of irrigation infrastructure networks managed by districts.** Moreover, the allocation and spending of these funds lack transparency.

Detailed O&M plans based on the allocations are not disclosed to water users. Moreover, the O&M budgets are still arbitrarily based on a flat rate per hectare, or an overall lump sum,<sup>300</sup> rather than on the condition of infrastructure and thus the maintenance needs. As a result, 22 percent of all national schemes have different degrees of malfunction due to ineffective O&M and the degradation of infrastructure.

**The condition of irrigation systems reflects the differences in adequacy of spending on O&M at different levels of government.** Between 2010 and 2014 (latest actual data point available), the share of irrigation systems in good condition increased for those managed by the central government and provinces but decreased for those managed by districts (Figure 11.10).

**Hence, to reach the target of 3 million ha of rehabilitated irrigation networks by 2019, a rapid acceleration is needed, since the 2014-19 target of 3 million ha is well above the 2010-14 target.** Most of the damaged irrigation networks are in Java and Sumatra. This is mainly related to

the age and size of the irrigation networks on these islands. Older and larger networks demand greater financial resources for O&M, which are often inadequate or unavailable.

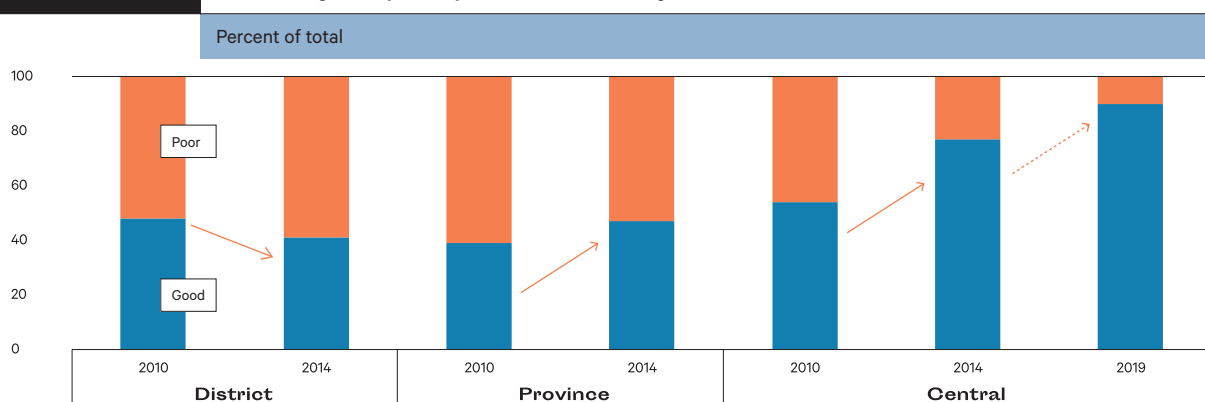
**While farmers are officially not charged for irrigation services, in some cases they pay out of pocket to carry out repairs.** The GoI policy is not to charge farmers for irrigation services in support of policies on food security and poverty alleviation. The operation, maintenance and management of the national irrigation schemes remain dependent on budget transfers from the GoI, as in almost all countries in the region. The GoI, instead, has adapted participatory irrigation to increase a sense of ownership among WUAFs and members in the irrigation facilities, in order to improve O&M practices and provide an opportunity to be involved in the implementation of schemes. In some cases, the WUAFs have initiated repairs at their own farmers' cost even in respect of the primary and secondary parts of the system, which by law is the responsibility of the SNG, as they cannot afford to wait for the districts to carry out repairs.

**TABLE 11.6.** Distribution of TP-OP allocations in percentages (2018, data from selected provincial agencies)

Province	Number of Systems	Area TPOP (ha)	Operation (%)	Routine Maintenance (%)	Periodic Maintenance (%)	Others (%)	Total %
West Java	17	399,963	-	-	-	-	-
Central Java	131	300,125	30.0	40.0	20.0	10.0	100.0
D.I. Yogyakarta	2	12,000	40.5	55.0	4.5	0.0	100.0
East Java	32	288,641	22.8	31.0	33.0	13.2	100.0

Source: AKNOP surveys (KPI that determines % of maintenance).

**FIGURE 11.10.** Share of irrigation system by condition and level of government



Note: 2019 is a target. 2014 is the latest actual data point available.

Source: Technical Audit, *Badan Pengawasan Keuangan dan Pembangunan* (BPKP, the government's internal audit agency), 2014

## Dams

**Due to spatial variations in Indonesia's geography, low unit costs for the construction of the dams should not be the only criterion, but it should also consider the needs for water supply, especially in the eastern region.** Unit costs for construction vary greatly across Indonesia. This variation is mainly caused by: varied construction materials, transport, and labor costs (areas with poor accessibility are likely to have higher material prices), varied land acquisition costs, varied resettlement and compensation costs, and varied dam purposes (which influence the choice of technology to be used) (Figure 11.11)

**Dam planning may not always be synchronized with the local spatial planning.** For example, four out of 65 planned dams by the RPJMN will be located in Java and will be able to irrigate an additional 220,000 ha of new rice fields. However, it is unclear if the SNGs in Java plan agricultural growth of such magnitude.

**Dam spending is also focused on the construction of the 65 new dams under**

**the *Nawacita*, at the expense of O&M.** O&M through the MoPWH's RBOs for dams was only 3 percent of total spending in 2017, despite O&M being key for dam safety. Regular O&M (including thorough and consistent safety inspections) must be practiced throughout the lifetime of a dam. In addition to maintaining dam function, cost efficiency, and compliance with safety regulations, such habits can lead to the early detection of safety issues and the prevention of dam failure.

**The development of new dams not only represents a substantial capital commitment from government resources but also has important long-term recurrent fiscal implications.** The lack of secure and stable revenue streams associated with water services provided from the dams increases the reliance on government budget allocations. These are often competing against other demands and are considered variable allocations that are often subject to significant variability year on year.

**The lack of predictable and sustained revenues for dam O&M can undermine long-term asset performance**

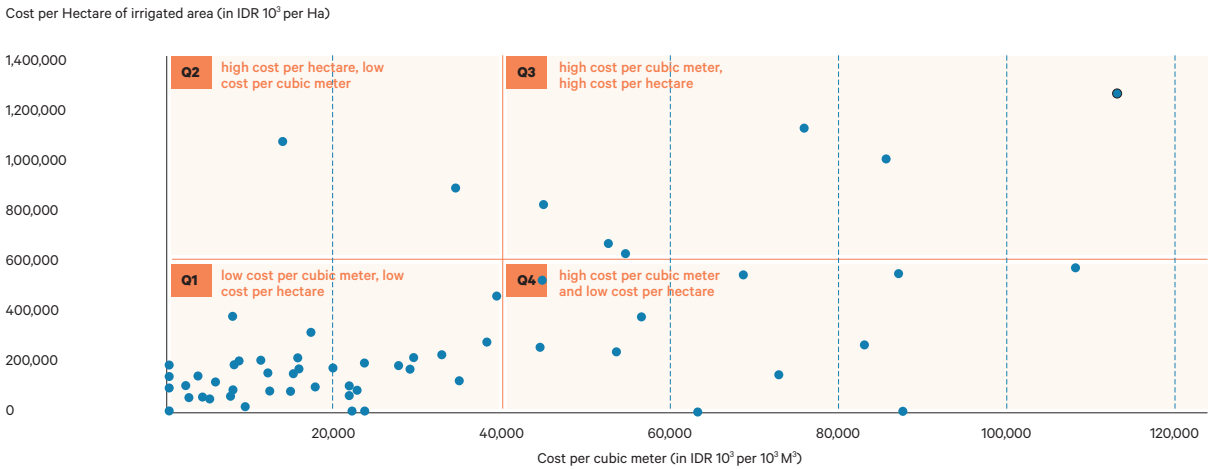
**and safety.** Deferring O&M can also result in higher capital requirements by shifting the nature of the works from relatively simple O&M into larger rehabilitation requirements. This is reflected in the large number of dams identified for rehabilitation in the MoPWH's strategic plan (Figure 11.12).

## B.2

### Technical efficiency in the use of budgeted resources

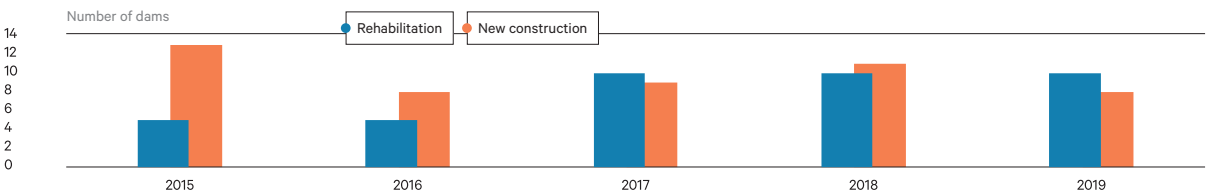
**Compounding the issue of low budget allocations to the WRM sector, the realization rate (ratio of spending to budget allocated) is decreasing.** Planning and implementation challenges, which involve assessments to update the data on the current status of infrastructure quality and the need for intensive consultations with various stakeholders on prioritization, have been constraining the development of new water infrastructure and have resulted in a low

**FIGURE 11.11.** Unit cost of dam and construction across Indonesia



Notes: Cost per cubic is total construction of dam divided by storage capacity. Cost per ha is total dam construction divided by area of irrigation service. Source: MoPWH.

**FIGURE 11.12.** Dam construction and rehabilitation plan (according to MoPWH strategic plan 2014-19)



Source: DGWR Strategic Plan.

budget absorption rate by DGWR (Figure 11.13). As mentioned earlier in this chapter and in the Overview chapter, in 2015 budget allocations for the MoPWH increased by 59 percent compared with the 2014 budget, with all departments showing a lower execution rate in 2015 and 2016, although the DGWR's budget execution is structurally below other departments.

**Some planning and implementation challenges result in low budget execution, constraining the development of new infrastructure:**

**Land acquisition.** Both irrigation and dam construction involve significant land acquisitions, which in most cases require a long and iterative process to reach agreement among parties;

**Coordination between multiple local governments in one service area.** Construction of dams and national irrigation systems normally takes place across multiple local government jurisdictions, thus they are also affected by the readiness of local governments to collaborate on the specific water resources development agenda. In addition, water resources development generally receives low interest from local governments, especially

comparing irrigation infrastructure to roads (DG Highways/*Bina Marga*) and housing, water supply and sanitation (DG Human Settlement/*Cipta Karya*), which mostly create positive externalities;

**Timing to minimize the interruption to farmers.** The construction of water resources development has to adjust with the farmers' planting cycle agenda to minimize interruption of planting and crop production; and

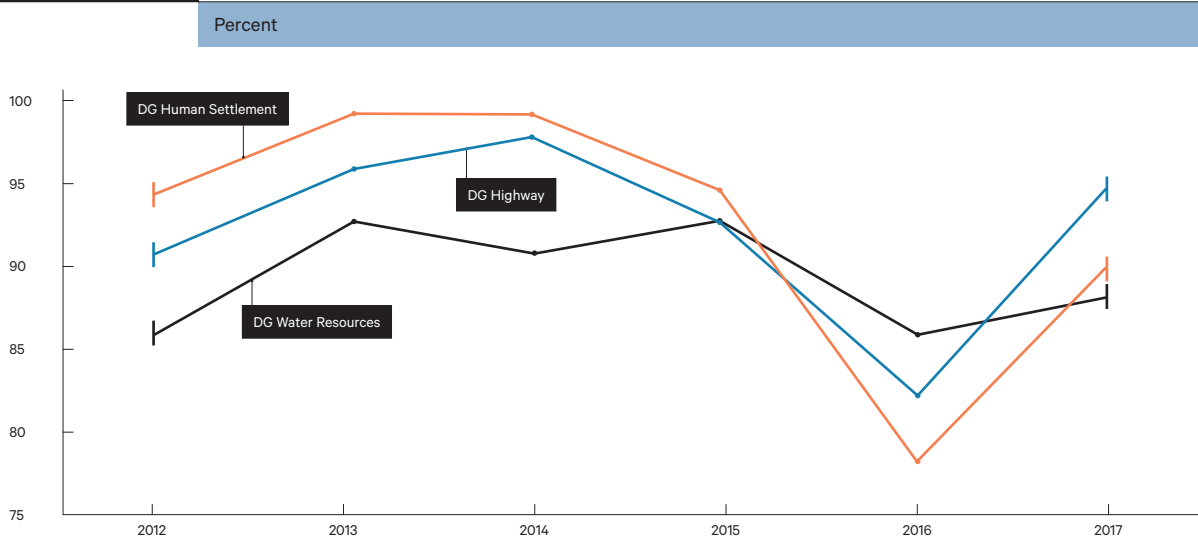
**Climate-sensitive design and construction standards.** Water resources infrastructure needs to be constructed according to high standards, not only to ensure durability and avoid leakage but also, and most importantly, to ensure human safety.

**At the subnational level, DAK Irrigation implementation has increased, thanks to improvements to regulations.** A study of a sample of provinces from the DAK infrastructure M&E report<sup>301</sup> suggests that execution rates were around 80 to 90 percent for 2018 in most districts. Thanks to Presidential Decree No. 70/2012 amending Presidential Regulation No. 54/2010 on Public Procurement, article 73(1), to accelerate the government procurement process,

the procurement unit (ULP) can announce the procurement process to the public based on the following conditions: (i) after enactment of the subnational budget (APBD) for goods and services procurement with the local budget financial source; and (ii) after the work plan and central government budget from ministry/institutions/agencies have been approved by the legislature (DPR). Hence, local governments have been able to announce the procurement process soon after the DAK Irrigation allocation has been approved and contract packages (URK)<sup>302</sup> have been developed.

**Generally, the DAK Irrigation targeting to rice-producing provinces has improved, although there are some exceptions (Figure 11.14).** Looking at the paddy production, it was found that DAK Irrigation in 2019 was allocated to provinces of the large beneficiaries of DAK on irrigation. These provinces matched with the locations of the large rice producers (Figure 11.5). This is an improvement on previous years, when other factors determined DAK allocations, and where, for example, in 2015, South Sumatra Province was the fifth-largest rice producer and was at the same time the fourth-smallest recipient of DAK Irrigation (out of 34 provinces).

**FIGURE 11.13.** Budget execution rate (ratio of spending to budget) among Directorates General of the MoPWH

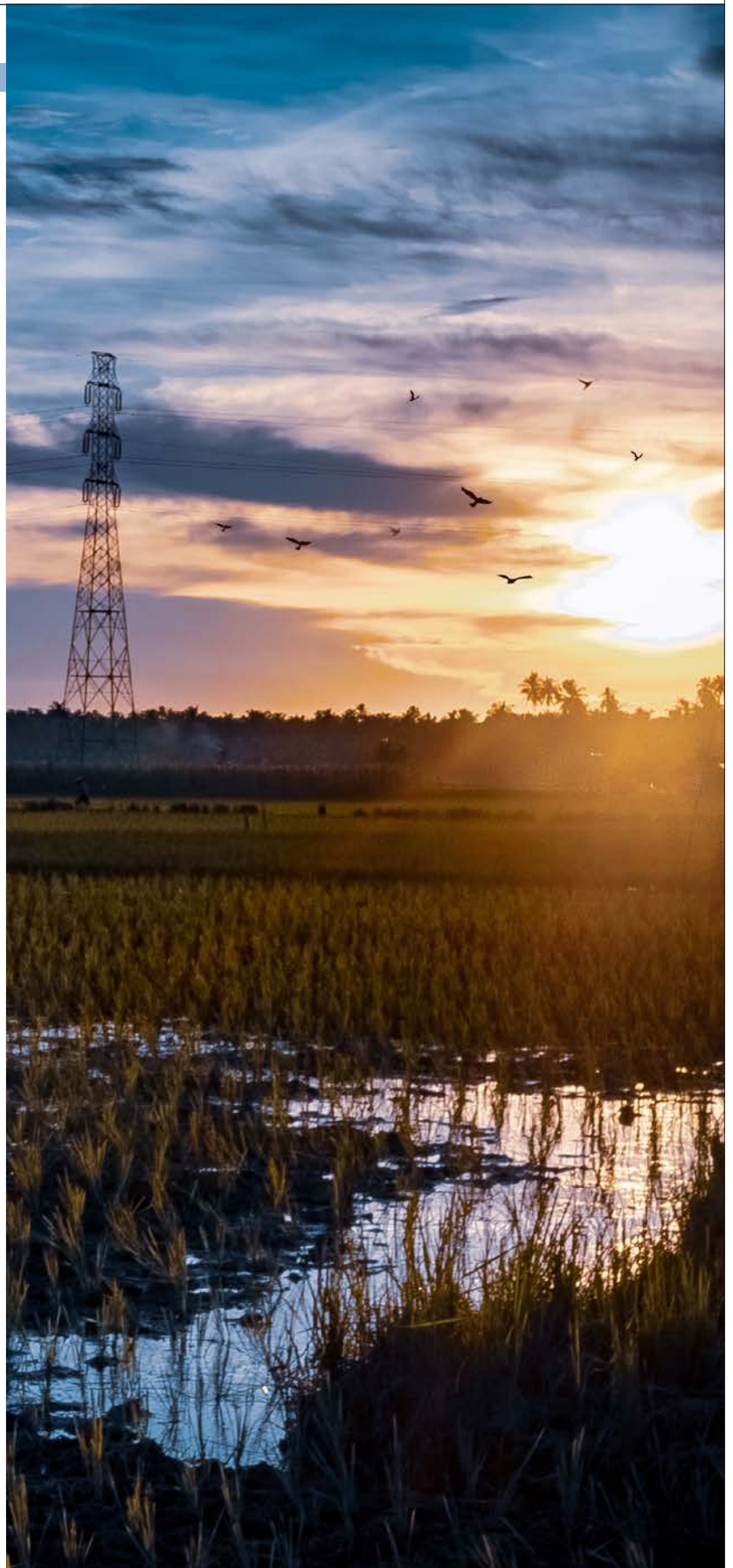
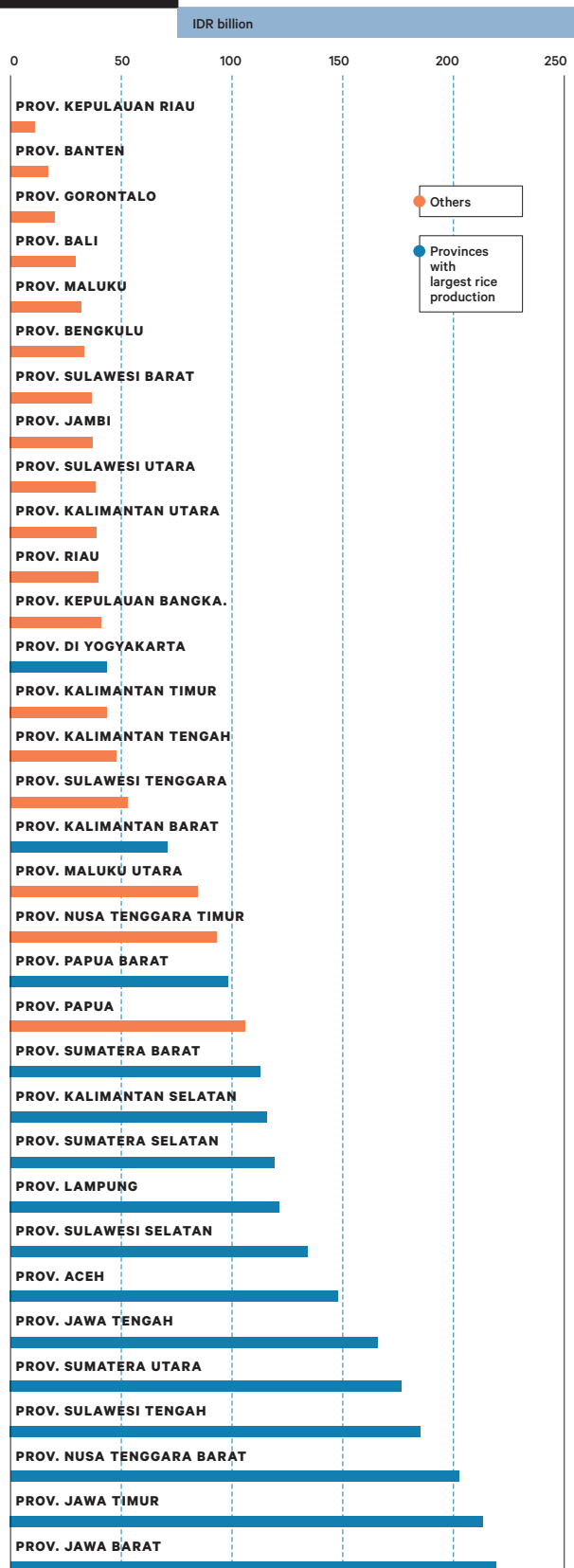


Source: State Government Annual Financial Report (*Laporan Keuangan Pemerintah Pusat*).

<sup>301</sup> e- monev report. <http://103.11.135.34/dak2018.php>.

<sup>302</sup> *Usulan Rencana Kegiatan* (Activity Plan Proposal).

**FIGURE 11.14.** DAK Irrigation allocation across provinces, 2019



Note: The 15 provinces with the largest rice production are defined by BPS 2015 data.  
 Source: DG Fiscal Balance, Ministry of Finance. <http://www.djpk.kemenkeu.go.id/wp-content/uploads/2018/10/Rincian-Alokasi-DAK-Fisik-TA-2019-Upload-Final-Fix-31-Okt.pdf>



## How Effective Is Public Spending in the Sector?

**C**onstruction challenges in remote areas. As mentioned earlier and shown in Figure 11.11, construction of dams in the extreme eastern parts of the country is complicated by the remoteness of the locations, the distance from the main economic centers of the country, and logistics constraints associated with construction in difficult terrain. Hence, implementation capacity of this construction can be challenging.

**Despite a defined institutional and policy framework, the irrigation sector faces performance issues as a result of the absence of a functioning accountability system between the service providers and their clients, and between governments at different levels.** For example, district governments are responsible for setting up and providing support to the WUAFs that manage tertiary networks in their command areas, regardless of whether the command area belongs to the district, the province, or is national. But in fact districts rarely provide

support if the command area of an irrigation scheme belongs to the provincial or central government. This also means that WUAFs, which are supposed to manage a province's or national command areas, will be neglected, while preventing the provincial and central government from supporting the WUAs.

**There is a need for better regulations.** Participatory irrigation has also given the farmers a voice in respect of regulatory development, through their representation in the Irrigation Commissions. However, implementation of the participatory principle in national schemes seems to be more problematic due to the fragmented mandate at the national level, whereas capacity building and development of WUAFs are the responsibility of local government. Also, the type of construction required for national schemes is generally more complicated and beyond the capacity of WUAFs. For participatory irrigation to be successful, the cooperation mechanism needs to be backed up by a clearer procurement policy that allows for WUAs to implement the smaller schemes.

# Recommendations to Improve the Quality of Spending

*Given the crucial importance in water systems, the quasi-public-good nature of the investment, and Indonesia's water needs, the irrigation sector needs greater resources to develop an adequate and timely supply of water to rural areas all year round. While there are efficiency gains to improving current spending patterns, greater investment overall is also needed to address Indonesia's dam and irrigation needs. Below are the main recommendations for improving the quality of spending:*

## *A*

### *Scope of Analysis*

***T***his analysis focuses on the public expenditure on water resources for food security at the national level spent by the MoPWH and its agencies. It does not include:

1. Spending on the subnational level; analysis was infeasible due to limited data availability;
2. Spending by the Ministry of Agriculture (MoA) on the maintenance of tertiary irrigation channels, as the size of the expenditure is relatively small, and the responsibility for the maintenance of tertiary canals will soon be transferred to the MoPWH (awaiting the finalization of a presidential decree); and
3. MoPWH expenditure on the provision of social assistance for WUAs to maintain their tertiary canals; analysis was unfeasible due to limited data availability.

## *B*

### *Improved Operation & Maintenance*

***I***nfrastucture development target needs to consider institutional capacity and the implementation of asset management to ensure effectiveness and sustainability of services. This review found that O&M spending on dams and irrigation is insufficient. The review therefore recommends allocating more resources to O&M for irrigation and dams, which will reduce the need for rehabilitation in the future and ensure dam safety. Several initiatives could be recommended as follows:

1. **Create incentives for SNGs to increase the budget for O&M.** In addition, to address the deteriorating quality of the irrigation network, provinces and districts need to allocate more resources to O&M and assume a portion of the rehabilitation cost (according to local fiscal capacity). Local governments have little incentive to adequately invest or even increase their O&M budgets, because they do not bear the cost of the central



government's rehabilitation grants. The cost of rehabilitating the provincial and district networks should be shared between central and local governments according to fiscal capacity. This would create an incentive to maintain the network, because it is significantly cheaper to fund regular maintenance operations than to support rehabilitation projects. Central government could also introduce performance-based transfers by making district and provincial irrigation asset management plans, proof of adequate O&M allocation, and achievement of performance targets conditions for receiving central government financial support.

**2. Apply asset management/full lifecycle cost planning (medium term).** The assessment found that ambitious construction targets are an additional burden on budgets and institutional capacity. For example, the budget prepared for new dam construction does not include costs of additional human resources required to operate and manage such facilities. The review suggests developing medium- and long-term plans for O&M based on an asset management system, instead of annual or ad-hoc practices. New investment should incorporate medium- and long-term needs for O&M. It is suggested that budget increases for capital spending should be complemented by targeted and well-timed institutional capacity programs, and investment planning should look at longer-term, full lifecycle cost planning.

**3. Introduce SOE-Public-Partnership (SPP) to identify revenue mechanisms to provide alternative long-term financing mechanisms.** To cope with higher needs

for O&M in the future, while RBOs cannot generate their own revenue from users, the review recommends that RBOs consider the possibility of converting RBOs into revenue-receiving entities, such as BLU<sup>303</sup>, and the possibility of introducing SPPs based on PJT management contracts of irrigation services in other basins.

**4. Build the capacity of technical staff in RBOs and in SNGs for O&M.** A significant increase in new water resource investment will require improved human resources capacity. In the central government, it is vital that the DGWR in the MoPWH develops a capacity-building program that links with long-term sector objectives. To develop the capacity, learning centers should be revitalized to include water resources capacity-building programs. Cooperation between RBOs and these centers should be strengthened. For the SNGs, a capacity-building program should be developed by SNGs in cooperation with RBOs to increase WUA/WUAFs' capability for O&M.

**5. Introduce clear service agreements describing the roles, responsibilities, rights and obligations of the service provider and the recipients of the service.** These service agreements would be between: (i) the RBO and provincial/district irrigation agency; and (ii) the provincial/district irrigation agency and the WUAFs. These agreements would make the provision of services to farmers more reliable. This should be accompanied by hiring sufficient field-level staff at all three levels, and the provision of systematic information on actual amounts of water needed, available, and allocated.

C

## *Scaling-up & institutionalization of participatory irrigation at the subnational level (coordination CG-SNG)*

**R**eforms to delegate irrigation management to the subnational level and to adopt participatory irrigation through the involvement of various stakeholders, especially WUAs, need to be implemented consistently. In addition, participatory irrigation has been proven to be effective in increasing O&M practice, better water distribution among users, and increasing farmers' involvement in decision-making processes. Further enhancements of these approaches should be undertaken through various initiatives, such as:

**1. Ensure local commitment in rice-growing provinces and districts to support the agenda on food security.** Central government has identified a focus on provinces and districts that have high rice production rates and should include these as eligible criteria to receive DAK Penugasan. Central government should ensure that these SNGs include food security and participatory irrigation in their medium-term development plans. This is important to ensure that local resources are allocated to the sector and performance is measured by local parliaments. The MoHA could be assigned this task.

**2. Strengthen the role of the Irrigation Commissions and water resource boards as local/multi-stakeholder platforms.** The roles and responsibilities of WUAs, especially on O&M aspects, could gradually be increased. Accordingly, Irrigation Commissions and water resource boards need to be strengthened as multi-stakeholder platforms that provide guidance to local governments

<sup>303</sup> Badan Layanan Umum or General Service Body is a Gol institution that provides goods or services to community. This is a non-profit-oriented body rather than one that can increase efficiency and productivity.



## D

## *Convergence in Planning, Budgeting, Targeting and Result Monitoring (PFM)*

on the sector development agenda. This has already been included as aspects to be considered for local government planning in WRM (Public Works Affairs) as per MoHA regulation (Permendagri) No. 22/2018.

**3. Revise DAK to include procurement of technical assistance.** The transfer of funds from the central government should provide a menu to procure technical assistance and capacity-building support. These will include the provision of facilitator for WUAs to support them to develop a work program, to ensure alignment between their workplan and the district work plan, and to provide necessary skills, including organizational development, simple financial management, and O&M of infrastructure. Revision of DAK could be considered to accommodate this suggestion.

**4. Improve clarity on the mechanism for irrigation scheme above 3,000 ha under central government control.** Additional technical guidance and clearer agreement between central government with district governments that have a mandate to set up and support WUAs in those area is recommended. Currently, district governments do not provide any support to farmers who fall under central government irrigation schemes. Despite this, by regulation, the central government has no financing mechanism to support farmers with regards to O&M of the tertiary networks.

**The objective of the sector is still focused on outputs (e.g., number of dams and irrigation networks built), and not on the outcomes.** It is suggested to realign the sector objective to focus on outcomes, such as improved irrigation efficiency and agricultural productivity (“more crop drop”).

**While WRM is only one of the many other factors that contribute to achieving food security, support is necessary at every level to reach the optimum outcomes: (i) water storage development and management to ensure water availability; (ii) irrigation networks management; (iii) development of paddy fields and ensuring land conversion; (iv) WUA establishment; and (v) post-production support.** Therefore, clear coordination mechanisms need to be established both horizontally (among sectors both in central and subnational levels) and vertically (between central and subnational levels). This concept has been practiced and proven feasible on a project scale under the Water Resources and Irrigation Sector Management Program 2 (WISMP-2) project.<sup>304</sup> The scale-up of implementation of these approaches could be done through various initiatives, such as:

**1. Disseminating best practices on integrated sector planning and incentivizing coordination.** The integrated sector planning requires stronger coordination

and convergence planning among related sectors through an integrated results framework. The WISMP-2 project applied a performance-based program to incentivize coordination and requires each institution to work together for the same goal to improve agricultural productivity. The participating Dinas<sup>305</sup> in the participating districts confirmed that this system helped them to plan and implement the program accurately and has been replicated for non-WISMP-2 projects in about 70 percent of districts. Wider dissemination of this evidence and best practice should be endorsed.

**2. Endorsing an integrated, outcome-driven planning framework to enable stronger coordination and convergence of planning among related sectors.** This could be implemented by introducing guidelines describing each ministry’s role in improving the quality of planning and budgeting processes, as well as sector coordination toward broader outcomes. The key ministries are the MoPWH in charge for infrastructure development, the MoA in charge of crop production and post-production, and the MoHA in charge of developing local government capacity. The guidelines can also be considered a DAK requirement to improve the effectiveness of the funds. Bappenas should lead the development of the guidelines, while the MoF should lead the review process of DAK proposals.

<sup>304</sup> Water Resources and Irrigation Sector Management Program-2 (2011-18), funded by the World Bank.

<sup>305</sup> These are the equivalent of ministries at the subnational level: Dinas Public Works, Dinas Agriculture, and the Local Planning Agency (Bappeda).

# 267–281

12.1	Context
12.2	Assessing the Quality of Spending
12.3	Recommendations to Improve the Quality of Spending

# Water Supply & Sanitation

# REF

## Key Messages

- A** The government targets universal access for water supply and sanitation (WSS).
- B** Meeting these targets will require higher levels of expenditure but, given the current disconnect between government expenditure and the quality of outcomes, the immediate priority should be to improve efficiency in the WSS sector.
- C** On water supply, underlying issues fall on both the supply and demand sides:
- *Lack of co-ordination between central and local governments, and poor prioritization of local government capital expenditure, mean that expenditure has led to relatively small increases in the number of homes connected, while idle capacity has also increased significantly.*
  - *Insufficient incentives for households to utilize piped water as the primary source for drinking water, even when they do have access to this service.*
- D** On sanitation, the main issues that drive the poor performance cover the whole sanitation chain:
- *The majority of septic tanks that are being used are of poor quality; and*
  - *Sludge treatment plant facilities exist, but most are in poor condition and not used optimally. Most cities do not have adequate sanitation management.*

## Summary of Recommendations

- A** Improve institutional arrangement and strengthen fund management mechanisms to encourage the efficient expansion of the piped-water supply:
- *Align central government investments with local governments' needs and investment plans, and ensure that adequate budget, institutions and arrangements for O&M is allocated in local governments' budget documents prior to the implementation of construction; and.*
  - *Reform the regulatory environment of the PDAM to enhance their financial sustainability, and enforce relevant regulations.*
- B** Increase demand for the piped-water supply:
- *Change incentives to discourage the use of groundwater and enforce regulations to limit groundwater exploitation; and*
  - *Improve regulation and enforcement on the quality of water supply services.*
- C** Promote a comprehensive urban sanitation system, as well as increase the capacity of local governments to design and implement plans appropriate to their cities, which could involve a mixture of both centralized and good quality decentralized systems.
- D** Provide support for sustainable community-based rural water supply and sanitation development.

### Further key reading

Water Supply and Sanitation chapter, "Indonesia Sector Infrastructure Assessment Program", World Bank, June 2018. Forthcoming Indonesia Water Supply and Sanitation PER (World Bank, 2015)

Project Appraisal Document Indonesia National Urban Water Supply Project (World Bank, 2018) <http://documents.worldbank.org/curated/en/385841559235504323/pdf/Indonesia-National-Urban-Development-Project.pdf>

Urban Sanitation Review: Indonesia Country Study (World Bank and AusAID, 2013) <http://documents.worldbank.org/curated/en/76471468023379490/pdf/838770FA0WPOP10Box0382116B00PUBLIC0.pdf>

Water Supply and Sanitation in Indonesia Service Delivery Assessment: Turning Finance into Services (World Bank, Water and Sanitation Program, 2014) <http://documents.worldbank.org/curated/en/326971467995102174/pdf/100891-WSP-P131116-AUTHOR-Susanna-Smets-Box393244B-PUBLIC-WSP-SERIES-WSP-Indonesia-WSS-Turning-Finance-into-Service-for-the-Future.pdf>

Water Supply Improve the Quality of Life, PAMSIMAS Report (MoPWH, 2012)

MoPWH Annual Performance Evaluation Reports (Laporan Akuntabilitas Kinerja Instansi Pemerintah, LAKIP)

MoPWH Strategic Plan (Renstra) 2015-2019



## Context

**I**ndonesia has made considerable progress in the water supply and sanitation (WSS) sector over the past two decades.<sup>306</sup> As of 2018, 73 percent of households in Indonesia had access to improved drinking water<sup>307</sup> and 69 percent to improved sanitation facilities.<sup>308</sup> This situation is a significant improvement on 1994, when only 38 and 28 percent of Indonesian households had access to these services, respectively. This achievement has been largely driven by progress in rural areas, where access to safe drinking water increased two to three times faster than the increase in urban areas.

**However, Indonesia lags other emerging market peers in providing these basic services to its population.** Other countries in the region, such as China, the Philippines, Vietnam, Thailand and Malaysia, have higher shares of the population with access to safe drinking water and sanitation services (Figure 12.1 and Figure 12.2). The comparison with Vietnam and the Philippines is particularly striking, given that these countries have lower income per capita than Indonesia.

**National averages hide large income-related disparities in access to clean drinking water.** The use of bottled water, for example, varies substantially across income segments. More than half of those in the richest quintile of Indonesian households rely on bottled water, while only 8 percent of the poorest quintile in rural areas use bottled water (Figure 12.3). The reliance on bottled water for drinking is particularly prevalent in the richest quintile, indicating that af-

fordability is a key determinant of access to this water source. While bottled water has become a popular source of drinking water in general, the main users remain only those who can afford it. Poorer households still depend on traditional sources of water, both in urban and rural areas.

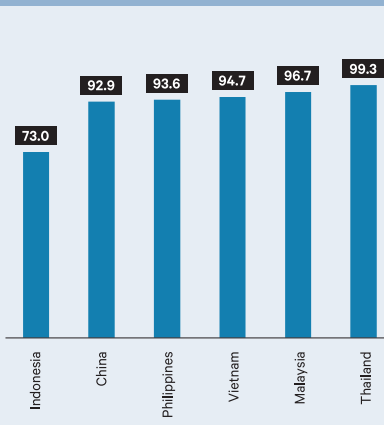
**Similarly, disparities in access to improved sanitation across both income and geographic differences remain.** Only 49 percent of Indonesians in the lowest-expenditure quintile have access to improved sanitation facilities, compared with 87 percent in the top quintile (Figure 12.4).<sup>309</sup> Significant differences between urban and rural areas also remain: in 2017, 91 percent of the richest urban population had access to improved sanitation, compared with 74 percent in the richest rural population. Similarly, 64 percent of the poorest urban population had access to this service, versus 41 percent in the richest population quintile.

**Beyond basic service provision, Indonesia specifically needs to catch up in improving access to piped water, and wastewater collection and treatment.** Currently, only about 10 percent of the population uses the piped-water supply for drinking purposes,<sup>310</sup> far from the Ministry of Public Works and Housing's (MoPWH) target of 60 percent.<sup>311</sup> Access to much-needed formal sanitation services is still very low, with only 1 percent of wastewater in urban areas collected and treated properly.<sup>312</sup> For sanitation, improvements beyond basic services include centralized or decentralized sewerage systems and on-site sanitation with improved fecal waste management (FWM).

**FIGURE 12.1.**

**Indonesia trails its neighbors in providing access to safe drinking water sources...**

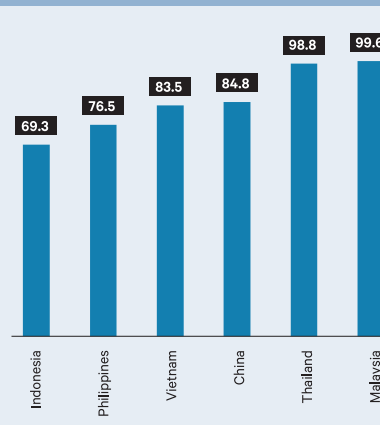
Share of population, 2017



**FIGURE 12.2.**

**...as well as in access to safe sanitation services.**

Share of population, 2017



Source: Calculations based on data from WHO/UNICEF Joint Monitoring Program for other countries and National Socioeconomic Survey (Susenas) for Indonesia.

**306** This chapter is based on work done for the World Bank Infrastructure Sector Assessment Program (forthcoming), pp. 279-280, the World Bank Indonesia Water Supply and Sanitation Public Expenditure Review (2015) and preparation of the National Urban Water Supply Project.

**307** Data from the National Socioeconomic Survey (Susenas). According to BPS, improved drinking water sources include piped water, water from public tap/standpipe/borehole/tube well, protected wells or springs, and bottled water. Users of bottled water are considered to have access to improved sources only when they have a secondary source which is of an otherwise improved type.

**308** Data from the National Socioeconomic Survey (Susenas). Improved sanitation facilities include flush/pour-flush toilets or latrines connected to a sewer, septic tank or pit, ventilated improved pit latrines, pit latrines with a slab or platform of any material which covers the pit entirely except for the drop hole, and composting toilets/latrines.

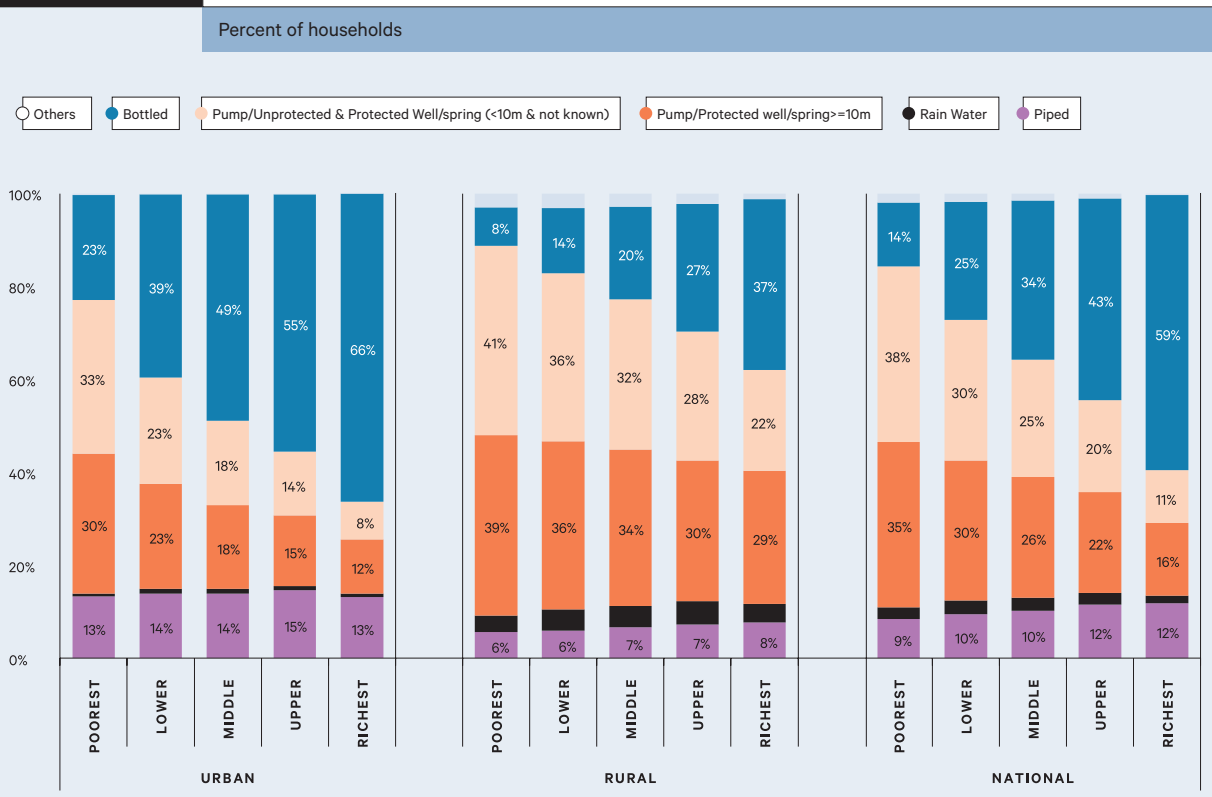
**309** World Bank staff calculations based on National Socioeconomic Survey (Susenas), 2017.

**310** Ibid.

**311** The GoI is currently reviewing the definition of 'drinking water quality' across ministries. For example, the Ministry of Health defines 'drinking water quality' as potable drinking water, meaning that tap water could be directly consumed. Meanwhile, the MoPWH adopts a broader definition of 'drinking water quality' that permits one step of treatment such as boiling or filtering, effectively including piped water services.

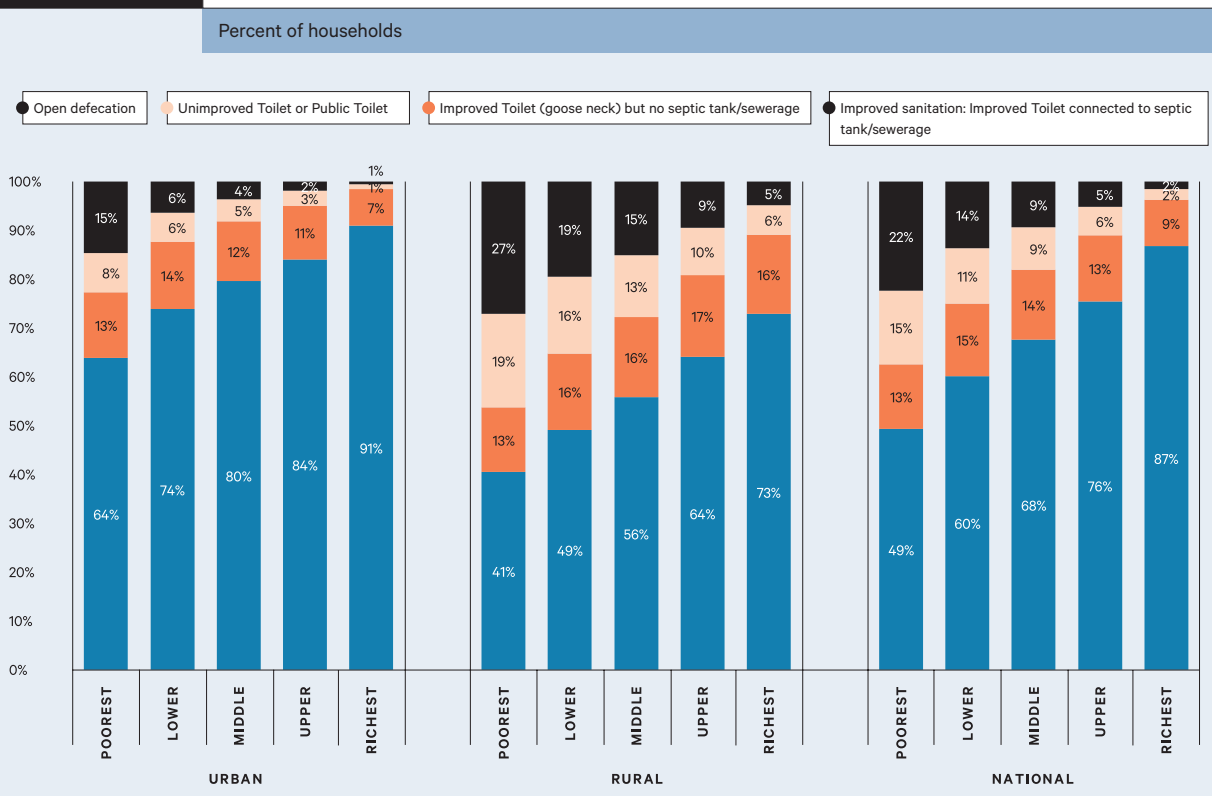
**312** Indonesia Water Supply and Sanitation PER (World Bank, 2015), page 2

**FIGURE 12.3.** Household primary access to drinking water by income and area, 2017



Note: Safe drinking water includes bottled (blue), pump/protected well/spring >= 10 meter (orange) and piped (purple).  
Source: World Bank staff estimates based on Susenas data, BPS.

**FIGURE 12.4.** Household access to sanitation by income quintile, 2017



Source: World Bank staff estimates based on Susenas data, BPS.

**This status quo is far from the target of universal provision of clean water and sanitation in the National Medium-Term Development Plan (RPJMN) 2015-2019.**<sup>313</sup>

According to the MoPWH's target, which is known as the "100-0-100 program", Indonesia aims to achieve 100 percent access to clean drinking water, 0 percent of the population living in slums, and 100 percent access to improved sanitation services (including an end to open defecation) by 2019. These targets appear to be ahead of United Nations Sustainable Development Goal (SDG) 6,<sup>314</sup> which envisions similar targets by 2030. However, the RPJMN 2015-2019 (and the 100-0-100 program) focused more on MDG-related goals, which use a less stringent definition than the SDGs' targets. In any case, Indonesia's progress remains far from the 100-0-100 target as of 2019.

**Achieving the RPJMN target of "100-0-100" requires additional investments in WSS infrastructure of around IDR 253 trillion (US\$20 billion) over 2015-19.** The GoI envisioned having to build 16 million additional pipe-water supply connections and increase the national total clean water production capacity by 32 per-

cent, from about 125,000 liters per second to about 165,000 liters per second over the period 2015-19. To achieve the SDG targets, even greater investment will be required, not only to build new infrastructure but also to include adequate O&M of existing systems, as well as additional investment for non-structural measures to provide sustainable drinking water sources, piped and non-piped. For sanitation, achieving the RPJMN targets will require building of additional 409 septage treatment facilities, and for 438 cities and districts to be provided with city, area, and community scale sewerage. To achieve the SDG targets, additional investment will be required to ensure improvement in the overall sanitation service chain (centralized and decentralized sewerage, and good quality standard on-site systems with improved FSM).

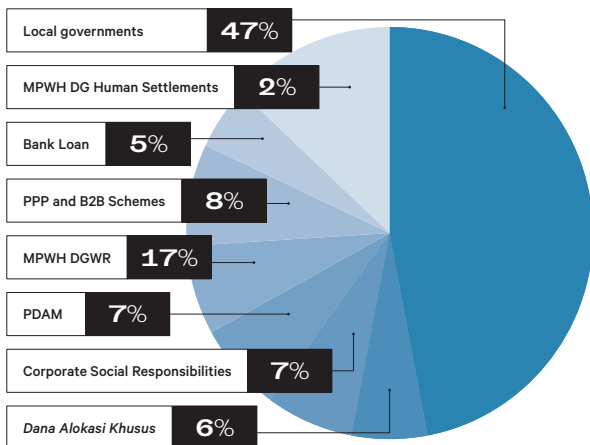
**From the estimated required investment to meet the RPJMN 2015-2019, the largest share of investment to meet the water supply infrastructure requirement of US\$20 billion over 2015-19 was expected to come from local governments, and over 20 percent was expected to come from the private sector and bank financing (Figure 12.6).**<sup>315</sup> These estimated and

anticipated portions of funding in the RPJMN were projections based on historical figures and actual project plans available when the RPJMN was prepared, combined with the expectation of the various initiatives to invite other sources to contribute to closing the gap to reach the target of universal coverage by 2019. However, with delays in implementation of the various initiatives in private sector participation and bank financing, the expected investment has not been materialized and the financing gap has not been filled; and with current data limitations it is difficult to track the actual investment from local governments. Meanwhile, the central government's budget has been decreasing over the past two years, aligned with the continuing decentralization.

**Responsibility for basic service delivery, including WSS, has been decentralized, but in practice a clear unambiguous division of roles has yet to be achieved (see Box 12.1).** For example, local government-owned enterprises, *Perusahaan Daerah Air Minum* (PDAM), are mandated to hold, operate and manage the local water system, but lack the legal authority to make efficient reinvestment decisions. Therefore,

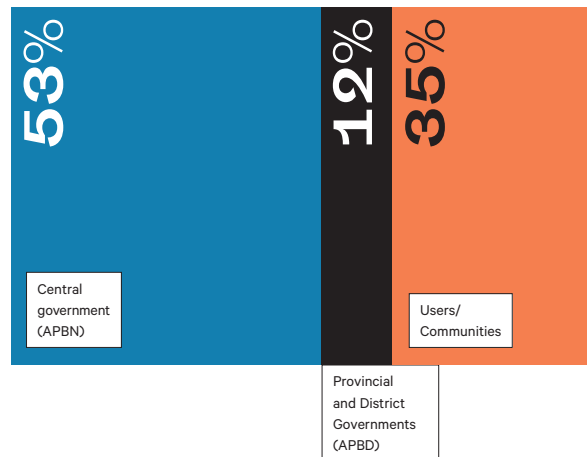
**FIGURE 12.5.** Largest share of water supply investment will come from local governments...

Sources of funding throughout 2015-19 for water supply infrastructure (percent of total)



**FIGURE 12.6.** ...whereas largest share of wastewater investment will come from the central government

Anticipated sources of funding throughout 2015-19 for wastewater subsectors (percent of total)



<sup>313</sup> The Government target is to achieve universal access to water supply and sanitation, comprising of 85 percent of population with access to water supply services that meet the 4Ks principle (quantity, quality, continuity and accessibility) through piped and non-piped systems, and 85 percent of the population can access the service standard of sanitation (onsite and centralized system), and 15 percent with access to services that meet basic needs.

<sup>314</sup> Especially Goal 6.1 ("universal and equitable access to safe and affordable drinking water for all") and Goal 6.2 ("access to adequate and equitable sanitation and hygiene for all and end open defecation").

<sup>315</sup> Infrastructure Sector Assessment Program (World Bank, 2018), page 41.

even when there is a surplus, the current financial structure does not enable the PDAM to make commercial decisions that could improve their services—from water intake, treatment, transmission, to distribution.<sup>316</sup> Thus, many PDAM prefer to keep the revenues they collect in reserve and place greater priority on contributing to local government revenues rather than reinvesting to further expand and improve their services. Government Regulation No. 54/2017 on Local Government-owned Enterprise (BUMD), which also covers PDAM, includes additional objectives of contributing to economic development and generating revenue or profit, and provisioning for reinvestment. It also includes guidelines on whether the BUMD will be a PERUSDA (that will allow multiple shareholders, including private sector and investment from the capital market), or PERUMDA (local government as the sole shareholder) and description of the differences.

**Furthermore, most PDAM do not have adequate capacity to invest in new infrastructure.** More than half of all the PDAM (263 out of 378 PDAM) were loss-making in 2017, while accumulated losses remain persistent even among profit-mak-

ing PDAM. A tariff that is below the full cost recovery level is a major reason behind the inability of PDAM to be profitable, even for those PDAM that are categorized as healthy. The recently completed debt restructuring has helped to improve the financial situation of those that were facing debt arrears, but this improved situation will not last. Although the MoHA has issued two regulations regarding tariffs and subsidies (MoHA Regulations Nos. 71/2016 and 70/2016), implementation of these regulations has not been enforced or monitored. Meanwhile, the actual levels of non-revenue water (NRW) are far higher than standard levels (20 percent) in many PDAM, and this exacerbates the issues created by the low tariff levels in meeting full cost recovery. Moreover, although some PDAM receive capital injections from local governments, these are mostly used for operations rather than investment.

**The water sector faces unique socio-political and commercial characteristics that justify a prominent role for the public sector, but the private sector can complement this by bringing increased efficiency and additional financing.** Positive externalities arising from water, sanitation

and hygiene (WASH) services are often not captured in what consumers are willing to pay for the service. WASH is a basic need and its infrastructure usually caters to a localized population (confined markets) that may not offer the full magnitude of revenues required to cover operations and capital development costs. While the required role of the public sector is clear, the private sector can bring about operational efficiency and commercial financing under the right conditions.

**Improving the efficiency and effectiveness of spending in the WSS sector can help the GoI to improve access to these services for all Indonesians.** Although public investments alone cannot close the infrastructure gap in the WSS sector, ensuring that existing public spending translates into meaningful improvements in access is critical to leverage private investments. This needs to occur both at the central and local-government levels, as both of these are responsible for financing, delivering and operating investments in different aspects of WSS (see Box 12.1). This is critical considering that local governments were expected to contribute most of the required investments to achieve the 2015-2019 RPJMN targets.



<sup>316</sup> According to Law No. 5/1962 on Local Enterprises, the objectives of PDAM objectives include delivering public services, collecting revenues for those services, and holding assets that have been separated and assigned from local governments. However, there is no clear provision on reinvestments.

## BOX 12.1.

## Devolved governance for WSS services in Indonesia

**Institutionally, water supply service is a devolved function with concurrent responsibility between local, provincial, and national governments, as provisioned in the 2014 Decentralization Law and described further in Government Regulation No. 122/2015 and shown in the figure below.** The central government is responsible for policy development, regulation, providing investment support, and monitoring, while local governments are responsible for ensuring water supply services provision. Local governments have the primary responsibility for service provision that are solely operated and provided within their respective boundaries, while cross-boundary operations and services come under the appropriate higher level of (i.e., provincial and central) government.

**This is often translated by dividing the investment between the central and local governments based on the aspect or component, i.e.,** central government will invest and build the bulk supply (water resources, transmission lines, treatment plants, and some parts of the main distribution network) with the hope that local governments' investments in distribution network and house connections will follow. Most urban water supply is delivered through local government-owned PDAM. In addition to 391 PDAM, there are 30 private entities developed as part of specific housing or industrial areas, and 26 other legal entities including UPTD (technical departments), BLUD (local service bodies), or BPAM (local water service bodies).<sup>317</sup>

**Although the responsibility to ensure water service provision lies with the local governments, the central government, mainly through the MoPWH, continues to provide investment support through special government programs, e.g.,** special mandated invest-

ment in bulk water supply in regional systems, grant programs targeting lagging provinces and remote areas, of special areas of national importance, etc.

**With continuing decentralization, the central government ministries' budget for infrastructure investment will be more limited, presenting the central government with a challenge in allocating resources equitably and better leveraging central government programs.**

**Similarly, the responsibility to provide basic sanitation services is primarily devolved to local governments, which are responsible for the development of sewerage, wastewater, and septage management services.** Meanwhile, the central government has the concurrent responsibility to support local governments by providing financing for infrastructure development. Outside the public sector, business entities are also expected to provide their own means of treating wastewater before disposal. That said, in contrast to water supply services, only a few local governments designated institutions to deliver environmental infrastructure services. Most local governments implement sanitation programs, operate, and manage sanitation infrastructure through units (UPTD or BLUD) under their environment, public works, or housing and settlements departments, while a few local governments established local government-owned enterprises for wastewater (PDPAL) or incorporate the responsibilities into PDAM.

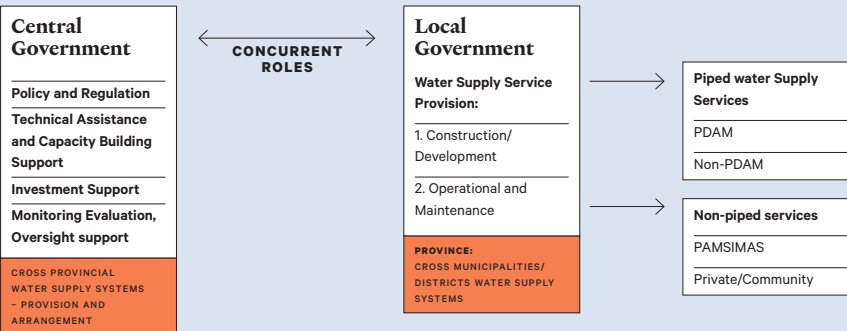
**With the unclear institutional set-up at the local government level, very often the investments made by the central government are not followed by provision of adequate budget by local governments for O&M of the built infrastructure (often local governments then refuse to take over O&M after the infrastructure**

**has been built), and further downstream investments (e.g., sewer connections and/or collection systems) for optimal utilization of the treatment.**

**The need for non-public financing is recognized and private sector involvement is encouraged but with limited scope.** Following the annulment of Law No. 7/2004 on Water, Law No. 11/1974 on Irrigation has been reinstated and two Government Regulations (No. 121/2015 on Water Resources and No. 122/2015 on Water Supply Provision) have been issued to be bridging regulations prior to the issuance of a new law (the draft is currently under discussion at the House of Representatives). The two government regulations were prepared based on the six principles, as follow: (i) exploitation of water should not interfere, let alone negate, people's right to water; (ii) the state should fulfil people's right to water; (iii) environmental sustainability; (iv) the state's supervision and control over water is absolute; (v) the main priority for the exploitation of water should be given to state or local government-owned enterprises; and (vi) only when all the requirements have been fulfilled, it is possible for the GoI to issue a permit to the private sector to exploit water with specific requirements and stringent monitoring. Under Government Regulation No. 122/2015, water abstraction rights remain with a state or local government enterprise, and service provision to the poor needs to be guaranteed, while private investment is permitted subject to state or local government enterprise supervision. The role of the Development Board for Water Supply (BPPSPAM), which previously included advising on private sector cooperation, has been revised to focus instead on improving the capacity and performance of the PDAM.

Source: Authors.

**FIGURE 12.7.** Division of roles and responsibilities of water supply provision



Source: Government Regulation No. 122/2015)

<sup>317</sup> UPTD (Unit Pelayanan Teknis Daerah), BLUD (Badan Layanan Usaha Daerah), BPAM (Badan Penyedia Air Minum).

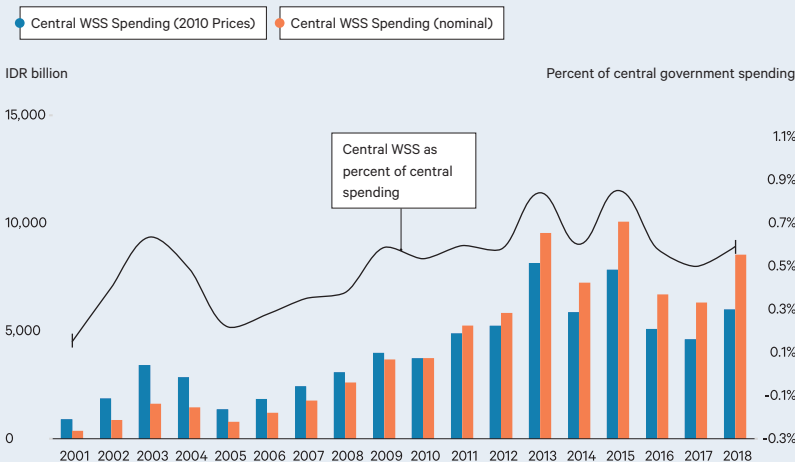


# 12.2

## Assessing the Quality of Spending

- A Overall Trends: Is Spending Adequate?
- B How Efficient Is Public Spending in the Sector?
- C How Effective Is Public Spending in the Sector?

**FIGURE 12.8.** Central government spending on water supply and sanitation, 2001-18



Source: World Bank estimates based on data from APBN, APBD/SIKD, MoF.

### A

## Overall Trends: Is Spending Adequate?

**P**ublic expenditure on the WSS sector has increased threefold in real terms over 2001-16. This

translates into almost 8 percent growth per year (Figure 12.8). The increase was mostly driven by an increase in central government spending. The proportion of central government contribution in the sector has also increased from 18 percent in 2001 to an average of 45 percent throughout 2011-15, primarily through the MoPWH executing large infrastructure development projects.

However, compared with other countries and relative to its development needs, Indonesia spends very little on the WSS sector (Figure 12.9). Indonesia is among the countries with the lowest spending on WSS, together with the Republic of Congo and the Central Africa Republic, at only 0.2 percent of GDP.<sup>318</sup> WSS expenditure as a share of national spending also remained mostly at 0.8 percent throughout 2001-14. Overall, the level of WSS spending is still far below the amount that is required to meet the GoI's targets. Implementing the RPJMN requires a public investment of around IDR 253 trillion (US\$20 billion) over five years,

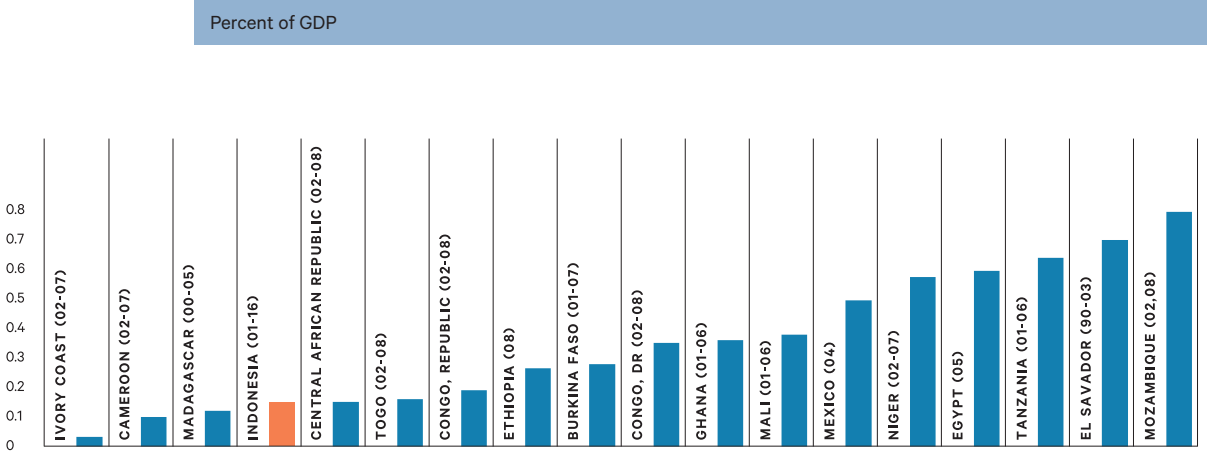
<sup>318</sup> Water Supply and Sanitation Public Expenditure Review (The World Bank, 2015), page 34.

or IDR 55.5 trillion annually. This indicates a financing gap of IDR 43.4 trillion compared with the current level of investment in the sector.

**In general, data on WSS spending is limited across all levels of government,**

**especially at the subnational level.** It is not possible to split WSS spending at the central government level before 2005. At the subnational level, it is not possible to identify even aggregate WSS spending after 2010 (see Box 12.2).

**FIGURE 12.9.** Indonesia's WSS spending as a share of GDP is small compared with peer countries



Source: Various countries' PER, WDI, various years. (footnote 319)

**BOX 12.2.** Data on water supply and sanitation are limited at the central and subnational levels

**Central Government (CG) Estimation**  
 Between 2001 and 2005, WSS spending is taken from the Environment Subsector under the Environment and Spatial Planning Sector. However, this classification cannot be split into WSS. The change in the central government budget to functional classification since 2005 gives an advantage in recording WSS expenditure. After 2005, water supply spending is classified as the Drinking Water Supply Sub-function under the Housing and Public Facilities Function, while sanitation spending is classified as the Waste Water and Waste Management Sub-function under the Environment Function.

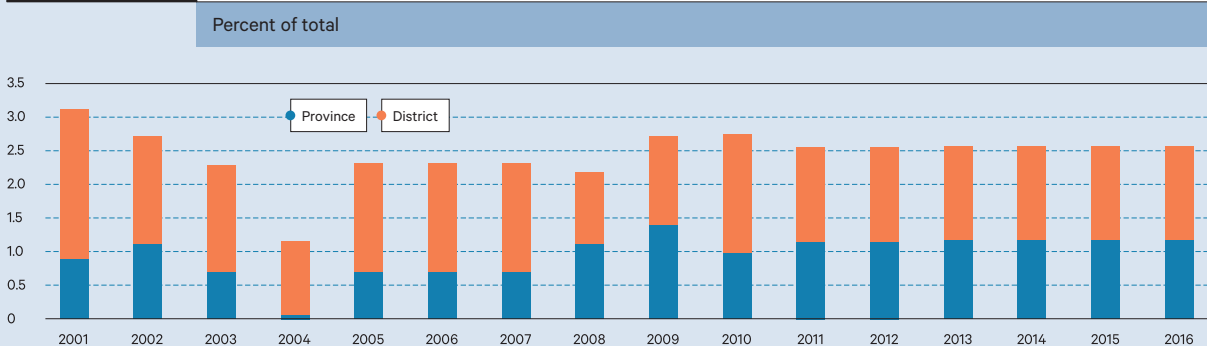
**Subnational Governments (SNGs) Estimation**  
 WSS budget classification at the SNG level

varies across districts and provinces. It cannot also be identified directly. For example, in some districts WSS programs are conducted by Dinas Public Works, while in other districts they are conducted under Dinas Human Settlement. Moreover, detailed data availability is also limited. Detailed data with programs and activities breakdown are available only between 2008 and 2010. Therefore, WSS spending at the SNG level is estimated as follows:

- 2001-04: Development spending is generated from the Housing and Settlement Subsector, while routine spending is from Dinas Human Settlement (*Cipta Karya*) under the Public Works Sector.

- 2005-07: The historical (2001-04 average) WSS spending share of total expenditure is applied to total SNGs' realized expenditure.
- 2008-10: Because detailed spending data are available, WSS spending is estimated using selective keywords from the program and Dinas classification, i.e., filtering out activities that are related to water and sanitation programs.
- 2011-16: The historical (2008-10 average) WSS spending share of total expenditure is applied to total SNGs' expenditure, where realized expenditure is used until 2014, and planned expenditure for 2015-16.

**FIGURE 12.10.** Estimation of average share of total expenditure on subnational WSS spending



Source: Ministry of Finance, World Bank staff estimations for 2011-16.

B

## How Efficient Is Public Spending in the Sector?

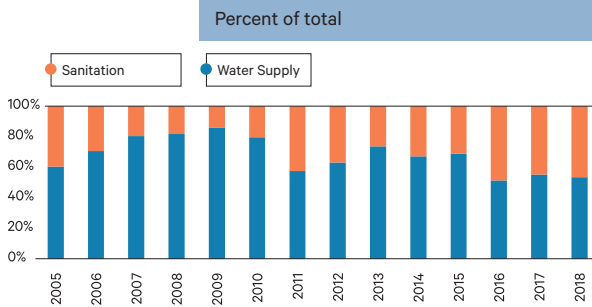
**A**t the central level, the water supply subsector receives more allocation than sanitation (Figure 12.11). Within the water supply subsector, the vast majority of central government expenditure goes into programs aimed at increasing piped-water access, including through large infrastructure projects. In the sanitation subsector, the vast majority of central government expenditure is supposed to be on the construction of septage treatment plants, wastewater treatment plants and sewerage systems. However, given the complexity of wastewater treatment plants and sewerage systems construction projects, combined with the fact that these are only implemented in a few cities, this reduces the capacity of central govern-

ment to implement these programs, leading to lower expenditure than for the water supply subsector. This trend is reversed at the local level, where governments tend to spend more for sanitation, as water supply provision is primarily delegated to the PDAM (Figure 12.12). Local government spending in the provision of water supply is mostly as indirect spending, as PDAM receive investment support from their respective local government in the form of equity contributions.

**Due to the lack of coordination across different government levels, the growing central government infrastructure investment is often not complemented by local government investment in complementary infrastructure.** Therefore, when projects are later handed over to the local entities, they are often not immediately

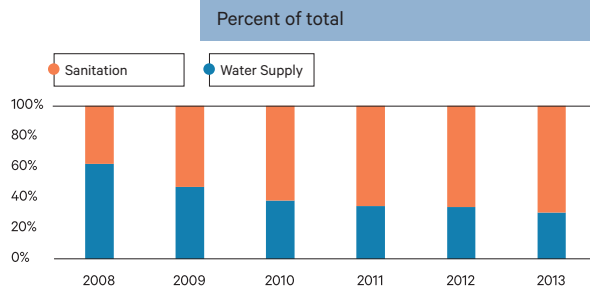
operational due to lacking necessary investment such as local distribution networks.<sup>320</sup> This indicates a lack of coordination across government levels, as well as the central government's limited pre-allocation assessment of local governments' existing capacity and development priorities. The central government needs to ensure that its investment is aligned with local governments' needs and investment plans, as stated in the local governments' budget and planning documents (i.e., water supply master plan or *Rencana Induk Sistem Penyediaan Air Minum* [RIS-PAM], PDAM business plans and city sanitation strategies), and ensuring that local governments include the provision of adequate budget and institution arrangements for O&M in their budget documents prior to commencing with construction.

**FIGURE 12.11.** More of the central government spending is allocated toward water supply...



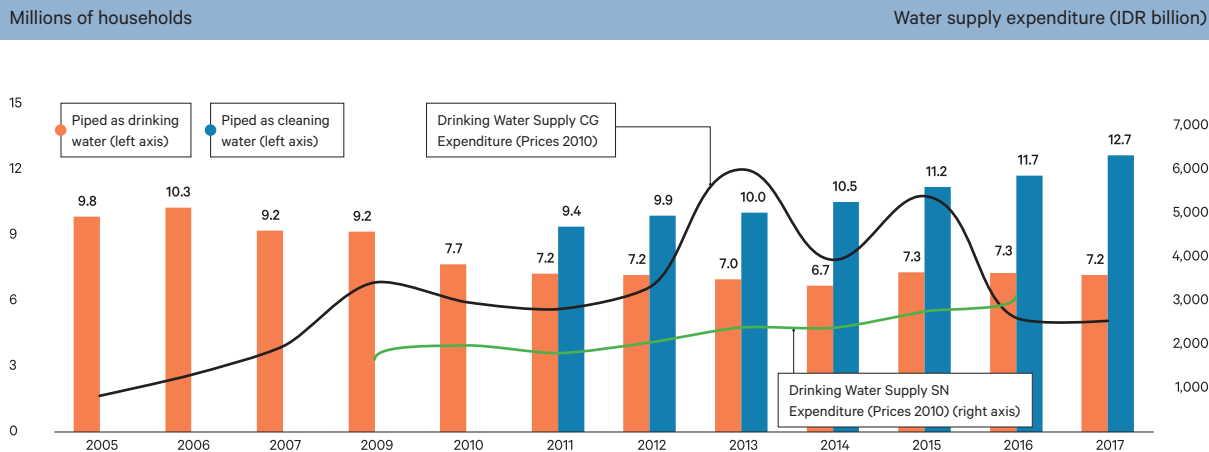
Note: 2018 using central government budget data. Detailed data before 2005 are not available. Source: World Bank estimates based on data from APBN, MoF.

**FIGURE 12.12.** More of the central government spending is allocated toward water supply...



Note: Detailed data to update the calculation beyond 2013 are not available. Source: World Bank estimates based on data from APBD/SIKD, MoF.

**FIGURE 12.13.** Increase in spending on water supply has not been commensurate with increases in piped-water connections



Source: World Bank Staff estimate using Susenas, various years, BPS and MoF.

<sup>320</sup> This is demonstrated by the insignificant increase in the number of connections and the additional length of distribution network (which is responsibility of local governments) despite the increase investment from central government for construction of new water treatment plant and main distribution network.

As a result, despite the threefold real increase in spending on water supply between 2001 and 2016, the number of additional households with access to piped water has been insignificant and has not been able to cope with urban population growth. The statistics suggest that there were increases in the number of households with access to piped water in the period 2001-16. However, these increases were insignificant, and inadequate in coping with urban population growth, and thus the percentage decreased. Meanwhile, central government investments in the construction of new water treatment plants, which have not been followed by complementary investments by local governments on the distribution network and house connections,

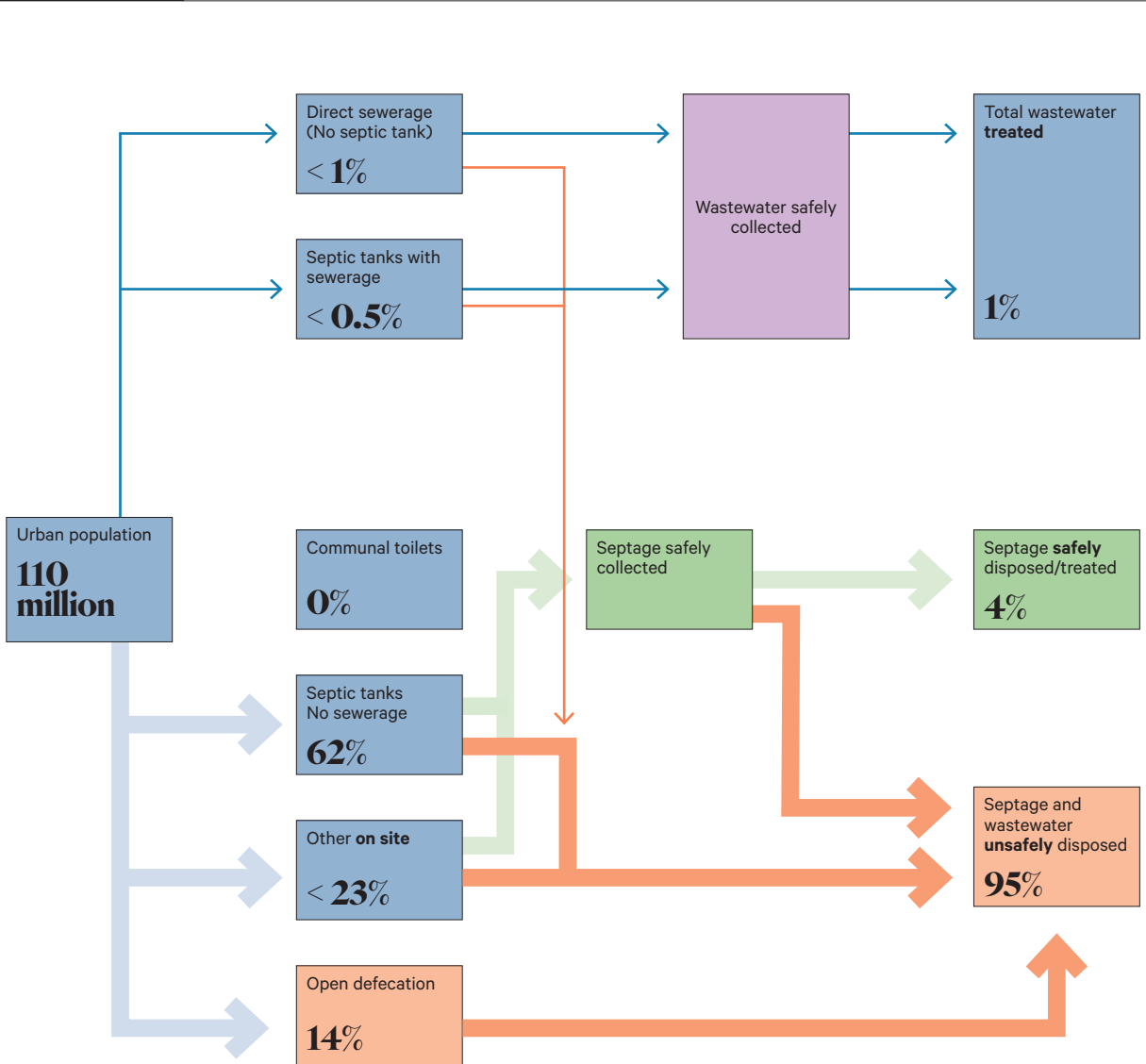
have resulted in increased idle capacity. Based on data from BPPSPAM, there was a total 54,846 liter/second of idle capacity, or about 27 percent of the total installed production capacity from 378 PDAM.

In sanitation, the fourfold real increase in spending has been followed by a steady increase of number of households with access to improved sanitation. However, this masks significant problems with the handling and disposal of waste. A joint 2013 World Bank and AusAID report estimated that just 5 percent of urban waste was collected and disposed of safely (Figure 12.14). Despite the focus of central government spending on urban sanitation being on connecting households to the piped-sewerage system (centralized and decentralized

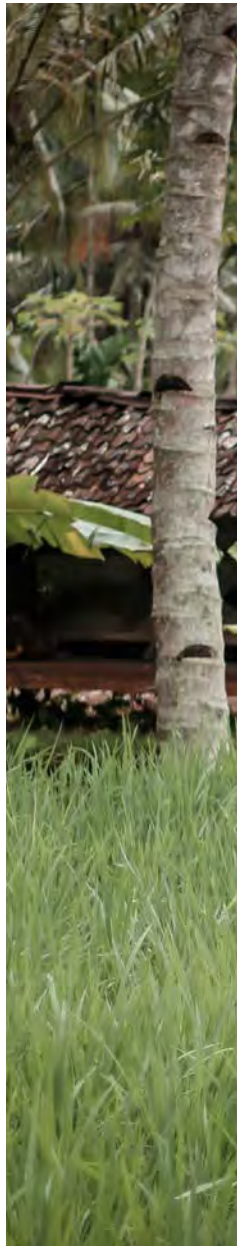
systems), less than 1 percent of the urban population were connected in 2012. While the share of improved sanitation increased both in urban and rural areas, more than 40 percent of the rural population do not yet have access to improved sanitation and around 17 percent still rely on open defecation.

Furthermore, across subsectors and government levels, there are insufficient allocations for O&M, and regulatory and monitoring functions. In 2010, the last year for which data were available, roughly 80 percent of the overall budget was allocated toward capital spending, with spending on O&M included in the 16 percent spending on goods and services. This disproportionate allocation creates

FIGURE 12.14. Wastewater and septage flow in urban Indonesia



Source: World Bank & AusAID, East Asia Pacific Region Urban Sanitation Review, Indonesia Country Study, 2013.



inefficiency, especially with regards to ensuring the long-term durability of purchased capital. Currently, the central government has not included O&M capacity of local governments and PDAM in prioritizing investment of new assets.

On average, local government spending on enhancing administrative and apparatus facilities (46 percent) is almost as much as local government spending on infrastructure development (48 percent). A large proportion of the expenditure is allocated toward activities such as training, the purchase of office supplies, and building improvements, which are not directly linked to increasing the number of households connected to WSS services (). The recent influx of large infrastructure investment by the central government might have arguably deprioritized additional investment from local governments toward infrastructure development.



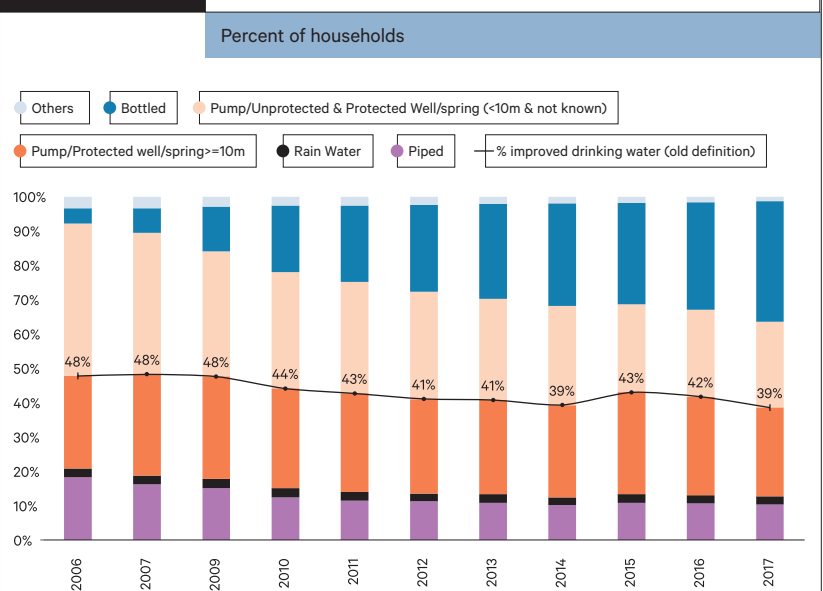
## C

### How Effective Is Public Spending in the Sector?

**W**hile the number of piped-water connections has increased (although falling as share of the urban population), usage of piped water for drinking has been falling (Figure 12.15), as there are not enough incentives for the population to increase the utilization of piped water for drinking purposes. There is a very low community awareness on the benefits of piped water and, combined with perceived lower cost of groundwater, this is the main reasons why utilization of piped water is low, even when households have access. People’s perception of the better quality of bottled water and concerns over the reliability of piped water are likely to be an important driver of usage of bottled water for drinking. In addition, the perceived lower cost of groundwater and the lack of regulations (including lack of or non-enforcement of abstraction charges) likely explain why some households choose not to use piped water as their primary drinking water source.

The decline in the use of improved water sources for drinking water is accompanied by a very large increase in the usage of bottled water for drinking purposes. The shift to bottled water for drinking purposes is particularly stark in urban areas, although since 2007 bottled usage has increased rapidly in rural areas as well, albeit from a low base. Although the usage of bottled water means that an increase number of citizens able to access “safe” drinking water, bottled water is not a sustainable source given the significant problems attached to it, as follows: (i) affordability – bottled water is much more expensive than piped water; (ii) reliability – bottled water requires regular purchase of new bottles, leaving households vulnerable to supply problems; (iii) quality – the majority of bottled usage is through refilled bottles of which refilling stations are unregulated and the quality of the water they provide is therefore unknown; and (iv) adequate quantity – all households that use bottled water as their primary drinking water source also require an alternative source for cleaning purposes.

**FIGURE 12.15.** Primary drinking water sources for households



Source: Susenas, various years.

**Groundwater usage, especially for cleaning purposes, has been increasing at a higher rate than piped-water usage.**

Households persist in using groundwater through pumps and wells that have been installed as part of the original housing equipment at the time of construction or install new pumps/wells. The persistent use of groundwater without proper government control raises serious concerns in the following areas, and is an issue that requires policy attention, particularly in congested urban environments.

**1. Health risks:** Groundwater is exposed to the risk of contamination from various sources. Poorly designed and managed sanitation facilities will leak bacteria, viruses, and other contaminants into the surrounding groundwater. Current government regulations and controls on these potential causes of water contamination do not appear to be well developed, while at the same time it is unrealistic to expect individual households to check their groundwater quality on a regular basis.

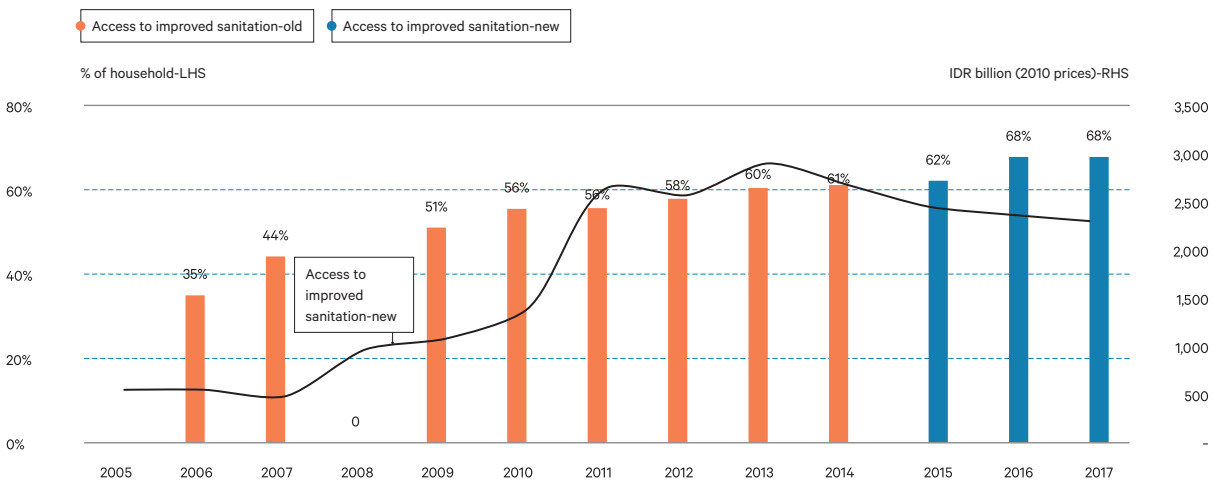
**2. Negative effects from over-exploitation:** Exploitation of groundwater will lead to a lowering of the aquifer if the pace of exploitation exceeds the rate at which water returns through precipitation. This can further lead to land subsidence, which in turn creates an increased risk of flooding and also causes damage to buildings and other infrastructure.

Similarly, despite a steady increase in the number of households with access to improved sanitation, the quality of septic tanks and standards in the overall sanitation value chain remain poor. The majority of septic tanks being used are of poor quality (not designed and constructed to the proper standard, for example not properly sealed and using only one chamber instead of two chambers). A World Bank assessment of households that would count as “improved sanitation” against the government’s measure found that only 8 percent had adequate, multi-chamber and sealed septic tanks.<sup>321</sup> There is a real concern that

the rest of the sewage could leak out into groundwater, and this risk is exacerbated by the lack of septage collection. The utilization of wastewater facilities is low, and some facilities are even totally unused by the population in certain areas.

**Most cities do not have adequate sanitation management and, while sludge treatment plant facilities do exist, most are in poor condition and not used optimally.** The central government sees its role principally as a provider of major infrastructure (predominantly standalone septage/sludge treatment plants), which are handed over to local governments to be responsible for O&M. However, in many cases, there is lack of local government ownership and maintenance, and a lack of local septage collection and transport to the plants. As the results, although there are 150 sludge treatment plants, 90 percent of them are not fully operational, and sludge does not appear to be collected and treated as a matter of course.<sup>322</sup>

**FIGURE 12.14.** Real increase in government sanitation spending, 2001-17



Source: World Bank staff estimates based on APBN and SIKD MoF, APBD data USAID, and Susenas BPS. The 2008 Susenas data are not reliable.

<sup>321</sup> Upgrading Onsite Sanitation and Connecting to Sewers in Southeast Asia: Insights from Indonesia and Vietnam (World Bank, 2015).

<sup>322</sup> Ibid.

# 12.3

## Recommendations to Improve the Quality of Spending

- A** *Improve institutional arrangements and strengthen the mechanism for fund management to encourage the efficient expansion of the piped-water supply*
- B** *Create incentives to use piped water as the primary source of drinking water and limit the use of groundwater*
- C** *Promote a comprehensive urban sanitation system*
- D** *Create the enabling environment that raises the effectiveness and sustainability of community-based rural water supply and sanitation development*

**W**hile there is evidence that meeting the WSS sector's objectives will require an increase in government expenditure, the immediate priority should be to improve efficiency and effectiveness. Given the current disconnect between government spending and the quality of outcomes in the WSS sector, the GoI could focus on identifying opportunities for efficiency gains and strengthened impacts. This section provides some of the steps that the GoI could consider taking to address this, before increasing its expenditure.

In general, the central government needs to broaden its role from only being the infrastructure provider to also being the regulator, and standards enforcer, as well as a collaborator with local governments in delivering services. The central government could consider a wider range of instruments such as technical assistance, regulation, as well as the use of incentives principles, e.g., performance-based grants and transfers, to achieve the sector's targets and objectives, while allowing local governments to take on more leadership and ownership in service provision. Incentives and cross-conditionality principles should be utilized to encourage and ensure that all actors invest in their respective parts of the service provision infrastructure and O&M chain. Overall, the focus should be directed toward improving WSS services quality, and groundwater management, as well as improving household and service-provider behavior. Direct provision of infrastructure by the central government should only be necessary in a small number of low-capacity areas and areas where water sources are scarce, thus requiring higher capital investment. A clear investment and service improvement framework should be provided and implemented through national platform programs, to allow gradual and sustainable improvement of PDAM and local government capacity to take a leading role in WSS development, with supporting guidance and oversight by the central government.

That said, due to the limited availability of public financing, achieving development targets will also require the participation of the private sector and the utilization of commercial financing. Local governments should support their PDAM to access different financing sources for (especially medium- and large-scale) capital investment by improving their performance and creditworthiness. MoHA regulations and guidelines on full cost recovery tariffs should be enforced to ensure that there is adequate revenue for O&M, in addition to small capital investments. Meanwhile, central government investment should be utilized as incentives for local governments and PDAM to continue improving their performance. To leverage non-public financing, public funding should be targeted toward the provision of services for the poor through targeted subsidies, such as house connections development.

## A

### Overall Trends: Is Spending Adequate?

**A**n improved coordination and fund channeling mechanism between different government levels is needed to ensure that expenditure leads to increased levels of service. Achieving the GoI's targets for the WSS sector requires a coordinated approach between central and local governments. Local governments should be enabled to increase their own investment in, and support of, their PDAM to be able to obtain enough revenue to cover their O&M costs, and to invest in improved and expanded services. Increased awareness and establishment of incentives to encourage private sector participation and commercial financing will be required to fill the financing gap. This will require clarity on the scope and confirmation of the legal framework for private sector involvement in the water supply subsector.

**In the short term, the central government needs to place safeguards to ensure that its investment will improve the quality, quantity, and continuity of piped-water supply prior to undertaking major investment.** In areas where the central government provides investment support for upstream infrastructure (water resources, intake, water treatment plants, transmission mains, etc.), it should propose a binding agreement with the local government to fund adequate complementary investment for downstream infrastructure, such as tertiary pipes and connections. The central government also needs to ensure that its investment is aligned with local governments' needs and investment plans, and that there will be adequate budget, institutions and arrangements for O&M allocated in local governments' budget documents prior to commencing construction. In situations where a local government's poor financial health makes this impossible, the central government should consider whether to

fund the whole project or not, based on its overall economic value. However, if the local government can afford to pay its share, but chooses not to, the central government should not proceed with a partial upgrade to the system unless there are sufficient benefits from doing just this element alone. Meanwhile, resources from the central government will also likely be needed to facilitate rehabilitation and optimization of existing facilities, especially for low-capacity local governments and PDAM, although this is primarily the responsibility of local governments.

**In anticipation of increased SNG spending, expenditure rationalization is required to create fiscal space for the WSS sector.** Gradual rechanneling of funds from central government to local governments should be accompanied by better targeting of expenditure to ensure that it will have a material impact on improving outcomes for citizens. Efficiency gains could be achieved within the local government budget by shifting allocations from administrative and apparatus facilities toward service delivery, and reprioritization within the funds already allocated to the WSS sector. That said, greater fiscal space for WSS can only be achieved through overall expenditure rationalization by local governments, including on personnel and general administration spending. This will require development of better and clearer guidelines on budget planning, as well as guidelines on the classification of types of expenditures for local governments and their prioritization by local governments. With the issuance of the government regulation on the minimum service standards (MSSs) and the relevant MoHA implementing guidelines, the MoP-WH should collaborate and coordinate with the MoHA to ensure that local governments include provision of adequate budget for MSS achievement (including for WSS) in their budgeting and planning documents. The MoHA's plan to include MSS achieve-



“An improved coordination & fund channeling mechanism between different government levels is needed to ensure that expenditure leads to increased levels of service.”



ments as a KPI for governors, mayors and district heads should be encouraged.

**In the medium term, financing arrangements should be modified to ensure that local governments/PDAM play their part in developing network facilities.** Financing arrangement through performance-based grants could be considered as one of the mechanisms to channel funds. One option is by expanding the Water *Hibah* model, which provides reimbursements to local governments once they have completed their own investments, to include other indicators linked to improved efficiency and performance. Alternatively, resources for the entire project could be channeled through an enhanced version of DAK, which requires co-funding from the local government, where funding is based on specific performance indicators. Other options could include establishing incentive-based structure support to encourage PDAM and local governments to increase their investments, as well as to encourage them to utilize non-public financing. All these options will require a reliable M&E system with credible data and enforceable penalties for non-performing local governments.

**Infrastructure investment programs should be integrated with an effective capacity-building program for local governments and PDAM.** Currently, investment and capacity-building programs are planned and implemented separately by different agencies/programs, and for different recipients. The MoPWH provides technical assistance and capacity-building programs to PDAM through the Directorate General of Drinking Water Supply Development (through the Center of Excellence program and through training programs implemented in its training center) and through BPPSPAM. The association of water utilities (PERPAMSI) implements several training programs through its education foundation, as well as through its Water Operator Part-

nership program. More effective coordination between these programs could ensure more sustainable O&M for the infrastructure.

**Reforming the regulatory environment for PDAM may enhance their financial sustainability.** Government Regulation No. 54/2017 on Local Government-owned Enterprises (BUMD) has provided clarity on the profit-generating function of BUMD. However, it does not specifically address underlying issues causing poor piped-water performance in urban areas, such as PDAM in financial difficulties and therefore their inability to invest. The regulations (or lack thereof) preventing PDAM from both achieving full cost recovery and from reinvesting profits should be reformed. For example, a regulation on dividend payment obligations needs to be issued soon to provide further clarity and enforcement in support of Law No. 23/2014, which allows PDAM to retain their profits for reinvestment toward new infrastructure with the approval from the mayor/bupati. That said, the tariff structure for PDAM should still take into consideration affordability to avoid further reducing incentives to use piped water. The MoHA's regulations on tariffs and subsidies (MoHA Regulations No. 71/2016 and No. 70/2016) need to be enforced and implementation needs to be monitored and evaluated. To implement this, PDAM should start measuring their non-revenue water (NRW) rates (i.e., produced water that is lost before it reaches the customer through leaks or metering inaccuracies) as the basis to calculate the real full cost recovery tariff level, including the subsidy that might be required to ensure affordability. Given that the average NRW rate of PDAM is far in excess of the 20 percent standard stipulated in the tariff guidelines, the MoHA and the MoPWH should modify the current requirement, otherwise it will cause local governments to set tariffs that are below actual cost recovery.

**At the same time, local governments**

**should ensure that their PDAM develop multi-year business plans that include strategy and action plans to improve their performance in order to escape from reliance on subsidies.** Many PDAM still do not have a realistic and good quality business plans aligned to the RPJMD and other local government planning documents, such as the master plan for water supply development (RISPAM). Many PDAM still prepare business plans only to fulfill readiness criteria for projects and/or just because it is required by regulation, and many of these business plans are prepared by consultants without involvement of the PDAM. As a result, most business plans are not being utilized or updated. PDAM should prepare realistic business plans that include strategy and action plans to improve their performance that are discussed and approved by local governments, and hence align to the local development plans. Local governments should also monitor and evaluate the implementation of these business plans and ensure that PDAM review and update them on an annual basis. To improve PDAM governance, the MoHA should provide technical assistance and capacity building to local governments, especially to Board members of the local government supervisory PDAM body (*Dewan Pengawas*).

**Central government should undertake stronger measures to discourage proliferation of PDAM, as well as to encourage the merger of PDAM that are below an economically viable size.** The poor performance of PDAM is particularly noticeable among small-sized entities. When PDAM are too small, they will not be able to generate adequate revenue to cover their O&M costs. Therefore, further proliferation of PDAM is likely to have a negative impact on national water supply development.

## B

## *Create incentives to use piped water as the primary source of drinking water and limit the use of groundwater*

**C**hange incentives to discourage the use of groundwater and enforce regulations to limit groundwater exploitation, such as taxing the usage of deep wells where piped alternatives are available. Even when piped water is available, households often opt for groundwater sources that are perceived to be cheaper and more reliable. Meanwhile, the quality of groundwater sources is largely unknown as there is a significant risk of contamination causing health concerns due to inadequate and unregulated abstraction in the infrastructure (e.g., borewells not sealed properly, close proximity to septic tanks). In addition, the overexploitation of groundwater causes land subsidence and sea water intrusion. The GoI should regulate groundwater prices to reflect the negative environmental externalities from its usage. However, taxing or regulat-

ing groundwater usage will be very challenging to monitor due to scale. Hence, the GoI could start by focusing on large commercial or industrial groundwater users with deep wells, such as through metering and charging groundwater use, or regulating those where piped alternatives are available. This approach has been applied in big cities such as Jakarta, but strong enforcement is still required. In the long term, all households could be charged for groundwater usage to reflect externalities and promote piped-water usage, but this will only be possible once alternative sources, such as piped water, are widely available.

**Alternatively, effective groundwater use could be promoted through restrictions on the digging of new wells, restrictions on the volumes pumped, and norms for the design of equipment and the siting of wells.** International experience suggests that community management of ground-

water is a viable and effective approach, in which community institutions, covering both households and commercial entities, as the primary custodians take the initiative in designing, implementing and monitoring groundwater usage. Knowledge dissemination activities, such as on the impact of groundwater use, as well as comparison of quality test results between groundwater and piped water, are also important.

**The GoI should integrate the management of surface and groundwater to ensure the comprehensive management of water resources.** Groundwater management currently remains under the responsibility of the Ministry of Energy and Mineral Resources (MEMR), while surface water management remains under the MoPWH through the river basin authorities.<sup>323</sup> The revision of Law No. 7/2004 provides an opportunity to address the issue of having integrated management of ground and surface water resources. The transfer of groundwater management responsibility to the river basin authorities could be considered to implement the integrated management of water resource development.

**Increasing demand for piped-water services for drinking purposes will also require providing a high-quality service that is consistently safe to drink through regulatory improvements and the improved enforcement of quality standards.** Although piped-water quality standards have been set, they are poorly enforced and, in practice, standards are often not met. There is a strong case for central government to play an enhanced regulatory role under the Ministry of Health (MoH), through setting appropriate standards for water quality, and actively enforcing them. This will require the MoH to improve the capacity of health departments at the local government level, and the MoPWH to enhance technical and operational guidelines and procedures for PDAM in conducting appropriate water quality sampling and testing, and to publish the water quality data to improve their social accountability.

**Once quality is achieved, a communication campaign to convince the public will need to be endorsed, supported by accurate and transparent monitoring of water quality.** Given that it may be impractical to deliver high water quality levels across the country immediately, a phased-in approach that could start with the more technically and financially capable or the larger PDAM should be adopted. Government output targets for the subsector should be changed to only include those households whose connection to the network meets the MSS for quality and reliability.

<sup>323</sup> There are 106 River Basin Organizations and 2 River Basin Corporations with responsibility for 135 river basins. See Water Resources Management chapter.

## C

*Promote a comprehensive urban sanitation system*

**G**iven the multi-dimensional nature of issues in the WSS sector, the focus needs to be expanded to include both centralized and decentralized systems, making up a comprehensive view of the urban sanitation system, i.e., promote the principles of citywide inclusive sanitation. While centralized systems are inevitably part of the long-term solution for urban areas, wastewater management involves different processes that include containment (installation of septic tanks), collection (desludging), transportation, treatment and safe disposal of sludge. Capacity and system development to effectively manage the whole system is as important as infrastructure development and, given the current poor performance, are areas that need addressing urgently. Therefore, spending should be allocated properly across the following items

so that all segments of the sanitation chain can function effectively:

1. Enabling environment (policy and regulatory framework, planning, M&E);
2. Infrastructure (septic tanks, desludging trucks, sludge treatment plants); and
3. Advisory activities (advocacy for the installation of septic tanks, capacity and system development, and policy analysis).

**In practice, this means a reprioritization away from the current RPJMN plan of major infrastructure investment to focus on a wider range of services.** This is likely to require the central government's transfer of resources to local governments to undertake their duties to ensure the safe disposal of wastewater. Central government

should monitor the performance of local governments in maintaining and utilizing sludge treatment plants and using a funding mechanism that allows them to take resources away from those local governments that are not using them effectively. An incentive mechanism or performance-based grants could be considered as a fund transfer mechanism.

**The GoI should improve the legal and policy framework for sanitation services.** There is currently no national sanitation management policy to guide local governments. Given the poor performance in this area, SNGs should strengthen the sanitation management agenda with appropriate budget allocations. The MoPWH is currently preparing a ministerial regulation for sanitation with guidelines on sludge treatment plants (IPLT) and is also revising the technical standards for septic tanks.

*D*

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*Create the enabling environment that raises the effectiveness & sustainability of community-based rural water supply & sanitation development*

**E**nhance community-led development for rural WSS through technical support, appropriate M&E, and broader stakeholder involvement. Community-led WSS development continues to be a promising approach for rural areas, with high connections to water supply, in particular, being achieved at relatively low cost. However, there are a number of under-performing systems and concerns about the capacity of local areas to maintain these new assets. Meanwhile,

there have been cases of community-based organizations receiving funding from private banks and/or building partnerships with the private sector through corporate social responsibility (CSR) initiatives. The GoI could also contribute to these initiatives in the areas of policy development and liaising activities, in addition to its own funding in targeted areas. Low provision of affordable toilets is another concern for the rural poor and here the GoI could consider enhancing policies for market development in this area through private sector providers.

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